Amina Omrane
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New Business Models in the Course of Global Crises in South Asia

Lessons from COVID-19 and Beyond

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Preface

In the twenty-first century, doing business is becoming not only a complex but also a crucial process for marketers and businesspersons, as the environmental scene has witnessed several unexpected and unpredicted events, crises, and new phenomena. More especially, during the last couple of decades, the society has experienced several natural disasters that had been not preventable and then hard to alleviate, due to their devastating impacts on society and business as a whole. We can cite for instance the 2004 Indian Ocean earthquake and tsunami, the Cyclone Nargis which struck Myanmar in 2008, as well as the 2010 Port-au-Prince earthquake in Haiti. Besides, the different viruses related diseases, such as SARS-CoV, MERS-CoV, BAT-CoV, and then SARS-CoV-2 (COVID-19), have altered the normal life of the human being from all aspects.

When it comes to worldwide business and how it is evolving in the globe, it will be important to stress the rapid changes it has undergone during the last years. In fact, nothing is stable in the present situation and the rate of uncertainty is out of imagination. Similarly, the social complexity and level of ambiguity are becoming unmanageable, so that the current environment becomes qualified as "VUCA," pointing out its volatility, uncertainty, complexity, and ambiguity. Moreover, the coronavirus crisis has taken a toll on the global arena so that multiple procedures and initiatives have been applied to recuperate this devastation. Therefore, business areas and orientations have needed some sorts of new approaches to cope with this VUCA context and to fight against such a calamity. New business models have also been required to ensure new value creation, sustainable growth, and development. Such models should be adaptive, resilient, innovative, and successful in generating profits.

In this perspective, the present book represents the outcome of sustained efforts and collective considerable workings undertaken by many researchers and professors in order to highlight the reinvented and new business models and trends that will offer new shapes and bring up novelty about adaptive strategies, new skills, and operational methods/means, required for those new VUCA versatile situations.

Creating and improving value in today's competitive world business requires also an understanding of powerful and resilient business models that improve

business performance in terms of high-quality produce, proper customer service, pool of motivated and competent frontline employees, customers' loyalty, as well as implementation of appropriate strategies.

The present book intends then to bring up novelty by gathering specific knowledge regarding the sustainability of a business in this global crisis, the application of Artificial Intelligence (AI) and Machine Learning (AL) in managing human resources, the building of a brand during the Act-Of-God Periods, the harnessing of new opportunities by SMEs during this COVID-19 pandemic, and so on.

By the way, the present book has been designed by keeping in mind the current sanitary situation in order to provide an in-depth understanding of the strategies and operational modes by which an organization can survive in this highly uncertain business environment. By taking into consideration the main effects of the coronavirus turmoil, and the way by which it has weakened the economy of many nations in the world and yielded a business slowdown during this period, this book will help business managers, entrepreneurs, and policymakers to find out new reflections and orientations to fight against such kind of future uncertainties efficiently.

For this purpose, this book entitled ***New Business Models in the Course of Global Crises*** intends to present a coherent framework and a conclusive overview of adaptive successful strategies and new business models implemented by organizations to fight against global crises. It includes 15 chapters which address issues and provide insights into all the elements stated above.

The first chapter represents an empirical study undertaken to understand and demystify the behavior of the higher education faculties in India during the COVID-19 pandemic lockdown. It emphasizes the main effects of e-learning, anxiety and dissatisfaction, concern for students, and health consciousness and precautionary measures on the harmonious lifestyle.

The second chapter focuses on how academicians use their self-leadership skills and innovativeness during global uncertain situations, like the COVID-19 crisis. It stresses that they have taken up new challenges through their innovative behavior of e-learning and enhanced, in turn, their self-efficacy aptitudes as well as their job satisfaction.

The third chapter investigates the different factors, which are responsible for the engagement of teachers in an Indian Higher Education Institute (HEI) and hence contribute to carry on uninterrupted teaching-learning, research, and community engagement during the pandemic.

The fourth chapter considers the main impacts of COVID-19 pandemic on business continuity in certain developed (i.e., USA and China) and developing (i.e., Pakistan and India) economies. It also covers the PAMA principle (Plan, Adapt, Monitor, and Assess) proposed by the International Chamber of Commerce (ICC) to minimize the risks and to sustain the business operations during the epidemic turmoil. Such principle basis turns around following prescribed precautions and choosing online sources for business continuity.

The fifth chapter explains that pandemics may be "Acts of God" (AOG). It underlines that the lockdown, due to COVID-19, presents an interesting opportunity to study brand preferences, when respondents are going through an AOG period.

The proposed theoretical framework and then the empirical study conducted on post-millennials during the COVID-19 lockdown period in India show that the COVID-19-related lockdown has attenuated the influence of the usual brand preference factors on the brand preference of post-millennials.

The sixth chapter reports on the way by which the COVID-19 crisis has changed the behavior of every individual person, by orienting them to opt for the online business market. It argues that the techniques, terms, and conditions (relying on innovation and digitalization) of the online business should be more demanding and satisfying for both employees and consumers in order to strengthen the financial base and to reduce unnecessary expenditures.

The seventh chapter seeks to examine the process by which Saregama Carvaan 2.0 has reconsidered its customer value propositions and operational processes. The case study supports that Saregama has been implementing a proactive stance in the digital transformation and is leveraging the total capacity of its disruptive technologies. It addresses how Saregama has been integrating novel and archetypal business operations, in order to reshape its customer value propositions.

The eighth chapter explores the key business opportunities offered for small Indian firms through digital platforms and online marketing in the post-COVID era. It intends to identify the inner instinct of consumers in the wake of adapting digital buying. The enquiry results support that pricing design, or developing confidence in online transactions, as well as operational efficiency in terms of prompt services, can enhance digital habits experienced by small firms.

The ninth chapter aims at assessing the deadly effects of COVID-19 on the Micro, Small, and Medium Enterprises (MSME) in India (West Bengal) through a micro-empirical survey. It also underlines the main short-term remedial measures proposed by the government (via offering financial packages for the revival of MSME sector). The study concludes with suggesting that the government might take further revival strategies for the medium and long-term requirements of the sector.

The tenth chapter demonstrates that mergers and acquisitions might be considered as a key revival strategy during the COVID-19 times, as it may help the corporate leaders to gain economies of scale or at least the potential to run more efficiently: in the banking sector by citing the examples of merger between troubled Lakshmi Vilas Bank (LVB) and DBS Bank India Ltd on one hand and Indian Bank and Allahabad Bank on the other hand.

The eleventh chapter inspects the effectiveness of the operating cycle of the MSMEs which enable them to maintain daily activities and production schedules despite the financial problems they are facing due to their poor awareness about how to meet daily expenses.

The twelfth chapter explores the benefits of the Application of Machine Learning (ML) in the Human Resource Management area. It shows up how ML might not only help people to do their jobs but also replace them whenever needed. By the way, ML affords more availability and time for managers and other employees, enabling them to focus on their important tasks. Machine learning can then bring a better future to the HR world.

The thirteenth chapter deals with the policies of DAY-NRLM for indigenous people, mainly for tribal community in the post- and pre-pandemic era with special emphasis on tribal participation in India during that period. It promotes a special scheme called "Deendayal Antyodaya Yojana-National Rural Livelihood Mission" (DAY-NRLM), which took attempt to club the scattered vulnerable tribes into Self-Help Groups (SHGs) with way-out of livelihood security, protection, and promotional maintenance and thus to curb the main coronavirus pandemic effects on the marginalized people of society.

The fourteenth chapter sheds some light on the role of microcredit, as an economic development tool, in supporting the economic and mental well-being of inhabitants of rural areas. Findings of the study support that microfinance enables them to combat the COVID-19 situation and to increase the possibilities of employability at individual, household, and community levels.

The fifteenth chapter focuses on the role played by new business models of Micro, Small, and Medium Enterprises (MSMEs) in reconstructing the economic growth of the world. More especially, it explores the MSMEs' contribution to promoting the Indian economy during the COVID-19 crisis, and mainly after the lockdowns' turmoil, that causes a global economic shutdown.

Finally, in keeping with tradition, we hope this book will serve as a useful and practical guide for all readers who are merely struggling and sustaining promising efforts to gain best business practices and valuable learning experiences in the fight against global crises.

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The publication of an edited book requires a lot of dedication and sound efforts on the part of authors, reviewers, and all the members of the editorial board. Indeed, this book is the outcome of several well-researched empirical contributions regarding managing the business and alleviating certain pre- and post-environmental uncertainties related to the severe pandemic COVID-19. It aims at finding out a capsule and highlighting some guidelines that may help businesspersons to maintain and grow up their projects/ventures in such kind of future severe threats.

We would therefore like to express our sincere and warmest thanks to all the contributors for their valuable writings and their sustained efforts that encouraged us to yield the production of this book. Their continuous cooperation and coordination have been also so appreciated in this perspective.

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Thanks and Warm Regards
Board of editors

Introduction

Similar to all other known precedent viruses spread throughout history, e.g., SARS, MERS, Spanish Flu, and Ebola, the coronavirus outbreak appeared for the first time in Wuhan, China, in December 2019, then developed exponentially into a pandemic in March 11, 2020. It infected millions of people, with a global death toll of more than 500,000 during its first 6 months' expansion. At this same date, the World Health Organization (WHO) declared that COVID-19's (i.e., the disease caused by the coronavirus called SARS-CoV-2) estimated mortality rate is between 3 and 4%. Eventually, infected persons suffer mostly from many diseases such as severe acute respiratory syndromes, cough and fever, and loss of smell and taste for 14 days at least.

That is why a large degree of fear and anxiety has usually accompanied such a contagious virus, characterized by a rapid spread among humans. Due to the severity of COVID-19 transmission, which has engendered awful effects, all humankind feel frustrated from the uncertainty they are living. Such havoc is increasing especially since different new coronavirus waves have been registered in many countries. Indeed, since December until today, as many as 213 countries and territories have registered thousands of infected cases, and the entire world has been buzzing with pressures and trouble due to the number of deaths, which attained more than 140,000,000 infected persons and three million deaths worldwide by 19 April 2021.

The COVID-19 pandemic has then compelled humans, wherever they are, to experience another world full of uncertainties and ambiguities, and then to renegotiate their world perceptions and behaviors. Its immediate influence was and continues to be on human life as well as on economic growth of nations.

On the other hand, the major indicator of economic index GDP of all the countries has declined drastically since the appearance of the coronavirus. The curve of employment has also gradually downward, even if few winning sectors such as pharmaceutical industry, healthcare, and e-commerce benefited from the crisis. Furthermore, the number of jobless people has increased worldwide during the last year, especially in losing sectors such as tourism, hospitality, shopping, cultural and travel activities, as well as airlines and certain services like restaurants.

In view of all the painful effects caused by the coronavirus contagion and cited above, the economic development has been the first priority for all the countries along with the saving of human life. For this purpose, governments have done their best to ensure security and healthcare to citizens and businesspersons by implementing strict measures and imposing safety guidelines and rules revolving around lockdown strategies, social distancing, mask wearing, and containment, e-learning courses for students and children, as well as remote work via digital platforms.

Besides, as the economic development of countries largely depends on the industrialization and the growth of trade transactions, the crisis forced each one of them to cope with the new situation by reframing or remodeling the business. In this perspective, managers, entrepreneurs, as well as policymakers have quickly reacted by reconsidering their business competitive strategies and rethinking their own business models and operational modes, in order to meet the changing expectations of their key stakeholders, i.e., namely their shareholders, customers, and employees.

To demystify the business model as a concept, we can refer to Teece (2018, p. 40) who defined it as "*an architecture for how a firm creates and delivers value to customers and the mechanisms employed to capture a share of that value.*" In other words, a business model enables a company to design its business in terms of "what it does," "what it offers," and "how the offer is made" (Ritter & Lettl, 2018). For this reason, it is pursued as a main tool that might enlighten the elements and relationships in business activities in terms of communication, planning, and/or development.

The coronavirus crisis has then imposed and driven changes in business models' configurations, relationships, and value proposition in order to adapt to a new volatile and turbulent environment. In such a context, Peter Drucker mentioned that "*the greatest danger in turbulence is not turbulence; it is to act with yesterday's logic*." It implies that reimagined and new business models are today expected to bring up novelty to Small and Medium-Sized Enterprises (SMEs) and big firms so that they could deal with this large-scale crisis, by showing up their aptitude to survive over time and to ensure sustainability, prosperity, and competitiveness in the long term. That is why, such new technology-driven and collaborative business models might not only redesign workforce by enabling remote infrastructure and redeploying the upskilled and trained employees; but they should also empower them with continuous information on COVID-19 implications to manage a real-time communication with customers regarding the various burning issues. For this purpose, leading persons and managers have to orchestrate the best core competencies and capabilities coming from talented and flexible internal stakeholders and accumulate the domain-specific knowledge required for the welfare and sustainability of their business models. Among them are the digital competencies that enable workers to adapt to remote work, as well as creativity (i.e., the aptitude to bring up novelty by imagining new ideas and proposing new products/services, processes, and systems, …), mental flexibility, resilience (i.e., the capacity to quickly overcome difficulties and obstacles), etc.

Moreover, as already mentioned by Osterwalder and Pigneur (2010) and Clark et al. (2012), the application of those nursed and developed business models concerns public sector administration, NGOs, schools, universities, profit-oriented companies, and individuals alike.

However, as new shapes of chain value configurations emerge to accompany the digital transformation worldwide, new business models should encompass and build up new portfolios of resources and assets to capture and generate value creation. Those combinations, including digital technologies, Artificial Intelligence, Internet of Things, social media platforms, core automatized processes, clouds, and other complementary financial and physical assets, might be used by managers and entrepreneurs to illustrate the effects of their decisions on value creation in the current and the post-COVID digitalized world. Accordingly, those leading persons are invited to show up to what extent they are adapting their activities and businesses to the coronavirus turmoil by developing more inclusive, responsive, and resilient business models. They are also conveyed to overcome the big challenges they are facing in order to find out new solutions, products, and services that enable them to save costs, optimize the use of resources, improve their business processes, and bring up novelty with an acceptable efficiency and profitability.

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Chapter 1
Behaviour of Faculty During COVID-19 Lockdown: A Study of Higher Education in India

Satinder Kumar, Deepika Singla, Muskan, and Rachana Sardana

1.1 Introduction

The World Health Organisation declared a global pandemic in response to the alarming spread of novel corona virus called COVID-19 on 11 March, 2020. This COVID-19 virus had spread to about 160 countries and regions. One of the measures taken by the countries was the complete lockdown of the country to prevent the spread of virus leading to shut down of all the economic and social activities. According to UNESCO, most governments around the world have temporarily closed educational institutions to control the spread of the COVID-19 pandemic, and these nationwide closures have impacted more than 157 crore students across 191 countries which is over 90% of the world's population. In response to this, India also closed its all the educational institutions nationwide whether public or private. In India, more than 32 crore students have been affected by the various restrictions, and the nationwide lockdown has impacted academic activities at various levels, including the postponement of board exams, college exams, and even entrance exams such as the Joint Entrance Examination (JEE) for engineering and National Eligibility and Entrance Test (NEET) for medical, among others. Although various ICT (information and communication technology) initiatives of MHRD like SWAYAM, SwayamPrabha, National Repository of Open Educational Resources (NROER), e-PG Pathshala, Shodhganga, E–ShodhSindhu, e-Yantra, FOSSE project, virtual labs, SAMARTH, VIDWAN, and ShodhSudhiin India are very active

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and being used by the students all over the nation yet sudden lockdown had an impact on the minds of students and as well as the faculty.

The sudden lockdown, which was imperative as per the current pandemic situation, has an impact on the behaviour of teaching fraternity especially of higher education as it has taken place amidst the ongoing academic session. So the researcher at this point of time has some curiosity in mind whether the faculty would be able to cope up with the present changing scenario of lockdown and working from home as they have encountered such kind of situation for the very first time. So, the basic research questions in front of the researcher are:

RQ 1. What are the factors which are going to influence the behaviour of faculty at higher education during lockdown?

RQ 2. How the factors are interrelated and they have an influence on the dependent factor?

Many studies have been conducted on attitude, lifestyle, mental wellness and perception of people and students during various pandemics occurred earlier but few studies have been conducted regarding studying the behaviour of the faculty of higher education during pandemic and especially during lockdown like situation. No such kind of study has been done so far in India. So the present study attempts to study the behaviour of higher education faculty of India during COVID-19 lockdown. Our study is basically divided into two parts: one covers the extraction of factors indicating their behaviour and another part deals with examining the relationship between extracted factors by identifying independent and dependent factors among them. The findings of this chapter would give administration of higher education an increased understanding of factors indicating faculty behaviour during lockdown which would further help in taking appropriate and wise decisions. As this study has not been conducted before, it would give academicians to further extend this research on various parameters.

The rest of the chapter is organised as follows: the next section covers literature review, and Sect. 1.3 addresses research methodology. Section 1.4 covers data analysis and results followed by discussion in Sect. 1.5. Section 1.6 presents implications and limitations, and finally conclusions are explained in Sect. 1.7.

1.2 Literature Review

Such kind of pandemic lockdown scenario due to COVID-19 novel corona virus is faced by the world for the very first time. So very less literature is available on the faculty behaviour in lockdown. People perception and student attitude in different pandemic situations have been studied in past. Rubin et al. (2009) carried out a study to assess the association between anxiety and perception about swine flu and behaviour change on the sample of population of England, Scotland and Wales and discussed that few behavioural changes were found at the beginning despite widespread media coverage and advertising. On the other hand, Cava et al. (2005)

discussed in their study that people's reaction on receiving the public order of quarantine during SARS in Toronto leads from acceptance to fear, anxiety, stigma and disbelief. In many studies, it was found that people started taking preventive measures at the beginning of outbreak of pandemic. Bults et al. (2011) examined the perception and behaviour of people during the initial phase of influenza A (H1N1) and found out that people's intentions to comply with preventive measures were very high. Meilicke et al. (2013) revealed changes in hygiene perception of people during influenza A H1N1 pandemic in Germany which were as per the compliance of the government instructions. Bish and Michie (2010) carried out a study to review demographic and attitudinal determinants of protective behaviours during a pandemic and found out demographic differences in behaviour like older, female and more educated, or non-White, which is associated with a higher chance of adopting the protective behaviours.

Not even a single study has been found out which is directly related to the behaviour of faculty of higher education towards pandemic lockdown. Rather studies that we were able to collect are related to universities' attitude, its preparedness and students' attitude in past pandemic situations in various countries. Rosychuk et al. (2008) identified attitude towards volunteerism in the event of a pandemic of influenza and provided guidance for those who are preparing universities to deal with pandemic influenza. Lugova and Wallis (2017) showed that the university community had good attitudes towards dengue and provides useful information that could guide public health authorities in developing programs and activities aimed at dengue prevention and control in university settings in Malaysia. Van et al. (2010) measured the perceptions and responses of staff and students towards pandemic (H1N1) 2009 and found out low risk and anxiety initially; hand washing and cough etiquette are must in students, and university should provide online teaching resources and training during inter-pandemic periods. McGuire (2007) outlined the role of librarians in helping out to continue the educational programs in the event of a pandemic influenza outbreak and revealed creation of virtual space and various e-learning tools by the librarians for the teaching–learning. Beaton et al. (2007) observed in their study about the planning, preparedness and policies of University of Washington about the pandemic influenza and found out most planning was just theoretical in nature and practicality was less. Schwartz and Bayles (2012) researched about the US university response to H1N1 in the form of online preparedness and response information to university and college campuses and found that no proper guidelines were issued for the pandemic communications at institutions of higher learning. Cauchemez et al. (2009) reviewed various studies and highlighted that school closure alone cannot mitigate the influenza pandemic rather vaccines, antiviral drugs and other measures are also needed, and simultaneously, the social and economic implications of school closures should also be considered. This lockdown due to COVID-19 is going to put pressures on teaching fraternity to get into e-learning which they were not previously using in regular teaching practice. Kim (2008) had also discussed in his study about the importance and use of e-learning in higher education and mentioned that resistance by professors and lecturers in university and colleges worldwide was high towards the use of technology and e-learning.

Navimipour and Zareie (2015) investigated in their study also satisfaction of employees towards e-learning systems and provided a framework for assessing the impact of e-learning on employees satisfaction. On the other hand, Alkhalaf et al. (2012) investigated and found in their study the positive attitude of faculty of higher education towards the e-learning and having positive impact on their job performance. Seale et al. (2009) on the other hand also discussed about the attitude, beliefs and perceived risks of the community of Australia towards the influenza A (H1N1) pandemic declared by the WHO.

1.3 Research Methodology

This study adopted a quantitative approach to study the behaviour of higher education faculty of India during COVID-19 lockdown. In the first part of the study, various variables indicating their behaviour were constructed, and then using Principal Component Analysis (PCA), major five factors or components were explored, i.e. harmonious lifestyle, e-learning, anxiety and dissatisfaction, health consciousness and precautionary measures, and concern for students. SPSS 21 software was used for exploration of factors using principal component analysis (PCA). Another part dealt with considering 'harmonious lifestyle' as dependent variable and examining the impact of all other extracted factors on 'harmonious lifestyle'. SEM was used through AMOS 20 software to examine the impact of all independent factors on harmonious lifestyle.

1.3.1 Questionnaire Development

An online survey was conducted to empirically explore higher education faculty behaviour during COVID-19 lockdown. A questionnaire instrument was developed for this study consisting of two parts. The first part had demographic questions about the participants, while the second part had 18 variables measuring behaviour of faculty during COVID 19 lockdown which were related to effectiveness of e-learning, e-learning resources and assessing e-learning outcome; concern for students' fees and exams; spending time on quality research, for improving skills and quality time with family; stress and dissatisfaction during lockdown; attention towards health and hygiene; and taking precautionary measures for prevention of coronavirus. Items related to e-learning were adapted from Chen et al. (2010). Hopko (2005) and Wu et al. (2013) were referred to adapt items of questionnaire related to anxiety; and items related to health consciousness and precautionary measures were adapted from Lin and Kuo (2020) and Wiedemann et al. (2013). Rest of the questionnaire was self-structured due to lack of studies on COVID-19. Each item corresponding to behaviour was measured using a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7).

For drafting the questionnaire, experts and professionals from the field of psychology and education in the different parts of the nation have been consulted, and later on, pilot testing had been done to finalise the questionnaire. As a result of suggestions from experts and pilot study, few items have been added and removed to finalise the structured questionnaire, and reliability and validity of the questionnaire have been ensured. Since single measure cannot be perfect for analysing its reliability, various measures have been used as mentioned by Hair et al. (2009). The reliability coefficient was first calculated for each item of the questionnaire using Cronbach's alpha which were above the threshold limit of 0.6. Correlation among items of questionnaire, i.e. inter-item correlation was more than 0.3, whereas item to total correlation was calculated at over 0.5. The eigen values were larger than 1.0. To ensure the presence of correlation among items, Bartlett's test of sphericity was calculated, the value of which was acceptable for level of significance at less than 0.05. We have also ensured that convergent, construct and discriminant validity were met. Content validity was analysed by consulting experts from psychology and education related field.

1.3.2 Sampling and Data Collection

This research attempts to study behaviour of faculty of higher education institutions during COVID-19 lockdown. The research is exploratory cum descriptive in nature and uses cross-sectional survey as data is collected at one point of time. The sample of the study was taken from faculty members of various public universities of India as behaviour of faculty of public universities is going to be affected more in comparison to private universities due to this lockdown. The faculty of private universities are already well averse with online examinations, online assessments, online classes and work from home as discussed by Aithal and Revathi (2017) on their research work on comparison of public and private universities in India based on NIRF ranking. The sample in this study was chosen through multistage sampling and was comprised of faculty of selected public universities—both central and state universities of North Indian states, i.e. Jammu and Kashmir, Union territory of Delhi, Uttar Pradesh and Haryana. These four states are selected as maximum number of central and state universities offering multidisciplinary courses are in these four states out of total seven states in North India. There are total 14 central universities and 19 state universities in these selected states. Firstly, using stratified sampling and taking type of public university as stratifying variable, central universities are taken as one strata and state universities as another strata. Five universities from each strata are selected randomly. Online questionnaire on Google Forms was used to collect the data which were sent to the email ids randomly, being taken from the respective websites of the selected universities of the faculty members. This study included professors, associate professors, assistant professors and research scholars as faculty of higher education institutes. The research scholars are considered in this study as faculty because they are involved in delivering lectures and teaching in

selected universities and are regular students doing Ph.D. Although research scholars are not the part of faculty formally but due to their participation in teaching–learning in these universities they have been considered for our study. This survey was conducted through Google Forms during the months of April and May of 2020 when strict lockdown was imposed in the country.

In Godden B. Formula for infinite population, with Z value of about 1.96, p value of about 0.5 and C expressed in decimals as 0.4, minimum sample size of 600 was calculated. Through online survey, questionnaires were sent to 700 email addresses out of which 661 valid responses were received.

$$n = \frac{Z^2 * p(1-p)}{C^2}$$ (**Formula 1**. Godden formula for infinite population).

1.4 Data Analysis and Results

1.4.1 Response Rate and Subjects

A total of 700 questionnaires were distributed to the faculty of higher education institutions of India for this research. Questionnaires with incomplete or invalid responses were eliminated, thus a total of 661 valid responses were received which were used for further analysis (a response rate of 94.42%). In terms of demographics, gender distribution of the sample was 63.6% female and 36.4% male and most (61%) were married. With respect to age and designation, most of the subjects were in the age group of 20–30 (42.2%) followed by those in the age group of age group of 31–40 (39%). Most of the respondents were assistant professors (69.5%) and have job experience of 0–5 years (42.9%). Table 1.1 presents the demographic characteristics of respondents.

Table 1.1 Demographic characteristics of the sample

Items	*N*	%	Items	*N*	%
Gender			**Designation**		
Female	420	63.6	Research scholar	167	25.3
Male	241	36.4	Assistant professor	459	69.5
Age (years)			Associate professor	30	4.5
20–30	279	42.2	Professor	5	0.75
31–40	258	39	**Experience (years)**		
41–50	98	14.9	0–5	283	42.9
Above 50	26	3.89	6–10	137	20.8
Marital status			11–15	146	22.0
Married	403	61	Above 15	95	14.3
Unmarried	258	38.96			

1.4.2 Principal Component Analysis (PCA)

SPSS 21 was used to analyse the collected data. The first part of the study is based on principal component analysis (PCA) which is a complex, multi-step process and widely used in social sciences (Costello & Osborne, 2005). PCA helps to identify groups or cluster of variables and to reduce a dataset to more manageable size and in order to interpret structure of the set of variables (Hernandez & Monzon, 2016; Field, 2009).

1.4.2.1 Pearson Correlation Analysis

Correlation analysis was used to measure the degree of relationship between the 18 main variables. As a rule of thumb, coefficient value of correlation r from 0 to 0.2 indicates weak relationship between variables, 0.3–0.6 indicates moderate correlation and 0.7–1 is generally considered strong (Dancey & Reidy, 2007). Table 1.2 presents correlation matrix which revealed many coefficients of above 0.3 indicating that there was sufficient correlation to further continue factor analysis where correlation is significant at 0.01 level. It is also showed that mean correlation was 0.395, and it varies from 0.059 to 0.898 with a range 0.839.

1.4.2.2 Data Consistency

For correct application of PCA, some basic conditions need to be fulfilled. As shown in Table 1.3, Kaiser–Meyer–Olkin (KMO), an index used to measure sample adequacy, showed significant results as its measure 0.895 was exceeding the recommended value of 0.6 (Tabachnick & Fidell, 1996; Kaiser, 1974), and Bartlett's test of sphericity (Bartlett, 1954) reached statistical significance, indicating that correlations among 18 variables were sufficiently large to apply a PCA. Reliability of the sample was checked by Cronbach's alpha which measured 0.860, far exceeding a value of 0.6—that represented an acceptable scale for exploratory research (Fornell & Larcker, 1981; Hair et al., 1998).

1.4.2.3 Factor Extraction

This is concerned with the extraction of factors from all the variables to reduce dataset into few latent components or factors. As shown in Table 1.3, the value for communalities using PCA ranges from 0.541 to 0.897 and communalities with more than 0.5 is sufficient for explanation of constructs (Hair et al., 2009), indicating factor analysis has extracted good quantity of variance among items.

Exploratory factor analysis was conducted to check validity of the items (Pallant, 2001). In this study, factor loading ranged from 0.647 to 0.892 and factor loading of

Table 1.2 Correlation matrix of variables indicating behaviour

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18
S1	1.00																	
S2	0.483	1.00																
S3	0.742	0.544	1.00															
S4	0.720	0.460	0.757	1.00														
S5	0.381	0.360	0.288	0.223	1.00													
S6	0.433	0.281	0.366	0.337	0.673	1.00												
S7	0.379	0.164	0.333	0.473	0.397	0.560	1.00											
S8	0.510	0.240	0.398	0.503	0.191	0.332	0.389	1.00										
S9	0.457	0.272	0.362	0.381	0.269	0.300	0.276	0.641	1.00									
S10	0.504	0.346	0.403	0.420	0.284	0.366	0.301	0.655	0.723	1.00								
S11	0.264	0.100	0.217	0.269	0.104	0.121	0.202	0.369	0.182	0.306	1.00							
S12	0.265	0.066	0.219	0.205	0.165	0.210	0.214	0.274	0.292	0.346	0.527	1.00						
S13	0.278	0.059	0.207	0.191	0.177	0.211	0.184	0.279	0.237	0.327	0.547	0.806	1.00					
S14	0.641	0.379	0.572	0.543	0.357	0.445	0.416	0.499	0.479	0.527	0.182	0.320	0.356	1.00				
S15	0.454	0.324	0.419	0.399	0.348	0.360	0.339	0.283	0.289	0.366	0.158	0.125	0.216	0.662	1.00			
S16	0.644	0.397	0.535	0.516	0.368	0.431	0.391	0.504	0.492	0.553	0.204	0.231	0.271	0.860	0.676	1.00		
S17	0.513	0.389	0.450	0.443	0.329	0.401	0.344	0.374	0.403	0.452	0.094	0.204	0.207	0.788	0.646	0.797	1.00	
S18	0.647	0.370	0.527	0.504	0.382	0.462	0.412	0.468	0.479	0.511	0.162	0.303	0.346	0.898	0.700	0.885	0.777	1.00

** Correlation is significant at the 0.01 level (two-tailed)

Inter–item correlation: Mean = 0.395, minimum = 0.059, maximum = 0.898, range = 0.839, max/min = 15.262, variance = 0.032, $N = 18$

Table 1.3 Scale reliability analysis

Variables	Communalities		Corrected item-total correlation	Cronbach's alpha if item deleted	Mean	Std. deviation
	Initial	Extraction				
Students have equal access to e-learning	1	0.767	0.749	0.907	5.72	1.635
Assessing students learning outcome	1	**0.541**	0.554	0.915	4.77	1.957
Sufficient e-learning resources	1	0.825	0.656	0.91	5.25	1.722
Effectiveness of online classes	1	0.792	0.657	0.91	5.39	1.705
Waiving of student's fees	1	0.748	0.567	0.914	4.59	1.756
Concern for students exams	1	0.819	0.559	0.912	4.89	1.689
Conducting exams after lockdown	1	0.551	0.513	0.913	4.72	1.841
Stress or anxiety	1	0.767	0.623	0.91	4.98	1.752
Dissatisfaction of not performing pre-planned activities	1	0.803	0.581	0.911	5.15	1.803
Impact on salary budget	1	0.78	0.668	0.909	5.09	1.708
Health and hygiene habits	1	0.642	0.669	0.918	3.27	1.972
Attention to health	1	0.821	0.537	0.916	4.27	2.094
Following social distancing	1	0.854	0.548	0.916	4.18	2.081
Time to improve skills	1	0.878	0.802	0.907	5.87	1.505
Coordinating work from home and household chores	1	0.681	0.591	0.911	5.46	1.856
Spending valuable time towards quality research	1	0.875	0.783	0.907	5.79	1.562
Spending quality time with family	1	0.797	0.673	0.909	5.6	1.572
Challenging to perform the academic activities	1	**0.897**	0.793	0.907	5.92	1.506

more than 0.5 is considered good. This revealed the presence of five components showing eigen values of more than 1 ranging from 1.139 to 8.055, explaining 76.88% of the variance (Table 1.4). All these processes resulted in five components or factors which were named as harmonious lifestyle, e-learning, anxiety and dissatisfaction, health consciousness and precautionary measures, and concern for students. After the detailed study of the past literature, the information was derived for

Table 1.4 Factor analysis results of faculty behaviour during COVID-19 lockdown

Variables	Factors				
	Harmonious lifestyle (F1)	E-learning (F2)	Anxiety and dissatisfaction (F3)	Health consciousness and precautionary measures (F4)	Concern for students (F5)
Challenging to perform the college activities	0.841				
Spending quality time with family	0.831				
Spending valuable time towards quality research	0.814				
Time to improve skills	0.812				
Coordinating work from home and household chores	0.772				
Sufficient e-learning resources		0.829			
Effectiveness of online classes		0.800			
Students have equal access to e-learning		0.690			
Assessing students learning outcome		0.677			
Dissatisfaction of not performing pre-planned activities			0.838		
Stress or anxiety			0.783		
Impact on salary budget			0.773		
Following social distancing				0.892	
Attention to health				0.879	
Health and hygiene habits				0.754	
Concern for students exams					0.845
Waiving of student's fees					0.829
Conducting exams after lockdown					0.647
Eigen value	8.055	2.019	1.333	1.293	1.139

(continued)

Table 1.4 (continued)

Variables	Factors				
	Harmonious lifestyle (F1)	E-learning (F2)	Anxiety and dissatisfaction (F3)	Health consciousness and precautionary measures (F4)	Concern for students (F5)
% variance	44.748	11.218	7.403	7.183	6.329
Cumulative % variance	44.748	55.966	63.369	70.552	76.881
Scale reliability alpha (Cronbach's alpha)	0.860	0.778	0.860	0.836	0.939

Cronbach's alpha = 0.860, Kaiser–Meyer–Olkin measure of sampling adequacy = 0.895, Bartlett's test of sphericity (approximately chi-square = 8.944E3, Df = 153, sig = 0.00, mean = 90.91

these factors, and it was found in many studies that these factors were taken as independent factors except harmonious life.

Harmonious Lifestyle (F1) The first factor, which has been extracted as per the factor analysis solution, is harmonious lifestyle and taken as dependent factor for the present study as per the related literature review. Urrutia et al. (2012) found in their study that anxiety and depression adversely affect the quality of life and disease control among patients. Zhang and Ma (2020) have also done a cross-sectional study to find out the impact of COVID-19 pandemic on the mental health and quality of life of local residents of China. In the same way, lifestyle of tourists is being investigated in another study by Wen et al. (2020) in which they found that this pandemic is going to impact the luxury trips, their travel habits and consumption habits, etc. Thus, harmonious lifestyle has been taken as dependent factor for our study also. The present study has observed that harmonious lifestyle alone has explained the 44.75% variance of the total variance and named as harmonious lifestyle. It included five variables, i.e. challenging to perform the academic activities, spending quality time with family, spending valuable time towards quality research and time to improve skills, coordinating work from home and household chores. The scale reliability alpha of this factor is 0.860 and factor loading ranges from 0.772 to 0.841. Challenging to perform the academic activities during lockdown *variable* has the highest loading in this factor. The inter item correlation ranges from 0.521 to 0.836, and item to total correlation ranges from 0.591 to 0.802. It covers 8.055 of the eigen values.

E-Learning (F2) The second factor has been loaded by four variables, i.e. sufficient e-learning resources, effectiveness of online classes, student's access to e-learning and assessing their learning outcome and labelled as 'E-Learning'. E-learning factor had also been taken and discussed by Lahti et al. (2014) in their study where they found the impact of e-learning on the skill enhancement, knowledge and satisfaction among nurses and student nurses and concluded that e-learning is an alternative method of education. Chen et al. (2010) revealed in their study a

general positive relationship between the use of learning technology and student engagement. This factor has explained 11.218% of the total variation in the factor analysis. The factor loading ranges from 0.677 to 0.829. The variable, sufficient e-learning resources with faculty is having the highest factor loading. The inter item correlation ranges from 0.312 to 0.678, and item to total correlation ranges from 0.554 to 0.749. It covers 2.019 of the eigen values.

Anxiety and Dissatisfaction (F3) The third factor is anxiety and dissatisfaction and is composed of three variables, i.e. dissatisfaction of not performing pre-planned activities, stress or anxiety and impact on salary budget due to sudden lockdown. Past studies have also discussed about the impact of anxiety and dissatisfaction. Hopko (2005) investigated the impact of anxiety on the IQ performance, and in the same way Wu et al. (2013) in their study discussed about the impact of anxiety on the social decision-making. According to a study by Sarma and Byrne (2014), anxiety makes a significant contribution to quality of life in older people with serious mental disorders. Brechan and Kvalem (2015) also aimed their study to investigate the effect of body dissatisfaction on disordered eating behaviour. Thus, in the present study, anxiety and dissatisfaction is taken as the independent factor. This factor has explained 7.403% of the total variation in the factor analysis and indicates the importance of this factor in behaviour of faculty during lockdown. The inter-item correlation ranges from 0.488 to 0.585, and item to total correlation ranges from 0.581 to 0.668. It covers 1.333 of the eigen values.

Health Consciousness and Precautionary Measures (F4) The fourth factor comprises three variables, i.e. following social distancing, attention to health and hygiene habits, and it is labelled as *Health Consciousness and Precautionary Measures*. This factor has explained 7.183% of the total variation in the factor analysis. The factor loading ranges from 0.754 to 0.892. The inter-item correlation ranges from 0.321 to 0.671, and item to total correlation ranges from 0.537 to 0.669. It covers 1.293 of the eigen values. Michaelidou and Hassan (2008) had examined in their study the role of health consciousness along with other factors in explaining attitude and intentions towards organic food. Lin and Kuo (2020) also discussed about the impact of health consciousness on the attitude of elderly people towards the agriculture products. Chen (2013) found high health consciousness group's greater willingness to use functional foods. Hayes and Ross (1987) also discussed in their study that concern with health has the largest impact on eating habits for persons willing to control their health. Wiedemann et al. (2013) studied the impact of informing precautionary measures on the perceived risk of the people. Thus, based upon the past studies, health consciousness and precautionary measures becomes an independent variable for the present study.

Concern for Students (F5) The fifth factor naming concern for students comprises three constructs, i.e. concern for student's exams, waiving of student's fees and conducting exams after lockdown. Rhee et al. (2013) had studied the impact of concern for others in distress in predicting antisocial behaviour in children and

adolescent. On the other hand, Alexandrov et al. (2007) also discussed that concern for employees and customers has a significant impact on employees' turnover intentions. In our study, we have taken constructs/statements which show concern of faculty towards students due to sudden lockdown situation as there is no face to face interaction with them. This factor has explained 6.329% of the total variation in the factor analysis. The factor loading ranges from 0.647 to 0.845. The inter-item correlation ranges from 0.315 to 0.554, and item to total correlation ranges from 0.513 to 0.567. It covers 1.139 of the eigen values.

Since building harmony with the work and personal life may be the biggest challenge for the faculty during the sudden lockdown so it may be taken as dependent factor for the study as mentioned in the literature (Urrutia et al., 2012; Zhang & Ma, 2020; Wen et al., 2020). On the other hand, E-learning, anxiety, health consciousness and precautionary measures and concern may affect the harmonious lifestyle in one way or the other way, and the past studies have also considered them as independent factors in their respective studies (Lahti et al., 2014; Hopko et al., 2005; Wu et al., 2013; Sarma & Byrne, 2014; Brechan & Kvalem, 2015; Michaelidou & Hassan, 2008; Lin & Kuo, 2020; Wiedemann et al., 2013; Rhee et al., 2013; Alexandrov et al., 2007; Hayes & Ross, 1987; Chen et al., 2010). So, this study considered harmonious lifestyle as dependent factor and all other factors as independent which resulted in the development of the following null hypothesis as shown in Fig. 1.1.

H01: There is no significant impact of E-learning on harmonious lifestyle.
H02: There is no significant impact of anxiety and dissatisfaction on harmonious lifestyle.
H03: There is no significant impact of health consciousness and precautionary measures on harmonious lifestyle.
H04: There is no significant impact of concern for students on harmonious lifestyle.

1.4.2.4 Validation of Factor Extraction

To check validation of the five factors extracted, correlation among those factors needs to be checked, and less correlation implies independence among the factors extracted and non-occurrence of multi-collinearity. Table 1.5 shows less correlation between the factors, i.e. less than 0.456 which reveals that factors extracted are independent of each other and multi-collinearity is not occurring, thus validating results of factor extraction.

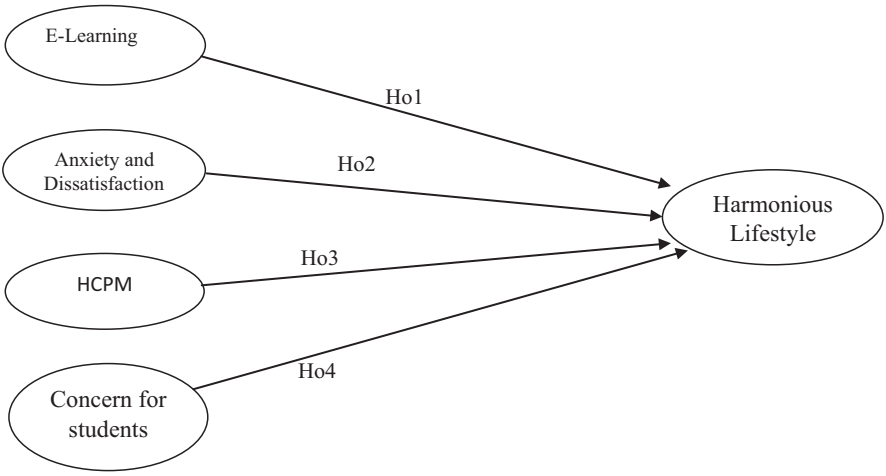

Fig. 1.1 The research model

Table 1.5 Correlation between summated scales

Factors	Harmonious lifestyle	E-learning	Anxiety and dissatisfaction	Health consciousness and precautionary measures	Concern for students
Harmonious lifestyle	1.000				
E-learning	0.258**	1.000			
Anxiety and dissatisfaction	0.387**	0.438**	1.000		
Health consciousness and precautionary measures	**0.456****	0.408**	0.398**	1.000	
Concern for students	0.361**	0.311**	0.401**	0.419**	1.000

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

1.4.3 Applying Structural Equation Modelling (SEM) for Measuring Impact of Factors on Harmonious Lifestyle

SEM is a multivariate data analysis technique which includes measurement model and path analysis and is used for construct validation and to test links or association between constructs of the model (Gefen et al., 2000). AMOS 20 software was used to implement SEM. Figure 1.2 shows the first-order CFA, presenting relationships between factors affecting harmonious lifestyle of faculty during lockdown. The

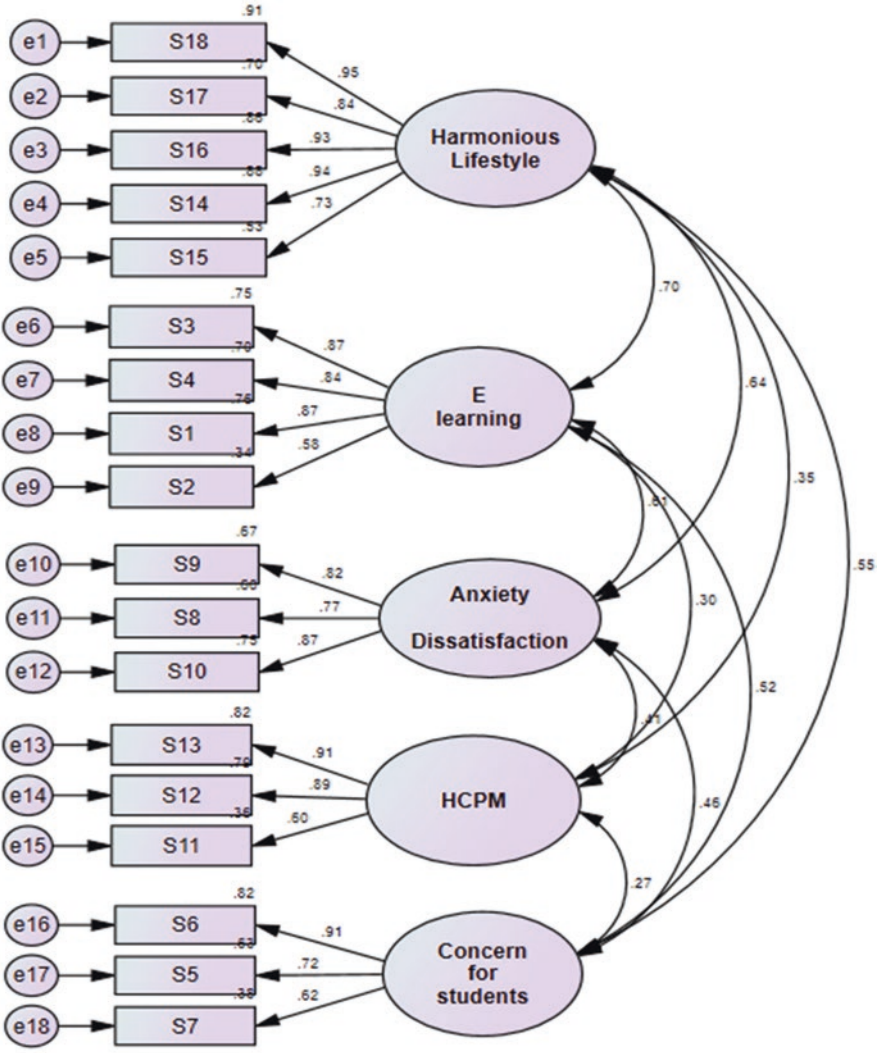

Fig. 1.2 Proposed structural relationships of factors affecting harmonious lifestyle of faculty during lockdown

second-order CFA was presented in Fig. 1.3 with modified relationships which were considered as final model for this study as no further modifications were required. Model fitness was assessed by indices like comparative fit index (CFI), the goodness of fit index (GFI; Hair et al., 2003), the normed fit index (NFI) and the root mean square error of approximation (RMSEA; Steiger, 1990). Overall goodness of fit is assessed using CMIN/DF measuring 4.573 where CMIN value was 567.161 with 124 degrees of freedom, thus indicating good model fit (a ratio less than 5). Table 1.6 presents the actual and recommended values for various fit indices where

recommended values were considered according to Hair et al. (2003), Steiger (1990), Anderson and Gerbing (1988) and indicated that actual values were better than recommended values, thus showing a good model fit. Composite reliability and average variance extracted were above the threshold of 0.8 and 0.5 respectively.

1.4.4 Hypothesis: Path Testing

This section is concerned with measurement model and hypothesis testing. AMOS was used to assess the effects of E-learning, anxiety and dissatisfaction, health consciousness and precautionary measures, and concern for students on harmonious lifestyle. Table 1.7 shows the related empirical results. It shows that all the factors have significant impact on harmonious lifestyle. E-learning ($b = 0.505$, $p < 0.01$) shows the greatest effect on harmonious lifestyle followed by anxiety and dissatisfaction ($b = 0.336$, $p < 0.01$), concern for students ($b = 0.234$, $p < 0.01$) and health consciousness and precautionary measures ($b = 0.110$, $p < 0.01$). Therefore, all the factors have significant impact on harmonious lifestyle of faculty during lockdown, and all the path coefficients were significant at the level of $p < 0.01$, rejecting all the null hypothesis.

Figure 1.3 shows the research model and summary of the results for each hypothesis. Solid line indicates that the path is significant.

1.5 Discussion

In this study, factors revealing behaviour of faculty of Indian Higher Education during COVID-19 lockdown were explored. Firstly, various variables indicating their behaviour were constructed and then, by using principal component analysis (PCA), major five factors or components were explored explaining 76.88% of variance. Most of the variance was contributed by the factor 'harmonious lifestyle' (44.74%) which was also considered as dependent variable for this study followed by e-learning (11.28%), anxiety and dissatisfaction (7.40%), health consciousness and precautionary measures (7.18%) and concern for students (6.33%). Also, all the factors, in one or the other way, seem to have effect on harmonious lifestyle of faculty during COVID-19 lockdown due to which they were taken as independent variables, also supported by previous studies. Then SEM was applied to identify factors significantly impacting harmonious lifestyle of faculty during COVID-19 lockdown.

Results state that all the four factors have significant influence on harmonious lifestyle. E-learning is the strongest predictor of harmonious lifestyle followed by anxiety and dissatisfaction, concern for students and health consciousness and precautionary measures. Even the study conducted by Chen et al. (2010) concluded that there exists relationship between e-learning technology and student engagement. Lahti et al. (2014) in their study into e-learning found the impact of e-learning

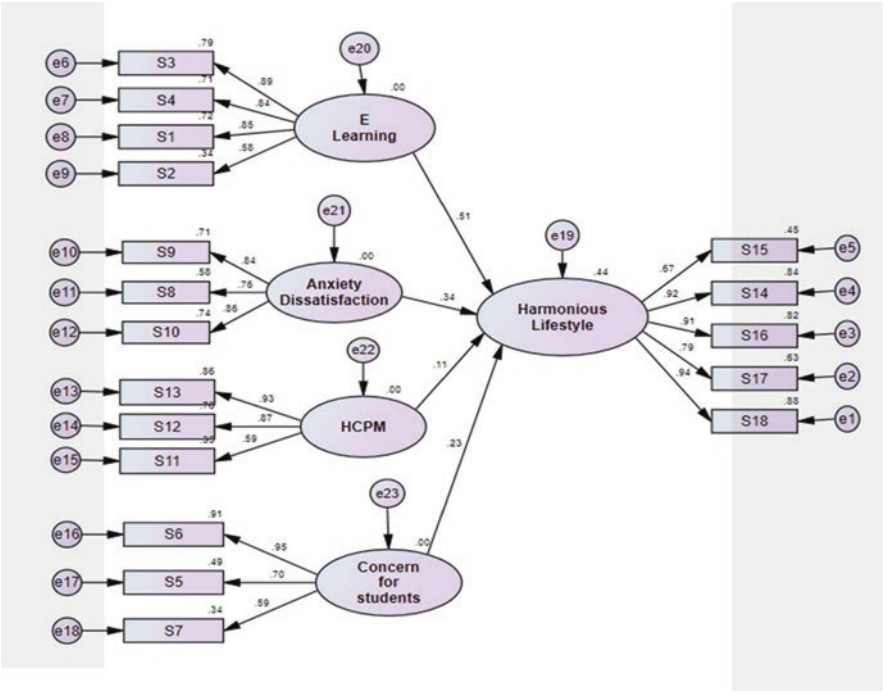

Fig. 1.3 Modified structural relationships of factors affecting harmonious lifestyle of faculty during lockdown. Note: *HCMP* health consciousness and precautionary measures

Table 1.6 The value of fit indices

Fit indices	CMIN/DF	GFI	NFI	CFI	RMSEA	IFI	AGFI	RFI
Actual	4.573	0.901	0.921	0.933	0.079	0.934	0.84	0.902
Recommended	Between 1 and 5	>0.90	>0.9	>0.90	<0.08	>0.9	>0.80	>0.90

on nurses knowledge, satisfaction and skill enhancement. Due to closure of educational institutions in COVID-19 lockdown, faculty is supposed to use e-learning technology at their homes to teach students online. Therefore, their harmonious lifestyle is highly dependent on the use of e-learning. So higher education administration of India must provide them resources for e-learning and knowledge on using them effectively which could further lead to enhance harmony between their work and lifestyle.

In this study, secondary determinant of harmonious lifestyle is identified as anxiety and dissatisfaction which is highly dominated by dissatisfaction by faculty of not performing pre-planned activities. This confirms what Urrutia et al. (2012) concluded in their study that anxiety affects the quality of life of patients, and Sarma and Byrne (2014) stated that quality of life of older people is significantly contributed by anxiety. This finding also corresponds with Hopko et al. study which found the impact of anxiety on IQ performance and with Wu et al. (2013) study which

Table 1.7 The outcome of path analysis

Null hypothesis	Path	SRW	S.E.	P	C.R.	Supported
H01	E-learning → harmonious lifestyle	0.505	0.028	***	14.280	No
H02	Anxiety and dissatisfaction → harmonious lifestyle	0.336	0.029	***	9.515	No
H03	Health consciousness and precautionary measures (HCPM) → harmonious lifestyle	0.110	0.021	***	3.292	No
H04	Concern for students → harmonious lifestyle	0.234	0.027	***	6.722	No

*** It Indicate the significance at 1% (P ≤ 0.001)

uncovered significant impact of anxiety on social decision-making. Even Brechan and Kvalem (2015) concluded the effect of body satisfaction on disordered eating behaviour. So, this study reveals that faculty feels stress or anxiety during this lockdown and is concerned for lockdown's impact on their salary budget, further impacting their harmonious lifestyle. So they should be given awareness on how to deal with stress or anxiety and to reduce them. Also they could be ensured that their salary would be least effected during this lockdown so that these measures can positively enhance their harmonious lifestyle.

Harmonious lifestyle is also dependent on the factor 'concern for students' as faculty is concerned for student examinations. Also they believe that students' fees during the lockdown should be waived and exams should not be conducted immediately after lockdown. The results are consistent with the findings of Rhee et al. (2013), who discovered concern for others in distress as significant factor in predicting anti-social behaviour in children and adolescents, and with Alexandrov et al. (2007), who concluded that concern for employees and customers has significant impact on employees' turnover intentions. So higher education administration should take decisions wisely related to students' fees and exams which could be beneficial for both of them.

The factor 'health consciousness and precautionary measures' has least impact on 'harmonious lifestyle' of faculty, but still it significantly influences dependent variable which corresponds with what Chen (2013) and Michaelidou and Hassan (2008), asserted in their studies, that health consciousness factor significantly predicts consumer's attitude towards organic foods. Although the latter study concluded less impact of health consciousness on attitude compared to other factors taken in the study. Also, Wiedemann et al. (2013) proved the impact of precautionary measures on perceived risk of the people in his study. This factor reveals that faculty is concerned for its health during lockdown affecting their 'harmonious lifestyle'. So they could be given some suggestions on maintaining their health at home which could develop harmony between their work and lifestyle. As a precautionary measure, they are ready to follow social distancing after lockdown.

1.6 Implications and Limitations

1.6.1 Theoretical Implications

This investigation is entirely new of its kind as this type of global lockdown has never been imposed before which continued for so long. This study has explored factors indicating behavioural change of faculty and factors which do affect their harmonious lifestyle during this lockdown. Few previous studies existed stating factors affecting faculty harmonious lifestyle. Empirical results showed that this model has good fit and has rejected all null hypothesis supporting that all the four identified factors have significant impact on harmonious lifestyle of faculty and are its critical antecedents with e-learning technology as its strongest predictor. Future studies may explore further factors influencing these variables and how they can be manipulated to improve faculty's harmonious lifestyle during any kind of lockdown.

1.6.2 Managerial Implications

Higher education administration can make use of the findings of this research for taking various important decisions related to its faculty. By considering significant factors affecting their harmonious lifestyle, they should implement such measures which could develop harmony between work and lifestyle of faculty during this lockdown. They should provide them awareness and guidance of using e-learning technology as it is the major antecedent of their harmonious lifestyle. They should also share with them some health boosting and anxiety reducing measures which could improve their harmonious lifestyle. Webinars could be conducted online which could give them opportunity for enhancing their skills. Even government can play a major role along with higher education administration in providing them with various measures to deal with anxiety, dissatisfaction and health during this lockdown.

1.6.3 Limitations and Future Research

First, this study is cross sectional as it measures faculty behaviour at one point of time. Further studies should be based on longitudinal survey as behaviour of individuals change with their experience. Second, this study considered only four factors affecting harmonious lifestyle of faculty. Possibly there could be additional factors which may influence their harmonious lifestyle. Third, this research does not consider the impact of demographic variables on any of the independent or dependent variables extracted. Further studies can consider impact of demographic variables on the factors. As this study is limited to India, cross-cultural studies on faculty

perceptions towards COVID-19 lockdown will draw more attention from researchers, educational institutions and government. This study considered faculty of higher education institutions only, so further research can study schools and other educational institutions too.

1.7 Conclusions

This study, from the first part of the chapter, concludes that five factors are responsible for revealing behaviour of faculty of Indian Higher Education during COVID-19 lockdown. Among these factors, harmonious lifestyle contributes highly to their behaviour accompanied by e-learning, anxiety and dissatisfaction, health consciousness and precautionary measures and concern for students which suggest that lockdown has disturbed harmony between their work and life. The second part of the chapter, through SEM analysis, state the rejection of all null hypothesis which proposes that all the four independent factors have significant influence on harmonious lifestyle. The strongest predictor of harmonious lifestyle is e-learning followed by anxiety and dissatisfaction, concern for students and health consciousness and precautionary measures. This concludes that all these factors are responsible for effecting harmony of faculty between their lifestyle and work and administration of higher education should take this into consideration for taking various decisions related to faculty and should take such measures which could improve harmonious lifestyle of faculty during lockdown.

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Chapter 2
Self Leadership and Innovative Behaviour Challenges in Academics During COVID-19 Crisis

Bidisha Banerjee

2.1 Introduction

Self-leadership skills have generated considerable research efforts over the past decade (e.g. Manz, 1992; Manz & Neck, 1999; Manz & Sims, 2001). Self-leadership gets influenced through which individuals (and working groups) navigate, motivate and lead themselves towards achieving desired behaviours and outcomes (Manz, 1992). As a broader construct, self-leadership encompasses a set of three complementary cognitive and behavioural strategies, which impact subsequent outcomes. These are:

1. Behaviour-focused strategies
2. Natural reward strategies and
3. Constructive thought pattern strategies

Behaviour-focused strategies enhance self-consciousness and management of some unpleasant, behaviours. These strategies include self-observation, self-goal setting, self-motivation, positive self-feedback, reward and self-coaching. Self-observation enables an individual to identify specific behaviours that need to be changed, enhanced or terminated. It also helps in setting challenging goals guides and motivates an individual to accomplish a tasks (Locke & Lathman, 1990). Compared to self-criticism, self-reward has a positive self-corrective feedback and has a positive effect on employee motivation. Finally, fostering those desired behaviours prior to their actual execution would enable an employee to avoid mistakes and correct them as they occur. Natural reward strategies focus on the positive experience associated with a task and the process through which it is achieved. The work itself are valuable, rewarding and motivating. Individuals should view work practices as pleasant, rewarding and enjoyable, because such an approach augments a sense of

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capability, competency and self-control, which eventually increases performance. Constructive thought pattern strategies refer to those thought patterns that are constructive in nature. Thought patterns are integrative and repetitive. Individuals can adapt constructive or destructive thought patterns, which affect their emotional and behavioural state and reactions. For instance, individuals may alter their thought patterns to focus on potentially available opportunities in times of difficulties, rather than thinking about the difficulties as obstacles. These individuals use optimistic thought patterns to create opportunities so that they can better cope with difficulties that may impede them from attaining their desired ends. The nature of an individual's thought pattern affects her or his behaviours and outcomes (Neck & Manz, 1992). Seligman (1991) argued that individuals tend to develop either optimistic or pessimistic thoughts. When a problem occurs, the optimist views it as a challenge and strives to solve it, while the pessimist believes that this problem will endure and be disruptive or create conflict. Non-constructive thoughts are viewed as being dysfunctional. Burns (1980) argued that an individual should cope with such dysfunctional thoughts, which are derived from predispositions shaped by stressful and problematic events. Thus, individuals use their dysfunctional thoughts into functional ones through a self-assessment process that would enable the substitution of non-rational beliefs with more rational ones. In addition, self-talk, which is defined as what we say to ourselves rather secretly, may facilitate self-influence and direct self-efficacy. Employees can alter their negative self-talk into a more positive type of self-talk, result, for example, in more generally positive thoughts and behaviours, even during times of change and difficulty. Finally, evidence shows that mental imagery of positive moves and performance enhances the likelihood that an individual will perform more successfully. Mental imagery refers to a process by which individuals can symbolically make and experience virtual behaviours, which are similar to real ones. Individuals who use mental imagery are able to experience the outcomes of their behaviour prior to their appearance in real life and, thus, strengthen their confidence in their abilities (Prussia et al., 1998) and enhance their subsequent performance.

Job satisfaction has been an important focal point for organizational and industrial psychology. In defining job satisfaction, the reference is often made to Locke's description of job satisfaction as a 'pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences'. The appraisal involves various elements related to the job such as salary, working conditions, colleagues and boss, career prospects and, of course, the intrinsic aspects of the job itself. So, simply put, job satisfaction is connected to how our personal expectations of work are in congruence with the actual outcomes. And since job satisfaction is merely an employee's attitude towards his or job, previously discussed theories regarding attitudes are applicable to job satisfaction. Consequently, job satisfaction can be seen as containing three components: an affective component, a cognitive component and a behavioural component. While the affective component refers to a feeling about a job, the cognitive component represents a belief in regard to a job. Often these two aspects are related. The behavioural component is an indicator for behavioural intentions towards a job such as getting to work in time, working hard, etc.

It is vital for academics to be effective by having teachers with greater level of self-leadership and self-efficacy. Related literature brings into the gap that much more

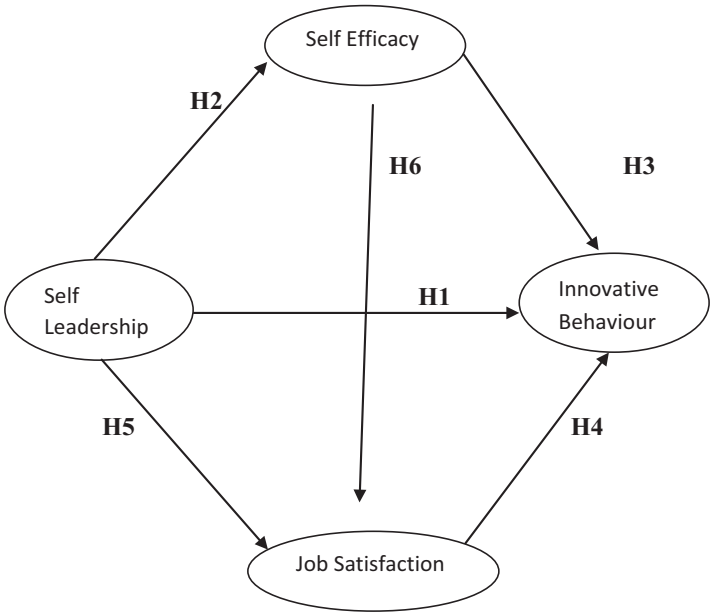

Fig. 2.1 Proposed Conceptual Model

studies are needed about the self-leadership and innovative behaviour during this challenging situation to enhances their motivational level and job satisfaction. On the basis of the previous studies we have focused on how self-leadership influence to innovative behaviour, self-efficacy and job satisfaction and motivate the academicians to enhance their performance during this pandemic crisis of COVID-19 (Fig. 2.1).

2.2 Literature Review

2.2.1 Self-Leadership and Innovative Behaviour

Self-leadership is a process through which employees motivate and navigate themselves to attain desired behaviours and ends. Although individuals are motivated to accomplish tasks, not everyone is capable of displaying innovative behaviour, because of the absence of self-navigation, a key element in the concept of self-leadership (Latham & Locke, 1991). Academicians act as a role models by inspiring students through innovative behaviour during COVID-19 crisis. People who possess good self-leadership qualities know how to achieve high levels of self-direction and self-motivation (Houghton et al. 2003; Manz, 1986; Manz & Neck, 1999). Previous studies shows a significant positive influence between self-leadership and innovative employee behaviour.

H1: There is no difference between self-leadership and innovative behaviour.

2.2.2 Self-Leadership and Self-Efficacy

Several studies have shown that leadership behaviours affect perceptions of self-efficacy. This study focused on external leadership, self-management, or self-leadership influences on self-efficacy in a variety of task domains. Studies examining external leadership influences on self-efficacy perceptions generally focus on how the provision of feedback (e.g. Karl, O'Leary-Kelly & Martocchio, 1993) or the use of effective training techniques (e.g. Gist, 1989) influences these perceptions. However, two studies specifically emphasized leader behaviour influences on self-efficacy perceptions. Redmond et al. (1993) found that leader behaviours, including task direction and goal-setting, positively influenced self-efficacy expectations. Found similar results in that the influence of an entrepreneurial parent (a leadership role) significantly affected subjects' level of self-efficacy and expectancy to pursue an entrepreneurial career. Almutairi (2020) has found that positive connection that occurs among leaders' self-efficacy and affective commitment. Based on the previous studies made in different country context, we have studied in Indian context how academicians influence their self-leadership skills through self-efficacy.

H2: There is no difference between self-leadership and self-efficacy.

2.2.3 Relationship Between Self-Efficacy and Innovative Behaviour

Lack of researches on self-efficacy and innovative behaviour during this crisis phase. Building on this gap this study focuses on how self-efficacy influence the innovative behaviour of the teachers in colleges during this COVID-19.

H3: There is no difference between self-efficacy and innovative behaviour.

2.2.4 Relationship Between Job Satisfaction and Innovative Behaviour

Due to lack of literature review on job satisfaction and innovative behaviour, our study focuses on how teachers relates their job satisfaction and innovative behaviour during COVID-19.

H4: There is no difference between job satisfaction and innovative behaviour.

2.2.5 *Relationship Between Job Satisfaction and Self-Leadership*

Javadi et al. (2013) has tested the relationship between self-leadership strategies and job satisfaction at an educational organization in Isfahan. A total of 180 employees were selected but only 164 employees completed the questionnaire. This study had showed that the behaviour focused strategies, natural reward strategies and constructive thought pattern strategies had a significant effect on job satisfaction and self-leadership. The findings showed that self-leadership can be considered as a predictor of job satisfaction. Besides that, the results also stated that having self-leadership characteristic can influence on enhancing job satisfaction. So, training the self-leadership skills for employees is a good way to increase their job satisfaction (Javadi et al., 2013).

H5: There is no difference between job satisfaction and self-leadership.

2.2.6 *Relationship Between Self- Efficacy and Job Satisfaction*

Researches have demonstrated significant positive relationships between self-efficacy and motivational, affective and behavioural outcomes in organizational settings (e.g. Wood & Bandura, 1989). One of the outcomes is job satisfaction, and it is defined as the extent to which people like their jobs either on the whole or with respect to particular conditions or rewards (Spector, 1997). A large number of theoretical models which integrate multiple factors have been developed in the job satisfaction literature. Lent and Brown (2006) conceptualized job satisfaction as key classes of variables that compose the model including (a) work-educational satisfaction, (b) personality and affective traits, (c) goals and goal-oriented activity, (d) self-efficacy, (e) work conditions and outcomes and (f) goal-oriented environmental supports, resources and obstacles. General self-efficacy would effect job satisfaction through its association with practical success on the job (Judge & Bono, 2001; Luthans et al., 2006). Individuals with high self-efficacy deal more effectively with difficulties and are more likely to attain valued outcomes through persistence, and thus derive intrinsic satisfaction from their jobs. It, then, follows that those with higher general self-efficacy are more likely to be satisfied with their jobs (Luthans, 2006). Research has confirmed that self-efficacy is associated with job satisfaction, and it predicts job satisfaction in employed workers (e.g. Lent & Brown, 2006; Caprara, 2003).

A school with a high level of self-efficacy teachers makes a great contribution in order to corroborate self-efficacy perceptions of students. When examining it on a model with many attitudinal variables, self-efficacy belief, an important concept in terms of education quality, has been deemed significant to propound the effects of self-efficacy more clearly. This study aimed to determine the relationship between self-efficacy and job satisfaction. Self-efficacy beliefs positively affected teachers' job satisfaction (Demir, 2020).

H6: There is no difference between self-efficacy and job satisfaction.

2.3 Research Methodology

A set of structured questionnaire was self-designed based on the qualitative research and literature review followed by the attribute identified for the said.

The questionnaire consists of 16 questions on 5 points (Likert scale) ranging from (1 = strongly disagree and 5 = strongly agree) based on these variables:

Then the respondents were asked to rank their beliefs towards attributes. The ranking ranged from strongly disagree to strongly agree. Numerically, 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. Questionnaire of the variables are given in the Appendix.

2.3.1 Measures

2.3.1.1 Self-Leadership

Self-leadership was measured with six items based on the measure developed by Manz (1992).

2.3.1.2 Self-Efficacy

Self-efficacy was assessed by the employees with four items developed by En Fournier et al. (2010).

2.3.1.3 Job Satisfaction

Job satisfaction was assessed by the employees with three items developed by Piercy et al. (2006).

2.3.1.4 Innovative Behaviour

Innovative behaviour was assessed by the employees with four items developed by Jackson (1994).

2.3.2 Target Population and Sample Size

There were a total of 100 respondents from an institution who all were faculty members of different engineering departments comprising of AEIE, CSE, ME, EE and from management department comprising of MCA, MBA and BBA faculty members.

The distribution of research instrument was done with the help of faculty members of the college. A total of 200 sets of questionnaire were distributed. At the end, only 100 completed questionnaires were received from different faculty. Based on the information provided by the participants, a code was assigned to one of them in order to ensure their anonymity, non-biasness and proper identification of the respondents**.**

2.3.3 Sampling Method

From the descriptive statistics, frequency has been implemented as a research tool to measure the degree of responsiveness of the respondents towards the various attributes.

2.3.4 Data Analysis

Analysis is done on Microsoft Excel. ANOVA is required because the study focuses on the factors influencing self-leadership, innovative behaviour, self-efficacy and job satisfaction of academicians. It also helps to study the motivating factors that influence the academicians and enhance their performance. Besides that, it also helps to identify the difference between self-leadership, innovative behaviour, self-efficacy and job satisfaction and apart from that to gain information about the relationship between dependent and independent variables.

To find that, we considered six hypotheses and performed ANOVA test among each two variables to find the significant difference.

As per the first objective:

2.3.4.1 Self-Leadership

The detailed inference of the above classification of self-leadership is shown with the use of a bar chart (Fig. 2.2).

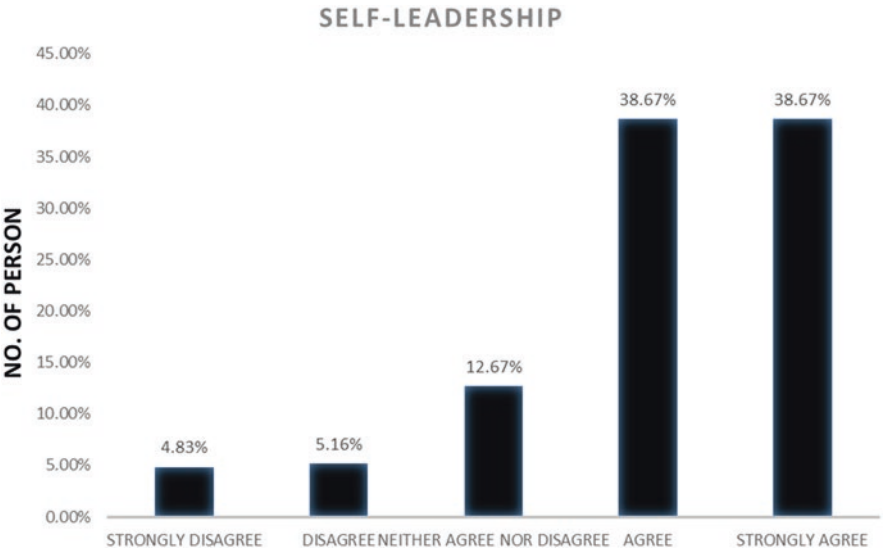

Fig. 2.2 Bar Chart Measuring Self Leadership

2.3.4.2 Innovative Behaviour

See Fig. 2.3.

2.3.4.3 Self-Efficacy

See Fig. 2.4.

2.3.4.4 Job Satisfaction

See Fig. 2.5.

As per the second objective:

Here we compare the four factors with each other and try to find out which factor motivates academicians to enhance their performance (Fig. 2.6 and Tables 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6):

2.4 Results

- As per the first objective of the study, we needed to find out how much factors like self-leadership, innovative behaviour, self-efficacy and job satisfaction has effect on academicians.

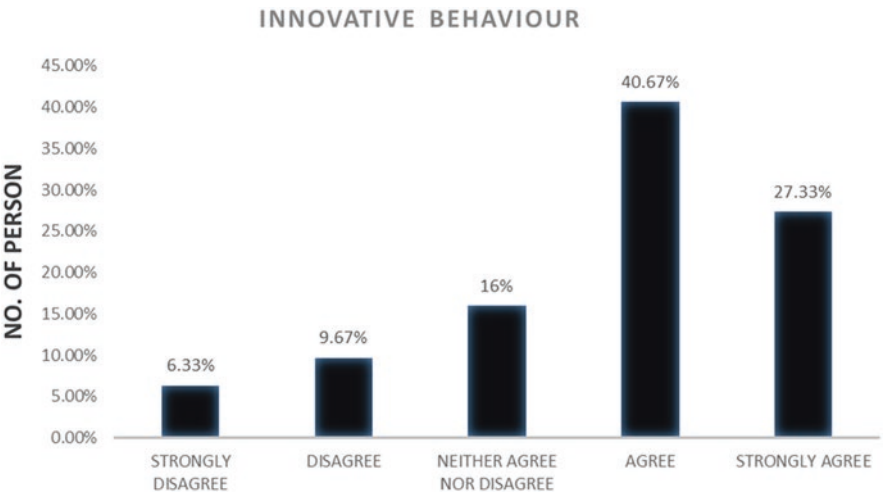

Fig. 2.3 Bar Chart Measuring Innovative Behaviour

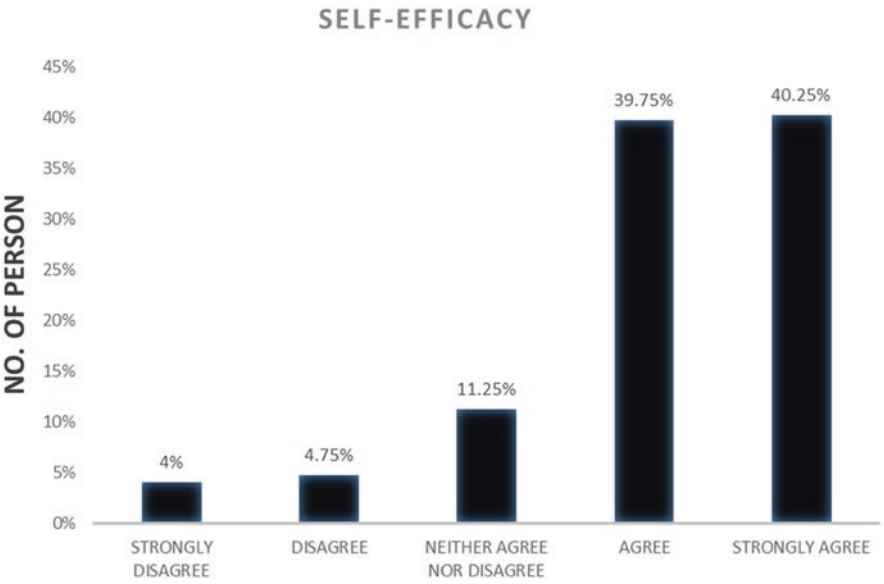

Fig. 2.4 Bar Chart Measuring Self -Efficacy

- So the inference about the first objectives are:
- From the graph of self-leadership, we found that the percentage distribution of the self-leadership on the basis of Likert scale ranging from strongly disagree to strongly agree are: **strongly disagree = 4.83%, agree = 5.16%, neither agree nor disagree = 12.67%, agree = 38.67%, strongly agree = 38.67%.**

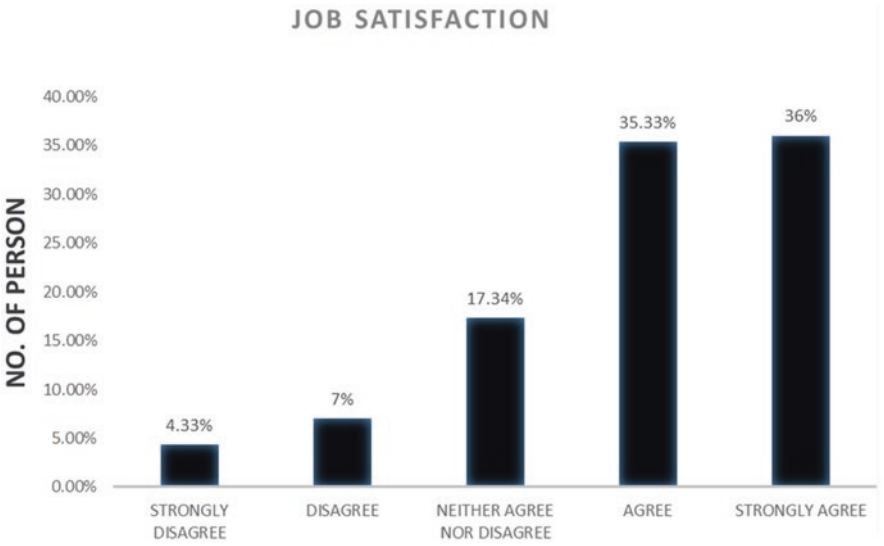

Fig. 2.5 Bar Chart Measuring Job Satisfaction

- From the graph of innovative behaviour, we found that the percentage distribution of the innovative behaviour on the basis of Likert scale ranging from strongly disagree to strongly agree are: **strongly disagree = 6.33%, agree = 9.67%, neither agree nor disagree = 16%, agree = 40.67%, strongly agree = 27.33%.**
- From the graph of self-efficacy, we found that the percentage distribution of the self-efficacy on the basis of Likert scale ranging from strongly disagree to strongly agree are: **strongly disagree = 4%, agree = 4.75%, neither agree nor disagree = 11.25%, agree = 39.75%, strongly agree = 40.25%.**
- From the graph of job satisfaction, we found that the percentage distribution of the job satisfaction on the basis of Likert scale ranging from strongly disagree to strongly agree are: **strongly disagree = 4.33%, agree = 7%, neither agree nor disagree = 17.34%, agree = 35.33%, strongly agree = 36%.**
- In the second objective, we needed to find the motivating factors that influence the academicians and enhance their performance during this crisis period. We found that, the teachers and academicians mostly depend on self-leadership skills rather than innovative behaviour in this pandemic situation. The innovative behaviour skills is much less adapted by the teachers than the other factors.
- As we needed to find the positive relation among the factors, we considered only the scales 'agree' and 'strongly agree'. Considering the two scales to find out the positive relation among the four factors, it was found that the self-leadership (232,232) factor is the most motivating factor among the four factors followed by self-efficacy (161,159), job satisfaction (108,106) and innovative behaviour (82,122) in this crisis period.

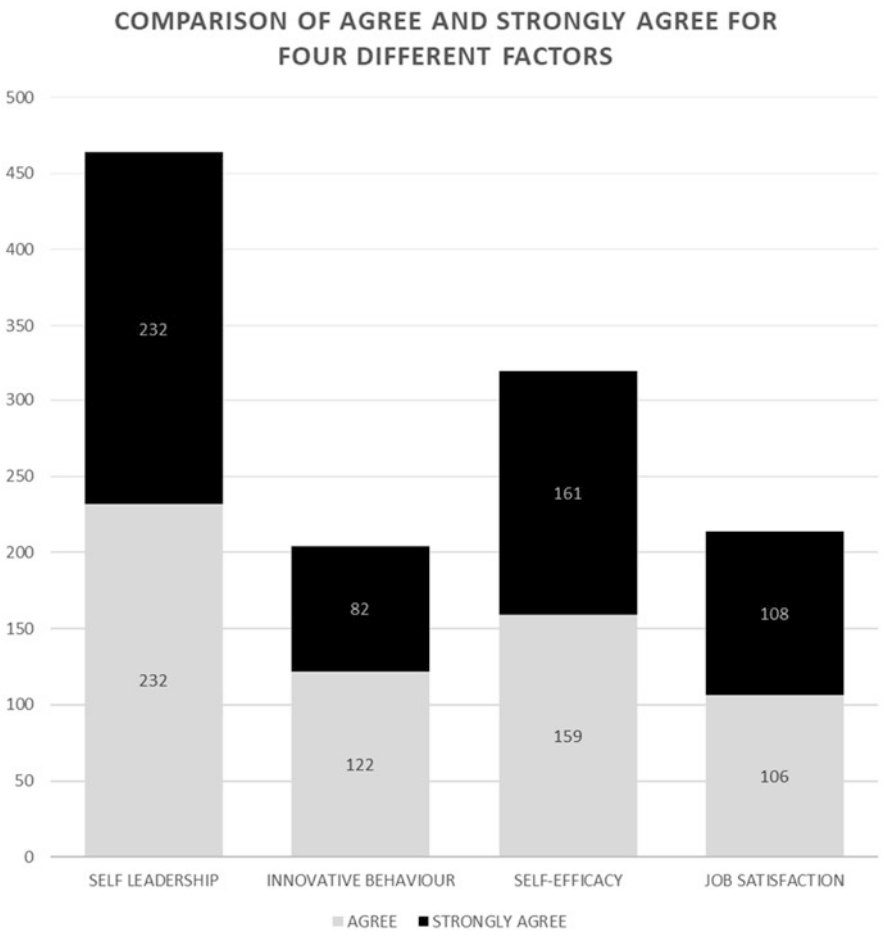

Fig. 2.6 Bar Chart of Four Factors Comparison

- As per the third objective of the study, we needed to find if any difference exists among the four factors. To find that we considered six hypotheses and performed ANOVA test among the factors. The hypotheses were:
  - H1: There is no difference between self-leadership and innovative behaviour.
  - H2: There is no difference between self-leadership and self-efficacy.
  - H3: There is no difference between self-efficacy and innovative behaviour.
  - H4: There is no difference between innovative behaviour and job satisfaction.
  - H5: There is no difference between job satisfaction and self-leadership.
  - H6: There is no difference between self-efficacy and job satisfaction.

Table 2.1 ANOVA test self-leadership and innovative behaviour

Self-leadership	Innovative behaviour					
74	45					
79	81					
78	78					
72						
85						
76						
ANOVA: single factor						
Summary H1: There is no difference between Self-Leadership and Innovative Behaviour						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Self-leadership	5	390	78	22.5		
Innovative behaviour	2	159	79.5	4.5		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	3.214285714	1	3.214286	0.170068	0.697137	6.607891
Within groups	94.5	5	18.9			
Total	97.71428571	6				

Table 2.2 ANOVA test on self-leadership and self-efficacy

Self-leadership	Self-efficacy					
74	83					
79	77					
78	80					
72	80					
75						
76						
ANOVA: single factor						
Summary H2: There is no difference between Self-Leadership and Self-Efficacy						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Column 1	6	454	75.66667	6.666667		
Column 2	4	320	80	6		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	45.06666667	1	45.06667	7.023377	0.029248	5.317655
Within groups	51.33333333	8	6.416667			
Total	96.4	9				

Table 2.3 ANOVA test on self-efficacy and innovative behaviour

Self-efficacy	Innovative behaviour					
83	45					
77	81					
80	78					
80						
ANOVA: single factor						
Summary H3:There is no difference between Self-Efficacy and Innovative Behaviour						
Groups	*Count*	*Sum*	*Average*	*Variance*		
83	3	237	79	3		
45	2	159	79.5	4.5		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	0.3	1	0.3	0.085714	0.78878	10.12796
Within groups	10.5	3	3.5			
Total	10.8	4				

Table 2.4 ANOVA test on between innovative behaviour and job satisfaction

Innovative behaviour	Job satisfaction					
45	77					
81	71					
78	66					
ANOVA: single factor						
Summary H4: There is no difference between Innovative Behaviour and Job Satisfaction						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Innovative behaviour	2	159	79.5	4.5		
Job satisfaction	2	137	68.5	12.5		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	121	1	121	14.23529	0.063618	18.51282
Within groups	17	2	8.5			
Total	138	3				

Table 2.5 ANOVA test on job satisfaction and self-leadership

Job satisfaction	Self-leadership					
77	74					
71	79					
66	78					
	72					
	85					
	76					
ANOVA: single factor						
Summary H5: There is no difference between Job Satisfaction and Self-Leadership						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Job satisfaction	2	137	68.5	12.5		
Self-leadership	5	390	78	22.5		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	128.9285714	1	128.9286	6.289199	0.053971	6.607891
Within groups	102.5	5	20.5			
Total	231.4285714	6				

Table 2.6 ANOVA test on self-efficacy and job satisfaction

Self-efficacy	Job satisfaction					
83	77					
77	71					
80	66					
80						
ANOVA: single factor						
Summary H6: There is no difference between Self-Efficacy and Job Satisfaction						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Self-efficacy	3	237	79	3		
Job satisfaction	2	137	68.5	12.5		
ANOVA						
Source of variation	*SS*	*df*	*MS*	*F*	*P-value*	*F critical*
Between groups	132.3	1	132.3	21.45405	0.018956	10.12796
Within groups	18.5	3	6.166667			
Total	150.8	4				

The ANOVA tests were performed for all the six hypotheses to determine the F value and F critical values, and the results found during this pandemic situation are as follows:

- If F > F critical, we reject the null hypothesis. In case of H1, F < F critical which is 0.0697137 < 6.607891. Therefore, we do not reject the null hypothesis. So, there is no difference between self-leadership and innovative behaviour.
- In case of H2, F > F critical which is 7.023377 > 5.317655. Therefore, the null hypothesis gets rejected. So, there exists a difference between self-leadership and self-efficacy.
- In case of H3, F < F critical which is 0.085714 < 10.12796. Therefore, we do not reject the null hypothesis. So, there is no difference between self-efficacy and innovative behaviour.
- In case of H4, F < F critical which is 14.23529 < 18.51282. Therefore, we do not reject the null hypothesis. So, there is no difference between innovative behaviour and job satisfaction.
- In case of H5, F < F critical which is 3.073171 < 5.591448. Therefore, we do not reject the null hypothesis. So, there is no difference between job satisfaction and self-leadership.
- In case of H6, F > F critical which is 21.45405 > 10.12796. Therefore, the null hypothesis gets rejected. So, there exists a difference between self-efficacy and job satisfaction.

2.5 Discussions

From the above study of four different factors, it was found that teachers and academicians are less influenced or in other words they do not follow the characteristics of innovative behaviour as compared to other factors. This is because they are more focused on their task strategies, i.e. the teachers always look to complete the course as early as possible instead of focusing on new pedagogy of teaching during this pandemic and challenging situation.

It is not always mandatory for teachers who are self-leaders to follow the path of self-efficacy because certain level of self-efficacy skills always exist within teachers, but they are not influenced or regenerated with respect to increase or decrease in self-leadership skills. We know from the definition of self-efficacy that it is a person's confidence in the ability to achieve his/her goals, but self-leadership-oriented teachers might not always be clear and confident about his ability to achieve the esteemed goals. So self-efficacy and self-leadership are not always related.

Teacher self-efficacy can be defined as the teacher's beliefs in his/her own ability to plan, organize, and carry out different educational activities that are essential for achieving pedagogical goals. It affects how teachers perceive environmental opportunities and obstacles and how much effort and what activities they are willing to invest in overcoming these obstacles (Pajares, 1997; Bandura, 2006). Teachers with high self-efficacy believe in their personal influence, power and impact on the educational process, including students' learning (internal dimension) and factors

outside the classroom (external dimension). Hence, job satisfaction depends on both internal and external dimensions. Hence, teacher's self-efficacy is not equal to job satisfaction that means they are not similar in nature. They both have different parameters. So, in this study, we could find out they are different to each other that the reason they are not related to each other specially during this crisis period.

2.6 Conclusions

From the study, it can be seen that if teachers and academicians are trained with new self-leadership skills, they will learn to adapt with the new skills, they will input the skills into teaching and provide more effective outcomes. Hence, the teachers and academicians who are self-leaders need to enhance their skills to provide effective performance during this crisis period.

The findings of this study lend support to the role of self-leadership skills in fostering innovative behaviour at work. It can be stated that academicians and especially the one under study should focus more on enhancement of self-leadership strategies specifically constructive thinking strategy, so that they can increase their job satisfaction level and have a better teaching performance by conceiving a promising future and a certain perspective during this COVID-19 period.

The data that has been collected is only from different department from one institution. This lead to a less effective data. Other institutions' teachers tend to be unresponsive during the requests for filling up the questionnaires during this pandemic crisis.

There can be many other parameters which could have been taken to find out the relations in future study.

Due to unresponsiveness of several teachers and academicians during this crisis the results proved to be a bit less effective. More compact data and extensive survey could have resulted more effectivity.

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Chapter 3
Engagement of Higher Education Teachers During COVID-19 Pandemic in India

Amrita Majumdar and Sudipta Majumdar

3.1 Introduction

The outbreak of COVID-19 has impacted the world economy, and education sector is not an exception of this. Change is inevitable, and this pandemic taught the whole world to adopt the changes and explore the opportunities. As a result, the education sector has also faced a quick and sudden transformation and opted digital mode to ensure the continuous teaching–learning, research, community engagement, etc. by using different online tools and techniques which has added struggle and stress both to the work–life balance of the teachers. When the students' learning was on stake, teachers have taken up the challenge. They adopted digital mode of teaching–learning pedagogy and started delivering lectures online for the students. To attain this modern education technology and be equipped with them, teachers need to develop new learning environment for all the stakeholders including teacher, student, parent, administrator, etc. In Indian context, mostly, the traditional methods were followed in higher education institutes to fulfill the teaching–learning criteria. But this pandemic has forced to adopt the digital alternatives to make the teaching–learning takes place in an uninterrupted way. This sudden embracement of online teaching–learning pedagogy has changed the traditional teaching pedagogy to blended teaching–learning pedagogy, wherein students are learning both in online live classes and also in offline mode, where they are going through the contents as uploaded by the teachers. The teachers are adopting both synchronous and asynchronous ways of teaching pedagogy for implementing this.

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In the present chapter, the researchers identified the various factors responsible for the teacher's engagement of higher education institute (HEI) during this pandemic through literature review and peer discussion. Also some strategies have been suggested at the end so that teachers can continue with the success of blended model of teaching–learning environment for both teachers and students. This will also help and make Indian teaching environment more dynamic, and all the stakeholders, including the parents associated with this, can visualize a new teaching–learning environment, especially in case of higher education sector.

3.2 Literature Review

Education plays the major role as a predictor of overall development of any country. Providing effective and quality manpower is the basic requirement to promote the industrial and economic growth. The COVID-19 crisis has changed the definition of "Education." The pedagogical shift from primitive to modern approach has affected the culture of formal education in higher education institute (HEI). Previously online teaching rather no direct interaction was supposed to be considered as the non-formal mode of education but in this present scenario, it is going to gradually replace the formal education system in the new normal scenario.

Ahmed and Ikram Khan (2020**)** mentioned the success story of The School of Business Administration (NCBA&E), its students, faculty, and staff and how the institution has carried on its semester despite the disruption caused by COVID-19 which works as an evidence to the new education system. **Dhawan (**2020**)** in his study mentioned the changing model of education where EdTech Startups are coming up with a scope of exploring the modern education world in this pandemic associated with online teaching–learning. **Tartavulea (**2020**)** discussed that the institutional support, the trust in the online system, and the perceived effectiveness of formative assessment are the different factors that are positively associated with the impact and effectiveness of online education. **Rapanta (**2020**)**, in the article, focused on certain pedagogical content knowledge (PCK) which is important to create better learning environment with different digital technologies. **Mishra (**2020**)** discussed on the holistic view of online teaching–learning activities to establish the bridge between change management and online teaching–learning process. **Bao (**2020**)** focused on the six specific instructional strategies which were presented to summarize the online teaching experiences for teachers. The study concludes with five high-impact principles for online education: (a) high relevance between online instructional design and student learning, (b) effective delivery on online instructional information, (c) adequate support provided by faculty and teaching assistants to students; (d) high-quality participation to improve the breadth and depth of student's learning, and (e) contingency plan to deal with unexpected incidents of online education platforms. Johnson (2020) focused on the primary areas where faculty and the administrators identified a need for assistance which were related to student support, greater access to online digital materials, and guidance

for working from home. Carrillo and Flores (2020) discussed on the online teaching and learning practices those are related to social, cognitive and teaching presence. It was also highlighted that the need of a holistic approach of the pedagogy of online education that integrates technology to support teaching and learning. Yen (2020) aimed at verifying the procedures and effects of flipped classroom for online teaching. Shenoy (2020) revealed the loopholes in online education system and some positive aspects of offline or classroom teaching.

In the Indian context, the Government of India has also started working on embracing the ICT enabled teaching learning pedagogy in the Indian Education System. The apex regulatory body of higher education, University Grants Commission (UGC) has already put efforts to combat with the situation and ensured to complete the semesters, examinations, etc. in a timely manner.

The educational scenario of India is going to be different in the new normal life where the role of the teacher will be more and more important because their engagement can only be the channel between the technology and students. This will ultimately help the overall teaching–learning environment to grow in India and will help to develop more skilled youth.

3.3 Research Methodology

The present study was based on the quantitative data to find out the engagement of faculty members of higher education institutions during COVID-19 pandemic in India. The primary data has been collected through a structured questionnaire. Data was captured through Google Forms which was circulated online through different professional network and emails among the teachers of HEI in India. The sample size considered for the study is 67. Random sampling technique has been used to collect the samples.

The collected data is analyzed using exploratory factor analysis, and the items of the derived components are prioritized using multiple regression. The IBM SPSS (version 19) is used for the purpose.

3.4 Main Results and Discussion

Table 3.1 is derived from the rotated component matrix output of exploratory factor analysis. It creates components using the factor loadings which is derived from all the independent variables used in the questionnaire.

In the first component, there are five variables V2, V3, V4, V6, and V10 (explained in Table 3.1), and all the variables are describing the academic flexibility as provided by an institute for the faculty members. So the component is named as "**Academic Flexibility**."

Table 3.1 Output of the exploratory factor analysis with respect to the items of teacher engagement

V2	Conducting online classes is equally effective like a regular class in offline mode	Academic flexibility
V3	Students' involvement during online classes	
V4	Students are examination ready through this online classes	
V6	Teacher's mentorship is important for helping student overcome this pandemic situation	
V10	Contribution toward the overall development of the institute during lockdown period	
V7	Pandemic is going to impact the overall academic cycle of the institute	Working style
V8	Involvement in the community engagement activities during this pandemic	
V9	Exhausted during your work from home period	
V11	Lockdown period can be utilized to increase the API score	Job enrichment
V12	Security in the current job role during this pandemic	
V1	Time spent on taking online classes	Job involvement
V5	Teacher should constantly be in touch with their students	

Table 3.2 Regression analysis for academic flexibility with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	2.725	0.610		4.469	0.000
	V2	0.140	0.162	0.151	0.865	0.390
	V3	−0.210	0.154	−0.240	−1.362	0.178
	V4	−0.006	0.150	−0.007	−0.039	0.969
	V6	0.102	0.113	0.114	0.899	0.372
	V10	0.254	0.128	0.278	1.986	0.052

[a]Dependent variable: V13
Source: SPSS output

The second component consists of three variables V7, V8, and V9 (explained in Table 3.1) which are associated with the new working style of teachers in the new normal era. So it is named as "**Working Style**."

The variables V11 and V12 (explained in Table 3.1) discuss about the enrichment of teachers' job role. This states that the teachers are getting new opportunities to explore their skills. So the third component is named as "**Job Enrichment**".

Similarly, V1 and V5 (explained in Table 3.1) are grouped together based upon the values of factor loading. All the variables are discussing about the involvement of teachers with respect to their job. So the component is named as "**Job Involvement**."

The various variables in each of the components are prioritized using multiple regression and the results are summarized in Table 3.2.

The output furnishes the following regression model:

$$V13 = 2.725 + 0.140\ V2 + (-0.210)V3 + (-0.006)V4 + 0.102V6 + 0.254V10$$

V13 is the teacher's engagement during the work from home period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The regression table reveals that the beta value for V2 is 0.151, V3 is −0.240, V4 is −0.007, V6 is 0.114, and V10 is 0.278. It states that V10, i.e., "**Contribution towards the overall development of the institute during lockdown period**," has the highest influence on the criterion variable, whereas V3, i.e., "**Students involvement during online classes**," has the least influence on the criterion variable, i.e., "**Academic Flexibility**" (Table 3.3).

The output furnishes the following regression model:

$$V13 = 4.041 + (-0.173)V7 + 0.127V8 + 0.035V9$$

where V13 is the teacher's engagement during the work from home period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V7 is −0.207, V8 is 0.158, and V9 is 0.044. It states that V8, i.e., "**Involvement in the community engagement activities during this pandemic**," has the highest influence on the criterion variable, whereas V7, i.e., "**Pandemic is going to impact the overall academic cycle of the institute**," has the least influence on the criterion variable, i.e., "**Working Style**" (Table 3.4).

The output furnishes the following regression model:

$$V13 = 2.725 + 0.087V11 + 0.216V12$$

where V13 is the teacher's engagement during the work from home period.

Table 3.3 Regression analysis for working style with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	4.041	0.501		8.060	0.000
	V7	−0.173	0.108	−0.207	−1.611	0.112
	V8	0.127	0.105	0.158	1.202	0.234
	V9	0.035	0.102	0.044	0.342	0.734

[a]Dependent variable: V13

Source: SPSS output

Table 3.4 Regression analysis for job enrichment with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	2.725	0.544		5.014	0.000
	V11	0.087	0.130	0.088	0.669	0.506
	V12	0.216	0.117	0.243	1.852	0.069

[a]Dependent variable: V13
Source: SPSS output

Table 3.5 Regression analysis for job involvement with respect to teacher's engagement

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	3.679	0.538		6.833	0.000
	V1	0.292	0.114	0.313	2.575	0.012
	V5	−0.093	0.122	−0.093	−0.763	0.448

[a]Dependent variable: V13
Source: SPSS output

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V11 is 0.087 and V12 is 0.216. It states that V12, i.e., "**Security in the current job role during this pandemic**," has the highest influence on the criterion variable, whereas V11, i.e., "**Lockdown period can be utilized to increase the API score**," has the least influence on the criterion variable, i.e., "**Job Enrichment**" (Table 3.5).

The output furnishes the following regression model:

$$\mathrm{V13} = 3.679 + 0.292\,\mathrm{V1} + \left(-0.093\right)\mathrm{V5}$$

where V13 is the teacher's engagement during the work from fome period.

We know that the standardized regression coefficients (beta) is a measure of how strongly each predictor variable influences the criterion variable, and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

The model reveals that the beta value for V1 is 0.313 and V5 is −0.093. It states that V1, i.e., "**Time spent on taking online classes**," has the highest influence on the criterion variable, whereas V5, i.e., "**Teacher should constantly be in touch with their students**," has the least influence on the criterion variable, i.e., "**Job Involvement**."

3.5 Conclusion

The swift changeover from a physical classroom to virtual classroom was altogether a new experience for the teachers. Even very experienced teachers have also experienced the cultural shock in terms of physical world to digital world. The thirst of learning digital tool for survival in the digital era is the need of the hour.

Engaged employees always work harder, and they are more likely to go above the requirements and expectations of their work (**Lockwood,** 2007). This pandemic has proved the teacher's engagement only made it possible for students, administration, parents, and all other stakeholders to cope up with the digital world.

They have learned to use different online platforms like Zoom, Microsoft Team, Google Meet, Google Classroom, Moodle Learning Management System, etc. to make the learning environment easy for the students. They are not only keeping themselves engaged, rather the efforts are also toward the engagement of students as well through online assignments, taking online tests, conducting webinars, conducting online projects, providing training, engaging students with different leisure activities like skit, song, poem, video making, poster making, etc.

Apart from teaching their students, teachers were constantly engaged by attending online faculty development programs (FDP), some are also developing online courses, writing good research articles, etc. Teachers have faced a lot of challenges while during their work from home period mainly student's mindset, poor network connection in remote areas, the work life balance, lack of digital gadgets to attain the online classes, etc.

Through this study, the researchers have tried to find out different factors which are responsible for teacher's engagement. Using exploratory factor analysis, it was observed that the following component factors such as academic flexibility, working style, job enrichment, and job involvement influence teachers' engagement. Higher education institutes can focus on the above-mentioned factors which can keep teachers more engaged into their basic job role of teaching with a new pinch of digital flavor into it. Further initiatives such as providing the teachers opportunity to contribute for the overall development of the organization, providing opportunity for the interested teachers to contribute for community development, providing job security, and facilitating them so that the teachers can teach in an online environment can be implemented to make the teachers more engaged. The mentioned engagement factors will help in building a cohesive environment in the new normal era, even if the pandemic may end soon, but the existence of online teaching learning environment is going to co-exist.

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Chapter 4
Business Continuity in COVID-19 Pandemic: A Global Review

Aon Waqas

4.1 Introduction

The global forces, pressures, and pandemics are continuously demanding to the firms to ensure the continuity of their businesses, thus business continuity has become an interesting matter to overcome the negative impact of global epidemics (KPMG, 2006). There is a management process that considers the continuous functions and operations of the business. The continuity of firm business operations is critical for the survival of an enterprise in the condition of a global crisis because of the risk factors of a global pandemic like COVID-19 (Randeree et al., 2012). An approach that confirms the business continuity plan (BCP) is known as business continuity management (BCM).

BCM is a strategy to make certain the capabilities of the business to execute its functions in a virulent disease like coronavirus (COVID-19). The epidemic of COVID-19 has disrupted business throughout the world by crashing the global economy. All categories of business corporations including small and medium enterprises (SMEs) have to deal with different types of issues in their continuity of business functions (Merchant et al., 2018). The global economy principally reports issues about trade, demand, and supply of products and services in global markets to achieve business orders of dedicated customers in time (Sikich, 2018).

BCM (Gibb & Buchanan, 2006) is a tool that may be applied to provide a high level of confidence to the business firm and business community about the business continuity process and services that should be delivered by proper BCP (Pheng et al., 2010) that can play an important role for the creditability of firm even in the timing of a global pandemic like COVID-19.

The cirmucstances of the COVID-19 circumstances that businesses are facing the substantial impact of the global pandemic outbreak. Business organizations are

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reliant upon smooth continuity of their business operations in normal and especially in epidemic days to satisfy their customers with an appropriate channel of demand and supply of mandatory products and services (Koonin, 2020).

The products and services of any business are the sustenance for business continuity that has been influenced globally by the outbreak of coronavirus (COVID-19). The recent reports of the United Nations Conferences on Trade and Development (UNCTD). Zhan (2020) considers the business continuity process of every type of economy including developed economies like the USA and China (Oldekop et al., 2020) and developing economies like Pakistan and India (Djankov & Panizza, 2020). International Chamber of Commerce (ICC) provides guidelines for business continuity that are being reviewed in detail in the next section of this chapter (Alao & Gbolagade, 2020).

Figure 4.1 is communicated by ICC in its published guideline-based report. This picture indicates the impact of COVID-19 on business continuity. This figure also declares how COVID-19 restricts the customers to approach the business corporation for products and services, etc. The above picture of ICC has a good point too that every official member of a business firm may perform his duties online and every customer can order any available item with the help of technology.

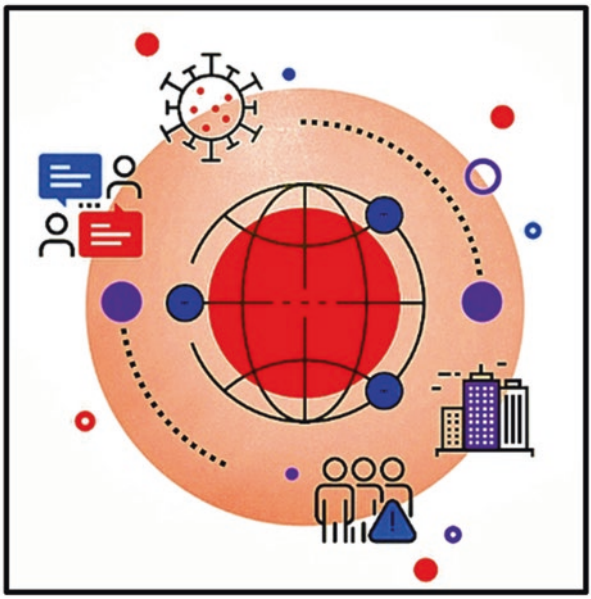

Fig. 4.1 Impact of coronavirus on the global business markets. (**Source**: https://iccwbo.org/publication/covid-19-business-continuity-guide/)

4.1.1 Objectives

This chapter has been written to fulfill the following key objectives:

1. To illustrate the economic consequences of the COVID-19 pandemic in global business markets.
2. To explain the principles of the ICC about business continuity management in the COVID-19 situation.
3. To describe the business issues of globally developed economies in the COVID-19 pandemic.
4. To describe the issues of developing economies in the business continuity in COVID-19 pandemic.

4.1.2 ICC Principles for Business Continuity Management in COVID-19: PAMA

Business continuity plays a significant role for the global economy in pandemic diseases like COVID-19, but this is not an effortless task to perform business operations in the epidemic for the firm management and employees in the public market to facilitate the customers at a possible level. Meanwhile, a proper route map is needed for the continuity of business operations even in global pandemic such as COVID-19. ICC takes an initiative in this regard by providing guidelines to the business community. These guidelines are known as PAMA principles including Plan, Adapt, Monitor, Assess.

PLAN will insure less disturbance and more flexibility in your business continuity according to the pandemic.

Figure 4.2 is extracted from the shared report of ICC about business continuity in COVID-19. This figure shows the first principle of ICC know as plan. Figure 4.2 states the important points about the plan.

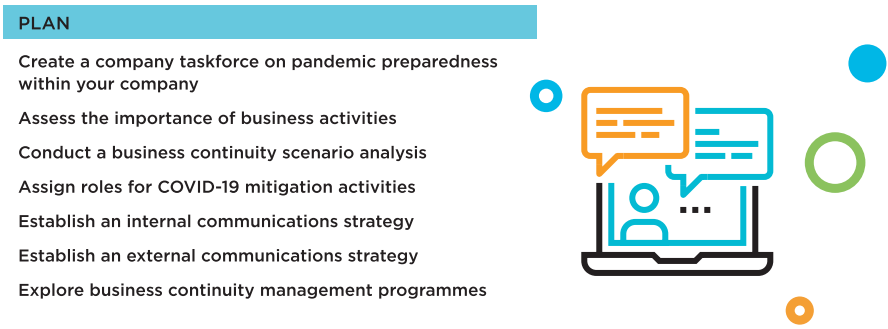

Fig. 4.2 The first principle of ICC: plan. (**Source:** https://iccwbo.org/publication/covid-19-business-continuity-guide/)

1. Plan to create the task force to prepare its employees for an epidemic situation.
2. Plan to continue the business operations in an epidemic condition.
3. Plan to conduct business continuity analysis.
4. Plan to conduct internal and external communication in an epidemic situation.
5. Plan to explore a business continuity management program in an epidemic condition.

ADAPT is essential for operations of the business to ensure step-by-step business continuity after the settlement of the desired plan.

Figure 4.3 is extracted from the shared report of ICC about business continuity in COVID-19. This figure shows the second principle of ICC know as adapt. Figure 4.3 states the important points about adapt.

1. Adapt to protect your taskforce in COVID-19.
2. Adapt to finalize home-based working mechanism in COVID-19.
3. Adapt to maintain cash and capital in COVID-19.
4. Adapt to monitor demand and supply risk in COVID-19.
5. Adapt to select an appropriate business location in COVID-19.

MONITOR means that after the development of a suitable plan and adapt for business continuity, the responsibility of the business management is to monitor every aspect of government support for your business and employees to perform the business operations in a pandemic situation.

Figure 4.4 is extracted from the shared report of ICC about business continuity in COVID-19. This figure shows the third principle of ICC know as monitor. Figure 4.4 states the important points about monitor.

1. Monitor the pandemic situation to observe the service change.
2. Monitor the availability of transportation for employees and customers in pandemic conditions.
3. Monitor the fruitful suggestion about business continuity in the pandemic situation.
4. Monitor the announcement of the government grant for business in pandemic condition.

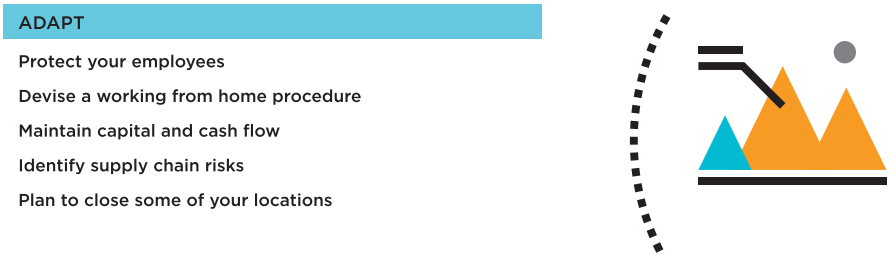

Fig. 4.3 The second principle of ICC: adapt. (**Source**: https://iccwbo.org/publication/covid-19-business-continuity-guide)

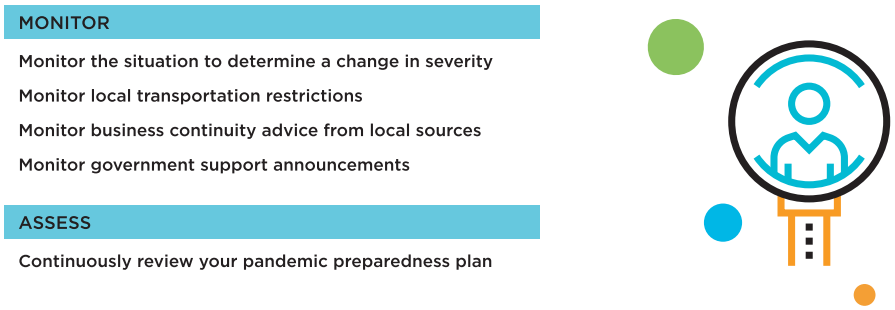

Fig. 4.4 The third and the fourth Principles of ICC: monitor and assess. (**Source**: https://iccwbo.org/publication/covid-19-business-continuity-guide)

ASSESS covers the surety of your COVID-19 plan, adapt, and monitoring process on the necessary basis for the betterment of your business operations in such a pandemic.

Figure 4.4 is extracted from the shared report of ICC about business continuity in COVID-19. This figure shows the fourth principle of ICC know as assess. Figure 4.4 states the important points about assess.

1. Assess to review the above-stated principles especially whether the prepared plan is being adopted and monitored or not.

4.2 Literature Review/Background

All economies of the world have to face the COVID-19 pandemic outbreak regardless of a developed or developing economy (Maria et al., 2020). The stock markets of the USA, China, Pakistan, and India have experienced disturbance especially in planning for business continuity in a pandemic situation.

If we assume that the COVID-19 does not lead to even crush the financial systems by stabilization of growth with developed business continuity process for well-established business due to proper application of global technology financial system, issues still stand same as before for in-process business continuity to shift on the technological business process (Ostapets et al., 2020).

The globally strong economies such as the USA has already been shifted to advance business continuity management because of well planning and availability of the best technology. The USA is being recovered even after hard shocks of the COVID-19 pandemic, but still, the situation is uncertain because cases are being reported due to the second wave of COVID-19 as compared to the first shift of COVID-19 in the world (Fig. 4.5).

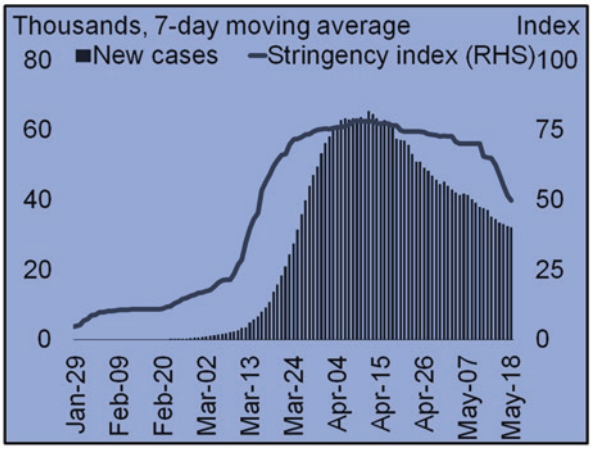

Fig. 4.5 Weekly reporting cases in the USA: 7-DMA. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

The foreign policy experts of the United States including Kissinger (2020) state that the COVID-19 pandemic outbreak for business financial operations is different from the financial crisis of 2008, the reason is that coronavirus threatens to "set the world on fire and disrupt the global economic order" while to differentiate COVID-19 from that financial crisis in 2008, different important technological ways so far have been introduced and being adopted to cover-up despite a global pandemic known as COVID-19 discontinues the business operations among major and minor economies all over the world (Schindler et al., 2020).

Figure 4.5 shows COVID-19 cases that were being reported in the USA. The 7 days moving average method is adopted to present several patients with coronavirus. This chart-based picture shows the start of the first wave of COVID-19 from China on December 2019 and then the spread of an epidemic all over the world including the USA in January 2020.

The population of the USA observes the symptoms of coronavirus in the year 2020; in January, the reporting cases rate was a little bit slow, and this rate was being high from February to March 2020. Figure 4.5 shows the peak of reported cases in April 2020 but with a good indication, high reporting ratio went low down after April onwards as per sample papulation and random days after stricken follow-up of SOPs.

4.2.1 Global Review

The influence of COVID-19 on the global economy can be verified from lockdown situations around the world especially restrictions on labor mobility, ban to travel, and most important shutting down of business operations and slowdown in economic continuity.

Coronavirus (COVID-19) was declared as a global pandemic by the World Health Organization (WHO) in December 2019, and the first wave was confirmed between February and March 2020 all over the world (Economics, 2020). Coronavirus mostly reflected the GDP growth by 2.3–4.8% (Park et al., 2020), and COVID-19 may cause the Foreign Direct Investment (FDI) by 5–15% shrinking (Jaworek et al., 2020).

Meanwhile, according to the recent reports of ILO (International Labour Organization), 25 M people around the world could go unemployed (Khanna, 2020). COVID-19 will have more impact in developing countries as compared to developed countries of the world, which will be too much difficult for developing economies to plan effective business continuity plan in a limited time and unlimited constraints (Valensisi, 2020).

Furthermore, constraints may be like a poor health system, imbalance in trade, the high burden of international debt, and unstable capital flow (Bangladesh Bank, 2004). This is being expected for a high rate of unemployment and inflation in developing economies while this is quite clear that the situation may go worse due to $220B income losses in developing countries according to United Nation Development Program (UNDP) (Mission, 2020).

This chapter considers case studies of the USA and China as globally developed economies while covers Pakistan and India as developing economies of the world to discuss the background and global literature review regarding business continuity in COVID-19.

4.2.1.1 The USA

The outbreak of the COVID-19 pandemic in the USA has collapsed the activity level of production and service sectors unprecedently as compared to the global financial crisis before the pandemic of coronavirus while in the United States, unemployment is being raised every week, as well as business continuity for sale and purchase of consumer products has fallen very quickly in such a global pandemic along with prices of oil in the USA, and the global oil market has put an impact on investment pattern for business continuity of oil sectors in the world including the USA (Figs. 4.6, 4.7, and 4.8).

Figure 4.6 shows the reduction of workers, a reduction in working hours of laborers and taskforce respectively in different departments that provide regular services on the spot, mainly beauty and personal care, food and beverage, entertainment, and professional services department. While, as we know that COVID-19

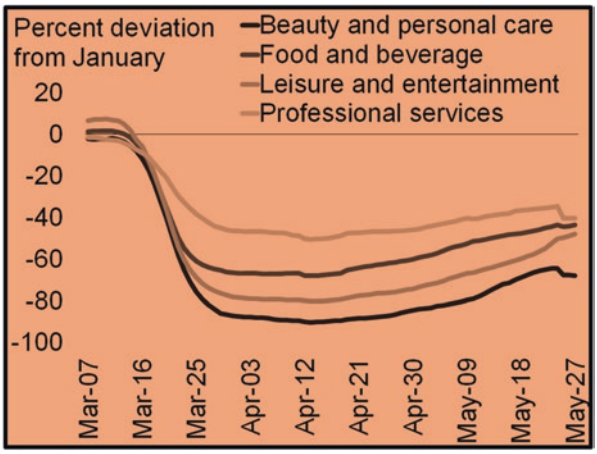

Fig. 4.6 Reduction of labor in the USA in different sectors. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

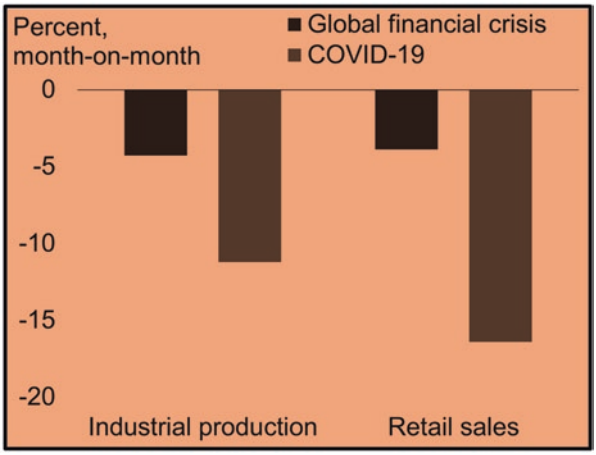

Fig. 4.7 Comparison of financial crises and COVID-19 with production and sales of the USA. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

affected the population of the USA from January 2020 after reporting of cases in China from December 2019.

The cases of COVID-19 are reported in the USA with symptoms the public and service providers limit themselves at home for isolation and go outside even with no presence at the workplace (Fig. 4.6). The observations are available in the above figures collected from four different departments where people go the most even in a hard time. Figure 4.6 confirms the reduction of the taskforce available in the sample four sectors from January 2020 to May 2020, which indicates that almost

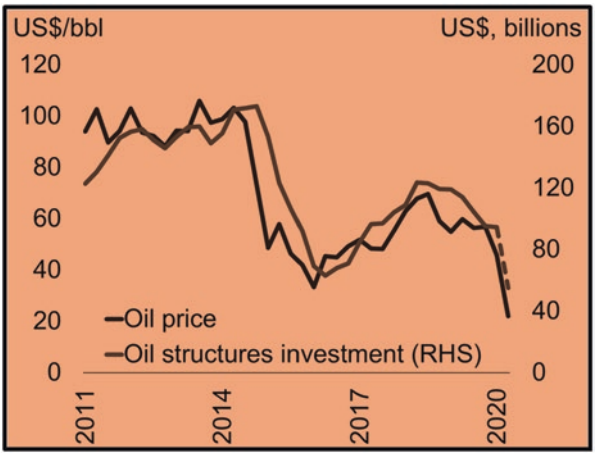

Fig. 4.8 Comparison of oil prices and investment in oil structure of the USA. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

20%–80% of laborers decide to rest at home rather than to go for the work is such an epidemic situation.

Figure 4.7 presents a comparison of the effects of global financial crises especially about FC-2008 and COVID-2019. To compare the effects of FC-2008 and COVID-2019, the sample data is taken for industrial production and then retail sales of the USA. Figure 4.7 indicates that industrial production of the USA decreased by 1–4% in FC-2008 while retail sales deducted at the same rate in FC-2008. Furthermore, the figure states the interesting story about the effects of COVID-19 on industrial production and retail sales in the USA. Figure 4.7 shows approximately 1–12% reduction in industrial production while 1–16% decrease in retail sales in the USA. In short, this comparison presses the bell of danger for the global economy including the USA till COVID-19 is going on.

Figure 4.8 presents the comparative effect of COVID-19 on oil prices and investment in oil sectors of the USA. This analysis indicates that there is a high rate of investment in the oil sector from 2011 to 2018 with a zigzag position of oil prices, but unfortunately, as COVID-19 affects the global economy, the prices of oil and its investment go down in 2019–2020.

The financial reserve of the USA is being reduced and almost near to ZERO while suitable measures have been taken for recovery to stabilize the financial system for continuity of business which is being operated inside or outside the boundaries of the USA with the direct and indirect association toward global economic phenomena under the consequences of COVID-19.

The government of the United States provides $3 trillion for economic recovery by business continuity management while including $1 trillion for business debt but the expected GDP is 6.1% in 2020 due to the first wave of COVID-19 as a global pandemic by the World Health Organization (WHO).

4.2.1.2 China

The economic outlook by the World Bank in COVID-19 for China states that private consumptions and nonfinancial services to the customers for the business continuity management have been hardly hit by such global pandemic, imbalance in trade due to fewer exports as compared to import, as a result of discontinuity of factories while business operations are being normalized gradually in terms of regular business continuity online process with the help of technology in Chinese markets.

However, Chinese business firms have to face discontinuity in demand and supply chain management to deliver the products and to offer the services in the local and global market (Fig. 4.9) (Bangladesh Bank, 2004).

For comparison and to check the after-shocks of COVID-19 on China's industrial business, Government's revenues, and its profits. Data is extracted from a 100 index for the period of 1 year from January–April 2019 to January–April 2020. Figure 4.9 analyzes that profits and revenues of the Chinese industry and government were 100 indexes before the novel of COVID-19 (January–April 2019) but as the sample period near toward the spread of coronavirus in August–December 2019, the profits and revenues dropdown up to 80 from an index of 100. As the cases ratio increase and the epidemic goes out of control globally index of 100 declines 10–15 index more in January–April and reports roundabout 70 for profits at the end of the sample period but revenues of the government show betterment because of effective policies and saving of resources for future.

The government of China has followed the best fiscal and monitory policies to cover up the hurdles of the COVID-19 pandemic outbreak by providing liquidity back-up for business continuity in new or expansion in old ones, tax relief, a grant

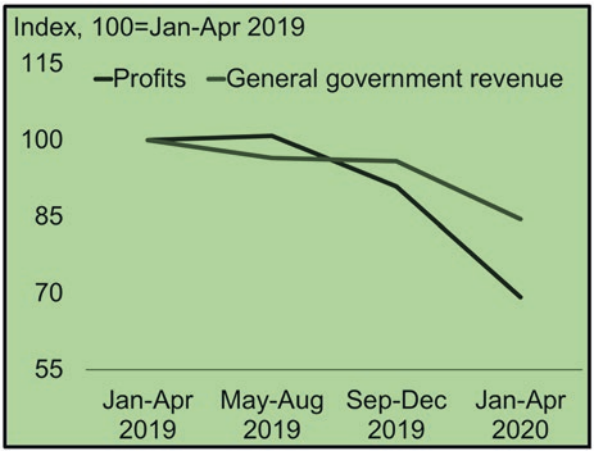

Fig. 4.9 Industrial profits and government revenues of China in COVID-19. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

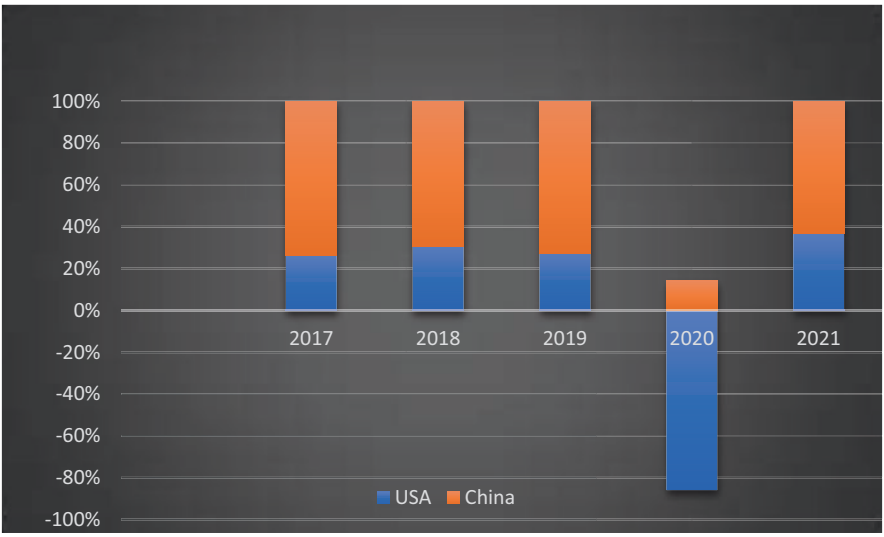

Fig. 4.10 GDP analysis from 2017 to 2021 of the USA and China in percentage. (**Source**: https://www.worldbank.org/en/publication/global-economic-prospects)

of 2.8% of GDP for health and other welfare and issuance of local, central, and special bonds at the rate of 2.6% of GDP (Sarmadi et al., 2020).

Furthermore, in a comprehensive economic analysis by the business experts of the world, considering the major hurdles of COVID-19 global pandemic, the growth of China is expected to be at the rate of 6.9% for 2020–2021 but depends on recovery from such pandemic in time because of, wave after wave of COVID-19 in all over the world over time (Fig. 4.10).

For this purpose, data is extracted from the website of World Bank from 2017 to 2021.[1] Figure 4.10 shows a better economic position in terms of GPA% from 2017 to 2019 but as per the rapid increase in reported cases of a novel coronavirus in 2019–2020, the GDP of both sample countries decline with a bad indication while interestingly GDP of China is better with +10%. The USA's GDP went in the worst position by declining by almost 80% as compared to China's GDP. According to the report of World Bank for 2020–2021, improvement is being expected as per policies and approvement of incentives for stock markets of sample countries (Fig. 4.10).

4.2.1.3 Pakistan

The outbreak of the COVID-19 pandemic has affected the global economies including Pakistan. Many business organizations of Pakistan have to face a variety of issues such as disruption in demand and supply chain, imbalance in exports and

[1] GDP in 2021 is expectedly for future prediction.

imports of business products due to cancelations of local and international trade orders (Asghar et al., 2020).

The above-stated situation indicates that business firms of Pakistan are experiencing the significant impact of coronavirus (COVID-19) disease on business operations continuity. Pakistan's business stakeholders accept that SMBEP (Small and Medium Business Enterprises of Pakistan) are major victims of such a global pandemic due to lockdown in Pakistan for 2–6 months with limited continuity of business operations (Shafi et al., 2020).

SMBEP is the backbone of the economy of Pakistan because there is too much unemployment in Pakistan, and this SMBEP provides job opportunities as a 40% contribution to GDP with 40% earning from exports of Pakistan (Bangladesh Bank, 2004).

According to the Finance and Statistics department of Pakistan, the Finance sector provides 1.50% of job opportunities. The electricity and gas sector provide 2.00%, the education sector provides 3.30%, and the health department provides 19.60% job opportunities for the public of Pakistan (Fig. 4.11).

Data and information are presented in Fig. 4.11 that most of the Pakistani population works in the agriculture department at the rate of 87.80% and almost 70% of people are associated with trading activities while so on. The purpose of such a presentation is to testify the unemployment rate in Pakistan. The public of Pakistan is losing their working/job opportunities day by day due to the outbreak of the COVID-19 pandemic at the national and international levels.

In the last week of December 2019, pandemic disease cases were being reported, and after that WHO proved with reasons, because of a global pandemic due to the

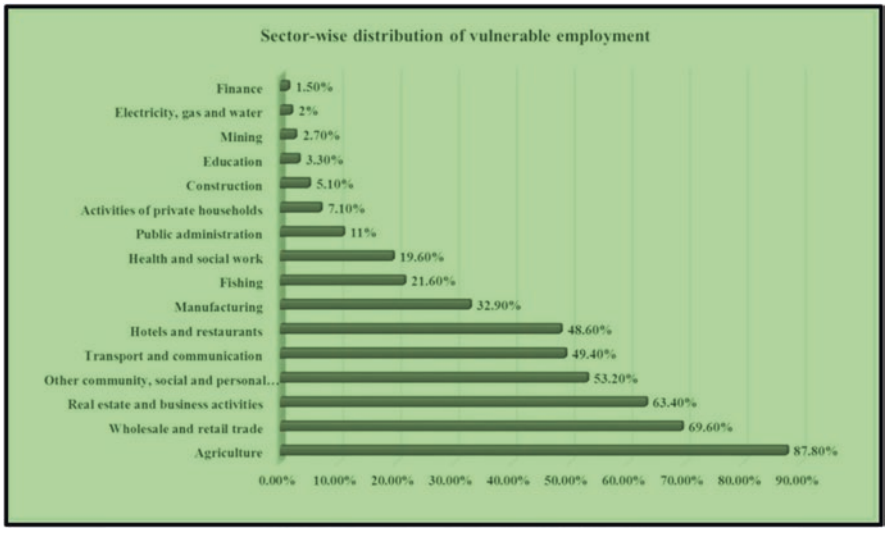

Fig. 4.11 The sector-wise employment rate in Pakistan. (**Source:** www.google.com & employment trend report by Sohail (2019))

coronavirus (COVID-19). WHO confirmed the alarming situation and declared PHE (Public Health Emergency) in January 2020 (Chatterjee et al., 2020).

In Pakistan, the cases of COVID-19 were reported and confirmed in February–March 2020 and so on, then there was an announcement of full lockdown for every sector while thereafter, on the demand of the business community of Pakistan demanded limited or smart lockdown by considering business continuity in Pakistan's markets (Fig. 4.12).

The first quarter of 2020 reported almost 43% of cases in Sindh province that was a high rate among the reporting cases in Pakistan. Gilgit (GB) and Kashmir (AJK) show a very low rate of reporting cases with around about 1.8% and 1.9% respectively. Figure 4.12 also confirms 34% of cases of COVID-19 in Punjab province, 32% in Khyber (KPK), and 12% in Balouchistan province of Pakistan accordingly.

Pakistan is a developing economy of the world and has been reported that Pakistan lost one third of its revenues and 50% decrease in its exports due to a lockdown situation to control the spread of the COVID-19 pandemic (Shafi et al., 2020). Financial analysts and the World Bank warn Pakistan about the recession period for business activities due to lockdown strategies in the COVID-19 pandemic (PSDP, 2020).

The real GDP growth of Pakistan for the FY2020 is expected to shrink by 1.3% as per the World Bank reports in COVID-19 for developing economies (World Bank, 2020b). The effect of complete and partial (smart) lockdown in Pakistan especially for business continuity in online as well as physical terms (Hussain, 2020).

Pakistan's textile, manufacturing, food, beverage, the tobacco industry, and other sub-sectors associated with these industries have to face and still are facing a

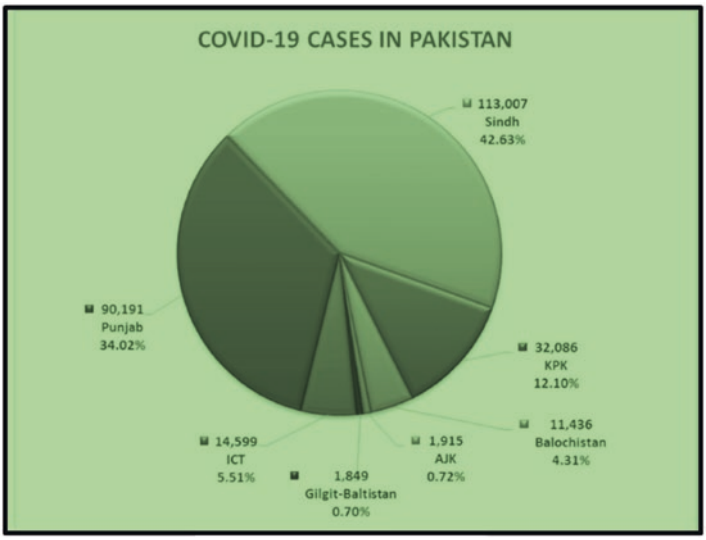

Fig. 4.12 Province-based reporting cases of COVID-19 in Pakistan. (**Source**: www.google.com)

reduction in business activities (Fig. 4.13) especially for exports at a massive level (World Bank, 2020b). Business firms associated with Pakistan are strictly trying to follow SOPs for the COVID-19 pandemic outbreak by bearing the extra cost for masks, gloves, and sanitizers for their safety and the safety of their customers (Umer & Khan, 2020).

According to the available information in Pakistan that is presented in Fig. 4.13, small and medium enterprises (SMEs) have to face a bundle of burdens such as 6% reduction in the labor force because of an epidemic. COVID-19 affects 48% of the supply chain and 33% of the transportation channel of Pakistan. The financial sector of Pakistan has affected much than others in the COVID-19 pandemic with roundabout 70% while 44% reduction in demand for products and services negatively impacts production 24%, sales 58%, and profits 42% accordingly.

The currency of Pakistan, PKR in terms of USD, has been devalued which is another threat for the business community associated with PSX in the outbreak of COVID-19 pandemic globally and especially in Pakistan (Chohan, 2020).

After all, the above-stated facts and figures show that Pakistan, among the developing economies of the world, may suffer much more until COVID-19 is defeated all over the world. The financial-economic impacts of coronavirus on the globe including Pakistan will leave "deep scars."

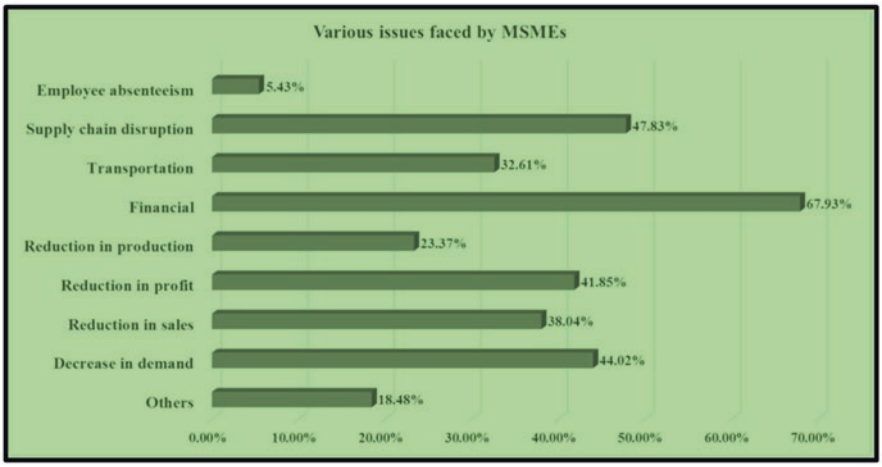

Fig. 4.13 Issues faced by business firms during COVID-19 in Pakistan. (**Source**: www.google.com and (Shafi et al., 2020))

4.2.1.4 India

The COVID-19 pandemic is constantly growing in global developing economies including India. The adverse impact of coronavirus on the economic growth of India may probably very serious for the Indian economy if such a pandemic does not come in control of India.

GDP growth of India for the present economic condition under the shadow of COVID-19 is expected to decline by 4.8% according to the recent reports of the United Nations (UN) for 2020. The UN Economic and Social Survey of Asia and Pacific 2020 report that COVID-19 would have socioeconomic consequences in the areas of especially tourism, power, trade, and other financial association of India even across the borders (United Nations, 2020).

The economic survey 2019–2020 provides indications for the real GDP of India at a rate of 5% as compared to GDP growth in 2018–2019 at the rate of 6.8% and so on (Fig. 4.14) which confirms decline due to outbreak of COVID-19 pandemic in India. The National Statistics Office (NSO) declared revised estimates (RE) about GDP growth quarterly, from 8.0 to 7.1% (first quarter), from 7.10 to 6.2% (second quarter), and from 6.2 to 5.6% (third quarter) respectively while economists estimated decline in GDP with 400 BP (1.6%) due to the only lockdown for 3 weeks in India (Chaudhary et al., 2020).

Mr. Yashwant, former Finance Minister of India, shared his analysis by stating that the estimated cost of lockdown for 21 days in India would bear a decline in 1%

Table 1. Growth of GVA and GDP at Constant Prices (2011–2012) Percentage

	2017-18 1st RE	2018-19 PE	2019-20 1st AE	Percentage Points Change in growth rate in 2019-20 over 2018-19 (Increase(+)/ Decrease(-))
GVA at basic prices	6.9	6.6	4.9	–1.7
Agriculture and allied sectors	5	2.9	2.8	–0.1
Industry	5.9	6.9	2.5	–4.4
Mining and quarrying	5.1	1.3	1.5	–0.2
Manufacturing	5.9	6.9	2	–5
Electricity, Gas, Water, supply and other utility services	8.6	7	5.4	–1.6
Construction	5.6	8.7	3.2	–5.6
Services	8.1	7.5	6.9	–0.7
Trade, Hotel, Transport, communication and services related to broadcasting	7.8	6.9	5.9	–1
Financial, real estate and professional services	6.2	7.4	6.4	–1.1
Public administration, defence and other services	11.9	8.6	9.1	–0.5
GDP at Market Prices	7.2	6.8	5	-1.8

Fig. 4.14 GVA and GDP growth % of India, sector-wise for 2017–2020. (**Source**: www.google.com & Economic Survey Report by the National Statistic Office, India)

BP in GDP but if COVID-19 impacts as is going on wave wise may decline GDP by 2% in basis point in future in growth rate for 2020–2021.

Gross value added (GVA)- and gross domestic product (GDP)-based analysis of India is presented in Fig. 4.14. GVA and GDP are taken into 3 lag for 2017–2018 (before COVID-19), and this period is added only for factual information. For analysis purpose, the year 2018–2019 to 2019–2020 (within COVID-19) are considered. According to the information available at the website of the National Statistic Office of India (NSO), GVA was added by agriculture by 6.6% in 2018–2019 (before pandemic) and 4.9% in 2019–2020 (pandemic period). GVA of the agriculture sector indicates a 1.7% difference because of COVID-19 and so on.

Figure 4.14 shows that the GVA of the Indian manufacturing sector was very impressive in 2018–2019 by almost 7% but as the cases of COVID-19 reported including all the above sectors especially including this sector had to face a huge difference of 5% by dropping its value from 6.9 to 2% in 2019–2020 and so on. According to Fig. 4.14, the GVA of the construction industry has to consider a major influence of −5.6% due to lockdown situation and shortage of labor force in the epidemic period of 2019–2020, but good information is also available in Fig. 4.14 that is continuity of trade and hoteling with a difference of only 1% because of SOPs and take away policy of India and so on. The capital markets of India have to face many issues; even Foreign Portfolio Investors (FPIs) have withdrawn their invested amount near 250B from equity and 140B from debt market due to worst economic decline in a pandemic situation in national and international stocks markets respectively while because of this INR will be depreciated as compared to USD in the coming days.

The SMEs of India create almost 90% of jobs by providing employment opportunities to 115 M out of the total population with a 30% contribution to the GDP of India (Sipahi, 2020). Indian SMEs have to pay loan payments on a monthly or yearly basis, but because of COVID-19, the business operations of SMEs are disrupted in India while the cash cycle of SMEs is disturbed in a lockdown situation in Asia especially in India. The government of India will have to manage funds for SMEs because of restricted capital flow globally (Fig. 4.15).

Private consumption and government consumption are taken as total consumption of India to consider all sectors while the formulation of capital and trade balance of exports and imports have considered for investment need in India. Consumption and investment are compared in Fig. 4.15 to find the impact of COVID-19 on business continuity in India. Data and information are collected from the official reports and website of NSO-India for the period of 4 consistent years in three lags. In the year of 2017–2018, how much amount has been consumed and saved by India for the investment purposes from earnings before COVID-19 (Fig. 4.15). The second lag starts from 2018 to 2019, in that period COVID-19 came in China and then in the USA but not in India. The third lag is important because, in 2019–2020, coronavirus cases are being reported globally and especially in India.

According to Fig. 4.15 total consumption of India increased by 1.5% while a portion of government consumption is 0.7% and a portion of private consumption is 0.8% which shows private consumption is high in the pandemic of COVID-19 in

Table 2. Consumption and Investment Demand in India

	2017-18 Ist RE	2018-19 PE	2019-20 Ist AE	Percentage Points Change in growth rate in 2019-20 over 2018-19 (Increase(+)/ Decrease(-))
Total Consumption	70.0	70.6	72.1	1.5
Government Consumption	11.0	11.2	11.9	0.7
Private Consumption	59.0	59.4	60.2	0.8
Gross Fixed Capital Formation	28.6	29.3	28.1	-1.2
Net Exports	-3.2	-3.9	-2.8	1.1
Exports of Goods and Services	18.8	19.7	18.4	-1.3
Imports of Goods and Services	22.0	23.6	21.2	-2.4

Source: National Statistical Office. Year 2020. Consumption and Investment Demand.

Notes: RE—Revised estimates, PE—provisional estimates and AE—advanced estimates.

Fig. 4.15 Consumption and investment demand of India, sector-wise for 2017–2020. (**Source**: www.google.com & Economic Survey Report by the National Statistic Office, India)

India. Capital formation also declines during the epidemic due to the discontinuity of business in India by 1.2%.

Figure 4.15 shows a very worst balance of trade of India in the global pandemic of COVID-19. Before the pandemic, imports of India were 22.0 in 2017–2018 and 23.8 in 2018–2019 that meant an increase in imports by 1.8%, but during COVID-19, imports went down from 24 to 21 with a 3% difference because of no business activities, people being isolated during the lockdown.

On the other hand, the same condition is about exports that need to be improved for capital and to cover consumption. Before COVID-19, private and government sectors were consuming 18.8 on exports in 2017–2018 while 19.7 in 2018–2019. Before COVID-19 the exports of india were increasing with 1% that was good for India but as cases of COVID-19 report as exports goes in decline by 1.3% because of no business activities regarding demand of products and services other than the necessities globally including India.

4.3 Materials and Methods

An exploratory methodology is adopted to review the impact of the COVID-19 pandemic on the global business continuity management by reviewing the available recent and past studies about infectious diseases and business operations in such infectious pandemics including case studies, economic analysis videos, talk shows, business reports, business research work of literature, and papers, etc. (Shafi et al., 2020).

Business continuity has been selected as a dependent variable (DV) while COVID-19 pandemic has been chosen as an independent variable (IV) for this research-based chapter to cover up the economic issues (Mukherjee et al., 2020; Shafi et al., 2020; Kruger et al., 2020; Shafi et al., 2020; Jaworek et al., 2020; Zhan,

2020) in developed and developing economies of the world by selecting four major countries.

The USA and China are globally developed business countries, and as we know that there are some economic clashes between these two countries. India and Pakistan are too associated with each other in every success and failure in the economic terms being developing economies of the world. The economic world reports these countries especially for their economic progress because of their economic relationship. Such reasons make this research too interesting; that's why these countries have been chosen to represent the progressed and progressive global economies respectively. This may be the limitation toward this research unfortunately but according to available data and information, this is a suitable selection for this research to cover both types of economies in a preferable time frame for global review.

The data is extracted from different websites according to the specific review-based methodology including finance and statistics department of the sample developed and developing economic countries, websites of the World Bank, Asian Development Bank, United Nations, World Health Organization, and especially the official website of International Chamber of Commerce along with stock markets of sample countries (Bloom et al., 2005).

Research studies have already been done for the business continuity management in a pandemic situation based on the growth analysis model with equilibrium analysis for demand and supply chain management as an important factor of the business continuity management regardless there is a global pandemic situation or not (Karlsson et al., 2013).

Many variables can be adopted for economic analysis in pandemic like COVID-19. Economic projections are linked with forecasting of impacts of pandemic diseases, in this study, the main focus is to determine the damages of COVID-19 in global business sectors like sales and purchase, imports and exports, poverty and inflation, smuggling and corruption, etc. with the help of proper implication of business continuity plan as per guidelines of International Chamber of Commerce (ICC-2020).

4.4 Conclusion, Recommendation, Limitation, and Future Research Direction

The first wave of COVID-19 pandemic arrived in the world when most of the economies were struggling for their economic betterment by business continuity on regular basis. The spiraling and pervasive COVID-19 pandemic has disordered the global business operations by unpredictable financial disruption. The global business SMEs understand how to continue business activities in the current magnitude of COVID-19.

Meanwhile, every financial crisis in pandemic disease brings almost different business opportunities by the development of proper and effective business continuity plans for the welfare of the business community, economy, and society.

COVID-19 pandemic has delivered an effective message in its first wave to the whole business world to adopt a well-developed business continuity plan with a proper framework for the prosperity of the global economy.

This study is conducted to examine the impact of the COVID-19 pandemic outbreak in the global economy including the USA, China, Pakistan, and India to confirm the business continuity with the current magnitude of coronavirus.

This study is also helpful for the policymakers in streamlining strategies to ease the burden of COVID-19 on a plan for business continuity for global economies including developed and developing countries.

This study also describes in detail the guidelines of the International Chamber of Commerce, United Nations, World Bank, and the World Health Organization to continue business operations with the strict following of SOPs with the help of technology for the safety of the customers.

Furthermore, this study covers the major hurdles in the business continuity process especially including the burden of debt, negative GDP growth, imbalance of trade, inflation, and unemployment, but the most important issue is the shortage of demand and supply of products and services that affect the exports of the global economy in business manners.

This chapter contributes to the growing global literature on business continuity in the COVID-19 pandemic in two ways: first, detailed discussion about PAMA developed by ICC for the guidance of the global business community against such global pandemic; and second, to quantify the economic consequences of the COVID-19 pandemic by estimating the financial damages to the global business continuity management.

These steps can be helpful for the analysis of economic policy concerns for specific sectors of specific countries but in the future, the researchers can conduct an empirical- or literature-based study by considering other than sample economies and sample sectors because this study is based upon case studies of USA, China, Pakistan, and Indian as developed and developing economies of the world.

This chapter covers only four global economies (USA, China, India, and Pakistan) for global economic review for business continuity according to the outbreak of the COVID-19 pandemic with its first wave economic effects. For future research studies, researchers may choose other developed and progressive economies of the world with the second wave of this pandemic.

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Chapter 5
Brand and Product Preferences Among Post-millennial Consumers During Act-of-God Periods

Chitralekha Sengupta, Amit Kundu, and Dev Narayan Sarkar

5.1 Introduction

For centuries, catastrophic events were considered "Acts of God" beyond the control of individual decision-makers (Guion et al., 2007). No prior pandemic, including the Spanish Flu, has distressed the economy as potently as the COVID-19 pandemic (Baker et al., 2020). The lockdown, because of COVID-19, presents an interesting opportunity to study brand preferences while respondents are living in an AOG period. It seems pertinent to build a conceptual framework for comparative studies on the purchase preference influencers of brands. Studies on brand preference (e.g., Prentice & Handsjuk, 2016) are plentiful in extant literature, but studies on brand preferences during periods of AOG may not be as numerous.

The primary objective of the present study is to conceptualize and validate a model for brand preferences during periods of AOG. The development of a framework for such brand preference may also add to the academic body of knowledge. Extant literature is used to conceptualize a model. The conceptual framework is used to conduct a study of post-millennials during the COVID-19 lockdown period in India. The data was, then, analyzed using structural equation modeling method, against the hypothesized model, to present a validated model.

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5.2 Review of Literature

5.2.1 Act of God

Smith (1776), the father of economics, highlighted "the invisible hand," which professes that everything that happens is an act of God. For more than three centuries, tort law has included the notion that an "act of God" is something caused naturally, beyond both man's anticipation and control (Fraley, 2009; Kittleson, 2020). The doctrine applied to bizarre manifestations of the forces of nature, including floods, tsunamis, cyclones, and hurricanes that have adverse social manifestations (Fraley, 2009; Zacher et al., 2021).

Morens et al. (2020) suggested that COVID-19 materialized as a "natural event associated with either direct transmission of a bat coronavirus to humans or indirect transmission to humans via an intermediate host such as a pangolin or another" (p. 957). While there has been speculation that claims that the virus has been man-made, the general scientific opinion maintains that the virus is a natural occurrence, an act of God.

5.2.2 AOG's Influence on the Marketing Mix

In the context of "Product," the fourth "P" in the marketing mix, it is claimed that the vacillations in commodities demand after natural disasters is often drastic and irregular (Nejad et al., 2020; Xu et al., 2010). Given the vagaries in the marketing mix during AOG, it is imaginable that the brand preferences of consumers may also change.

"Pricing" is not influenced, as marketers conceivably strive to maintain an image of fair-pricing, rather than being seen as exploiters (Cavallo et al., 2014; Wong, 2020).

Cavallo et al. (2014) analyzed the pricing and the supply aspects of marketing (the "place" element in the marketing mix) during the times of natural disasters. The daily trends of supermarket prices and product availability were studied following two natural disasters: the 2010 earthquake in Chile and the 2011 earthquake in Japan. In both the cases, there was an instantaneous and unrelenting effect on product availability (Cavallo et al., 2014; Rizou et al., 2020).

Corporate advertising has been suggested to be effective during times of AOG (Jiménez-Sánchez et al., 2020; Kim & Choi, 2014). Such advertising may have the purpose of countering the fake and spam messages that surge during times of natural disasters (Rajdev & Lee, 2015). Disaster relief organizations also employ advertising for charity disaster fundraising (Bennett & Kottasz, 2015). The preceding arguments cover the "Promotion" aspect of the marketing mix during AOG.

5.2.3 Brand Preferences During AOG

Key life events are found to change brand preferences among consumers (Mathur et al., 2003). Mergenhagen (1995) offered several examples of first-time brand preference decisions made during inflection points, like the periods of AOG. These life events create new consumption needs and are stressful because they create demand for readjustment (Mathur et al., 2003). While the studies deal with the changes in consumer behavior and brand preferences, because of stresses and life-changing events, the extant literature is silent about how brand preferences change during AOG, which arguably qualifies as stressful and life-changing (Knowles et al., 2020).

5.2.4 Brand Preference in Globalization Era

The globalization era and digitization era have caused significant alterations in the marketing world, which have changed the entire edifice of brands (Ďaďo et al., 2017; Kurebwa, 2020). Not only has it afforded a level playing field to the global brands across countries, but simultaneously, it has also enabled the development of numerous local brands in the market (Schuiling & Kapferer, 2004). This has heightened the level of competition among the long-established global players and the incumbent local players, who are struggling to endure and retain their position in the over competitive marketplace (Singh & Rustagi, 2018). Within the same product category, some consumers have dissimilar perceptions and approaches toward global and local brands.

5.2.5 Brands and Brand Preferences

The study by Ahmed (2014) recorded significant lack of correspondence between global brand and local brand preferences from the perspective of the developing country of Bangladesh. This implies that to compete with the global brands in a developing country, local brands must ponder over these factors while framing their marketing strategies. He and Wang (2017) found that when the local cultural constituents were within the framework of global brands, the acceptability rate among consumers improved considerably.

Existing literature has highlighted the fact that consumers in developed countries are highly ethnocentric, when compared with their counterparts in developing countries (Karoui & Khemakhem, 2019; Kurebwa, 2020). Sampaothong (2018) suggested that the various factors of brand equity responded positively to the formation of brand loyalty, they seemed to differ across the same product category in case of global versus local brands. Siddiqui et al. (2019) affirmed that customer satisfaction and customer loyalty are essential mediators for brand preference.

5.2.6 *Proposed Theoretical Framework*

The propositions, for consumers' purchase preference factors, are derived from the preceding literature review. The propositions are exhibited in Table 5.1 and depicted in Fig. 5.1.

The propositions, presented in Table 5.1, supported by citations and definitions, may be presented as the conceptual framework in Fig. 5.1.

Figure 5.1 presents a set of influencers that may be used for designing the questionnaire for the present study. Out of the 12 factors shown in Fig. 5.1, and presented in Table 5.1, the present study considers only five as the influencers of brand preference, namely brand loyalty, brand trust, brand knowledge, brand engagement, and brand evangelism, which are the elements in the brand preference framework suggested by Laroche et al. (2012). These five factors seem to be the principal

Table 5.1 The propositions in a tabular format

Proposition number	Variable name	Citations
P_1	Brand knowledge	Esch et al. (2006), Alimen and Cerit (2010), Driesener and Romaniuk (2006), Dutta (2012)
P_2	Brand trust	Brudvig (2015), Delgado-Ballester (2011), Alhaddad (2015), Rani and Suradi (2017), Soong et al. (2011)
P_3	Brand loyalty	Tabaku and Mercini (2015), Srivastava (2007), Cucea et al. (2010)
P_4	Brand engagement	Risitano et al. (2017), Fernandes and Moreira (2019), Pongpaew et al. (2017), Merrilees (2016), Ashraf et al. (2018)
P_5	Consumer ethnocentrism	Jain and Jain (2013), Siamagka and Balabanis (2015), Bawa (2004), Dogi (2015), Shimp and Sharma (1987)
P_6	Emotions	Richins (1997), Bagozzi et al. (1999), Martin et al. (2008), McDonald et al. (2011)
P_7	Word-of-mouth effect	Kardes et al. (2011), Solomon (2013), East et al. (2008), Hossain et al. (2017), Sweeney et al. (2012)
P_8	Brand evangelism	Becerra and Badrinarayanan (2013), Riivits-Arkonsuo et al. (2014), Riorini and Widayati (2015), Cestare and Ray (2019)
P_9	Affordability/price	Kotler et al. (2018)
P_{10}	Product category or product line	Kotler et al. (2018), Saxena (2009)
P_{11}	Environmental concerns/ environmental sustainability	Kotler et al. (2018)
P_{12}	Consumer culture	Firat et al. (2013), Sloth and Kjeldgaard (2018), Holt (2002), Featherstone (1990), Blackwell et al. (2006)

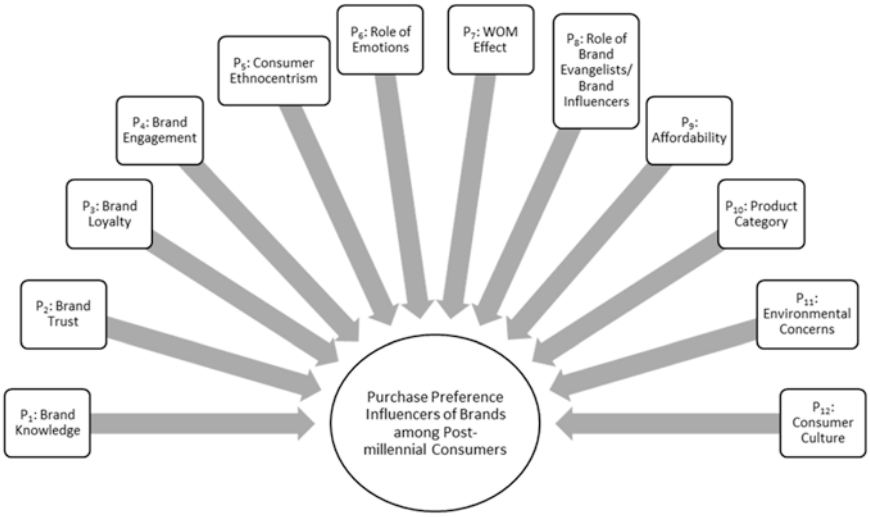

Fig. 5.1 Proposed conceptual framework for studying brand preferences. (Source: constructed as part of the present study)

determinants of brand preference (Leckie et al., 2016; Marticotte et al., 2016; Menidjel et al., 2017; Panda et al., 2020).

5.3 Research Objectives

To study the factors influencing the purchase preference of post-millennial consumers toward brands vis-à-vis local brands, a conceptual framework may be needed. The present study is an attempt to conceptualize such a framework, which may be used in comparative brand preference studies in different situations. The conceptual framework is then utilized to study the brand preferences during the times of AOG, against a pre-hypothesized model, specific to the lockdown period for COVID-19 in India.

5.4 Hypothesized Model

The hypothesized model is presented in Fig. 5.2, and the respective hypotheses are stated below:

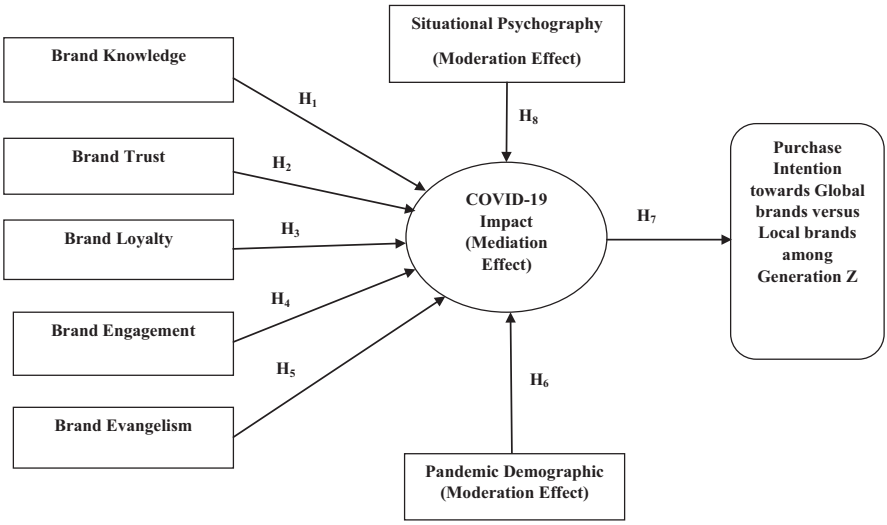

Fig. 5.2 Hypothesized model of brand preference during the times of COVID

5.5 Design of Study

A list of post-millennials was obtained from a college, where the range of courses ensure that the age of the students confirm with post-millennials. A limitation of this sampling frame is that the selected educational institute may not be completely representative of post-millennials.

Cochran's (1977) formula for infinite population was used to calculate the necessary sample size of 384, using a confidence level of 90% (corresponding *Z*-score is 1.64 and confidence interval is 0.1) and a *P*-value of 0.5. A random number table was used to select the 121 post-millennial students from the list available, to ensure at least a 90% confidence level. A total of 111 subjects filled in the survey on google forms.

The items selected for the questionnaire are mostly taken from constructs, which have already been validated by previous studies. Only the COVID-lockdown construct has been introduced as a fresh one in the present study. The constructs used (as also depicted in Fig. 5.2 and enumerated in Appendix A) are as follows: (1) Perceived brand globality (Batra et al., 2000); (2) Perceived brand quality (Keller & Aaker, 1992); (3) Perceived brand prestige (Han & Terpstra, 1988); (4) Brand familiarity (Oliver & Bearden, 1985); (5) Country-of origin perceptions (Jaffe & Nebenzahl, 1984); (6) Consumer ethnocentrism (Shimp & Sharma, 1987); (7) Likelihood of purchasing the brand (Dodds et al., 1991); (8) COVID lockdown, mediation box, new construct. Nine to ten statements for each of the above blocks of observable variables have been used in the questionnaire. Likert scale, with seven levels, was used to measure the responses to all the statements in the questionnaire.

Some of the statements have been reverse coded. The statements were randomized before the survey.

5.6 Analysis and Results

5.6.1 Exploratory Factor Analysis

EFA, with principle axis factoring method, as well as, Varimax rotation, is performed separately for each of the following seven groups (refer to Fig. 5.2 for the hypothesized groups): (1) brand knowledge, (2) brand trust, (3) brand loyalty, (4) brand engagement, (5) brand evangelism, (6) COVID impact, and (7) situational psychography. The group (Fig. 5.2) named "pandemic demographics" has not been found amenable to EFA the observable variables in this group have been used in the subsequent SEM. The single factor solutions explained the largest possible proportions of the total variances for each of the seven groups (Table 5.2) and showed a KMO evaluation of sampling adequacy that is higher than 0.9 in each case (Table 5.3). Kaiser-Meyer-Olkin (KMO) value should be above 0.60 for the sample size to be adequate for factor analysis (Hutcheson & Sofroniou, 1999). The significance of the chi-square for Bartlett's test is lesser than 0.001 for all the seven groups of data—so null hypothesis of no correlation is rejected and factor analysis is applicable in this case (Hutcheson & Sofroniou, 1999). Results from EFA, the items and their corresponding factors, are listed in Table 5.4, with low loadings below 0.50 suppressed (Fig. 5.3).

The seven groups of observable variables are, thus, reduced to seven corresponding latent factors named (1) brand knowledge (BR), (2) brand trust (BT), (3) brand loyalty (BL), (4) brand engagement (BE), (5) brand evangelism (BEvang), (6) COVID impact (CI), and (7) situational psychography (Situational Psychography).

5.6.2 Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was conducted using AMOS 23.0 in order to further test the validity of the items used in the survey instrument (Byrne, 2010).

The measurement model is set to have the number of latent constructs that were identified during EFA, and one factor per item was allowed. Indicators of goodness of fit have been calculated (presented in Table 5.4). The CFA diagrams, output from AMOS 23.0, with standardized estimates, are presented in Table 5.5.

A sample model fit for CFA of brand knowledge (BK) is explained here, and the rest are presented just as Table 5.5. A good model fit is indicated by the chi-square value (CMIN) of 112.592, $P < 0.001$, and degrees of freedom (DF) = 35 since the ratio of chi-square and the degree of freedom (CMIN/DF = 3.217) is less than 4

Table 5.2 Total variance explained for all EFAs

Brand knowledge							**Brand trust**						
	Initial eigenvalues			Extraction sums of squared loadings				Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %		Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	7.046	70.458	70.458	6.737	67.368	67.368	1	7.301	81.121	81.121	7.096	78.841	78.841
Brand loyalty							**Brand engagement**						
	Initial eigenvalues			Extraction sums of squared loadings				Initial eigenvalues			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %		Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	6.962	69.621	69.621	6.64	66.396	66.396	2	1.774	9.855	72.384	1.422	7.898	68.839
Brand evangelism							**COVID impact**						
	Initial eigenvalues			Rotation sums of squared loadings				Initial eigenvalues			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %		Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	1.013	16.885	79.226	0.669	11.155	68.57	1	1.014	6.34	67.655	0.655	4.095	60.863
Situational psychography							Extraction method: Principal axis factoring						
	Initial eigenvalues			Rotation sums of squared loadings									
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %							
1	1.021	25.515	67.66	0.255	6.376	41.52							

Table 5.3 KMO and Bartlett's tests for all EFAs

Brand knowledge			**Brand trust**		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.927	Kaiser-Meyer-Olkin measure of sampling adequacy		0.943
Bartlett's test of sphericity	Approx. Chi-square	1033.187	Bartlett's test of sphericity	Approx. Chi-square	1241.307
	Df	45		Df	36
	Sig.	0		Sig.	0
Brand loyalty			**Brand engagement**		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.931	Kaiser-Meyer-Olkin measure of sampling adequacy		0.922
Bartlett's test of sphericity	Approx. Chi-square	988.513	Bartlett's test of sphericity	Approx. Chi-square	2029.611
	Df	45		Df	153
	Sig.	0		Sig.	0
Brand evangelism			**COVID impact**		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.817	Kaiser-Meyer-Olkin measure of sampling adequacy		0.917
Bartlett's test of sphericity	Approx. Chi-square	383.615	Bartlett's test of sphericity	Approx. Chi-square	1152.61
	Df	15		Df	120
	Sig.	0		Sig.	0
Situational psychography					
Kaiser-Meyer-Olkin measure of sampling adequacy		0.474			
Bartlett's test of sphericity	Approx. Chi-square	67.524			
	Df	6			
	Sig.	0			

(Schreiber et al., 2006). Comparative-fit-index (CFI) is 0.910, which is a good fit (Byrne, 2010; Cheung & Rensvold, 2002).

Incremental fit index (IFI) is talso 0.911, which also indicates a good fit (Byrne, 2010; Cheung & Rensvold, 2002); Goodness of fit indicator (GFI) is coming at 1.000 which is a perfect fit (Byrne, 2010). Tucker–Lewis index (TLI) is 0.884, which also represents a reasonable fit (Byrne, 2010; Cheung & Rensvold, 2002) (Fig. 5.4).

5.6.3 Regression Imputation of the Latent Factors

As the next step, IBM AMOS 23.0 was utilized to conduct a structural equation modeling of the hypothesized model (Fig. 5.1) using the collected data.

Table 5.4 Factor matrices for all EFAs

Brand knowledge		**Brand trust**		**Factor matrix**	
	Factor		Factor		Factor
	1		1		1
BK2	0.908	BT5	0.942	BL9	0.907
BK9	0.903	BT1	0.921	BL6	0.861
BK10	0.882	BT3	0.918	BL2	0.844
BK7	0.863	BT6	0.914	BL4	0.834
BK1	0.833	BT2	0.902	BL3	0.83
BK3	0.798	BT7	0.9	BL1	0.824
BK6	0.796	BT9	0.829	BL7	0.824
BK5	0.785	BT4	0.828	BL8	0.802
BK4	0.719	BT8	0.828	BL10	0.708
BK8	0.69	**COVID impact**		BL5	0.688
Brand engagement			Factor	**Brand evangelism**	
	Factor		1		Factor
	1	CI11	0.851		1
BE8	0.871	CI13	0.821	BEV3	0.899
BE5	0.862	CI12	0.812	BEV4	0.797
BE6	0.851	CI6	0.794	BEV5	0.771
BE4	0.836	CI2	0.779	BEV2	0.754
BE3	0.831	CI1	0.743	BEV1	0.75
BE7	0.793	CI3	0.731	BEV6	0.526
BE11	0.781	CI16	0.726	**Situational psychography**	
BE10	0.745	CI15	0.714		Factor
BE9	0.724	CI14	0.714		1
BE15	0.706	CI5	0.685	SP2	0.863
BE14	0.686	CI8	0.653	SP4	0.806
BE2	0.681	CI7	0.566	SP3	
BE16	0.638	CI9	0.511	SP1	
BE12	0.631	CI10	0.504		
		CI4	0.543		

The latent variables were imputed using AMOS 23.0 using model-based regression imputation with each observed variable loading onto only one factor each, as confirmed using CFA (Byrne, 2010).

Model-based imputation created seven imputed variables corresponding to the seven factors validated through CFA, whose short and full names are: (1) brand knowledge (BR), (2) brand trust (BT), (3) brand loyalty (BL), (4) brand engagement (BE), (5) brand evangelism (BEvang), (6) COVID impact (CI), and (7) situational psychography (Situational Psychography).

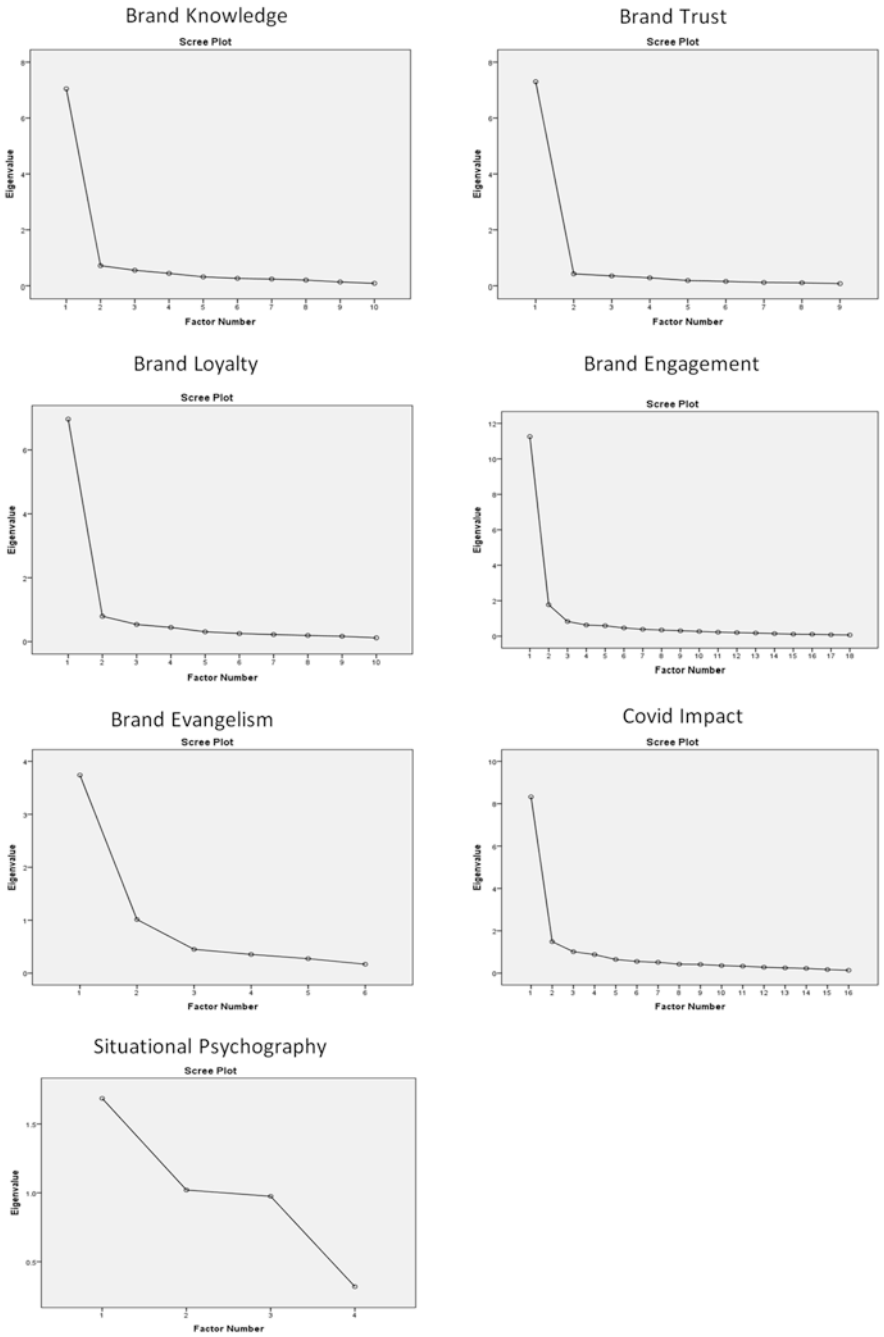

Fig. 5.3 Scree plots for all EFAs

Table 5.5 Goodness of fit indicators for all CFAs

Brand knowledge						**Brand trust**						**Brand loyalty**					
Model	NPAR	CMIN	DF	P	CMIN/DF	Model	NPAR	CMIN	DF	P	CMIN/DF	Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	20	112.6	35	0	3.217	Default model	18	84.97	27	0	3.147	Default model	20	127.7	35	0	3.647
Saturated model	55	0	0			Saturated model	45	0	0			Saturated model	55	0	0		
Independence model	10	907.1	45	0	20.158	Independence model	9	1286	36	0	35.726	Independence model	10	1027	45	0	22.832
Model	RMR	GFI	AGFI	PGFI		Model	RMR	GFI	AGFI	PGFI		Model	RMR	GFI	AGFI	PGFI	
Default model	0.316	0.844	0.756	0.54		Default model	0.044	0.841	0.735	0.51		Default model	0.074	0.795	0.678	0.51	
Saturated model	0	1				Saturated model	0	1				Saturated model	0	1			
Independence model	0.825	0.239	0.07	0.2		Independence model	1.019	0.167	−0.041	0.13		Independence model	0.85	0.201	0.023	0.16	
Model	NFI	RFI	IFI	TLI	CFI	Model	NFI	RFI	IFI	TLI	CFI	Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2			Delta1	rho1	Delta2	rho2			Delta1	rho1	Delta2	rho2	
Default model	0.876	0.84	0.911	0.88	0.91	Default model	0.934	0.912	0.954	0.94	0.954	Default model	0.876	0.84	0.907	0.88	0.906
Saturated model	1		1		1	Saturated model	1		1		1	Saturated model	1		1		1
Independence model	0	0	0	0	0	Independence model	0	0	0	0	0	Independence model	0	0	0	0	0
Model	RMSEA	LO 90	HI 90	PCLOSE		Model	RMSEA	LO 90	HI 90	PCLOSE		Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	0.142	0.113	0.172	0		Default model	0.14	0.107	0.174	0		Default model	0.155	0.127	0.184	0	
Independence model	0.417	0.394	0.441	0		Independence model	0.562	0.536	0.588	0		Independence model	0.446	0.422	0.469	0	
Brand evangelism						**COVID impact**						**Brand engagement**					

Model	NPAR	CMIN	DF	P	CMIN/DF	Model	NPAR	CMIN	DF	P	CMIN/DF	Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	13	31.9	8	0	3.987	Default model	34	200.1	102	0	1.962	Default model	32	376.6	104	0	3.622
Saturated model	21	0	0			Saturated model	136	0	0			Saturated model	136	0	0		
Independence model	6	393.8	15	0	26.25	Independence model	16	1221	120	0	10.176	Independence model	16	1967	120	0	16.389
Model	RMR	GFI	AGFI	PGFI		Model	RMR	GFI	AGFI	PGFI		Model	RMR	GFI	AGFI	PGFI	
Default model	0.105	0.909	0.762	0.35		Default model	0.109	0.824	0.765	0.62		Default model	0.098	0.675	0.575	0.52	
Saturated model	0	1				Saturated model	0	1				Saturated model	0	1			
Independence model	0.751	0.388	0.144	0.28		Independence model	0.718	0.213	0.108	0.19		Independence model	0.949	0.135	0.019	0.12	
Model	NFI	RFI	IFI	TLI	CFI	Model	NFI	RFI	IFI	TLI	CFI	Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2			Delta1	rho1	Delta2	rho2			Delta1	rho1	Delta2	rho2	
Default model	0.919	0.848	0.938	0.88	0.937	Default model	0.836	0.807	0.912	0.9	0.911	Default model	0.808	0.779	0.854	0.83	0.852
Saturated model	1		1		1	Saturated model	1		1		1	Saturated model	1		1		1
Independence model	0	0	0	0	0	Independence model	0	0	0	0	0	Independence model	0	0	0	0	0
Model	RMSEA	LO 90	HI 90	PCLOSE		Model	RMSEA	LO 90	HI 90	PCLOSE		Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	0.165	0.107	0.227	0		Default model	0.094	0.074	0.113	0		Default model	0.154	0.138	0.171	0	
Independence model	0.479	0.439	0.521	0		Independence model	0.289	0.274	0.304	0		Independence model	0.374	0.36	0.389	0	

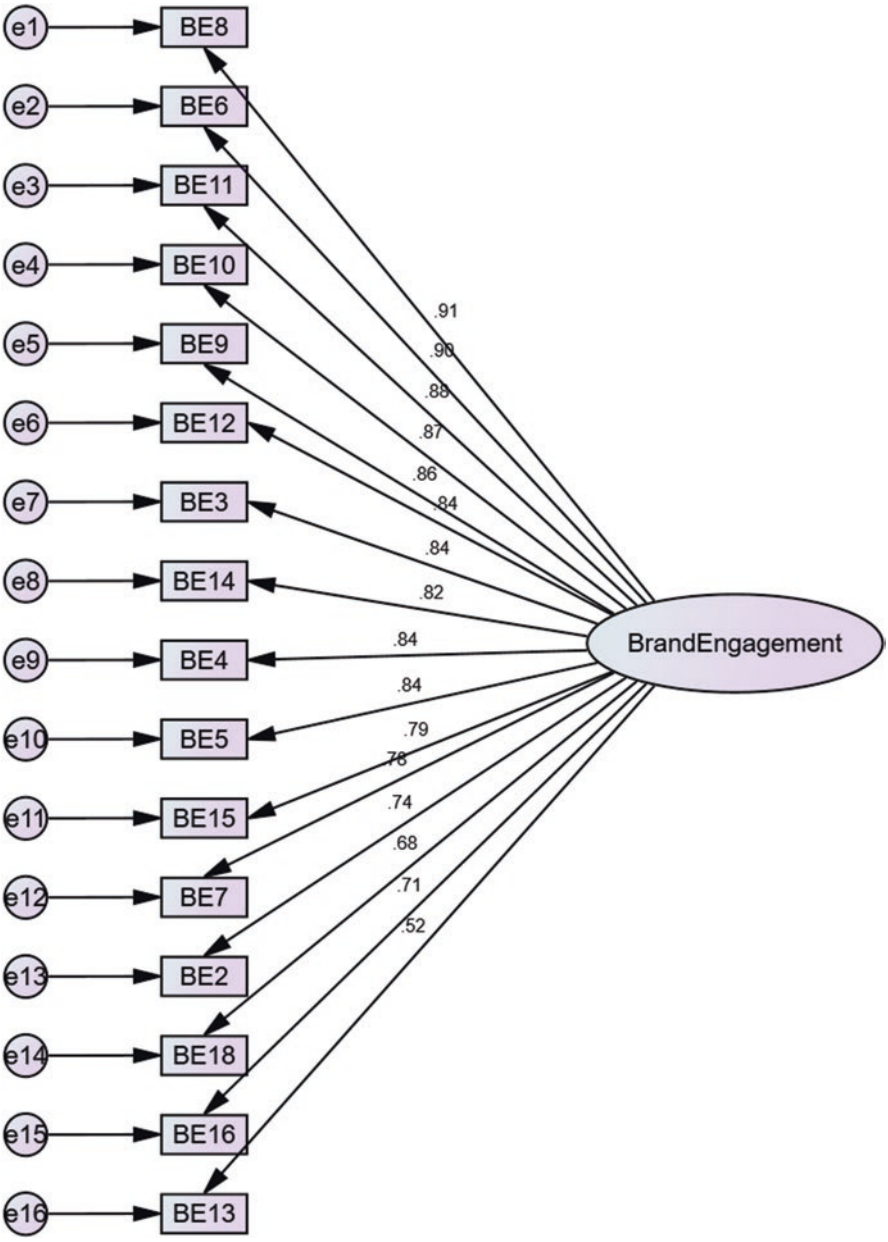

Fig. 5.4 Diagrams for all CFAs

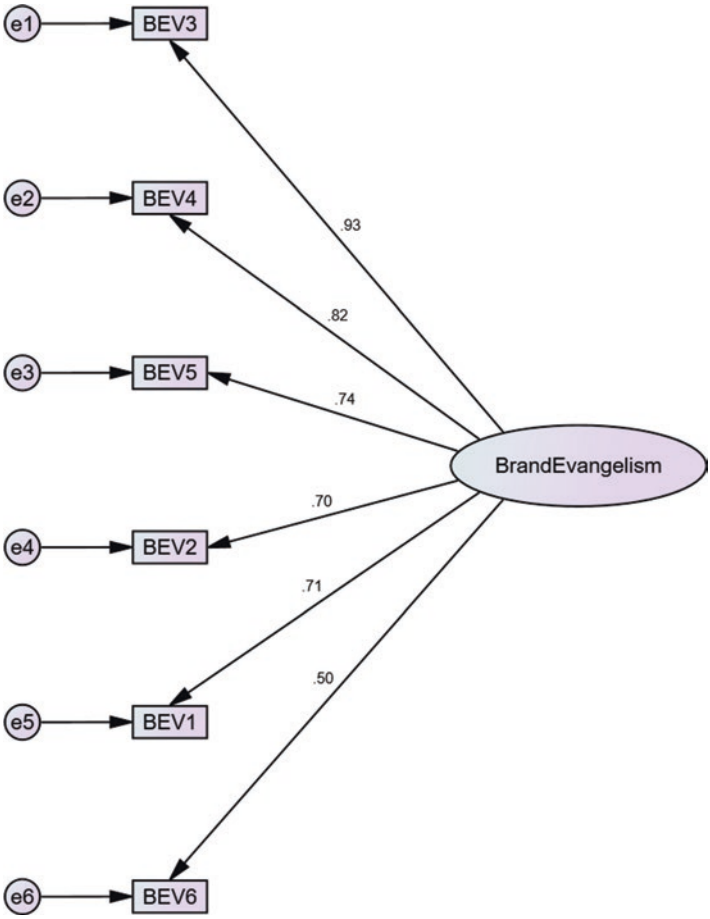

Fig. 5.4 (continued)

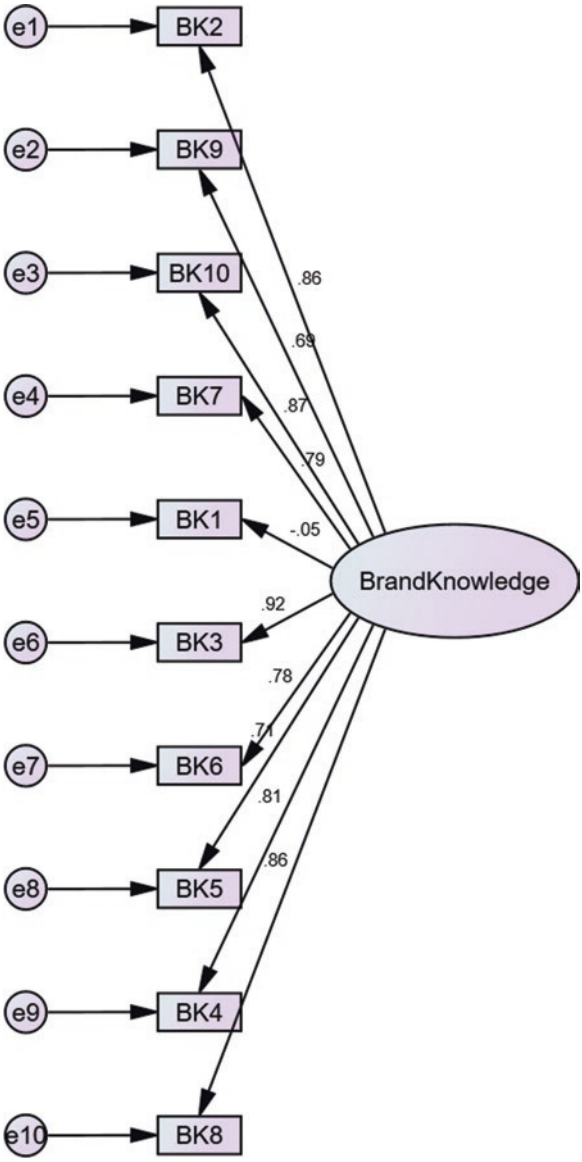

Fig. 5.4 (continued)

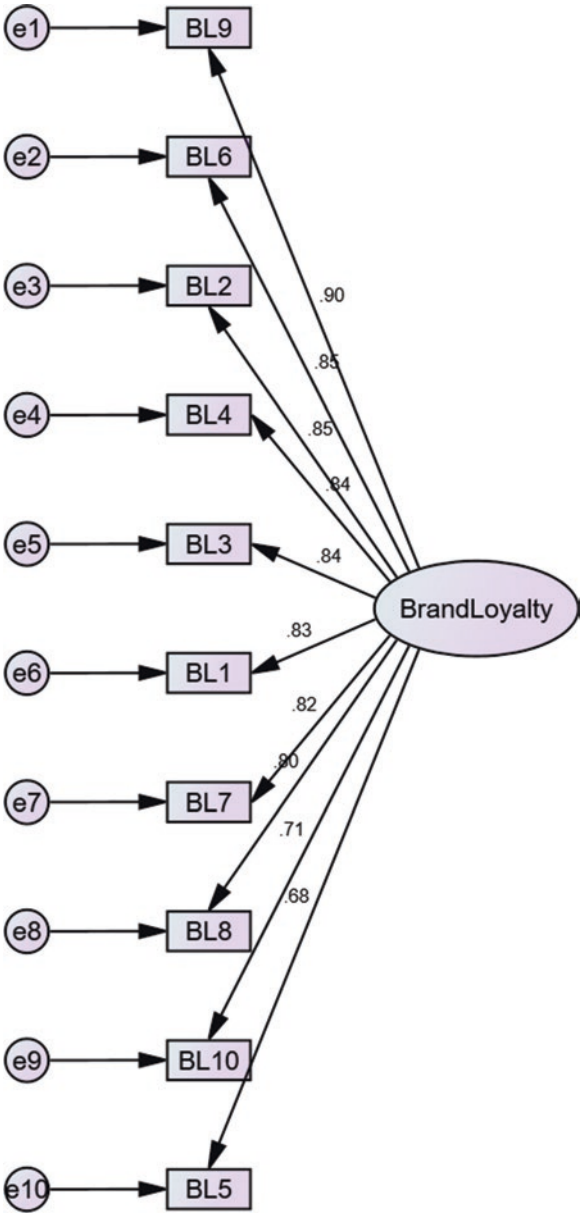

Fig. 5.4 (continued)

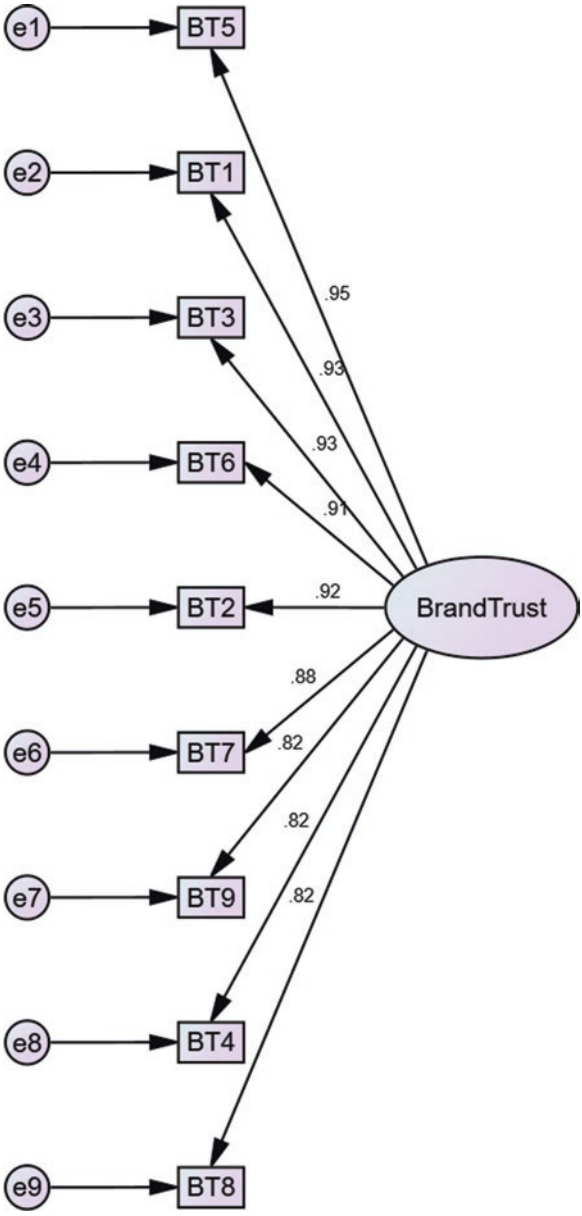

Fig. 5.4 (continued)

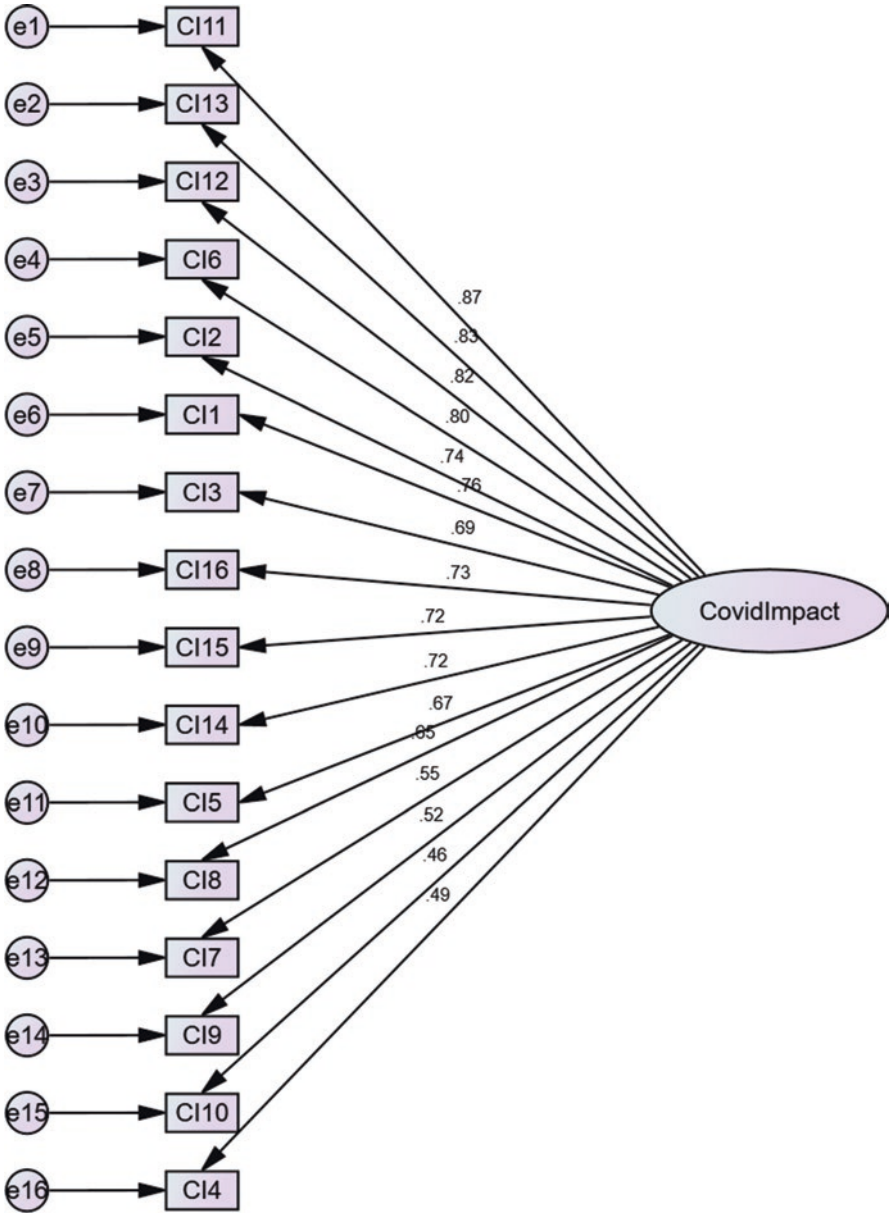

Fig. 5.4 (continued)

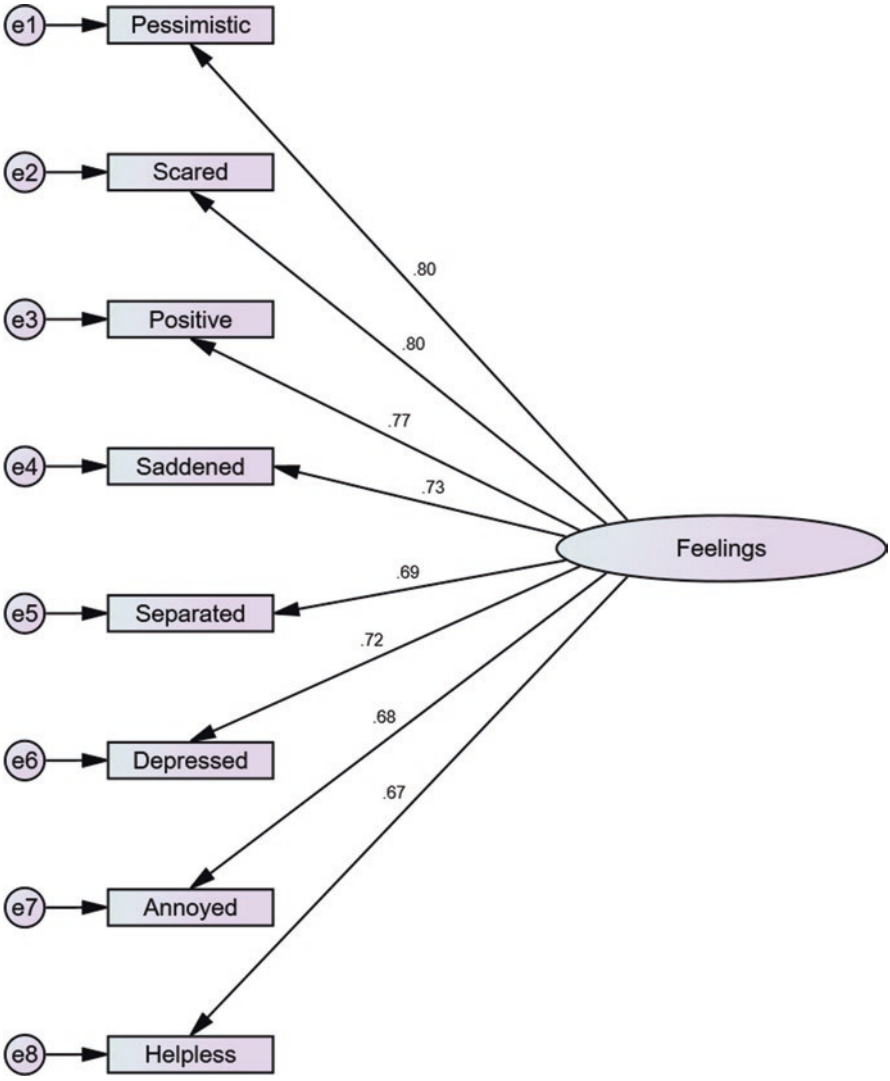

Fig. 5.4 (continued)

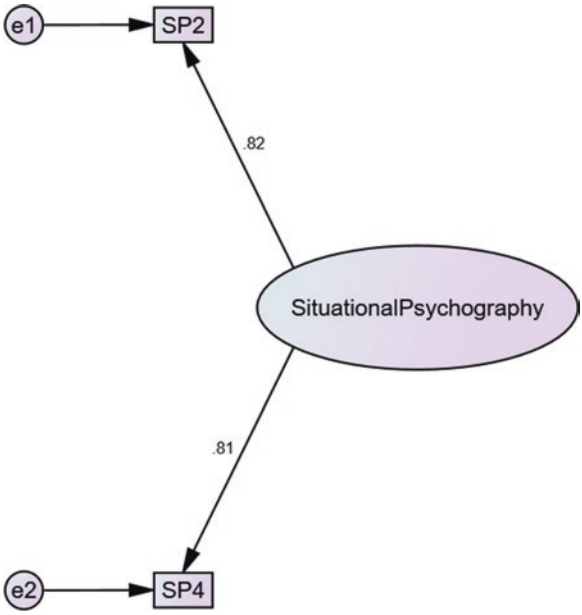

Fig. 5.4 (continued)

Table 5.6 Model fit indicators for SEM

CMIN	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	34	46.418	44	0	1.055
Saturated model	78	0	0		
Independence model	12	786.841	66	0	11.922
RMR, GFI	**RMR**	**GFI**	**AGFI**	**PGFI**	
Default model	0.062	0.936	0.887	0.528	
Saturated model	0	1			
Independence model	0.381	0.399	0.29	0.338	
Baseline comparisons	**NFI**	**RFI**	**IFI**	**TLI**	**CFI**
	Delta1	**rho1**	**Delta2**	**rho2**	
Default model	0.941	0.912	0.997	0.995	0.997
Saturated model	1		1		1
Independence model	0	0	0	0	0
RMSEA	**RMSEA**	**LO 90**	**HI 90**	**PCLOSE**	
Default model	0.022	0	0.069	0.791	
Independence model	0.315	0.296	0.335	0	

5.6.4 *Structural Equation Modeling*

The hypothesized model, as conceptualized in Fig. 5.2, was run on AMOS 23.0 using the seven imputed factors, and the resulting model indices indicate a good fit (Table 5.6, Fig. 5.5). A good model fit is indicated by the chi-square value (CMIN) of 46.418, $P = 0.001$, and degrees of freedom (DF) = 44 since the ratio of chi-square and the degree of freedom (CMIN/DF = 1.055) is less than 6 (Schreiber et al., 2006). Comparative-fit-index (CFI) is 0.997, which is a good fit (Byrne, 2010; Cheung & Rensvold, 2002). Incremental fit index (IFI) is 0.997, which also indicates a good fit (Byrne, 2010; Cheung & Rensvold, 2002); goodness of fit indicator (GFI) is coming at 0.936 which is a good fit (Byrne, 2010). Tucker–Lewis index (TLI) is 0.995, which also represent a good fit (Byrne, 2010; Cheung & Rensvold, 2002).

5.7 Discussion

From Fig. 5.5, it may be inferred that CovidImpact is negatively influencing the brand preferences among the post-millennials, as evidenced from the −0.7 (Fig. 5.5) standardized regression weight between CovidImpact and BrandPreference. This is even though the regression weights of the various brand factors have relatively high positive standardized regression weights to CovidImpact: BrandTrust (0.45), BrandEngagement (0.35), and BrandEvangelism (0.35). The mediation of CovidImpact has caused the brand factors to have a highly mitigated effect on purchase preference for brands. The situation psychological factors, like the lockdown and availability of salaries, have a negative influence on CovidImpact (−0.4 standardized regression weight from SituationalPsychography to CovidImpact). This appears logical since a person who stopped receiving salaries may be negatively impacted by the AOG. Lockdown has a 0.4 regression weight on the impact of COVID. Consequently, the lockdown, owing to the pandemic has added fuel to the fire of COVID impact, as observed in Fig. 5.5. Consumers in sealed locations (not allowed to leave houses) feel this effect to a greater extent, by adding 0.04 regression weight (Fig. 5.5) to COVID impact mediation box.

The present study found that brand preferences are subdued during the times of AOG. Consequently, lesser-known brands may compete successfully with the bigger brands to capture market share during AoG times. This extends Knowles et al. (2020) suggestion that the pandemic environment offered an unprecedented opportunity for these smaller companies to compete against their more established rivals for exposure, mindshare, product trials, and market share. Though the various antecedents of brand preference are individually significant, the mediating effect of the COVID impact dampens the influence of all antecedents toward the brand preferences. Moreover, the preference for global brands is more than the preference for local brands during the AOG periods. Indeed, the brand preferences for local vs. global brands seem to change during AoG times. Ng et al. (2020) suggested that

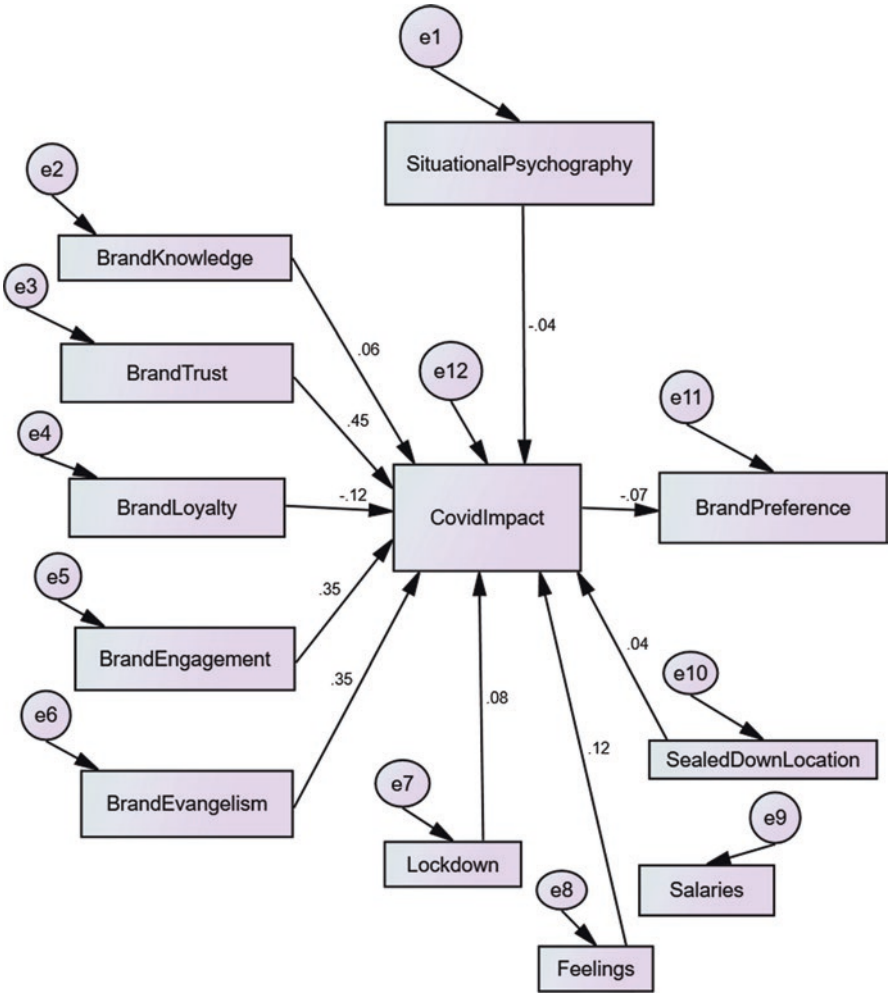

Fig. 5.5 Structural equation model with standardized estimates

uncertainty evokes consumers' preference for brands incongruent with their global–local citizenship identity. Having to reside in a locked down area, and not being allowed to move outside one's home, adds to the COVID Impact.

5.8 Conclusion

The globalization era and digitization era have provided a level playing field to the global brands across nations. It has also enabled the growth of numerous local upstart brands. This has heightened the level of competition between the

long-established global players and the incumbent local players, who are striving to sustain and retain their position. In order to maintain long-term sustainability, companies may have to redesign their products with a focus on the future consumers. This requires understanding the mind-set and purchase behavior of the post-millennials, the so-called Generation Z or iGeneration. It seems pertinent to study the influencers of purchase intention of global brands versus local brands among post-millennials and develop a conceptual framework. The development of a conceptual model for such purchase intention may also add to the academic body of knowledge.

The present study found that brand preferences are subdued during the times of AOG. Though the various antecedents of brand preference are individually significant, the mediating effect of the COVID impact dampens the influence of all antecedents toward the brand preferences. Moreover, the preference for global brands is more than the preference for local brands during the AOG periods. Having to reside in a locked down area, and not being allowed to move outside one's home, adds to the COVID Impact.

The present study is limited by its width of its literature review. The future scope of studies may include a follow-on study of the same subjects, utilizing the same questionnaire after the COVID period, and the lockdown period are over.

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Chapter 6
The Acceleration of Online Business is Changing the Face of Indian Market: Impact of Active Coronavirus(Covid 19)

Payel Aich

6.1 Introduction

Pandemics are not exactly a novel phenomenon which changed the environment strictly since prehistoric times. Each time it triggered major challenges and changes in economics, regional and global policies, social behavior, and citizens' mentalities and lifestyle. The corona virus first observed in the Wuhan city of China in December 2019 and thereafter spread in the whole world, people are dead for this virus and still now the spread is increasing. The disease has started from the seafood market of Wuhan city, where a lot of wild animals like rabbits, bats, snakes are traded and consumed. The Wuhan market has been recognized as an epicenter of the disease with a large number of patients contaminated having a history of visiting this market. The virus has rigorously affected the entire world in a monetary and nonmonetary term; this danger has been considered "very high" by the World Health Organization as well as other World Bank, and the World Health Organization has declared it a health emergency and named it as COVID 19. All states, continents, regions, urban and rural communities, families, and ultimately lifestyle of each individual have been impacted by the pandemic, and it had a hard blow to return to the normality previously experienced before COVID-19. When the threat of corona virus is hovering all over the world, governments across the countries are trying their best to fight with it, where the online business was highly commended for playing an important role in alleviating panic stockpiling behavior (Yao, 2020; Guo et al., 2020) during the starting of the pandemic. It is the fact that with the impact, the requirement of everyday life has not vanished. In the lockdown the business was slow with stoppage of online shopping at certain point of time when the spreading of the virus was at highest peak. With the new era of normalcy now, it is noted that

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people prefer online shopping more than going out as the trauma of COVID-19 still exists.

According to Rastogi (2010), the online business is having very bright future in India. With the innovation of Internet and online business, consumers can shop anywhere, anything, and anytime with easy and varied safe payment options. Consumers can even do comparison shopping by checking between product line, price, online stores. Now the virus has hampered economic activities, it is imperative to examine the detailed consequences of this virus on economy. Corona virus has affected the economy of the entire world, firstly more with Chinese economy, and because China is the second-largest economy in the world, its spillover effect is being seen all over the world. Intuitively, it can be noted that the crisis will not only leave many organization struggling for survival but will also force some to look for alternative strategic paths to maximize the present and future aspects of business. While on the one hand, the COVID-19 crisis has imposed enormous challenges on business organizations, on the other, it has also necessitated changes with innovations, presenting organizations with opportunities to identify new business models that will allow them to survive through the crisis. Service-related research work has focused on the effects of economic crises at the macro sectors (Das et al., 2011) as well as the impacts of crises and disasters on specific sectors including healthcare services noted by Ifanti et al. (2013). Any pandemic hampers monetary services (Talani, 2011), effecting the retail market (Ion, 2014), hospitality, and tourism industry (Jiang et al., 2019). To get to the normal environment, the leadership qualities must be effective which is characterized with decision-making factors. Schulz and Hofer (1995) suggested decision-making as a primary strategic resource in any organization. With various industrial revolutions, leadership is facing increase in complexity and ambiguity in the decision-making process. The global socio-economic impact of the COVID-19 pandemic creates an unprecedented opportunity for the Indian market to understand how the online business including service sector responses to such decisive situations and contribute to improved future research and practice.

This research work is based on comprehensive review of the various literatures on online business, the scenario during COVID-19, and how the people got affected. This chapter does not stand from any primary data collection and empirical investigation. It uses the results of the earlier research and the secondary data collected from various sources, to provide an overall context of the online business in Indian market. The major objective is to understand the situation of the online business due to COVID-19, the risk being faced by the employers of the online business, and how the online business can be recovered. The data and the information helped to derive the new business model which has been depicted with the pictorial diagram. The diagram which is a business model shows the change in business strategy benefiting the employees, consumers and the organization. This chapter shows that the impact of COVID-19 has devastated the life of the human beings. The online business and the online educational platforms have however changed the scenario and helped the people, from school going students to the other professionals. Some of the greatest challenges for organizations faced during pandemic can be recovered by changing the organizational environment and transformation in business models. In seeking

ways to foster the normal way of life again, the health and safety of the employees should not be neglected.

6.2 Emergence of Online Business During Pandemic

Business is not only earning profit, it starts from developing a product with the purpose to be useful for the consumers. To reach to the end consumers, various processes are required to be covered by the business. They are product development, setting attractive pricing strategy, managing distribution channels, and availability for target consumers. For individual consumers to know about the product, the awareness about the product is essential. The traditional way of awareness creation was print media which is now mostly replaced by digital media. The information technology has tremendously brought a change in the world of Internet marketing, and now it is very much easy and presentable to communicate the buyers through Internet (Muttaqin, 2012). The websites, social media, and the apps are very much useful for communication. For example, knowing the details about the product, retrieving the reviews of the product, and query about the product by the consumers can be done. The online business has made the communication transparent than before, and the consumers can also be easily acquainted with, understand the product and take the purchasing decision (Sutejo, 2010).

At the present age, this online business is making commendable contribution in hosting a large number of small vendors. The process hardly received any government support during the supply chain disruption because it is fragmented and not considered essential by governments. Its growth was considerable during the last few year when the consumers from any age group, any status, or any income level changed their behavior toward online shopping. The easy access and trust in the mind of consumers are the reason that during the pandemics, consumers rushed to the e-commerce platforms for food or any products and got benefited. If they failed to place the orders, they could not easily switch to offline channels, which may intensify their panic for the products. In case of food ordering, the situations happened sometimes that the panic of food may even got amplified by the transparency of e-commerce platforms. The consumers could visualize clearly when there was a food rush in apps and suddenly in the next minute the food was sold out. Online purchasing channels are considered to help alleviate food hoarding panic or fashionable purchasing by providing a convenient shopping venue and eliminating consumers' risk of getting infected with crowds in stores. Thus, online food delivery chain businesses are highly commended and have received good credits for its contribution in food distribution. On the other hand, the cosmetics and apparel shopping sites were moving downward in profit line as the consumers were truly interested in purchasing only the essential goods during the period of lockdown. The big business houses and the society will gain profit and it will be enhanced when the appropriate use of internet can be understood by the people. The applications are built to implement the internet as a medium of transactions between

the company and its agents while enjoying the services available. The websites or the application forms should be easy to learn, understand, and hence influential through user performance to increase the use of the sites or the applications.

6.3 Impact of COVID-19 on Online Business

The online business in present market plays a major role in the economy development. It contributes 10% to the Indian GDP and showed a drastic rise in the employment creation in the FY19 with 8%. The major segments of the online business are the household and personal care products, healthcare segment, the food and beverage sector and miscellaneous. The food delivery platforms such as Swiggy and Zomato that were by itself functioning almost stopped functioning during lockdown and now started again but with a big hit. The social distancing due to the threat of COVID-19 pushed the consumers to overstock on essential product and commodities viz. rice, flour, and lentils. This gave rise in the sales of the FMCG companies which again saw fall in trade due to distorted supply chain management which is an impact of COVID-19. The e-commerce sector saw a plunge in growth with pressure on the supply chain deliveries and the expectations of the consumers on the companies to generate new distribution channels became the demand. Categorizing the commodities into two part, i.e., essential commodities and non-essential commodities showed different responses from the consumer's behavior in the market. The online food, grocery, apparel, and textile industries or the other manufacturers specially the essential goods producers on the other hand suffered a huge loss due to the restriction of delivery vehicles and the lockdown. With the shortage of labor, the food processing units are facing a hunch in normal function post lockdown too. A major destination in the fight of COVID-19 for the next few months in the Indian export will be impacted due to low consumer demand.

The availability of online shopping platforms that allow consumers to shop for food or any other products over the Internet and have it either delivered to their home or set aside for curbside pick-up is one of the best option to reduce social distancing. Online food purchasing services also serve a public health interest by reducing contact between shoppers in retail food outlets, which may help to slow the transmission of COVID-19 and protect at risk consumers with pre-existing conditions. It is therefore important to understand to what extent consumers have shifted to online food shopping during the pandemic than before, and the implications of the shift for retail food markets with channel shifts for easy delivery and access. The other essential products, clothing, and personal care products were mostly purchased by online shopping websites or mobile apps. The online shopping and delivery at home is an important strategy that individuals have used and still now using to reduce the likelihood of exposure to COVID-19. Due to the high risk faced by the elderly or those with chronic medical conditions, the need to isolate oneself from others in the community is necessary. It is only possible if food can be obtained from home or from apps used for online purchase and online delivery. In

addition, the use of online shopping platforms can generate a positive public health externality by taking safety measure more scrupulously. When safety is the main precaution in the pandemic which caused lockdown, safety compliance is must. Safety compliance refers to core safety precautionary tasks individuals carry out to maintain workplace safety (Griffin & Neal, 2000). There has to be some set of objectives in the area of safety to meet an organization's safety requirements, as well as wearing personal protective equipment. Griffin and Neal (2000) proposed that safety compliance is influenced by each and every staff's safety knowledge, safety skills, and safety motivation, which are influenced by the organization's safety and protective climate.

The use of online business platform was highly responsive to media coverage of the pandemic. There was an opportunity for public health officials to successfully promote online shopping through public service announcements. The educational sites or apps also played and are still playing vital role in this crisis. The students cannot go to school but had online classes through the apps. The Indian education sector is surely going to witness major transformation in the years to come where education will be based mostly on latest technology rather than traditional methods (Lone, 2017). The change is the result of corona virus where students have a positive attitude toward online learning, which implies that they are more likely to accept it for future learning.

6.3.1 The Consumption Process During COVID-19

To maintain safe and healthy lifestyle, the human beings adopted the following consumption processes:

1. Where consumption occurs (spatial aspects): Restrictions to mobility or enforced physical distancing for the benefit of human beings. Purchasing essential goods in the areas close to the consumer's residence to avoid distance travel. Also order through telephone or online (Pantano et al., 2020). For this, supply and delivery chains should be available with minimal contact.
2. When consumption occurs (temporal aspects): Availability of access to different products as a result of disasters because the people faces terror and goes for panic buying or pushed back depending on risk perceptions (Peck, 2006).
3. What and why consumption occurs: The quarantine and mobility restrictions to home environments, have psychological and physiological effects depending on what products are consumed as a result of different motivations and needs (Forbes, 2017).
4. How consumption occurs: Restrictions in physical contact favor some forms of purchasing relations over others. For example, it influences the payment form by encouraging contactless purchasing rather than use of cash which is mostly possible by online shopping (Pal & Bhadada, 2020).

6.3.2 *Shifting and Unfolding the Business*

Shifts in business re-structuring are immediate reactions to the pandemic and once "normalcy" resumes, firms will revert to their earlier business models or find a new equilibrium to settle at. Yet, the prospect that the pandemic has presented to digitize a business or identify a viable alternative business structure by restructuring and refiguring the techniques can well be utilized by firms that are trying to stabilize and looking to expand their horizons. In order to capitalize on the opportunity for digitization, the employers need to be agile and rapidly develop capabilities that can help them survive the changes that environment imposes upon them in future. The pulsating capabilities relating to specific strategic and organizational processes like product re-development, identifying and working with new partners in an ecosystem and strategic decision-making that create value within such lively environments by manipulating available resources into new value-creating strategies (Eisenhardt & Martin, 2000). A good example of such organizations would be education sector which have not only adapted online platforms to hold virtual classes and examinations but have also designed educational products which combine interesting asynchronous instructional pedagogies. Similarly the online retail business is adopting techniques to hold the market in the pandemic (Ray, et al., 2020). But as the products are highly delivered from around the world, there is low productivity and sales in the present scenario of the pandemic. The environment now demands for "temporary adhocracies" which function with the sole purpose of innovating. Such adhocracies require strong professionals, such as design thinkers, marketers, technologists. They all together will aim to quickly fulfill the growing choice for digitization the product or service offers, look for digital replacements and where neither is possible, identify ways of delivering the product or service with minimal physical contact.

6.4 Factorial Influence of COVID-19 on Online Business

6.4.1 *The Slowdown of Online Business During COVID-19 Situation*

The trend of online ordering is present with numerous benefits compared to the conventional methods of shopping over the phone call or waiting in queue (Li et al., 2020). Since the starting of corona virus, many food and grocery delivery companies are grappling to deliver the products which are both essential and nonessential. The online food deliver platforms like Zomato, Swiggy are facing hurdles across cities while trying to deliver food. Online food delivery orders have dropped drastically in the first 15 days of lockdown in India. Slowly the delivery got totally stopped during the lockdown period. It was due to fear and anxiety, the customers stepped back to place orders and food stalls or top restaurants being shut amid a lockdown. The employees, the staffs, and the delivery boys cannot take risk of their life and

that delivery of the products stopped. To save from the huge loss and corona virus, the companies were forced to shut the counters due to shortage of staff and supplies. With the extension of lockdown till May 31, 2020, Swiggy the online food delivery firm decided to lay off 1100 of its employees. The firm considered the decision as the "unfortunate downsizing decision" as the coronavirus continues to hurt the business. Again Zomato reduced their employees to nearly 13% because of the crisis. Now when the delivery has been started by Swiggy or Zomato, the customers are reluctant to understand how much safe the outside food will be. It can be considered observing the situation that going forward the customers may not prefer outside food rather they will take home-cooked meals. During COVID-19 lockdown, the Swiggy and Zomato also delivered the daily groceries and essentials as the food ordering dropped hugely. The home consumption has increased during the lockdown but out-of-home consumption which statistically generates the highest margin has come to nearly in a standstill indicating changes in customer behavior and demand of shacking the Indian economy during the pandemic. Wang et al. (2020) analyzed that the various responses to the COVID-19 global pandemic will shape the online food delivery chain in 2020 and post pandemic. The customers should critically identify the top online food purchasing trends that customers and businesses must remain aware of.

6.4.2 Effects on Job Market Due to COVID-19 Situation

Due to the shortage of resources and raw materials, and slowing of the supply chain, the factory owners have to close down the factory. The manufacturing of the products and delivery of the products were stuck during the pandemic. Moreover, global brands and retailers due to the chaotic situation first delayed and later canceled production orders and deferred the payment too. As a result, in the apparel manufacturing industries, the apparel workers had to go back to their natives without any salaries, and henceforth, their sufferings started with their families. People with uncertain work environment are more diagnosed with various diseases such as chronic stress, mental health, physical, and instability in their work–family life (Blustein, 2019). These factors became more risky, affecting the working class people during COVID-19 crisis. During the lockdown, few factories continued their production without ensuring safety to the workers. The apparel workers are in the most vulnerable situation where their health was not the major importance for the employers till certain time. The affected sectors of the whole supply chain of few industries, i.e., automobile, energy, steel, textile, coal, agriculture, and electronic devices including mobile, etc. have been traumatized. Among the most affected industry, the apparel industry is one of the highest with abrupt increase in unemployment. As China has stopped the production and delivery of raw materials, the other apparel manufacturing countries like Bangladesh, India, Sri Lanka, South Africa, Myanmar, etc. apparel industry have shaken. According to the data released by the Confederation of Indian Textile Industry (CITI), the recovery for the

domestic market is expected to be quite hard post pandemic with huge loss and domestic market estimated to reach USD 120 billion (INR 9074 billion) by 2024. Apparel retail is even projected to contract by ~USD 27 billion (INR 2042 billion) in FY 2020–2021 as compared to pre-COVID-19 analysis for the same period. In the overall scenario, the online business for garments were also in a weak position during the crisis of the pandemic. The COVID-19 crisis brought the economy of the world in low level with vast increase in unemployment where competition between workers existed. The ultimate outcome that will be faced for long run is major dislocation of young workers from the labor market (International Labor Organization, 2020). The scenario of the private companies, especially IT companies, BPOs, and hotel industries, is worst. A huge number of employees were forced to leave the organizations in the critical situation. The reason shown by the management is COVID-19 or some unjustifiable circumstances.

6.4.3 Bit to Byte Technology Updation

Each of the online shopping site aims to create a point of difference from others in their line of products, offers, delivery process, and after delivery problem-solving techniques. Whenever upgradation of the technology has been occurred, it means there is change or shift of the technology for the benefit of the general people globally. At the present stage of pandemic, the technological progression is required to cope up the crisis situation by providing customers the alternative to share their shortlisted items with their companions through SMS, email, and social networking channels by a single click and of course buying the product. The 67% online baskets are deserted due to lack of payment options. So, now to improve the process few online business houses has started to offer different payment options such as COD, credit card, debit card, and net banking. There are also increase in coupon, and other offers to attract the prospective customers increase the sale. COVID-19 disruptions affected all businesses more or less equally. The shops where essential goods are available remained open, while others were required to close. Some businesses could shift employees to remote work, while others were ill equipped for the evolution. The way the business houses has managed to help brands in their go-to-market strategy at the onset of the pandemic is just the beginning of using data insights to make the industry more consumer focused. The consumers in late March 2020 and consulting firm Retail Systems Research found 90% of shoppers were hesitant to shop in stores because of the spread of the virus and wanted no face-to-face interaction which is called untact. This is great for the e-commerce companies with updating other options on their shopping sites and escalating the number of sorting and filtering options. The incorporation of different items to stay safe at the situation is a tricky business plot to increase the consumers on online shopping. But with the crowd of online orders, it becomes difficult for the companies to cater all the orders at once, due to limited manpower and less supply. Basically companies do online business to achieve more target-oriented consumers. The consumers who are using

Internet, smartphone, computers, and surfing the websites without going outside for shopping. They get the benefit out of online business and the employers must improve the technology, so that there can be easy adding of items, options, and making the website colorful and attractive for the buyers. This will contribute to the company's financial firmness, sustainability to compete better in the business market. Long-term relationships with the business stakeholders and the customer satisfaction are present because of the service provided. In the present pandemic situations, the effectiveness of the online shopping was felt by each of citizens all over the world (Winwin & Meiryani, 2019).

6.4.4 No Stoppage on Flow of Education

COVID-19 has resulted in a mass shift toward holding online classes for the students. Institutions are yearning for different ways to engage their students and to complete their courses and examinations in time. According to the UNESCO report, it had affected the studies of more than 90% of total world's student population during mid-April 2020 which is reduced to nearly 67% during June 2020. Every year in India. lakhs of students of the final year are happy to complete the course and get job. But with the starting of the pandemic this happiness is somewhere lost and the students are in doubt that how they will complete their final year and when will they acheive their goals. It is true that there is always restrain in our life but the scenario is now diffferent and fully disappointing when all opportunities are on hold from competitive examinations to company hire. Still the live sessions holding by the popular platforms for conducting meetings and conferences like Zoom, Google Meet, Microsoft Team with many others has helped the students to continue their studies and attending job interviews too. The school students of the higher classess are benefited by online learning classes of extra marks, BYJU's. These online learning platforms have divided the sujects and the contents for easy online teaching-learning process. The other academicians and corporate professionals have also gained knowledge from online education platforms like Udemy, Simplilearn. Post pandemic, these online education platforms are highly used, and few more are coming up to make the knowledge delivery and learning process easier. Educational mobile apps saw a spike in usage during pandemic till now compared to years before. There are also WhatsApp groups of guardians, teachers, students, and parents for effective communication between the stakeholders of the education through which they are always in touch to share their difficulties via this e-medium. ICT initiative of MHRD (e-Brochure—https://mhrd.gov.in/ict-initiatives) is a unique platform which combines all digital resources for online education, through which the students will be beneficent (Bag et al., 2020). The digital initiatives by the MHRD for secondary as well as higher education during COVID-19 have helped in continuing the academic sessions. The Indian Government and different stakeholders of education have explored the possibility of open and distance learning (ODL) in a very innovative way by adopting different digital technologies to cope up with

the present crisis of COVID-19 (Jena, 2020). It saves time but college administrators should determine how technical support can be expanded and extended to reach all students and teachers, thereby improving their experience and making the classes more effective (Nambiar, 2020).

6.5 Post-COVID-19: A Way to Normal

It has been observed that the crisis caused by the global corona virus (COVID-19) pandemic has created an incredibly complicated business climate. Businesses are being presented with many new risks as international borders close, businesses shut their doors, and people are told to isolate at home. The buying process or the customer behavior toward the essential and nonessential products has been forced to immediately change, they were certainly tensed with pandemic, and this change has come on a massive scale. Those in isolation or under lockdown cannot perform their usual routines, especially since many local shops have been forced to close their doors for safety reasons as per the government rules. Concerns about the availability of goods during lockdown especially have encouraged panic buying of items in bulk. To help the people all over the world, the online stores of all sizes stand to help the people. The switch of consumer behavior to online shopping is mostly observed during the pandemic until its fully lockdown, since the online stores are already well-positioned or established to serve the increasing demand for goods and services. If we look around the hospitality context, particularly restaurants, most of the researchers have focused on food handlers and food safety criteria majorly post pandemic because restaurants have been labeled as one of the most frequent settings for food-borne illness outbreaks (Murphy et al., 2011). Here the supply chain transformation is playing a major role. The chain has to be in smooth flow to avoid congestion in the overall delivery procedure, which was not stable in the pandemic because of many different reasons and situations. After the lockdown, the companies are already starting to be clever enough about resolving the business-related hindrances through innovation.

The global sustainability includes economic, social, and environmental risks and issues which enforces the firms to re-think and redesign their practices to manage their relationships with suppliers by collaboration or assessment transforming the supply chain if required (Ni & Sun, 2018). But challenges surely exist in the online business as is not a magic bullet in itself, i.e., sudden change in decision of transformation of the whole business. As the channel shift is a major part to run the profit. The lower income group consumers sometimes cannot go for adoption of the online purchasing which is a dampening effect against any uplift in sales. The companies with robust ecommerce offerings will fare the best in the current turmoil. The buyer behavior has changed and resulted in more and more shopping online over the period of time. To meet the customers' demand, the marketplace changed to become ever more competitive as companies seek to capitalize on this trend. For increase in money making, the organizations have to look after the requirements of the

employees. The pandemic has already made the employees frustrated or depressed with lockdown and no growth in career. The conditions of the employees have to be understood by the employers. In this pandemic and post pandemic, the awareness should be 100% on the health and safety measures of the employees of any organization. If required, the workforce should be allowed to work remotely. The resources should be provided with the best facilities and relaxation in working techniques. There should be smooth flow of communication within the team members and the supervisors. This will increase happiness in the employees, decreasing the boredom and stress. The increase in production means the organization should give major preference to health and safety of their employees with encouragement. A creative working style must be development where open communication with managers is identified (Kylen & Shani, 2002). It means that contributions to the ways and procedures of communication must not be excluded beforehand by bureaucratic rules or controlling supervision. The managers' role for smooth and transparent communication helps in task fulfillment and work hour flexibility (Bag & Aich, 2021). Hence, the online business will bloom. Management introduction and regular review to safety have been identified as an organizational factor that can drive profound compliance (Hu et al., 2020). Management has to start creating perceptions of commitment to safety among employees post-COVID-19 with safety rules and procedures to protect workers from being infected and stop possible transmission during service encounters. The process should be made mandatory by maintaining the health concern of every employees and business up growth in the post-COVID-19.

Shutting down of malls and shops has strictly hurt business for all retailers. This has led to major job losses as companies will not be able to sustain this for too long. The process of business might change post pandemic. The cooperation among all the employees at all levels has to be understood to save life, job, and the company. All these working together will benefit the employees, the business, and the customers to mitigate corona virus. In respect to stay in the competitive online business, the technology has to be fully modern because if the online shopping site is not found in search engines for relevant searches, the site's responsiveness lags behind other competitors. Resulting in the ability to compete will be severely diminished. The company's digital strategy need to be scrutinized regularly, which suggests some initial steps companies could take to review their current offering and help safeguard their business in these troubled times.

Figure 6.1 represents the path and direction which can be followed to make changes in the organization for the benefit of the organization as well as the employees. Here is the discussion for the process to be followed as shown in the diagram.

The organizations have to take care about the health of the resources, i.e., the employees or the staffs who are working whole heartedly. Health awareness should be the first priority for the organization. When employees perceive that management is genuinely worried about health and safety of the staffs, they are more motivated to engage themselves at their work and behave safely (Christian et al., 2009).

Here the figure is divided into two parts where the employees come to office daily and work to create or develop the product. In the other case, the employees cannot come to the office because of the ill health. But if the employee is skillful,

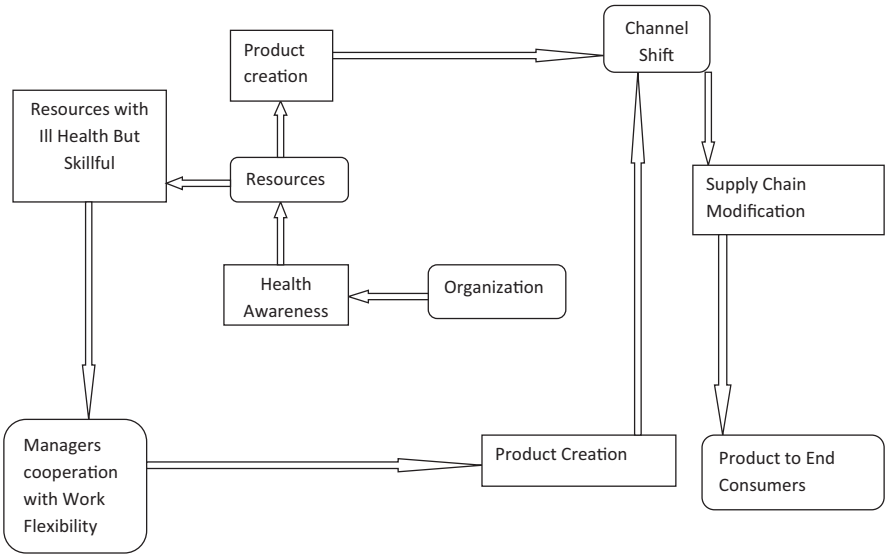

Fig. 6.1 A business model to prioritize the health of the employees with profit maximization post pandemic

knowledgeable, and has the capability to handle any task provided to him, he can fulfill the task with autonomy based on the expertise in his field. So, those employees should be retained in the organization by giving them work from home facilities.

At this stage, the manager has to be cooperative and transparent with the communication. There should be fairness in the division of work too. Sometimes an employee get stressed and bored while working from home. The organization should help the employees to reduce stress and to work happily. The employee may work from any location, but there should be generation of teamwork in any situation. Ray, This is possible through true leadership quality of managers and developing cordial relationships among the team members.

The employees from both work from office and work from home finally developed the product. Now, it has to be delivered to the end user. Industries such as food-retailing, FMCG, and many others retailers' business are growing with models. The models have been affected as the retail mix has changed with introduction of online channels (Sorescu et al., 2011), and their customers' behavior has been changed while taking the buying decision due to these developments. Thus, marketing channels of distribution and supply chain management should be stable to compete in the market. If cannot be done properly, it needs to be modified and transformed in the path which is easy for all, from manufacturers, suppliers till the end consumer. It is believed that supply chain management is the efficient management of the end-to-end process from designing, planning, restructuring and forecasting, sourcing through complex supplier networks, manufacturing, and distributing products from raw material to the end customer, and the final disposal of the product by

the customer (Chan & Lee, 2005). So, by the help of proper channels and supply chain management, the product is delivered to the end user without delay.

In recent years, we have observed a further digitalization in marketing and retailing with specific channel shift and challenges (Leeflang et al., 2014). Specifically, with the technological advancement of the mobile, tablets, social media, and the integration of these new channels in online retailing, the e-commerce platform or the landscape continues to change in the post pandemic. The resources from anywhere they work, if they are healthy, will bring profit to organization. The production of any organization depends on the employees which defines the product is created by individual performance or group performance, even if other individuals may have provided clues and stimulation (Ekvall, 1997, p. 195). This implies that the employees work all together or individually for product creation where there is satisfactory work culture.

6.6 Conclusion

The list of various factors for businesses will be the level of readiness of their ecommerce offering. If the online business platform is not capable of offering a competitive user experience, the chances are it will fail to entice, impress, or retain customers. It is to ensure easy and uninterrupted availability of essential food and grocery products or beauty and fashionable items at affordable prices so that people do not panic. During this critical time, it is imperative for all stakeholders to come together. The widespread effect of COVID-19, business across sectors is looking gloomy, impacting economy at large. Ensuring that ecommerce site or app is optimized and ready will be critical in the success of any online offering, and the tactics needs to be implemented in an increasingly competitive landscape.

For the businesses that remain active at this time, questions may arise inevitably that how best to cope with the prevailing trading market, and the best strategies that should be adapted. Any asked or enquiry related to business is not easy to answer since the corona virus pandemic is so new that the circumstances are changing fluidly and on a daily basis. Defining a strategy now is difficult, and the strategies will change whenever required as there is limited evidence or precedent to base assumptions on. The data of surveys by government and nongovernment organizations are not sufficient to gauge the consumers purchasing style and business. Still the face of the organization has to be changed depending on what and how the buyers demand.

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Chapter 7
Driving Digital Transformation for Competitive Distinctiveness: The Case of Saregama Carvaan 2.0

Shaunak Roy and Shivaji Banerjee

7.1 Introductory Reflections

> There's a popular meme going around that neatly captures the tipping point of digital. It's a short questionnaire asking who is driving your digital transformation. The first two options are "CEO" and "chief digital officer." Below that, highlighted with a bright red circle, is "COVID-19."
>
> —Fitzpatrick et al. (2020, April), McKinsey Digital

Recent deliberations on economic development have been mainly biased towards digital technology, primarily on account of its proliferated utilization in the wake of the COVID-19 outbreak. The role of the pandemic in boosting the adoption of novel digital technologies cannot be repudiated. However, it must also be noted that the standards of living of people in general, their approaches to making purchase decisions and their occupational trajectories have been incrementally influenced by such technological developments over the past decade or so (Saliola & Islam, 2020). Concurrently, business enterprises have also embraced the digital revolution by reassessing aspects that drive customer value and germinating functional systems that provide them with a distinct competitive advantage. The pandemic merely acted as a catalyst for forthcoming digital transformations in the Indian context, by fast-tracking the pace of digital adoption for several businesses across a multitude

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of sectors. Business leaders and managers, today, are thus contemplating on ameliorating their skills and developing competencies that would enable their endurance in the post-COVID paradigm (Chari, 2020). The question, however, remains: To what extent should business enterprises embark on the digital transformation journey, and how swiftly should it be traversed?

The current undertaking is designed as a research case study and endeavours to scrutinize the process by which Saregama Carvaan 2.0 has reassessed their customer value propositions and operational processes. The study also investigates the possibility of all product offerings and operations of Saregama being entirely digitized, especially since they need for physical infrastructure shall always be a requirement. The case further inspects a series of subsequent questions pertaining to digital transformation, such as how are the physical and digital developments of Saregama required to be administered in unison without estranging potential customers and conceiving superfluous degrees of intricacy? How does Saregama integrate novel and archetypal business operations, and how does this influence customers? How does the company reshape its customer value propositions? Finally, how does Saregama remodel its business processes to present new customer value propositions efficaciously, resourcefully and innovatively? Responses to these questions shall help unwrap how Saregama has been employing a proactive stance in the digital transformation and is leveraging the total capacity of its disruptive technologies.

7.2 Embracing the Digital Revolution

The last couple of decades have borne testimony to a radical shift in customer expectancies, as they have been observed to progressively use social networks to scout for jobs, friends, eateries, shopping and travel destinations and a plethora of other aspects (Accenture, 2014; Nasir & Kurtuluş, 2017; Yasav, 2015). Furthermore, they expect to receive pertinent information in connection to their pursuits, ubiquitously at any point of time in a device of their preference (Solis, 2017). 'Digital' has thus become ingrained in the fabric of customer lifestyles, such that they dictate the strategy for business enterprises. Consequently, corporate spearheads have leveraged the pros of information and communications technology (ICT) over the years, in their quest to enhance efficiency levels, diversify into new markets (Bharadwaj et al., 2013), develop new products and services (Narkiniemi, 2013) and augment logistics and supply chain efficiencies (Arenkov et al., 2019). Intending to keep pace with the 'mobile' consumer, approximately 67% of the corporate heads of Global 2000 companies have increased digital spending by reorienting their approach from archetypal offline-dominant business strategies to more contemporary digital design. According to a recent International Data Corporation (IDC) report, the net global outlays on digital transformation in 2019 was approximately USD 1.18 trillion, and it is pegged to rise beyond USD 2 trillion by 2022 (Reinsel et al., 2018). Nearly 80% of such businesses affirmed that the novel coronavirus crisis was immensely accountable for escalating the budget for digital

transformation and hastening the change to 'digital' and profoundly rejigging the corporate milieu (Press Trust of India, 2020). Thus, two parallel activities are balanced by such companies that have embraced digital technology: restructuring customer value propositions and transmuting their business operations by adopting digital technologies such as using smart devices and social networking platforms for building better liaisons with customers (Berman & Bell, 2018).

7.3 Music Business: Taking the 'Digital' Leap?

The music industry happens to be among the most rampantly expanding export spheres in the international service-dominant market (United Nations Conference on Trade and Development, 2002). The prominent export potential of earnings from the music business is gradually being acknowledged by business leaders across the world, mostly since it plays a crucial role in employment generation and the advancement of an ethnocentric national culture (Álvarez, 2017). Emergent nations such as India have also garnered increased interest in topical times, chiefly because Indian singers, composers, musicians and other mavens in the music industry have accomplished plenty of overseas feats. The music industry in the country has also observed a gradual decline in physical sales resulting from analogue music alternatives and a prominent surge in digital music (Muthusamy, 2012). For instance, it recorded revenues amounting to INR 1068 crore in 2019 and generated employment for around 1460 full-time employees in the same year (The Indian Music Industry & Deloitte, 2019). This digital transformation is steered by metamorphosing worldwide connectivity and increasing empowerment of customers (**refer to** Exhibit 7.1).

Exhibit 7.1 captures the pervasiveness of the digital transformation of the music business not only in India but also across several nations and operational domains. For instance, in the late 1990s, the music and entertainment industries were among the first to explore the prospect of digital products and services. Additionally, the telecom, software and IT sectors reserved the responsibility for developing the data and informational mainstay to ameliorate efficiency levels across various functional domains of business such as marketing, finance, logistics and human resources (Reinsel et al., 2018). This period witnessed the supremacy of compact discs (CDs), resulting in a revenue surge in the music industry. The CD marked the inception of a novel digital culture in India, epitomizing the transference from analogue to digital technology (Daniel, 2019). While young consumers demonstrated a definite enthusiasm in their tryst with music by adopting the compact disc, the relatively older generations were grappling with the anxiety associated with the decline of phonograph and vinyl records as well as audio cassettes (DeArcangelis, 2017; Pereira, 2017).

Despite the dot-com bubble crash in the late 1990s and early 2000s, consumer demand for digital music continued to witness an upward trend (El Gamal, 2012). The 2000s saw a rise in music industries emphasizing on web-based strategies such as an increased emphasis on hosts and domains, along with the optimization and

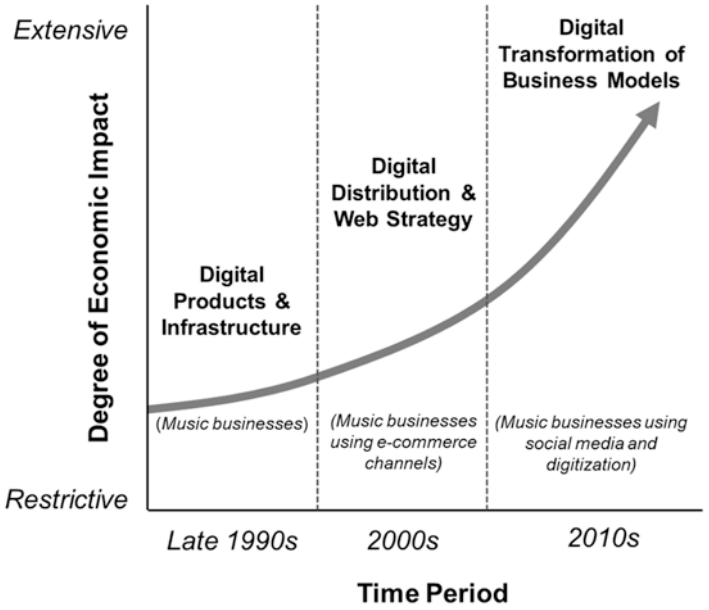

Exhibit 7.1 Universality of digital transformation in the music business. (Source: IBM Institute for Business Value)

supervision of their websites to amplify site visits and digital footfalls (Hutchison, 2008). Music businesses have increasingly tapped e-commerce channels in reaching out to the 'mobile' consumer of music. Accordingly, music businesses in India have grown to encompass fast-paced, production, promotion, licensing and supply operations, with the aid of the e-commerce vehicles that serve as a vital, expansive tool for high-speed digital distribution (Fox, 2004; Wiafe, 2012). Amateur and new musicians have adequate potential to conceive, promote and disseminate their compositions, without the active participation of major record companies in India or abroad (Janson et al., 1998).

The late 2000s witnessed a significant surge in the digitization of music in India. For instance, in an interview with Jay Mehta in 2019, the director of digital business at Sony Music India observed that digitization in the music business is the primary driver of the Indian music industry, making it more 'democratic' (News18 Report, 2019). Today, with hyper-digitization and with the availability of virtual streaming channels such as YouTube and Spotify, the dissociation between musicians and their prospective viewers has condensed. The mobile revolution among consumers has made the accessibility of music easier and remains a classic example of monetizing technology. The proliferation of music applications such as Spotify, Amazon Prime Music or YouTube Music, among several others, have served as momentous drivers for transforming potential listeners into active subscribers (Jani, 2020).

Further, increasing penetration of smartphones, as well as low-cost data accessibility, has been pronounced in the 'hyper-digitization' of the music business in

India (Business Standard, 2018). With a progressive movement towards 'everything-on-the-cloud' and 'everything-as-a-service model' (Venkatraman, 2020), music streaming apps such as Gaana, Saavn among other notable players are today able to generate sufficient revenues through advertising- and subscription-centric revenues. Again, 'music-analytics' that use data- and web-analytics, enable leading players in the music industry to investigate existing patterns and inclinations of music listenership and forecast the plausible forthcoming big hit. For instance, apps such as YouTube and even Spotify circulate trends, pillared on the genre of music listened to by the target audiences (Spotify Trends, 2020). Leveraging the power of such analytics are the marketing and PR divisions of such music businesses, which ensure that the record not only sells, but also generates a 'hype' among prospective customer, especially on social media platforms.

7.4 The Origin Saga of Saregama India Ltd.

Incorporated on August 13, 1946, Saregama India Ltd. has initially been a subsidiary of England-based 'The Gramophone Co. (India) Limited', whose operations were established in the city of Kolkata (formerly, Calcutta) in India. The parent company was itself another subsidiary of Electric & Musical Industries Ltd., England (EMI). Saregama's fundamental objective was to produce and trade in gramophone records, radio receivers, radiograms, record players, pick-up cartridges, other associated products (The Economic Times, 2018). On October 28, 1968, the enterprise was converted into a public entity under the name 'The Gramophone Company of India Limited'. In 1977, the company discontinued existing as a subsidiary of The Gramophone Company Ltd., England, in the aftermath of issuing its shares to Indian nationals under a prospectus. In 1984, the company was incurring significant losses on account of a precipitous fall in the sales of vinyl records, and the company attempted to offer dealer discounts as well as diminish the selling price to block subsequent sales decay. The deterioration in the financial performance of the company was manifest clearly, as the year 1987 witnessed the company arriving under the prerequisites of the Sick Industrial Companies (SP) Act, 1985. In the early 1990s, the company inaugurated a couple of upscale retail music establishments, which catalysed a holistic amelioration in the retail ecosystem in India, in the LPG era. At the same time, the company also launched a novel brand called 'Sheer Magic', to tap the nascent digital market. The new brand encompassed digitally remastered music that was recorded on premier-quality imported magnetic tape. The mid-1990s saw the entity making its foray into FM broadcasting in the radio stations of Kolkata and Goa.

The company also recorded a collaboration with Gramco Music Publishing Private Limited (GMPPL) by acquiring 30% of its equity and commanding complete managerial control. In the first half of 2000, the Rama Prasad Goenka (RPG) Group-led firm, suggested share exchange ratios of 4:7 and 1:700 for the purported merger of RPG Music International Limited (RMIL) and Gramco Music Publishing

Limited (GMPL), with The Gramophone Company of India Limited (GCIL). It was as recent as November 3, 2000, that the name of the company was altered to the present name of Saregama India Limited. The company owned a website called 'hamaracd.com' that offered made-to-order music CDs and raised kiosks in the city of Chennai during the December music season in an attempt to proffer music enthusiasts to develop their own 'Katcheris'[1] (Business Standard News, 2018). In 2004, Saregama partnered with Color Chips Limited for the creation and dissemination of the album 'Hanuman Chalisa'. The very next year noted the company's strategic alliance with MGM Studios (The Economic Times, 2005).

Today, Saregama has established itself as a crucial player in the Indian music industry, owning music inventories in various regional languages and domains such as movie music, Carnatic music, Hindustani classical and even spiritual music. Saregama has also magnified its index to evolve as the largest in-perpetuity global owner of both sound recording and publishing copyrights of Indian music across 14 versatile languages (Sen, 2019). Coupled with owning music projects, Saregama also happens to produce films under the title 'Yoodlee Films' as well as multi-language television content (Bhattacharya, 2019).

7.5 Saregama Carvaan to Carvaan 2.0: A 'Digital' Triumph?

> We are keeping the company relevant for 20 to 30 years down the line.
> —Vikram Mehra, Managing Director of Saregama India

Saregama Carvaan is a ground-breaking portable digital music player from Saregama India Limited, that is preloaded with an excess of 5000 songs, lucid user interface and high-grade speakers. Interestingly, the company owns Intellectual Property Rights (IPRs) for an excess of 1.2 lakh songs, 5400 h of television serials and 20 movies (Malpani, 2018; Saregama India Ltd., 2018). To the ordinary customer, it would indeed be a pertinent question as to why an eminent music firm would unveil a product that appears so retrograde in terms of its technological façade. In today's era of digital supremacy, ideally, the product would have fallen flat among consumers. Yet, the company seems to have checked all the right boxes in terms of its sales and acceptance among target consumers in India. The product has successfully managed to disrupt a multitude of archetypal industrial customs and conventions while reinvigorating the incidence of the retro genre among several generations, be it the millennials or otherwise.

There are several strategies that Carvaan implemented perfectly. For instance, the preliminary stage in determining whether or not a product may be deemed as innovative is to assess the existence of any demand for the same in the market. The ideation for Carvaan began in 2015, in the wake of substantial market research

[1] A *katcheri* happens to be a congress of musicians and audience members in the light of Carnatic music, which is usually presented in the concert format.

conducted across 23 cities to probe into the behaviour of Indians towards their consumption of music (Mehra, 2019). The research results suggested that ardent music enthusiasts, especially above the age of 35 years, preferred to patronize evergreen Indian legends of contemporary Hindi music such as Mohammad Rafi, Kishore Kumar, Lata Mangeshkar, Asha Bhosle and Jagjit Singh. Such individuals also found it arduous to access such music even when they were ubiquitously available across several digital platforms, often for free. Subsequent research revealed that as such individuals grew with age, their propensity to accept and adopt technology started dwindling as they struggled to operate novel mobile applications, thereby shunning them altogether. Further, they preferred products which were relatively uncomplicated, such as listening to their favourite music by merely switching on the radio. This is where Carvaan played a masterstroke by facilitating ease of access and ease of use to the end-user, keeping their personalities and usage attitudes in mind. Nostalgia played a major role in the success of the Saregama Carvaan. Another significant reason for the success of Carvaan was its prospect as a gifting opportunity, especially by Generation X consumers, for their parents or the elderly populace in their families or extended families. The product was positioned as a highly 'personal' gift alternative, triggering a plethora of memories. The growth saga of Carvaan has been fundamentally steered by this notion. E-commerce platforms, especially Amazon, have become crucial channels for the distribution of Saregama Carvaan, as it became one of the highest-selling products on the platform. The 2018–2019 period bore testimony to a total sale of nearly 2.29 lakh units of Saregama Carvaan and are anticipating a total sale of around 6 lakh units until the end of 2019 (MoneyControl News, 2018). The growth of Saregama Carvaan is clearly evidenced through its financial statements, such as its income statement (**refer to** Table 7.1) and balance sheet (**refer to** Table 7.2). Table 7.1 signifies a clear-cut measure of profitability as evidenced by a 67.2% surge in the diluted EPS (in INR Mn) from 2017 to 2018. The company also enjoys a robust net worth situation, as observed from the balance sheet information in Table 7.2.

Saregama Carvaan took technology as well as a content jump by introducing Carvaan 2.0, which offered consumers access to over 200 podcast stations in addition to 5000 pre-installed songs. From an olde worlde directory of music products, Saregama has indeed soared aggressively into creating unique content across not only music but also films and television. Since the inception of 2019, the company has made strategic investments in new-fangled music for Hindi mainstream movies such as 'Ek Ladki Ko Dekha To Aisa Laga', 'Total Dhamaal' and 'Panga'. Saregama has also initiated plans to mark its ingress into the music business specific to Bhojpuri-language movies. The company further owns a production division entitled, Yoodlee Films, which concentrates largely on digital releases, such as on OTT platforms like Netflix and Hotstar. The digital transformation of the company has been premised around the assurance made by the company to amplify the content offering. Accordingly, Saregama is presently unfurling its Carvaan platform to a multitude of talented content creators who can efficaciously utilize it as a viable platform to dispense their audio content across households in the country as well as globally (Chowdhary, 2019). Saregama affords prospective content cohorts with an

Table 7.1 Standalone income statement of Saregama Carvaan

Particulars (in INR million)	FY16	FY17	FY18	H1-FY19
Revenue from operations	2148	2081	3456	2497
Other income	99	159	142	454
Total revenue	2247	2240	3598	2,51
Total expenses	1997	2003	3115	2580
EBITDA	**250**	**237**	**483**	**420**
EBITDA margin (in %)	**11.13%**	**10.58%**	**13.42%**	**16.86%**
Depreciation	53	41	38	17
Finance cost	3	23	34	32
PBT	**194**	**173**	**411**	**371**
Exceptional items	96	–	–	–
Tax	22	73	106	136
PAT	**76**	**100**	**305**	**235**
PAT margins	3.38%	4.46%	8.48%	9.41%
Other comprehensive income	–	1301	136	−159
Total comprehensive income (after tax)	76	1401	441	77
Diluted EPS (in INR)	4.33	5.74	17.51	13.51

Source: Company records

opportunity to license their ongoing content or germinate novel content for Carvaan 2.0, within the ambit of their Content Partnership Program (Chawla, 2017). Such content can encompass an array of groupings ranging from religious, folklore, television, lifestyle, current happenings, technological advancements, kids-content, fitness and wellness, inspirational, psychological well-being, among others. Using various social media platforms such as Facebook, Instagram or YouTube, the content developed shall be hosted and promoted on Carvaan 2.0, in its own exclusive stations. The content developers to this end would be entitled to 40% of the net revenues earned by Saregama, from their advertising programs and subscription plans on the channel of the artist (MediaNews4U, 2019). Mehra (2019) noted that offering a plethora of content to users was fundamentally important in Carvaan's journey from a product offering to a platform interface in the case of Carvaan 2.0. Furthermore, fresh content creation is also being developed by the company by virtue of its collaborations with the British Broadcasting Corporation (BBC), film critics as well as food and travel bloggers and enthusiasts to develop 282 channels of podcasts. The evolution of Saregama Carvaan from a myopic audio-dominant product offering to a sui generis audio platform, and finally into a full-fledged professional content creating company is immensely warranted, especially since the company reported a waning in profits by 23% in Q3 of 2020. Although it was largely spurred by the pandemic and the ensuing lockdown, the timely transition to a digital-dominant strategy was appropriate and highly effective under the given circumstances (Jalan, 2020). Coupled with this, Saregama also registered a licensing contract with Facebook, wherein its music content could be used by Facebook users when generating their own personalized content. Mehra (2019) opined that retro

Table 7.2 Standalone balance sheet of Saregama Carvaan

Equity & liabilities (in INR Mn)	FY17	FY18	H1-FY19	Assets (in INR Mn)	FY17	FY18	H1-FY19
Shareholders fund				**Non-current fixed assets**			
(a) Equity share capital	174	174	174	(a) Property, plant and equipment	1893	1881	2058
(b) Other equity	3236	3647	3662	(b) Investment properties	25	24	24
Net worth	**3410**	**3821**	**3836**	(c) Intangible assets	62	61	60
(c) Non-controlling interest	–	–	–	(d) Investments in subsidiaries and JVs	**155**	**155**	**155**
Non-current liabilities				(e) Financial assets			
(a) Employee benefit obligations	19	21	21	(i) Investments	1076	1234	1051
(b) Deferred tax liabilities (net)	424	456	459	(ii) Loans	42	34	39
				(iii) Other financial assets	–	–	–
				(f) Other non-current assets	19	112	21
Current liabilities				**Current assets**			
(a) Financial liabilities				(a) Inventories	99	473	667
(i) Borrowings	–	**129**	**459**	(b) Financial assets			
(ii) Trade payables	371	386	449	(i) Trade receivables	556	781	1156
(iii) Other financial liabilities	115	347	487	(ii) Cash and cash equivalents	156	64	20
(b) Other current liabilities	68	116	183	(iii) Bank balances other than the above	1	16	17
(c) Provisions	262	359	387	(iv) Loans	28	5	6
(d) Employee benefit obligation	16	7	5	(v) Other financial assets	1	1	1
				(c) Current tax assets (net)	413	414	299
				(d) Other current assets	159	387	713
Total	**4685**	**5642**	**6286**	**Total**	**4685**	**5642**	**6286**

Source: Company records

music had struck a favourable chord with young audiences, as it was noted that users on platforms such as TikTok were also using retro songs in the development of their content. The successful digital transformation of Saregama Carvaan is also suggestive of the fact that collaborative strategies are crucial.

7.6 Saregama Carvaan's Digital Transformation Drives Competitive Distinction

As noted earlier, the music and entertainment sector were one of the earliest to experience the impact of digital reform. In the 1990s, the here and now of digital disruption was manifest with the advent of the homogenized mp3 format for digitized music coupled with the accessibility of broadband networks for Internet supply. While conventional music businesses lost their place in the evolving music market, other configurations of the music network that appeared to be more customer-centric continued to experience significant growth. For instance, Sony suffered defeat in terms of their status as once market-leader in the music business, to digitized music players, which radically altered the manner in which consumers accessed and stored their music (McGinty, 2015). Consumer electronics companies that manufactured portable digital music players, concert promoters and producers of other live events continued to enjoy success in the wake of the digital drive. The introduction of the Saregama Carvaan Go, a portable and personal audio player that comes pre-installed with over 3000 evergreen Hindi songs, is also crucial as it successfully rekindled the 'nostalgic' element among a host of consumer and customer groups.

A pertinent question in this context is: What did/does Saregama Carvaan 2.0 as a business enterprise undertake in order to surpass the rampant transformational drivers in today's digital era?

One of the fundamental realms that have been adequately addressed by Saregama 2.0 is the redesign of the customer value proposition and reorienting the functional business model. While traditional music businesses have largely addressed these issues by developing certain specific products and services, Carvaan has adopted the digital route, wherein they have focussed on restructuring informational content and customer engagement by diversifying into regional content, encouraging content creators to use the novel Carvaan 2.0 platform and also monetizing such new customer value propositions efficaciously, thereby resulting in a win-win situation for both parties. Next, the operational model of the firm has also been readjusted to ensure that the predilections and needs of customers are in congruence with the distribution dynamics of the product offering. This has necessitated an exhaustive integration of versatile business operations and using data optimization tools to ensure effective administration and tracing of such data. The 'what' (customer value proposition) and the 'how' (operational business model) are addressed in the advancing phases of digital transformation (**refer to** Exhibit 7.2).

The strategic trajectories leading to digital transformation in the case of Saregama Carvaan can nonetheless be encapsulated into three fundamental methods. Two of these methods have been deliberated upon in Exhibit 7.2, wherein the focus is on customer value propositions, and the other is on radically transforming the operational business model. Notwithstanding, a more holistic method involves the amalgam of the above two methods. The rationale is that in today's hypercompetitive digital business milieu, Saregama has actually never begun their process of digital

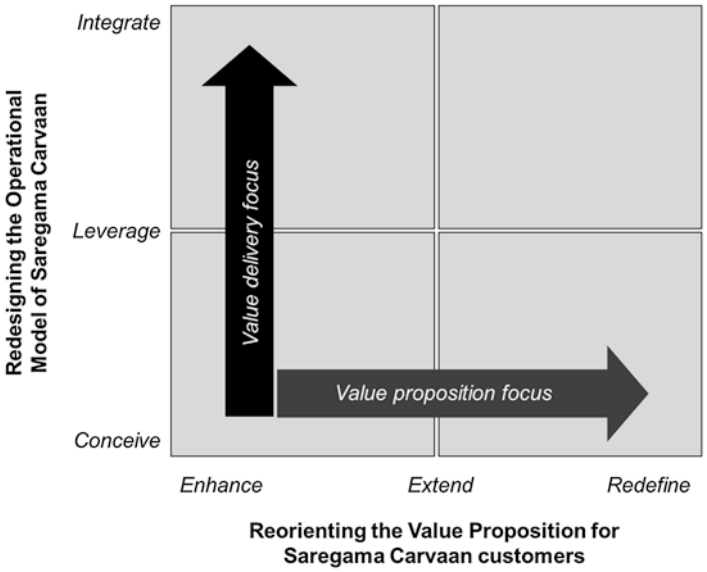

Exhibit 7.2 The customer value proposition-operational business model trade-off for Saregama Carvaan. (Source: Derived from IBM Institute for Business Value Analysis)

transformation from scratch, but instead, they host interactive web-based platforms, augmented customer services and experiences. Concurrently, they are generating rudimentary functional competencies in the forms of digital channels or e-logistics. From this foundational point, Saregama's strategic methods to tackle digital transformation follows one or more of the trajectories (**refer to** Exhibit 7.3).

The first trajectory (T1) represents an approach wherein Saregama can conceive and integrate their digital business functions initially, subsequent to which they can address the customer value propositions in order to accomplish the holistic transformation. The second trajectory (T2) explores the opportunity for Saregama to augment, broaden or reorient their customer value propositions with their digital content, visions and customer engagement. This approach would be followed by incorporating its digital operations. Finally, with the third trajectory (T3), the company can develop a novel suite of proficiencies around the radically altered customer value propositions and operating business model in close conjunction with each other.

The optimal trajectory for Saregama is pillared on its strategic goals, coupled with skyrocketing customer expectations, the intensifying music industry in India, as well as the competitive pressures arising in an era where apps such as Gaana, Saavn, YouTube Music or even Spotify play a dominant role. The third trajectory happens to be the most promising one as Saregama must redesign customer value propositions as well as operational models to ensure success in digital transformation. In fact, the company, given its rapid expansion spree, is incredibly eager to adopt the said route to drive transformation and gain an exclusive status to gain

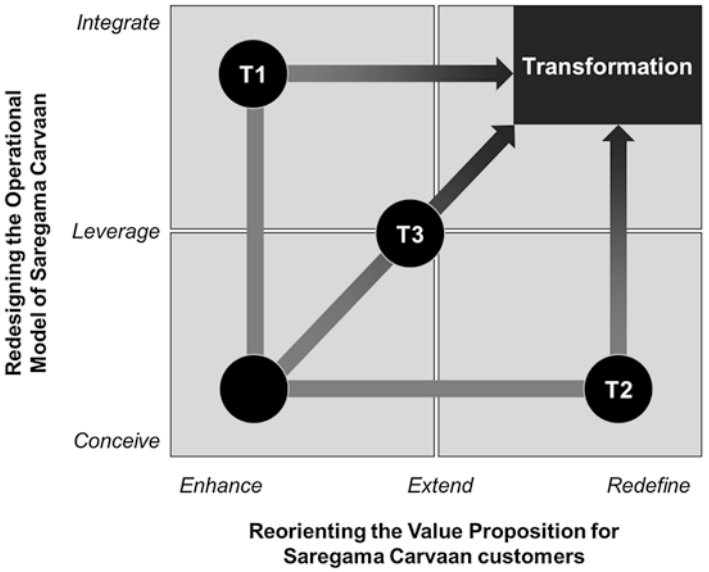

Exhibit 7.3 Trajectories to Saregama's digital transformation. (Source: Derived from IBM Institute for Business Value Analysis)

leadership in the industrial context. In this light, it is important to delve into the process by which Saregama Carvaan 2.0 has successfully reached a position of reshaping the customer value propositions as well as redefining operational business models (**refer to** Table 7.3).

The other question that warrants attention is: How does Saregama Carvaan 2.0 shape the most optimal strategy for digital transformation?

To this end, a coordinated and well-thought-out methodology enables organizations to engage various stakeholders such as customers, channel partners and employees at every phase along the digital transformation roadmap. The first phase was their identification of adequate transformation prospects pillared on a comprehensive appreciation of the process of digital transformation in the music business, although it is heavily dependent on the degree to which Saregama's product offerings can be digitized. It is more dependent on the briskly altering customer expectations. In 2015, Saregama entered into an agreement with Believe Digital, which fostered the digital distribution of Saregama's music directory across divergent languages and genres, in overseas markets especially with the Indian diaspora. The partnership would cater more to global markets for Saregama's music in addition to other prospects for monetization (Johari, 2015). Essentially, Carvaan 2.0 was Saregama's rejoinder to the consumer feedback about broadening the content offering on Carvaan. The index of novel audio stations intersects the age segments and presents a pure family-centric product offering. The enhancement of the content

Table 7.3 How is Saregama Carvaan bracing for digital transformation

How is Saregama Carvaan 2.0 restructuring their customer value proposition?	How is Saregama Carvaan 2.0 optimizing their business operational model?
Proffer augmented products and services for a better customer experience Carvaan is typically positioned for individuals aged above 40 years. Customers are provided with a lean-back music-listening experience, and they can proactively develop playlists according to their choice while deciding on their favourite songs. With Carvaan 2.0, the company has expanded its product mix breadth to rope in content creators and podcasts, as well as movie divisions, thereby appealing to more age cohorts	***Generate new digital competencies*** The market for Carvaan 2.0 had opened up to plenty of favourable responses, despite the fact that the company has still been developing their distribution systems and retail penetration. Carvaan's preliminary success has also contributed to building their logistics and distribution infrastructure. With lockdowns imposed due to the pandemic, the company has focussed on a digital-dominant strategy
Extend offerings for new revenue streams Carvaan 2.0 acts as a compere to podcast content under a multitude of genres ranging from entertainment, news, health and lifestyle, education, among others. Such content can be retrieved on-demand by customers ubiquitously at any point of time. Typically, a Carvaan 2.0 podcast offers an array of episodes, each ranging from 5 min to an hour of original and fresh content on a daily basis. Monetization aspects to generate revenue streams from such podcasts can be classified under two broad categories, each further subdivided into two models. Category A (Model 1) provides in-content advertising rights with the partner, who can monetize their podcasts, while Carvaan 2.0 would serve as a platform for them to distribute their content as it is. Category A (Model 2) provides in-content advertising rights with Carvaan 2.0, where the share of advertising revenues would be based on usage patterns. In case of Category B (Model 3), the content is developed by the collaborator at his/her cost and licensed to Saregama free of cost. Like in Model 2, the share of advertising revenues would be based on usage patterns. In Category B (Model 4), the content is conceived by the partner for Saregama against a predetermined fee (Saregama Resources, 2019)	***Leverage data to manage across the business*** At the subsequent echelons of operating transformation, Saregama leverages accessible information and liaisons across distribution networks and channels, business elements and supply chain associates. This renders its feasibility to amalgamate digital and physical modules that furnish the highest value, in terms of ameliorating swiftness to the market, or even to equip employees with information enabling them to outdo customer potentials

(continued)

Table 7.3 (continued)

How is Saregama Carvaan 2.0 restructuring their customer value proposition?	How is Saregama Carvaan 2.0 optimizing their business operational model?
Redefine principal components for a radically redesigned customer value proposition Capturing the complete prospects proffered by the digital revolution, Carvaan 2.0 has transform the entire customer value proposition radically. Besides its ease of use and gigantic assemblage of preloaded music, the Saregama Carvaan 2.0 can be distinguished especially due to its unique appearance, much like an archetypal radio. This is a robust component of its appeal to older audiences. Yet, Wi-fi happens to be the novel feature in Carvaan 2.0, as internet connectivity provides users a new-fangled approach to play and listen to music	***Integrate and optimize the 'digital' and 'physical'*** Saregama focuses on copiously redesigning the functional and operational business model by optimizing all components of the value chain around the loci of customer engagement

Source: Company records

offering in 2019 by the company is another attempt to offer a selection of content creators who peruse Carvaan as an effectual web-based platform for broadcasting their audio content (Mehra, 2019). The second phase witnessed the redefining of the value proposition centred around what prevailing and potential customers are expected to shell out when adopting Saregama Carvaan 2.0. This would also entail novel techniques of utilizing technology to distinguish their services and reach standing customers with novel digital offerings or liaisons and, ultimately, redefining all-inclusive products for digital value. The third phase involved the designing of an optimized operating business model that blends the competencies of Carvaan 2.0 along with their technological requisites. Further, contemplating on the "how" of value delivery calls for a holistic fathoming of the existing competencies and prospects available. The operational design of Carvaan 2.0 backs customer interaction as a core component of cross-channel integration and supply chain alliance. Next, in order to implement the strategy, the operational model has been redefined to complement the new value proposition. This would require optimization of the processes across digital and physical encounters as well, while developing a new-fangled set of digital competencies for customer engagement as well as supply chain incorporation.

Finally, there is a clear sense of perennially evolving using real-time customer insights and cutting-edge analytics for Carvaan 2.0. Customer necessities and predilections vary over the inception of new markets, as they adopt new technologies, such as location-centric apps. With the propensity to examine customer exchanges even at the micro-level, Carvaan offers a fresh source of insights for continual innovation.

7.7 Conclusive Deliberations

The disruptions posed by the coronavirus pandemic have accentuated the critical role of technology, in terms of unfurling the most optimal trajectory to digital transformation. This may be a wide-ranging restructuring of the customer value proposition, an alteration of the operating model of Carvaan as a whole, or a blend of both, that warrants a meticulous grasp and appraisal of key factors such as the location of Carvaan 2.0 on the tangibility-intangibility spectrum in the context of the music business. It also depends on the agility and adoption rates towards social networking sites, coupled with the strategic manoeuvres of the rival players in the music business in India. This is further coupled with the dependence on the degree of integration at every stage of transformation, while establishing a sync between the digital and physical.

First, transforming processes, for instance, influence client placement and performance. Nonetheless, if rivals interconnect with consumers in new-found manners, business-centric companies may be unable to search for sales prospects, customer satisfaction and market share. Conversely, working too fast to transform a value proposition can also pose cost problems if the new offering calls for too much sophistication or manual interaction. Businesses in every sector are under tremendous stress to reassess their plans and activities on the value of their clients. However, all products and functions cannot be completely digitized, for instance buildings, computer systems, as well as clients and staff, will still have physical specifications. Physical and automated systems are required to be handled seamlessly without alienating consumers and adding needless confusion. Integrating new and archetypal corporate operations encompasses assessing the effect of all business decisions and experiences on consumers.

Saregama Carvaan has been adopting a proactive stance in the digital transformation process by leveraging the maximum potential of disruptive technologies. To this end, they have not only reoriented and redesigned the value proposition of their customers, but also remodelled their business operations to furnish new customer value propositions efficaciously and innovatively. Such a transformational trajectory for Carvaan 2.0 not only demands a transparent and clear-cut vision, but also the pertinent skill sets at the right time and right place. Additionally, the trajectory varies according to the nature of the industry. Moreover, there is also a need to thwart any form of cultural confrontation and discrepancy to analytical-centric decisions across the extended enterprise. The path to digital transformation will vary by industry, as will customer adoption and an organization's legacy environment. Nevertheless, every industry is exposed to multiple challenges in an attempt to beget change, and every organization must possess and subsequently seek to implement a strategy in place. Many that are able to resolve the difficulty of optimizing both physical and digital aspects by introducing innovative business models focused on consumer preference will earn the first choice of talent, partners and capital. Saregama Carvaan is expected to sustain its growth in the near future, especially by focussing on Tier-II and other smaller cities and towns. As a matter of emphasis for

all new-age companies in India, regionalization and customization are the mantra to success for Carvaan and subsequently Carvaan 2.0. These are the markets wherein the regional adaptations can further reinforce its substance in the variety of choices and musical preferences of Indian markets. It is clearly evident that there remains a robust inclination among Carvaan 2.0 as it leans in favour of technology implementation with the intention of boosting efficacy levels. The company's surge is pegged to be powered by extensive and across-the-board marketing undertakings, coupled with other promotional activities, focussing on word-of-mouth, enlargement of towns, distribution channels and overseas markets. For their film division, the key would be to concentrate on developing a unique inventory, which would propel demand by various OTT platforms.

Appendix 1: List of Exhibits

Appendix 2: List of Tables

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Chapter 8
Business Opportunities for Small Firms Through Digital Platform in Post COVID Era

Gouranga Patra and Sumona Datta

8.1 Introduction

COVID-19, a worldwide pandemic, has brought about drastic changes in all aspects of our lives, starting from our daily activities to the global economy. Currently, India witnessed very low economic growth which does not match with any past figures. Nonetheless, a lot of initiatives have been taken by the government to revive this condition (like self-reliant to amendment of agriculture bill), and attempts are being made to find out an alternative root for economic driver. But economy can grow only if purchasing powers grow. Due to COVID-19 spread and high level of income fluctuation, the traditional market has got affected, while, on the other hand, marketing through digital platform is increasing in all sense. Therefore, sustainability of small firms in comparison to large firms is in question. If they run parallel levels of operation, then what could be the business structure for small firms to handle business in digital system? Certainly, it is a matter of debate, as in, what could be the future of Indian business scenario after COVID-19, especially in the small and medium segment.

Due to the pandemic, e-commerce and retail business got affected due to certain reasons like economic outlook, supply issues, buying habits and social restriction all around the world. Hopefully, the post COVID era will open a new door for the sustainable business transition (Cohen, 2020). Hence, there is a dire need to make the supply and production system more resilient (Sarkis et al., 2020) and flexible so as to preserve its economic and social sustainability. To attain this end, several trial-and-error methods are being followed by researchers to get a permanent solution for

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developing production and supply network through digital mode (Tan et al., 2019). In the same line, predictive models are being applied by marketers for assessing the effect of market condition in terms of growth and return on pandemic environment (Ivanov, 2020). Apparently, a flexible supply chain network and manufacturing system should be able to withstand the effects of an epidemic or other such impacts (Ivanov, 2020). In this respect, low cost store and low access to consumers can improve the digital business scenario, and more people can move towards digital platform. This mechanism can help small firms to compete with large ones and diversification of digital business can spread across different classes of people.

During the pandemic, lot of industries have suffered because of their incompetence and unpreparedness for the online marketing system and also their inability to link the production and distribution system. Industries like small clothes retailers and its associated companies, tourism and its associated business, education and entertainment industries got affected to a great extent. Most of these industries are associated with small-scale partners. Service units like restaurants, hospitality, tourism, etc. also witnessed a decreased demand and overall turnover. Even the ever-growing textile and apparel industries endured heavy impact in terms of order cancellations and stalling of regular funds. Needless to say, the most important concern in the current context pertains to how sustainability of the economy gets reshaped in the post COVID phases.

Fortunately, some of the global manufacturing leaders at least are relatively resilient enough to mould and customize their production strategy to pandemic-based requirements. The present government has also proposed various financial incentives for developing MSMEs in the post COVID era. Nevertheless, survival of the organizations in the post COVID era will require much more than mere financial incentives. Therefore, it is an important job of the strategists and market researcher to design sophisticated market policy to attract customers in the digital world and assess the components which helps the customers to use digital system in their buying process. Wang et al. (2020) recommended adequate mitigation strategies to deal with a crisis like an epidemic. Small firms need to get hold of their local market in terms of products, services, pricing and handholding use of technology through a blended mode (physical and digital).

The present study makes an attempt to explore the above issues in different urban and semi-urban areas. Certain recommendations are also given for the small firms for their business sustainability in post pandemic period following an empirical study done with primary data collection during the pandemic situation. The findings of the study shed light on the potential components of digital marketing on which consumers place relatively more importance. Finally, a theoretical framework was proposed to explain the possible strategies small firms can adopt in order to ensure greater sustainability in the post COVID phase.

8.2 Literature Review

One way to mitigate this global crisis in economy can be the digitization of business, especially for the service industries. As a matter of fact, the pandemic has brought about a major change in the buyer's mind-set and buying behaviour. Records indicate that online shopping at supermarket sites increased by a massive 135% by the end of April, 2020 (Shweta, 2020). Survival and contending in these hard times require a prompt adoption of a "digital-first approach" in vital business dealings. As per predictions, e-commerce would double in size by 2023 (Chawla, 2019). Nonetheless, the pandemic fastened the rate of growth, leaving the retailers with no alternative but to immediately optimize their dealings through adoption of a digitally improvised and reactive multi-channel strategy.

Digital marketing is a global phenomenon, as opined by Dahiya and Gayatri (2018), and India being one of the fastest growing economy is not exempted from the inevitable influences of it. Evidence of such enthusiastic endeavour can be found from the interactions and spontaneous reactions of both the marketers and consumers. Across diverse product categories, an inclination towards digital marketing can be witnessed for the marketers, with financial services and insurance, fast moving consumer goods, banking and cars being the highest spending brands (Mehra, 2012). Consumers, on the other hand, are also being part of this market digitalization by making purchases through digital channels, expressing their opinions and feedbacks, by giving recommendations and publicly manifesting their inclination towards a specific brand as also playing a pivotal role in propagating information and communicating with the marketers (BCG Study, 2013). The increasing digital records in terms of the Internet and mobile users base, data service expenditures and equal digital participation from both rural and urban areas coupled with the government's impetus towards a "digital economy" are providing more encouragement to the recent market digitalization in India (Steenhoek, 2016; Delloitte, 2019).

A lot of initiatives have been taken by marketers to add value to the customers for using digital platform. For instance, online shopping offering a 24 × 7 accessibility, wider reach out to the customer base, a low set up cost for stores and low access cost for consumers (Berthon et al., 1996). A greater percentage of the Internet users are young and well educated, belonging from high income group categories (Sin & Tse, 2002). They are more time conscious, avid Internet users and carry positive attitude towards online shopping. A clear understanding of these demographic factors will help identify the customer requirements to a greater extent. Each and every business needs to focus on the requirements of the customers as well as take into consideration their demographics. Therefore, small firms need to do narrow level market segmentation in this regard.

Another emerging trend in the wake of new normal is predicted to be the use of "Contactless" shopping in retail and technology companies. In the post pandemic situation, shoppers are expected to rely more on contactless shopping as opposed to crowding in the stores. Hence, augmented and virtual realities are going to be the next big thing in retail. Several retailers are now resorting on providing virtual tours

of their collection, in order to minimize physical visits but ensure in-store experience for customers' right from their homes. According to a recent Mastercard Survey (Chawla, 2019), contactless payment service has been pushed more in to the main stream, owing to the high vulnerability of contamination at the point-of-sale systems. To make this possible, retailers are tying up with technology companies to bring in business APIs that can be operated through mobile apps and facilitate contactless payments for smaller and midsized retailers. Needless to say, the pandemic has brought about changes in the short- and long-term requirements and demands of shoppers, thus leading to a re-segmentation of the market. Understanding and utilizing the insights gained from this re-segmentation is important to ensure the future sustainability of the retailers in the market. At the same time, importance to contactless business strategies are also going to gain more priority than the traditional user experience business model featured with physical visits to the store.

Although, there is a lot of benefit of adapting the digital platform, certain loopholes exist that lead the customers to lose their trust and confidence towards digital platform (Fukuyama, 1995). As a matter of fact, instead of focusing on shopping convenience, marketer needs to focus on reducing perceived risks of the consumers and helps consumer to gain their faith, loyalty and trust (Bhatnagar et al., 2000). In a recent study, Ramachandra suggested that the lack of security and physical contact as well as lack of confidence on online product quality and retailer reduces the interest level of the consumers towards online buying (Salehi, 2012). Probably, this explains why 95% of Indian markets are still operating offline despite online shopping being so popular.

Considering the above-mentioned issues, there is a huge scope for the small and medium firms to develop improved marketing strategy based on an in-depth study in this regard. Adaptations of digital technology by small and medium firms are quite high in other countries compared to India. This is because of lack of infrastructure and lagging business strategies in Indian small firms. Only a sincere effort towards adapting digital economy and improved marketing strategy can ensure sustainability of the market in the long run. Especially, in the COVID-19 situation, a lot of uncertainties exist regarding the future strategic plans in business. It can be noted from the above discussion that transforming customer from physical to digital can be done only by gaining the customer's trust and by following a user friendly operating system. This can fulfil customers' need and requirement and build their satisfaction. It goes beyond saying that in any platform customer satisfaction plays a pivotal role in business success. In India, most of the small firms follow physical store operations. But they are strongly associated with local customers' needs and requirement.

Therefore, it is important to try identifying the influential parameters of digital marketing. This will rather help devise the probable pathway for getting a concrete structure for marketers where small firms can enter into digital space across different bases of customers. The above discussion makes it clear that to survive in the post COVID era, there is a need to improvise and adapt newer strategies in business system. Not only is it required in the production and supply system, but also huge changes are necessary in the retail operations.

8.3 Present Study

Lots of discussions, debates and researches are going on pertaining to what could be the market future in the post-pandemic situation. Although online shopping is gaining lot of attention in the recent times, in a country like India, percentage of online buyers are still limited. This can be attributed to limitations of market structure, business environments, operational inefficiency as well as the socio-economic structure of the society. Currently, only a handful brands are operating virtually. However, greater number of contenders will be joining them soon, owing to the shopper's higher inclination to online buying in the recent times. This further necessitates the need to assess the consumer's perspectives and requirements so as to develop competitive strategies. Especially, small firms need to design and sharpen their market policies and strategies more intricately in order to find their own niche among the big players.

In this regard, we have done an empirical study to explore the patterns and provide evidence for the conjectures and speculations made. So the present study is an empirical approach highlighting a specific group of respondents who act as the initiators and influencers in this journey. The basic idea was to examine some important components which are considered as important determinants for consumers indulging in online shopping. This study will help provide insights to the small firms so as to design their marketing model for sustainable development in the market.

8.4 Empirical Study

8.4.1 Study Objective

To explore and identify the important components followed by the marketers to develop customer satisfaction in digital platform.

8.4.2 Method

Participants Purposive sampling was done. A total of 186 adults (53.8% males and 46.2% females) residing in the non-urban areas of North and South Parganas part of West Bengal participated in the study. Response rate was 100%.

Tools Data were collected using a questionnaire containing several questions about shopper's thought, ideas and preferences towards online marketing. There were two parts of the questionnaire: (a) general information about participants (age, gender, education, etc.) and (b) a set of 19 questions concerning the trust, price and other

subjective factors that influence online shopping. These questions were framed based on the literature review and researcher's insight.

The subjective factor includes the parameters like importance placed on *cheaper price, anytime buying, variety, user friendly setup* and *24-h operation*. The price factor includes the parameters like *discount, festive season price, free delivery, cheaper than offline, return policy, transaction discounts* and *price advantages*. Finally, the trust factor includes the *website layout, product visibility, product description, purchasing system, payment system and distribution* and *return policy*. For the first set of questions, responses were collected using a 3-point scale where 1 indicated "disagree" and 3 indicated "highly agree". For the second set of questions, responses were collected using a 5-point rating scale where 1 indicated "strongly agree" and 5 indicated "strongly disagree".

Procedure The present study was an exploratory study. Subjects were approached with the questionnaire after obtaining informed consent from them. Data collection was completed from June to September 2020, which is during the pandemic, to identify the real issues faced by the consumers on online purchasing.

Statistical Analyses Data were analysed using descriptive statistics, correlation and principal component analysis to fulfil the research objectives.

8.4.3 Findings and Discussion

The study mainly highlighted three important aspects of digital buying intension, namely subjective factors involved, pricing factors and trust. Findings revealed interesting patterns in the emerging inclination to digital marketing.

1. **Descriptive Statistics**: Descriptive statistics for the data included mean and SD for the parameters of subjective factor, price factor and trust factor. Table 8.1 shows the mean and SD for the parameters, representing the level of agreement or disagreement of the participants with respect to their emphasis on factors leading to online shopping.

   From the above statistics, it indicates that respondent responses are very in different determinants consider for present study. In subjective measure, it is observed that respondents quite agree on the point of price and user friendly process of digital system. In the price context, it shows respondents' interest towards discounted price flowed by offering in festive season and price content less than offline. In the third parameter of our study, it is observed that website layout, product visibility and purchasing system got more edge in respondents' responses.
2. **Correlation Analysis**: All the parameters in the three domains of online shopping, namely *subjective, price* and *trust* domains, are found to be highly intercorrelated. Tables 8.2, 8.3 and 8.4 represent the association among the domain

Table 8.1 Descriptive statistics of domain parameters on online shopping (n = 186)

Domains	Parameters	Mean	SD
Subjective parameter	Cheaper price	2.83	1.11
	Anytime buying	2.48	1.27
	Variety	2.52	1.31
	User friendly	2.68	1.18
	24-h operations	2.53	1.34
Price parameter	Discount	2.86	1.21
	Festive season	2.89	1.18
	Free delivery	2.65	1.30
	Cheaper than offline	2.76	1.10
	Return policy	2.57	1.21
	Transaction discount	2.56	1.13
	Advantage	2.60	1.10
Trust parameter	Website layout	2.75	1.05
	Product visibility	2.67	1.02
	Product description	2.57	1.05
	Purchasing system	2.67	1.08
	Payment system	2.50	1.13
	Distribution	2.57	1.19
	Return policy	2.48	1.23

Table 8.2 Correlation matrix of subjective domain parameters (n = 186)

	1	2	3	4	5
1. Subjective price	1.000				
2. Anytime buying	0.48**	1.000			
3. Variety	0.43**	0.71**	1.000		
4. User friendly	0.42**	0.52**	0.64**	1.000	
5. 24-h operation	0.35**	0.65**	0.74**	0.66**	1.000

**$p < 0.0001$

parameters. More or less, all the parameters within each domain are moderately correlated to each other, indicating shared variance among themselves as also retaining their unique variance.

3. **Exploratory Factor Analysis.**

Factor analysis was done to explore the factor structure for each domain of online shopping. For the *subjective domain* and *trust domain*, only one factor is extracted explaining *58.13%* and *66.13%*, respectively, while for *price domain*, two factors are extracted, explaining *61%*. For the *price domain*, parameters like *return policy, free delivery, cheaper than offline, advantage* and *transaction discount* loaded on the first factor, while the parameters like *festive season* and *discount* loaded on a second factor. Thus, the first factor extracted can be labelled as *online general buying* while the second factor extracted can be labelled as *online festive buying*. This indicates that the price factor in online shopping

Table 8.3 Correlation matrix of price domain parameters ($n = 186$)

	1	2	3	4	5	7	8
1. Discount	1.000						
2. Festive season	0.74**	1.000					
3. Free delivery	0.42**	0.37**	1.000				
4. Cheaper than offline	0.37**	0.34**	0.60**	1.000			
5. Return policy	0.0.41**	0.30**	0.58**	0.53**	1.000		
6. Transaction discount	0.40**	0.30**	0.55**	0.55**	0.56**	1.000	
7. Advantage	0.35**	0.30**	0.58**	0.48**	0.59**	0.44**	1.000

**$p < 0.0001$

Table 8.4 Correlation matrix of trust domain parameters ($n = 186$)

	1	2	3	4	5	7	8
1. Website layout	1.000						
2. Product visibility	0.60**	1.000					
3. Product description	0.63**	0.68**	1.000				
4. Purchasing system	0.60**	0.57**	0.72**	1.000			
5. Payment system	0.0.67**	0.70**	0.77**	0.72**	1.000		
6. Distribution	0.63**	0.66**	0.70**	0.66**	0.78**	1.000	
7. Refund policy	0.53**	0.56**	0.62**	0.56**	0.72**	0.73**	1.000

**$p < 0.0001$

differs with respect to whether the shopper is buying a product during the festive season or at any time of the year. Tables 8.5, 8.6 and 8.7 show the factor matrices for each of the domains.

We have done factor analysis on each of the domains in order to identify important components which can help marketers to decide on the strategies before moving into digital platform. The present study is trying to give an insight for the small firm business opportunities in connection with large firms who are already in market. Therefore, analysis has been done by looking at the strategies followed by large firms. In this regard, the above analysis shows that availability and 24-h operation make a significant impact on the minds of the consumers who prefer to buy in digital mode.

Customer satisfaction is the prime focus in all business. In India, satisfaction towards offline purchase is higher than online purchase due to various reasons. Satisfaction is found to be related to the pleasure associated with the buying decision made for a product as also the consumption experience of the product and services (Abdeldayem, 2010). Prior studies also suggest that one of the most important contributing factors to the popularization of online shopping is the availability of 24-h services (Perera & Sachitra, 2019) that one can avail in online purchase. Other important aspects on which customers place emphasis are the variety and user friendly operations offered by the online markets (Mahnke et al., 2015). It is also reported in some studies that across different demographic classifications (age, gender and educational qualification), there is preference given to 24-h service

Table 8.5 Factor matrix for subjective domain

Domain parameters	1st factor
Variety	0.88
24-h operation	0.83
Anytime buying	0.80
User friendly	0.74
Cheaper price	0.52

Table 8.6 Factor matrix for price domain

Domain parameters	Online general buying	Online festive buying
Return policy	0.76	
Free delivery	0.75	
Cheaper than offline	0.70	
Advantage	0.68	
Transaction discount	0.67	
Festive season		0.88
Discount		0.78

operations in online buying (Kumar & Velmurugan, 2017). Our study also supported the same components when we analysed in the context of subjective parameters. It delineates that high depth assortment with service is an important criteria for selecting digital platform (Szymanski & Hise, 2000; Bauer et al., 2002; Faqih, 2016; Robinson et al., 2007). We get the highest positive factor loading on these two components (0.88 and 0.83; Table 8.5).

In the second part of our analysis, we judge respondent responses with respect to the price factor. Here, we identify two important dimensions of online product price. When market segmentation is done, it is also segmented based on volume. Here, quantity of buying gets some priority over normal buying pattern. The above statement gives us hints about two significant issues. In normal buying process, *return policy* and *free delivery* carry the highest positive factor loading (0.76 and 0.75), which indicates promotion of company policies to develop confidence to consumers mind.

As suggested by Sukla (2016), the highest motivating factors for online shopping include cash back guarantee, fast delivery, access to branded products, cash on delivery and substantial discounts compared to retail. On the other hand, the hazards in online shopping include the inability to physically touching and trying products before buying, insecurity about providing personal and financial information online, fear of receiving default products and paying fixed prices (Bhushan & Malviya, 2013). The ease of return policy is often a concern to online shoppers (Teo, 2002). On the other hand, festive seasonal buying preference and buying at discounted price have positive factor loadings. That is, a positive perception exists towards the discounted price in a seasonal time, which rather generates more attraction of the consumers towards digital buying system.

Table 8.7 Factor matrix for trust domain

Domain parameters	1st factor
Payment system	0.92
Distribution	0.86
Product description	0.85
Purchasing system	0.78
Product visibility	0.77
Refund policy	0.76
Website layout	0.74

There are lots of similarities and dissimilarities in buying through digital and offline mode. But in numerous studies, it is claimed that online buying is strongly associated with the development of trust and security designed by the marketers to develop confidence. This will help to reduce the perceived risk of the buyers with respect to safe payment method and transparent transaction system (Clemes et al., 2014; Liu et al., 2008). Substantial research is also done on determining online consumer satisfaction, which claimed that hedonic motivation works within the consumer's minds, and it helps to develop their trust towards digital buying (Anand et al., 2019). Various factors influence customer satisfaction in online shopping, for instance, attitude towards product, promotion and distribution, perception, ease-of-use, reliability, website design, trust and security experience (Vaghela, 2014; Tan, 2012; Yulihasri et al., 2011; Dennis et al., 2010; Alam & Yasin, 2010; Hanai & Oguchi, 2009).

If we analyse our study, it also shows that respondents are more concerned about payment system, distribution and product description in website. A lot of studies reported that website content gets more priorities to develop trust among the consumers in comparison to other factors (Tandon et al., 2017). This strongly supports the present findings. In India, buying in digital forum is quite new and now after the pandemic, people are moving more towards online shopping. So, it is empirically evident that marketers need to develop the trust component to increase satisfaction level of the consumers which may help them to be more loyal towards digital buying.

8.5 Development of Theoretical Framework Suitable for Consumers in the Digital Platform

The present empirical study was an approach taken by the researcher to develop a base for online marketing strategies for small firms by considering the approaches of the large business unit. Small firms have a significant contribution to the business and economic growth in Indian context, and it is increasing all the more because of our government's initiatives towards self- reliance and digital India concept. Earlier,

online marketing was mostly limited to large cities. But it is expected that in the post pandemic era, it should reach both the urban and rural areas equally. In this present context, rural marketing is also improving because of attitudinal changes of rural customers. Trust and perceived benefits (related to associated service, price and promotion) are strongly associated with changes in consumers' attitude towards online buying (Hoque et al., 2015). For that, marketer needs to emphasize on certain important components like information quality, merchandise attribute and quality, website design and layout, transaction system, payment, security/privacy, delivery, self-consciousness, state of mind, the consumer's time sense and customer service (Liu et al., 2008; Katawetawaraks & Wang, 2011).

In the present research we found that, to develop consumers' perceived benefit, there is a dire need to blend certain factors *like offering variety products in cheaper price with all-time service facility and with user-friendly technology* that can build customers' interest. Looking into customers' mind-set, online marketers need to design prices in two ways: *psychologically based* (highlighting return policy and free delivery) and *value-based* (discounted price and seasonal offering). For developing trust, marketers ought to concentrate mainly on *secure payment system, distribution* and *detail product description.* The above components are not new for small firms. However, only giving importance to things like incorporating user friendly technology and promoting their existing customer will benefit them to a great extent. Therefore, if small firms can follow this basic mechanism in connection to their physical operation and attempt to promote small segments of customers with blending the process, then they will gain different market outlooks and will be able to sustain their business for long term.

8.6 Conclusion

Digital India is a concept defined by the government which hints to the fact that it could be an option for all sectors. COVID-19 has fastened this process because of certain restrictions in peoples' movement, and this has brought about a change in every possible sectors. In India, the concept of digital marketing is quite back footed because of our socio-economic structure and clear differences between rural and urban market. But with passing days, we are witnessing that a particular class of people (mostly educated and employed youth) are adapting themselves to digital world from buying grocery to official work. In the present chapter, we presented a great deal of discussion to understand the current context of digital marketing system in India. To validate the above statement, we conducted an empirical study among the young educated class, involved in digital buying process. The research highlighted few important areas which are applicable across different countries where digitalization already exists. It explains with statistical conviction that, to generate more growth and develop more customer base, marketers need to concentrate on a few areas of online shopping. These include developing trust among the consumers, by introducing user friendly and secure payment system, transparent

distribution system and easy access to website layout. The other areas highlighted are in connection with pricing factors, which indicated that discount price and return policy (with no additional cost) as well as festive season offering discounted price more effectively attract customers. Since people already have a satisfactory experience of purchase with offline stores, online marketers need to benchmark their services and introduce variety with 24-h operations. In this regard, we can say that this research gave us a deeper insight about future operation techniques of digital platform. It is nothing but a combination of depth of assortment, 24-h operations, return policy, discount selling, payment system and proper distribution system. If marketers can design a model highlighting these components, they may get good ROI in this region.

8.6.1 Theoretical Implications

This study provides a foundation for the future researchers in studying the consumer preferences towards online buying of shoppers. Further research can be done by increasing sample size including a rural population that may reflect the entire scenario of consumer behaviour of online shopping in different region of West Bengal. There is also ample scope to do the same kind of research considering different socio-economic classes of people. Furthermore, the variables that have been identified in this study may not be sufficient enough in different market conditions as customer and market structure are different. Therefore, there is a need to cover more variable which may be more relevant in different market setting to develop customer satisfaction towards online buying.

8.6.2 Managerial Implication

Digital platform concept has been introduced in India in the past few years, and the COVID-19 context has further accentuated the process to become more formalized. But looking into the nature of Indian consumers, marketers have to develop market strategy which can be more effective. This study was trying to develop a road map by taking into account the evidence of users to the small firms, suffering from prospective market because of offline market operations. The study highlighted some factors that customers can expect from firms operating in digital platform. If small firms can apply Omni- channel concept in small segmented market and focus on these components, then they can easily develop a strong market base for their business. The study highlighted that operational efficiency, safety, security; distribution and variety get more priority than brands.

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Chapter 9
Pandemic Effect and Remedial Business Model in Micro, Small and Medium Enterprises: A Study in India with Special Reference to West Bengal

Seeuly Nath and Manidipa DasGupta

9.1 Introduction

Like other countries, in India also the role of micro, small and medium enterprises (MSMEs) towards uplifting economy was appreciated mainly due to generating employment and self-employment opportunity (11.08 crore) beside production (45%), export (40%), GDP contribution (30%) [Ministry of Micro, Small and Medium Enterprises (MSMEs), All India Fourth Census Report, 2006–2007]. MSMEs had unique advantages due to their size; comparatively high labour–capital ratio; shorter gestation period; focus on relatively smaller markets; need of lower investments and mobilization of resources, skills which may otherwise be unutilized and stimulation of growth of industrial entrepreneurship (Dey, 2014; Katua, 2014).

But the prolonged lockdown and worldwide economic downturn had disrupted the demand supply chains of the Indian economy with suffering for prolonged economic slowdown. In this very issue, the labour intensive (like MSMEs)[1] would have to face tremendous pressure to continue production process with their human capital. Due to lack of techno-economic support, the enterprises could not fight

[1] The Micro, Small and Medium Enterprises Notification, 1 June 2020: MSMEs have been defined on their investment in plant and machinery and turnover. A micro enterprise where the investment in plant and machinery or equipment does not exceed 1 crore rupees and turnover does not exceed 5 crore rupees, a small enterprise where the investment in plant and machinery or equipment does not exceed 10 crore rupees and turnover does not exceed 50 crore rupees. A medium enterprise where the investment in plant and machinery or equipment does not exceed 50 crore rupees and turnover does not exceed 250 crore rupees.

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against the odds by restructuring their production process from labour intensive to capital ones. The outbreak of COVID-19 pandemic was an unprecedented shock to the world economy (Roy & Bhusan, 2020). The Indian economy had already been in one of its worst ever deceleration phases even before the COVID-19 outbreak (Hindustan Times, 2020). The economic growth had declined to an 11-year low of 4.2% in 2019–2020 as per National Statistical Office, whereas the country had faced just a week lockdown in March in this financial year (The Hindu, 2020). The present crisis would somehow deepen the societal problems when many of the enterprises would have to down their shutters with threatening of unemployment, starvation, social unrest, etc. As MSMEs sometimes had to depend on the supply-demand of large sector, the down-step of the large sector would also invite tremendous pressure on the MSME sector chain-wise (Verma et al., 2020). Considering the importance of MSMEs in Indian economy, it is important to take necessary steps to support MSMEs to recover from this distress situation. The government has come up with various economical packages to restructure and revive the sector. The government has declared some measures like Rs. 3 lakh crore collateral-free loans, Rs. 20,000 crore subordinate debt, Rs. 50,000 crore equity infusion, revised MSME definition, global tender disallowed and clearing MSME dues to provide cushion to combat this pandemic situation.

Now, though literature-supported good number of studies on the contribution of MSMEs in pre-COVID period, a negligible number of studies (Liguori & Pittz, 2020; Sipahi, 2020; Verma et al., 2020; Sahoo & Ashwani, 2020) focused on the imbalanced situation of MSMEs in economic activities during the pandemic era. Likewise, no studies considered in-depth assessment of the enterprises with micro-empirical assessment where not only the problems in activity but also the probable solution can be taken under consideration with some comparative judgment.

Following this knowledge gap, the study takes its attempt to pursue with the research questions like (1) what are the problems faced by the MSME sector due to COVID-19 pandemic? (2) what are the remedial measures that should be taken to revive the position apart from measures declared and adopted by the government?

Taking the knowledge gap and the research questions into consideration, the present study aims at assess the deadly effect of COVID-19 on MSME sector nationwide through micro empirical survey and recommending suggestions for further improvement.

To take an attempt to justify with the objectives, a micro empirical assessment would have to be taken in district South 24 Parganas[2] of West Bengal.

To support the above-mentioned objectives, the present study structures its scope in five more sections. Section 9.2 deals with the review of the related literature. Section 9.3 represents the methodology followed in the present chapter. Results and discussions are highlighted in Sect. 9.4, while Sect. 9.5 deals with conclusion and

[2] The district South 24 Parganas of the state West Bengal have been chosen due to its contribution to the MSME sector of the state. The district stands second for number of registered Udyog Aadhar Memorandum (MSMEs) after Burdwan district and third in employment generation (1.38 lakhs) within the state after Kolkata and North 24 Parganas.

recommendations. Section 9.6 considers limitations of the study and scope for further research.

9.2 Literature Review

MSMEs had played an important role in economic development of India and acted as ancillary units to large industries. It made significant contributions to employment generation, exports and economics development of the country and emerged as one of the key drivers of Indian economy over past few decades.

But the growth of this sector was sluggish since the end of 2016 as it had to bear with lack of access to the affordable institutional support (Dev & Sengupta, 2020; Sixth Economic Census, 2013). Both demonetization (2016) and GST (2017) had adverse effects on performance of the MSMEs in India, which would have been further exacerbated by the non-banking financial company crisis of 2018 (Dev & Sengupta, 2020). After demonetization of 2016 and GST implementation in 2017, COVID-19 pandemic brought economic stress in enterprises heavily (Verma et al., 2020; Dubey & Sahu, 2020). The pandemic hit at a time when economy was experiencing sharp contraction in demand (Singh, 2020). It affected all the sectors of economy, but severely hit the MSMEs in India due to its excessive dependence on human resource, low technological upgradation (Sahoo & Ashwani, 2020) and no scope for income replacement (Sipahi, 2020). The complete lockdown and partial lockdown affected demand and supply chain of Indian economy. It restricted the movements of goods, services and personnel which affected supply in one hand and disposable income and savings on the other hand for which uncertainty raised eventually (Sahoo & Ashwani, 2020). The situation raised a question of existence for MSMEs as these firms would not have much cash in hand to sustain in the crisis period which results in mass job losses. It was also found that a huge number of the MSMEs were deeply affected due to labour crisis (Muralidharan, 2020).[3] Misra (2020) found that there would be crisis of labour in urban area in the initial phase of post COVID-19 situation.

Therefore, in such an unprecedented time, policy should be well targeted and stimulus enough to generate positive results to revive MSMEs (Singh, 2020). The RBI had temporarily postponed the payback on term loans. Emergency credit lines were introduced by many of the public sector banks for MSMEs to borrow a certain loan amount to meet their financial obligations (Muthukrishnan, 2020; Singh, 2020). Wage support could be given to MSMEs to retain their employees and to avoid layoffs by firms (Akhter et al., 2020). The government should encourage banks to increase share of lending to MSMEs against flat interest rates (Muthukrishnan, 2020; Singh, 2020; Akhter et al., 2020). They should assist

[3] According to a survey conducted by the Federation of Indian Chambers of Commerce & Industries (FICCI), 60% of the MSMEs were deeply affected.

MSMEs for deferment from payments like electricity bills, water charges, property tax, etc. (ibid). MSMEs involved in exports could be given a tax holiday (Singh, 2020). Researchers suggested to ease the computation of GST liability and also recommended lowering GST on the procurement of raw materials that are used for production purposes (Roy et al., 2020).

9.3 Data Sources and Methodology

9.3.1 Date Sources

Besides primary survey, the present study took data from secondary sources—MSMEs Annual Report, 2019–2020 (www.msme.gov.in, http://udyogaadhaar.gov.in), government report (All India Census of MSME, 2006–2007), documents, journals, etc. For micro empirical assessment (September 2020 to October, 2020), the study considered South 24 Parganas, West Bengal where two blocks Sonarpur and Baruipur were selected purposively.

9.3.2 Methodology

Type of Study The study confirmed descriptive research methodology with an in-depth study and careful analysis.

Sample and Sampling In Sonarpur and Baruipur (surveyed block), areas like Kulpi Road, Puratan Bazaar, Kalikapur, Tematha, Champahati, Garia and South Garia were covered. The main activities of these areas are related to garments, apparel, agro product and plastic manufacturing. The primary survey was done on randomly selected 100 samples (85 micro, 10 small and 5 medium enterprises of MSMEs enlisted in DIC, South 24 Pgs for the period of 2015–2019).[4] In the field survey, most of the units of MSMEs are involved in apparel, garment manufacturing and handicraft and agro product.

Data Collection Tool and Techniques The questionnaire has been framed considering the factors such as lay off, cash crunch, lack of demand, decline in revenue which will be contributing on restructuring and redesigning of the enterprises in post COVID-19 period. Both male and female entrepreneurs were surveyed and question framed on Yes/No basis. The questionnaire was mainly framed to under-

[4] These are data of registered MSMEs under UAM (Udyog Aadhar Registration). Since UAM was launched in the year 2015 and was active till June 2020, data was considered for that period only. Udyom Aadhar Registration was launched in July 2020.

stand the present condition of MSMEs in pandemic situation, the measures MSMEs would have to take in view of sustaining in this crisis, the expectation of the MSMEs from government, the future of their business as per their perception and the safety measures opted for unlock period. To represent the result of the study, bar chart has been used.

9.4 Results and Discussion

9.4.1 MSMEs and Effect of COVID-19 Pandemic in India: A Micro Empirical Experience

As per the annual report of Department of MSMEs 2018–2019, it could be detected that there are 6.34 crore of MSMEs in India of which 51% of the registered MSMEs are located in rural areas. The growth of MSMEs resulted in increase in production as well as employment generation. As reported by Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MOSPI), the share of MSME in all India GDP during 2015–2016, 2016–2017 and 2017–2018 has been 29.5%, 29.3% and 29.7%, respectively. This sector is the second largest employment generator next to agriculture.

Sudden breakdown of COVID-19 pandemic has a deep impact on MSME sector. There are many projections and estimations by institutions and scholars on the economic stress of COVID-19 pandemic. IMF in its latest estimate in June 2020 projected that the global economy may shrink by 4.9%, almost three times more than the 2008 Global Financial Crisis (GFC), and the Indian economy is likely to witness 4.5% negative growth for the 2020. As per All India Manufacturers Organization (AIMO), nearly 25% of MSMEs is expected to face closure if the lockdown remained for 4 weeks continuously and a 43% MSMEs would shut if lockdown extends beyond 8 weeks. The sector is presently facing challenges related to debt repayments, wages/salaries, statutory dues, etc. Survey has shown that COVID-19 pandemic has negatively impacted MSMEs earnings by 20–50% (The TOI, 2020). According to the ILO, about 400 million people which will amount to 76.2% of the total work force are in risk of poverty because of severe economic impact of COVID-19. That work force are working in informal economy in India. Fixed costs like rent, wages or salaries for employees, interest on loans, etc. became a huge burden for MSME sector. According to the All India Manufactures Organization survey of 5000 enterprises in March 2020, 71% of the surveyed MSMEs across the country could not pay wages in whole or in part for the month of March 2020. The most immediate concern is insufficient working capital (Kadam & Pandey, 2020).

As per the survey report, all of the respective employers have confirmed the decline in their revenue due to COVID-19 pandemic. Among the enterprises that were surveyed, 95% of them made ‘reduction in demand of product and services’ responsible for the decline of revenue. This is found to be the major but not the only

reason for the revenue reduction. A very small percentage, i.e., 5% enterprise identified 'high cost of raw material' as reason of revenue reduction. The enterprises had to take certain steps and decisions to survive during this situation. Hence, to accommodate with the reduced revenue, most of the enterprises went for pay cut for employees. The others also resorted to other ways like temporary shutdown, use of previous funds, involving in other activities apart from their regular activity or some have also reduced staff by termination process or may be asked the staff to rejoin later when the situation prevails. About 70% enterprises went for pay cut of employees, 25% enterprises temporarily stopped functioning, 1% used reserve fund, 1% enterprises involved itself in other activity apart from their regular activity and 3% enterprises went for staff reduction.

Only few enterprises (2% of the surveyed enterprises) had shifted their activities from non-essential commodities to essential commodity like mask making, sanitizer, etc. Because of lockdown and social distancing, digital marketing had been emerged as new platform for marketing products and services. Only few enterprises tried for digital marketing but without much success, those percentages were not more than 10%. It is really uncertain to assume the future of the enterprises when GDP growth rate was negative in the first and second quarter of 2021 financial year. According to the Ministry of Statistics and Programme Implementation, the quarterly growth rate was as –23.92% and –7.54% for the first and second quarter, respectively. This was observed from this study that entrepreneurs were uncertain of the future economy and profitability of their earlier business activity and most of the owners, i.e., 65% enterprises believe that once the lockdown would over, their business activity will be equally profitable, whereas 20% believe that even when the lockdown withdraws, demand of the product/services will not increase heavily. Few enterprises still were uncertain regarding the future business profitability which was around 15% of surveyed enterprises. The enterprises which were paying EMI for loans took the moratorium facilities. Though there was huge debate regarding the actual benefit which could be yield from moratorium facility, all the enterprises availed the facility. But it was found that enterprises were not interested in taking fresh loan. The enterprises were found to be afraid of repayment as demand has been reduced for products and services.

Table 9.1 and Chart 9.1 show the opinion of the surveyed sample units on COVID-19.

9.4.2 Remedial Measures Taken by Government

In such an economically distressed condition, the central government has taken several initiatives in order to solve the problems of MSMEs and also to revive their situation, but as per the experts, nothing is adequate in this catastrophe. The Union Minister Mr. Nitin Gadkari also stated that the MSMEs of India are in the verge of collapse (The Economic Times Online, 2020). The Finance Minister Nirmala Sitharaman introduced the 20 lakh crore economic package including 3 lakh crore

Table 9.1 Opinion of surveyed sample units on COVID-19 issues

Particulars	Results	
	Yes	No
Is COVID-19 pandemic negatively affected revenue generation?	100	0
Reason for reduction in revenue generation:		
Percentage of MSMEs reduce in demand of product and service	95	5
Percentage of MSMEs shortage and high cost of raw materials	5	95
Steps taken to manage with reduced revenue:		
Percentage of MSMEs reduced number of workers	3	93
Percentage of MSMEs pay cut of employees	70	30
Percentage of MSMEs used reserve fund	1	99
Percentage of MSMEs temporarily shutting business	25	75
Percentage of MSMEs involve in other activity	1	99
Government schemes availed:		
Percentage of MSMEs availed moratorium facilities	100	0
Percentage of MSMEs found new opportunities during pandemic	2	98
Percentage of MSMEs tried digital marketing during COVID-19 pandemic	10	90
Current business strategy:		
Percentage of MSMEs sustaining in the crisis and wait for economy to revive	99	1
Further investment in the old business activities	1	99
Safety and security measures taken for unlock period:		
Percentage of MSMEs providing sanitizer and hand wash from organization's cost	100	0
Expectation from government:		
Percentage of MSMEs expected rebate on electricity charges and government charges including GST	100	0
Percentage of MSMEs requested reviving the market and help in increasing demand	100	0
Future assumptions on business:		
Percentage of MSMEs think current business activity will be equally profitable post COVID-19	65	15

Sources: Primary Survey Report (Sept–Oct, 2020)
Note: 20% surveyed employer could not predict future profitability in post COVID-19

for MSMEs in order to revive their business activities. The Government came up with new scheme named 'Atmanirbhar Bharat Abhiyan' economic package, with a wish of providing relief to the MSMEs as below:

1. The Central Government of India allocated an amount of Rs. 3 lakh crores to help MSMEs in this crisis. This fund will be utilized as working capital—for purchase of raw materials, paying initial bills and wages to workers for small businesses, i.e., will work as seed capital.
2. The central government has taken full guarantee of all Rs. 3 lakh crores and need no collateral for this loan, especially for MSMEs for a tenure of 4 years and moratorium of 12 months. This scheme covers 100% guarantee to banks and on principal and interest aiming to benefit 45 lakhs of MSMEs. The scheme was available till 31 October 2020.

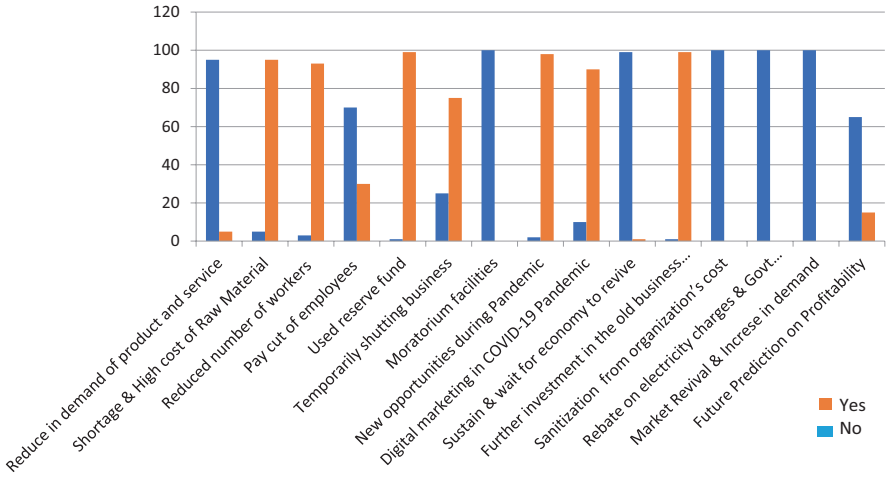

Chart 9.1 Opinion of the surveyed sample units on COVID-19

3. The government also infused Rs. 50,000 crores as equity to MSMEs as fund of funds, to be considered as mother fund and a few daughter funds in order to increase the capacity as well as size of MSMEs.
4. The central government announces a partial credit guarantee scheme of Rs. 20,000 crores for the MSMEs' promoters in order to increase the business equity.
5. All MSMEs having turnover of up to Rs. 100 crores and with outstanding credit up to Rs. 25 crores will be permitted to borrow 20% of their total outstanding credits as on 29 February 2020.
6. A 5% rate concession was announced by Small Industries Development Bank of India (SIDBI) on all loans to MSMEs. GST payments was extended till June 2020 by the government.
7. The finance minister had announced on 26 March 2020 as the workers earning Rs. 15,000 per month in business units where working people are less than 100 are at the biggest risk of losing jobs. Therefore, the government declared a proposal that EPF (employee provident fund) contribution of both employer and employee, i.e., 12% will be reduced to 10% for March, April and May months aiming to increase the cash taken away home. Now, the scheme has extended to further 3 months, i.e., June, July and August and expecting a benefit of 4.3 crore people and 6.5 lakh business units which releases a total amount of Rs. 6750 crore liquidity.
8. The adverse effect of the pandemic equally prevails in West Bengal also. Sudden lockdown stalled operations of most of the enterprises. Therefore, the state government has involved various companies from the micro, small and medium enterprises (MSME) sector for the production of hand sanitizers and is giving priority to MSMEs for public procurement so that stalled operation can start functioning. The sector is slowly started functioning in the state.

There is no doubt that MSMEs are in great distress. Through government-introduced economic schemes to support MSME sector, they still expect that government should give relief in electricity charges and various government taxes including GST. They expect that government will take necessary steps to normalize the economy as early as possible and would take initiative to create the demand of their product/services. The enterprises are ready for the normalization of their activity. During the unlock period, all of the enterprises arranged for hand wash and sanitizer for their employees, and the cost is born by the enterprises. But due to constraint of place and fund, enterprises could not arrange for shifting work and pick up and drop facilities for employees. Enterprises are ready to accept the new normalcy in compliance with safety rules and measurement. In brief, the study has revealed the fact that most of the units are facing drastic fall in revenue to no revenue due to temporary shutdown in this pandemic situation. Though lock down is lifting gradually, MSMEs are still not sure about demand of their product and market situation. Apart from the lack of health-hygiene awareness, technical know-how of the employees duly would affect the longevity along with the opportunity of alternative job prospect of the concerned participants. For remedial measures, effort could be made to make the respective participants know regarding recent crisis and probable functional support taken presently by government authorities and the units in their premises. Moreover, the government might extend its support to the enterprises with subsidy in electricity consumption and other input collections in production process with assurance of selling the products to government itself as per purchasing policy. Apart from this, the authority could extend online programme at reasonable/free of cost for the beneficiaries of MSMEs or offline promotion in this context maintaining present hygiene parameter.

9.5 Conclusion and Recommendation

The present study shows that all the enterprises were facing drastic fall in revenue. The enterprises were suffering due to shut down of production, decline of demand, delays in shipments, lay off, etc. The enterprises did not have reserve fund to pay recurring or other expenses in this pandemic period. Since they had zero to little reserve, they could not dare to involve in other activities in this period. Even the entrepreneurs were in confusion regarding revival strategy and future growth of their enterprises. But the enterprises were fully aware of the government schemes and availed those schemes. The whole situation is still unpredictable and under uncertainty.

Therefore, these firms need support in the form of **interest-free working capital** to cover their fixed costs like wages and salary, rent and EMI of existing loan to survive during these tough times. Apart from this, **proper training and workshop** should be done for revival of the production. **Awareness programme** on regular health check-up, importance of using mask, hand sanitizer etc. should be done. Employees should be encouraged to take COVID-19 **medical insurance** and also

should inspire on **rotation or shifting work** period for properly maintaining COVID protocol.

It is also important for the firms that economic activities get back on **operational mode in full swing**. The government should continue to focus on strengthening the country's economic fundamentals. Digital marketing is the only option for a global marketing of local product. Therefore, the government should promote and train MSMEs to use **digital platform** for their product successfully.

The government has taken financial revival strategy for this sector. But it can only revive MSMEs if the central government can ensure that all fiscal measures are well directed to the worst affected sectors. The government should also consider informal section of this sector while framing financial schemes. It should take proper steps for strict monitoring so that proper guideline and immediate action can be taken to combat the pandemic situation.

9.6 Limitations and Scope of Further Research

The limitation of this study was that no data was found on performance of the MSME sector post COVID-19 pandemic. Answers of the survey were totally based on the perception of the employees. Therefore, the result is very much subjective in nature. Further in-depth research can be done in different states in India on the basis of post COVID-19 pandemic which can provide realistic guideline for framing strategy for revival of this sector.

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Chapter 10
Mergers and Acquisitions: A Key Revival Strategy During the COVID-19 Times

Ratna Roy

10.1 Introduction

The COVID-19 pandemic situation has brought the countries in a stand-still state and thereby has pushed the entire world economy into one of the worst recession periods of the current times. This changed situation has adversely affected the world economy with lots of uncertainty. Indian businesses have also become victimized due to poor consumer demand and supply fluctuations along with the restrictions due to subsequent lockdown.

Fear of pandemic has thus restricted our movement. The subsequent lockdowns in India had a drastically negative impact on the economy mainly on aggregate demand, which is the biggest source of GDP. GDP has decreased and this downward decreasing trend may extend further. Downward decreasing consumption has led to the stoppage of businesses, thus impacting world supply chains. The impact of coronavirus is being felt across different sectors like logistics, tourism, drugs and pharmaceuticals, agriculture and allied, retail, etc.

By combining two companies together may help the corporate leaders to gain economies of scale or at least the potential to run more efficiently. Successful M&A will emerge as a critical tool for survival, growth, and long-term shareholder value-creation in the post COVID-19 period.

As the effects of coronavirus (COVID-19) continue, the corporate world has witnessed a number of modifications in mergers and acquisitions (M&A) transactions. Current events surrounding China's aggressive political and business tactics along with its rather poor handling of the coronavirus spread have made global economies wary of India. In this scenario, our government has renewed focus on Indian manufacturing and its 'Make in India initiative' has gained further momentum. In such situation, M&A are being considered as one of the ways out for both

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Indian and foreign companies who want to conform to the Indian government's initiatives.

In this situation, an honest attempt has been taken where M&A have been taken as a challenge for survival of domestic companies. Accordingly, the study has been divided into some sections—Introduction, Background, Literature Review, Materials and Methods, Results, Discussion, Future Research Direction, and Conclusion.

10.2 Background

On March 24, 2020, the Government of India under the Prime Minister Narendra Modi gave order for a nationwide lockdown for 21 days and thus limiting the movement of the entire 130 crore (1.3 billion) population of India as a preventive measure against the COVID-19 pandemic situation in India.

Earlier, a United Nations International Labor Organization (ILO) report claimed that the COVID-19 crisis has the potential to push around 40 crore informal sector workers (90% of people working in the informal sector), in India deeper into poverty, and thus will adversely affect jobs and earnings.

The coronavirus crisis is rapidly raising fears of a global recession. In such unprecedented times, it is crucial to synchronize the impact on businesses with the policy response by assessing the nature of the business which has got affected by the crisis.

In light of the economic slowdown, the government has announced many incentives for various sectors of Indian economy. For instance, the recently announced lower corporate tax regime with an effective rate of 17.16% for manufacturing companies, coupled with several production-linked incentive schemes such as the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) are likely to improve the domestic supply chain and invite a share of global manufacturing to India.

The global business disruption due to the worldwide lockdown has not just put firms on a reset mode but also pushed thousands of companies on the road to bankruptcy. Many would begin to consider consolidation to ensure business continuity. One of the major reasons for the increase in M&A activity in India can be attributed to the government's Make in India scheme. Nonetheless, the newly launched Aatmanirbhar Bharat Abhiyaan has been like a breath of fresh air for Indian manufacturers. Right now, there is a need for bold decision makers who are ready to take a long-term view and act responsibly from both the buyers' and the sellers' perspective.

10.3 Literature Review

Mohanty, P., Himanshi, & Choudhury, R. (2020). Events Tourism in the Eye of the COVID-19 Storm: Impacts and Implications have undertaken a systematic review of scientific literature to discuss the recent developments in various global events in

COVID-19 and the implications of the disease on event management. The study has concluded that events tourism has experienced never seen before a loss in this COVID-19 pandemic.

Shubhi Agarwal, Archna Singh (2020) "Covid-19 and its impact on Indian Economy", Int. J. of Trade and Commerce-IIARTC, Vol.9, No.1, pp. 72–79 has focused on the impact of a pandemic on different sectors of the economy and has also reflected on need for policy intervention. The paper has elaborately described about need for relevant policies on Government Front.

Das, Dr. Kishore Kumar and Patnaik, Shalini, The Impact of COVID-19 in Indian Economy – An Empirical Study (June 26, 2020). International Journal of Electrical Engineering and Technology, 11(3), 2020, pp. 194–202 has undertaken to study the impact of COVID-19 in various sectors considering the data which are secondary in nature, different appropriate statistical tools and techniques are applied for analysis and conclusion. On the basis of this finding, recommendations are suggested to overcome these adverse situations.

Goyal, A. Post Covid-19: recovering and sustaining India's growth. Ind. Econ. Rev. 55, 161–181 (2020). https://doi.org/10.1007/s41775-020-00089 has discussed about past virtuous growth cycles in India and has argued that the post COVID-19 macro-financial package is an opportunity to trigger another such cycle by raising marginal propensities to spend above those to save. The study has shown complementary supply-side improvements and has ended with the implications for policy.

10.4 Materials and Methods

The present study will basically deal with Banking sector where merger has been taken as one of the key revival strategies. It is known that tackling non-performing assets will be a major challenge for the banking sector as many companies may not be able to withstand the heat of the coronavirus pandemic. However GOI came up with merger of six public sector banks into four anchor lenders. However, here an analysishas been done firstly with the troubled Lakshmi Vilas Bank(LVB)where covid-19 outbreak is causing serious concern. Secondly, the study has considered also with one of the Mega Bank mergers i.e. the merger of Indian Bank and Allahabad Bank. Let them consider one by one.LVB has been selected as a part of the study where the Banking regululator RBI has drafted a scheme to amalgamate LVB into DBS Bank Ltd, which is fully owned by DBS Bank Ltd (DBIL) and therefore DBS will take over capital starved LVB. Accordingly, on 17th November 2020, the Reserve Bank of India imposed a month long moratorium on LVB due to a serious deterioration in the company's financial position. The data that have been collected is purely a secondary nature where ratio analysis has been used as one of the methedologies to compare the financial position of LVB particularly between pre-covid year (March-19) with the covid year (March- 20). Some important Financial Ratios of LVB through the years March-16 to March-20 have been considered with special focus on the pre-covid year (March-19) with the covid year (March-20). (Lakshmi Vilas Bank (LVB) was founded eight decades ago in 1926 by

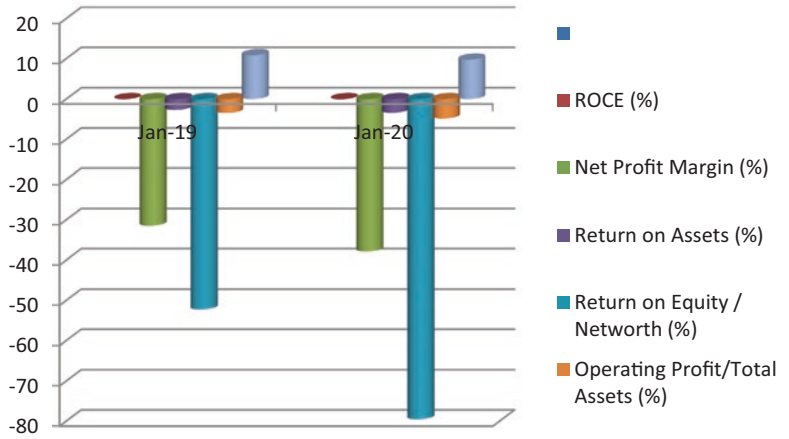

Fig. 10.1 Graphical representation of key performance ratios of Lakshmi Vilas Bank [Source: Self Created]

seven people of Karur area under the leadership of VSN Ramalinga Chettiar, mainly to look into the financial requirements of varied customer segments. The bank was incorporated on November 3, 1926, under the Indian Companies Act, 1913 and obtained the certificate to start its business on November 10, 1926, the bank obtained its license from Reserve Bank of India (RBI) in June 1958, and in August 1958, it became a scheduled commercial bank.

DBS has been in India since 1994 and converted its India operations to a wholly owned subsidiary (DBIL) in March 2019. The company was known as, before The present name was adopted on July 21, 2003.

Let us now highlight on some key performance ratios of Lakshmi Vilas Bank comparing between the years March 2020 and March 2019 (Table 10.2):

Let us now look into the indications of the above ratios (Table 10.3):

Thus, it is clear from the above that since the financial position of Lakshmi Vilas Bank has abruptly deteriorated in the COVID year, therefore it is expected that the merger with DBS will improve the financial picture of LVB.

In the second part of the study, another example of merger of banks has been considered that has taken place in the pandemic situation. Yes, the example that has been considered is the merger of Kolkata-headquartered Allahabad Bank and Chennai-based Indian Bank. This has made Indian Bank the seventh largest bank in India. Indian Bank is the anchor bank in this merger process. Some key performance indicators have been considered to compare between post- and pre-merger financial health of Indian Bank (Table 10.4 and Fig. 10.2).

It is evident from above that the financial position of Indian Bank has improved in the post-merger period compared with the pre-merger period, and therefore the merger strategy that the GOI has taken in the COVID year has definitely become effective.

Table 10.1 Financial ratios of Lakshmi Vilas Bank

Financial ratios of Lakshmi Vilas Bank (in Rs. Cr.)	Mar 2020	Mar 2019	Mar 2018	Mar 2017	Mar 2016
Per share ratios					
Basic EPS (Rs.)	−25.16	−34.66	−28.29	14.07	10.05
Diluted EPS (Rs.)	−25.16	−34.66	−28.11	13.95	10.05
Cash EPS (Rs.)	−22.37	−25.85	−20.55	15.89	12.15
Book value [Excl. Reval reserve]/share (Rs.)	31.21	53.48	84.39	102.74	88.7
Book value [Incl. Reval reserve]/share (Rs.)	36.52	59.16	90.93	111.59	98.27
Operating revenue/share (Rs.)	65.54	88.77	118.82	148.69	143.11
Net profit/share (Rs.)	−24.83	−27.95	−22.85	13.38	10.04
Per employee ratios					
Interest income/employee (Rs.)	5,074,006.67	6,231,937.46	6,579,324.46	7,040,953.50	7,204,205.05
Net profit/employee (Rs.)	−1,922,383.54	−1,962,030.06	−1,265,122.43	633,371.51	505,570.27
Business/employee (Rs.)	81,101,596.92	108,366,688.83	127,790,795.15	134,262,342.07	126,436,747.55
Per branch ratios					
Interest income/branch (Rs.)	38,987,376.33	49,910,261.86	55,504,045.62	59,305,364.58	55,832,589.13
Net profit/branches (Rs.)	−14,771,106.01	−15,713,481.55	−10,672,739.05	5,334,835.42	3,918,169.57
Business/branches (Rs.)	623,164,037.10	867,885,766.26	1,078,059,937.96	1,130,880,518.75	979,884,793.48
Key performance ratios					
ROCE (%)	−0.06	−0.03	0.89	1.83	1.45
CASA (%)	26.63	25.68	21.06	19.12	17.36
Net profit margin (%)	−37.88	−31.48	−19.22	8.99	7.01
Operating profit margin (%)	−53.8	−40.29	−30.63	−8.66	−4.83
Return on assets (%)	−3.42	−2.7	−1.44	0.72	0.62
Return on equity/net worth (%)	−79.55	−52.25	−27.07	13.01	11.32
Cost to income (%)	63.13	55.15	50.82	30.73	26.78
Interest income/total assets (%)	9.03	8.59	7.52	8.07	8.93

(continued)

Table 10.1 (continued)

Financial ratios of Lakshmi Vilas Bank (in Rs. Cr.)	Mar 2020	Mar 2019	Mar 2018	Mar 2017	Mar 2016
Non-interest income/total assets (%)	1.43	0.75	0.85	1.42	1.05
Operating profit/total assets (%)	−4.86	−3.46	−2.3	−0.69	−0.43
Operating expenses/total assets (%)	3.25	2.48	1.93	1.84	1.88
Interest expenses/total assets (%)	7.28	6.89	5.56	5.85	6.69
Valuation ratios					
Enterprise value (Rs. Cr)	21,519.79	30,801.95	38,136.67	34,042.04	26,322.00
Retention ratios (%)	100	100	100	100	70.12

Source: Adapted from https://www.moneycontrol.com/india/stockpricequote/banks-private-sector/lakshmivilasbank/LVB

Table 10.2 Key performance ratios of Lakshmi Vilas Bank

Key performance ratios	Mar 2020	Mar 2019
Return on capital employed (%)	−0.06	−0.03
Net profit margin (%)	−37.88	−31.48
Return on assets (%)	−3.42	−2.7
Return on equity/net worth (%)	−79.55	−52.25
Operating profit/total assets (%)	−4.86	−3.46

Source: Self-created after taking data from above

Table 10.3 Indications of financial ratios

Financial ratios	Indications
Return on capital employed (ROCE)	Return on capital employed (ROCE) is a financial ratio that determines a company's profitability and the efficiency the capital is applied. The lower ROCE of Lakshmi Vilas Bank in March 2020 compared with March 2019 is implying less economical use of capital. In other words, the ratio is helping us to understand that the company is generating less profit from its capital
Net profit margin	Net profit margin is one of the most important indicators of a company's financial health is giving us signal about the company's less ability to produce profit in March 2020 compared with March 2019
Return on assets	Return on assets is an indicator of how profitable a company is relative to its total assets. Here, it is indicating that the company is less efficient in using its assets to generate earnings
Return on equity/net worth	Return on equity/net worth is a measurement of financial performance which is calculated by dividing net income by shareholders' equity. It has deteriorated drastically in March 2020 compared with March 2019 which is indicating less profitability of the company in relation to stockholders' equity
Operating profit/total assets	It is indicating that the company is also less efficient in using its assets to generate operating income in March 2020 compared with March 2019

Source: Self-created

Table 10.4 Key performance indicators of Indian Bank during the pre- and post-merger period

Key performance indicators	31.12.2020 (post-merger period)	31.12.2019 (pre-merger period)
Income from operations	3,492,400.93	1,809,078.69
Profit after tax	142,377.02	112,853.49
Capital employed	3,801,454.86	2,392,767.00
Total income	3,492,400.93	1,838,644.05
Percentage of net NPA	0.32	0.52

Source: Indian Bank Financial Results: https://www.indianbank.in/departments/financial-results-ib/#!

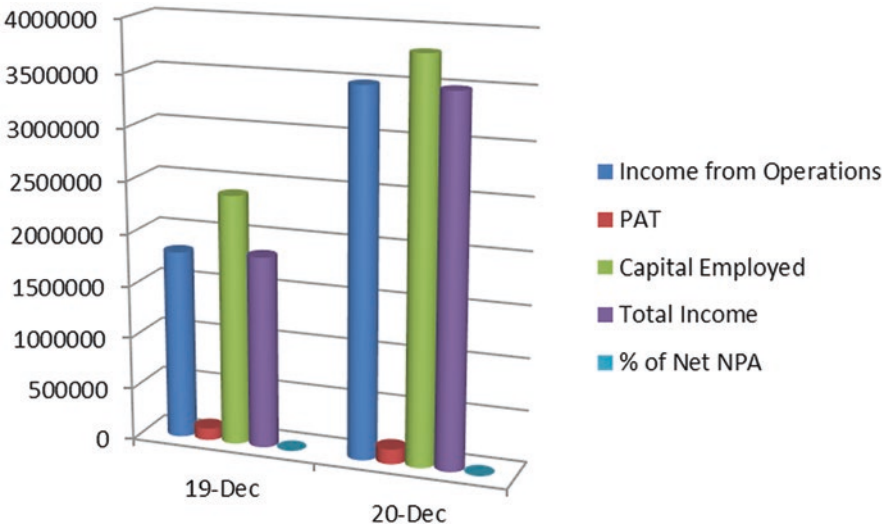

Fig. 10.2 Graphical representation of key performance indicators of Indian Bank during pre and post-merger period. (Source: Self-generated based on above data)

10.5 Results

The coronavirus (COVID-19) crisis is having and will continue to have an impact on M&A. LVB has a lot of NRI customers, and it will be easier for DBS to service them with its Asian presence. After converting its domestic operations to a wholly owned subsidiary, it has been looking to expand. The proposed amalgamation will thus provide stability and better prospects to Lakshmi Vilas Bank's depositors, customers, and employees. The merger is expected to allow DBIL (DBS Bank India Ltd) to improve its customer base and network, particularly in South India, which has longstanding and close business ties with Singapore. In the opinion of the bank, LVB bank thus will be able to achieve improvements in liquidity, asset quality, and solvency ratios, and mitigate the impact of COVID-19. The merger is also expected to strengthen DBS' business position in India by adding new retail and small and medium–sized customers. The government thus approved merger of crisis-ridden LVB with DBIL and removed restrictions on withdrawal of deposits by depositors. So, the merger has been considered here, as a key revival strategy for the Lakshmi Vilas Bank. Now, on the basis of the above data, following are the indications about the merger between Allahabad Bank and Indian (Table 10.5). The amalgamated Indian Bank will have a total business of Rs 8.08 lakh crore which is around 1.9 times of Indian Bank before consolidation (Source: Money Control News, August 30, 2019). According to the FM Nirmala Sitharaman the consolidation of the state-run banks will give banks both benefits of scale and synergy. So, this merger has definitely been considered a revival strategy in the covid situation.

Table 10.5 Analysis of key performance indicators of Indian Bank during the pre- and post-merger period

Key performance indicators	Indicators
Income from operations	Income from operations have increased in the post-merger period of Indian Bank than the pre-merger period. It indicates that the future potential profitability of the bank has increased
Profit after tax	Since it is one of the best ways to measure the ability of an entity to generate a return, it indicates here that the income-generating ability of Indian Bank has improved over time
Capital employed	Higher capital employed in the post-merger period indicates that the amalgamated Bank has efficiently invested its money and thereby utilization of capital has been made in a more effective manner than the pre-merger period
Total income	Increase in total income in the post-merger period indicates that the amalgamated Bank has been able to generate more efficiently its revenues after paying all expenses and taxes.
Percentage of net NPA	Lower NPA in the post-merger period indicates better financial health of Indian Bank. So Indian Bank has been able to strengthen its financial health through effective NPA management

Source: Self-Generated

10.6 Discussion

So, a discussion has been done about merger, as a key revival strategy to combat with the financial crisis caused by Covid 19 by citing the merger between LVB and DBIL as well as Indian Bank and Allahabad Bank. Now, a focus has been made in some other sectors in the Indian Economy. The present paper has considered Agriculture and Allied Activities from Primary Sector and Manufacturing Activities from Secondary Sector. Some sectors have also been considered which have converted this threat into opportunity.

10.6.1 Primary Sector

10.6.1.1 Agriculture and Allied Activities

To control the spread of COVID-19, just like how other countries did, India imposed a complete lockdown in March which coincided with the peak of harvesting season of Rabi crops in India mainly in the northwest which posed significant losses to the farmers. Although there were relaxations to the agriculture sector during lockdown but transport constraints, mobility restrictions and lack of labor due to reverse-migration of labor to their native places were the major problems faced by the farmers.

Agriculture and allied activities are however not a homogenous group of activities, rather an umbrella of different activities having their different dynamics each. So, the impact of COVID-19 in this sector is varying according to the set of activities, like on crops, livestock, and fisheries. Horticulture is likely to face more problems because of the nature of perishability, whereas food grains are non-perishable and apart from problems in harvesting and labor shortage, this is not impacted much In livestock (milk, meat, eggs), milk is the major contributor that has been impacted and fortunately, had undergone stability during the lockdown.

Fishing and aquaculture have faced a high negative impact. Agriculture seems to be a bright spot in India amid the COVID-19 crisis, and CRISIL expects agriculture to grow at a rate of 2.5% in FY2021 (CRISIL, 2020).

10.6.2 Secondary Sector

10.6.2.1 Manufacturing Sector

The manufacturing sector is the major contributor of GDP and employment in the secondary sector. It has strong linkages with other sectors. Overall, the manufacturing sector is going to be affected badly by demand–supply disruptions and global value supply chain.

We know, China has been the epicenter of manufacturing activities for one-third of total manufacturing over the world. But after the outbreak of COVID-19, India is planning to shift focus from China and looking for countries like China where cheap labor is available. So, it is a golden opportunity for India to make "Made in India" global. There is a huge potential in India, if proper measures will be taken to boost the manufacturing sector, India will emerge as a new manufacturing hub surpassing China.

While the overall economy has taken a hit because of the government lockdown, some sectors have converted this threat into an opportunity. Let us have a look finally on those sectors.

Digital and Internet Economy During the course of the pandemic, people have started using digital medium for work commitments, education, and entertainment. Online platforms have been taken for work meetings, video calling conferences. It has made the professionals to work from home. This has also facilitated schools and universities to start online education and assessments.

FMCG and Retail In this pandemic time, this sector has seen a growth. With the fear of complete lockdown, food-based retail chains and essential commodity providers have emerged as winners. The scope for these companies has grown further with the increased need of healthy food and immunity-boosting products among consumers. These companies are therefore launching new products in the food and health categories, thereby enhancing the direct distribution reach in the rural mar-

ket, door to door services, etc. which will help them to achieve the growth. The lockdown and social distancing requirement have forced consumer behavior to shift from eating outdoors to home-cooked food or ready to eat items. All these together have given these companies an opportunity for the expansion and launching of new products.

Specialty Chemicals Increased need for cleansing and sanitation has also increased the demand for hand sanitizers, disinfectants, and surface cleaners. India's largest fast-moving consumer goods (FMCG) companies have come up with a range of home cleaning, disinfectants, and personal hygiene products as they anticipate an increased demand for such items in the situation of COVID-19 crisis.

Healthcare Sector Healthcare sectors have faced hardships owing to the lockdown. The spread of the virus has forced people to take precautions to save themselves from this deadly disease. Demand for certain medical devices like oximeters, personal protective equipment (PPE) kits, and masks has seen a rise for self-monitoring.

The market to the above-specified sectors is expected to see growth owing to this pandemic. Some are converting this into an opportunity by changing their product mix. New brands are coming up with essential supplies while the established brands that have built trust over the years are leading through this rat race.

The world has seen something like never before. For the survival of the business, growth plays a vital role, and it depends on its internal environment and external environment. The internal environment is the strength and weakness of the business entity while the external environment lists all factors which affect the business which is uncontrollable.

10.7 Future Research Directions

With the commencement of 2020–2021 financial year the effects of coronavirus have affected the stability of the Indian economy. The lockdown has adversely affected service sector like banks, restaurants, food vendors, and food delivery providers at par with providing health safety and medical assistance. Future research directions can be cited in the following ways:-10.7.1Specifically, since banking sector's merger has been focused in this paperand also it is not known right now about the long term implications of Covid-19, therefore it can be stated that the future researches can be done by making an in-depth analysis of comparative financial performance of merged banks (i.e. at least 5 years before and after merger).10.7.2 Also, as because during the pandemic situation it has not been possible to collect primary data, future researches can be done through field survey by applying questionnaire methodology in other sectors of the economy.10.7.3 Since traditional methodology has been applied in this study, future research can be made by

applying modern performance indicators like Economic Value Added(EVA), Market Value Added(MVA) and Shareholder Value Added(SVA). 10.7.4 Covid -19 pandemic has brought un-precedented shock in Indian Economy,future researches also demand to know about the operational and technical challenges for both the customers and employees in different sectors of the economy. 10.7.5 Future researches can be conducted on the impact of Covid-19 on the anxiety and fear of loss of jobs i.e. on the employment opportunities particularly HR implications due to pandemic situation and how to improve the health of the sickening economy by mobilizing the resources and make plans of job creation and job continuity.

10.8 Conclusions

This coronavirus pandemic has damaged the Indian economy. The level of GDP may further fall, more so when India is not immune to the global recession. The Prime Minister of India has already spoken of setting up an Economic Task Force to find out measures to tackle the economic challenges arising from COVID 19.

This chapter has tried to make an attempt to show M&As as one of the revival strategies in the banking sector by citing the examples of mergers between LVB and DBS on the one hand as well as Indian Bank and Allahabad Bank on the other hand.

The following are some of the Business Survival Strategies that can be provided to strengthen Indian Economy:

- Business takes time to develop; therefore, it is necessary to create a strategy that has a 5-year outlook at the minimum. Constantly companies have to review their strategic plan so that they are aware of the results whether it is matching with the planned goals or not.
- Assets that are not actively being used, rather than generating money, need to be sold for cash. It makes no sense to hold on to assets that have become expenses.
- Companies need to find out the availability of human resources as there may be unavailability of migrant laborers for a certain period of time. Companies should also be very careful with the labor health and safety in the workplace for carrying out the operational activities properly.
- Organizations should focus on their core customer segments and need to predict their behavioral changes due to coronavirus as the consumption pattern may change during the crisis. So firms should rebuild their customer base.
- Businesses must re-determine their stocking strategies in view of the risk associated with the supply chain, volatility in demand and supply, liquidity, and perishability.
- With the increase in people wanting to limit what they touch, in the post-COVID-19 period it is of utmost necessity to see the reduction in usage of the touch screen. More of contactless payment and voice and machine vision interfaces will limit the amount of physical contact. This is a great opportunity for tech companies.

- COVID-19 has taught us how to live life with limited resources. So, soon professionals will try to avoid traveling for attending board meetings, conferences, events, and outdoor gatherings as much as possible. Hence, it is necessary to strengthen digital infrastructure at home so it can always have the feeling of working from the office.
- Cash flow is the life of any business and for its optimum business health, continuous inflow and outflow are essential. It is necessary to implement strategies to keep the cash flowing by increasing sales and minimizing unnecessary expenses.
- Companies have to communicate with customers and let them know that they and their reviews on their products matter. Improvement has to be done and the changes are to be made accordingly, if needed.
- Lastly, to keep businesses running amid the challenging period, a disaster management plan is required. Every business should prepare appropriate plans to cope with the difficulties and uncertainties that may arise anytime during the course of business. Businesses have to be prepared for the worst-case scenario.

So, it is expected that in the post-COVID-19 period, companies facing survival challenges may end up collaborating with other companies via mutually benefitting business strategy to survive the economic challenges. On the other hand, enterprises with strong cash reserves may find the time appropriate to acquire available stressed assets at a more affordable cost. It may be the adequate moment for these firms to evolve a proactive plan to expand their businesses via the acquisition of companies with considerable assets or to establish a friendly strategic alliance with them.

To conclude, Indian economy and exports have been passing through a difficult time since 2019, and COVID-19 has worsened the situation. Trade policies should be designed in a way that enables the country to reduce the negative impacts of COVID-19 and maximize the gains from the existing situation. The International Labor Organization has called for urgent, large-scale, and coordinated measures across three pillars—protecting workers in the workplace, stimulating the economy and employment, and supporting jobs and incomes. (*Source:* https://www.peoplematters.in/article/talent-management/impact-of-covid-19-on-the-indian-economy-workforce-25114). During this contagion, it is of utmost importance for businesses to conduct a proper assessment of their fixed and variable expenses as well as the actual revenues. This assessment will give a clear picture of where a company stands financially and help the entrepreneurs in planning ahead in the current market situation. This strategy thus can be implemented even when the pandemic effect settles.

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Chapter 11
Effectiveness of Working Capital Management on MSME Sustainability in West Bengal

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11.1 Introduction

11.1.1 Working Capital

Seed capital and fund to maintain the day-to-day activities are two main needs of funds by any enterprise, and MSMEs are no exception in this. Seed capital or long-term capital is needed to establish the firm, to purchase long terms and capital assets, like to purchase machinery, land, buildings, etc. This part is also known as fixed capital, and this part of capital is blocked by investments made on assets. They are not easily recoverable unless and until the assets are disposed of. But there will be loss in the disposal of fixed assets due to wear and tear. But funds are also needed to purchase raw materials and other day-to-day expenses like payment of wages. The fund needed for this is known as working capital. So, by definition, working capital means the fund that is needed to finance day-to-day expenses as well as current assets like debtors, inventories, short-term marketable securities, cash, etc.

Gross working capital is known as a total of current assets on a particular day. Net working capital which is referred to as the difference between the total of current assets from total of current liabilities. So, management of working capital relates to the process of managing current assets in such a way that when the need for short-term funds arises or the current liabilities need to be paid off, there will be no shortage of funds. Working capital management generally means management of

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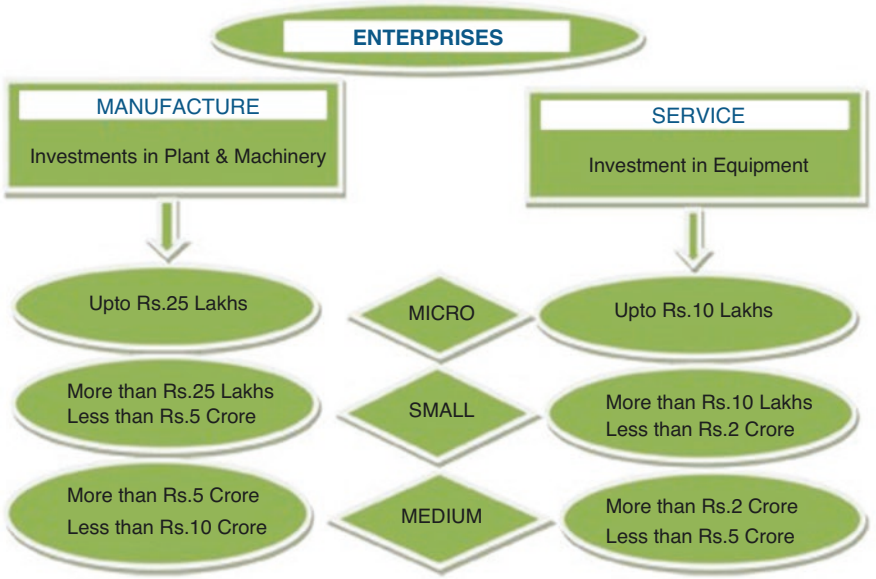
the relationship between current assets and current liabilities, so that the relationship always shows a positive one. Negative working capital is also possible in some cases. Now the positive working capital also means an adequate level which is industry-specific. Level of working capital and working capital management policies have a great effect on profitability, liquidity, and the overall performance of the enterprise. There are three dimensions for working capital:

1. **Dimension I**: It is concerned with the formulation of policies and frameworks related to working capital management by any organization which is related to profitability, liquidity, and risk faced.
2. **Dimension II**: This is concerned with the level and composition of current assets.
3. **Dimension III**: It is concerned with the level and composition of current liabilities.

The need for working capital depends on working capital cycle. The operating cycle takes time from the purchase of raw materials to the conversion of sales to cash. Initially when raw materials are purchased all are not made by cash, some amount of credit purchase is also involved in it. That gives rise to the creditors as current liabilities. By incurring some extra expenses, these raw materials are converted into finished goods, leaving some work in progress. These finished goods are then converted into sales, but not all sales are realized by cash. Some are made on credit thus giving rise to current assets as debtors. When the collection is made from debtors, then it is converted into liquid cash. Thus, from making sales to get it converted into cash, there is a time lag. Within this period, further purchase is necessary to continue production, and other activities are needed to be carried on. To meet this purpose, working capital is required. The period which is needed to convert raw materials into sales by collecting from debtors is known as operating cycle. Firms aim to shorten this cycle. The greater the time needed, the more the working capital is needed by the firm.

11.1.2 MSME

According to the Micro, Small, and Medium Enterprises Act, 2006 as enacted by the Government of India, the units are defined as follows:



11.1.3 Forms of Working Capital

Traditionally, the corporate finance was interested in long-term financing of assets such as capital structure, investments, dividends, etc. Later on, the emphasis has been put forward to short-term assets as well. The investments made in short-term assets are important to monitor. Where the resources that will mature within 1 year, are the main components of the balance sheet to look at carefully, as these investments are pretty much associated with a firm's profitability, liquidity, risks, operating efficiencies. So working capital can be taken as the lifeblood of any firm irrespective of its nature. Through managing working capital, short-term financing, and the relationship between current assets and current liabilities, maintenance of liquidity at an optimum level is also needed such that daily operational needs can be met. Thus, the working capital management is all about speeding up the collection from debtors while getting relaxed payment terms from creditors so that enough cash can be arranged without much hassle. This will also minimize the risk of being out of cash in times of need. But maintaining the liquidity also needs care as increased liquidity can lead to a decrease in lower profitability. On the other hand, less liquidity will increase profitability, but the risk of being out of money in times of need will arise. This trade-off needs to be well maintained as it gives the optimum level of working capital. This optimum level also varies between industry to industry. Thus, efficient working capital management is very much important.

Working capital is generally a trading capital; it generally does not stay in any fixed nature or form. It keeps changing the money invested in it in the form of nature and material—raw material to liquid cash. Without the business will suffer as is suffered by the human body without blood. Firms maintain the liquidity intact by generating cash receipts over cash payments. Big corporates have adequate management technology for working capital while the small firms perform poorly as they do not have any sound financial management practices. This often leads to bankruptcy for the firm as they do not maintain proper liquidity, and they have very poor cash management. In the case of sole proprietorship firms, this has become a very frustrating issue.

11.1.4 Importance of Adequate Working Capital

Maintenance of an adequate amount of working capital is very essential to run all the operations smoothly. It will help in the utilization of fixed assets more meaningfully to maximize the shareholder's wealth. If the image of the firm gets hurt due to non-payment of dues or short-term liabilities, then it will not get any further credit terms from its suppliers which in turn results in a lack of raw materials and production stoppage or it may compel the firms to purchase at a high rate than normal. Also, if there is a poor credit policy and there is no monitoring on the credit policy that has been adopted, it will result in low liquidity and lack of cash. It also supports the bad weather days for businesses. O′ Donnel et al. correctly stated, "to avoid interruptions in the production schedule and maintain sales, a concern requires funds to finance inventories and receivables." The survival or demise of the firm depends on the adequacy of the working capital so that it can sail smoothly in rough waves. Anything excess than normal is always unhealthy like here in working capital also. Without adequate profit, a firm may turn sick, but without adequate working capital, the firm may be bankrupt. So to maintain both the profitability and liquidity, working capital management is equally important. So constant managerial review is needed to ensure proper maintenance of the same.

11.1.5 Need for the Study

Working capital management has become a must for every firm, whether large corporates or SMEs. Dedicated management of the same can encourage the development of the firm. This study has been undertaken to know how the micro, small, and medium enterprises of Kolkata, are managing their working capital needs. The study also aims to study how the impact of the current liquidity position affects the firm. The study has been conducted to assess the knowledge level and expertise among owners and managers of the MSMEs in terms of inventory management, cash management, and receivables management—the three main aspects of

working capital management. The study is based on primary data which is collected by getting filled a pre-designed and structured questionnaire from the respondents who are actively managing the business or are related to working capital management of the firm.

11.1.6 Objectives of the Study

The objectives of the study can be laid down in the following points:

1. To analyze the working capital requirements by the MSMEs in the Kolkata district.
2. To examine the different sources of working capital finance.

11.2 Literature Review

The literature reviews give a glimpse of the studies made earlier to be effected in the present study. Here also, an attempt has been made to show in brief, a review of the past studies which has direct or indirect influence in the present study on the field of working capital management.

Dey (1995) stated that in the same level of business activity also, the working capital need varies from firm to firm. This variance may be due to an increase or decrease in stock or debtors' turnover rate. According to him, there are three approaches to manage working capital—the conservative approach, matching approach, and aggressive approach. He inferred that three factors that will be needed into consideration—tolerable risk, comfortable liquidity position and, adequate profitability—to lead into the growth path.

Dutta (1995) stated that working capital management plays a pivotal role in running the wheels of business without giving it humps. There is no evidence that a firm can manage without working capital. According to him, the adequacy of working capital can be measured by (1) sales to working capital ratio and, (2) working capital in terms of a month's cost of production.

Maheshwari (1996) raises questions about quality crunch which the author related to the period of 1991–1994 when the New Economic Policy was announced and India opened door to the foreign trade. The heavy flow of foreign investments led to inflation in the Indian market and to break the chain RBI applied monetary measures, many FIIs withdraw money from the economy. After that RBI cut CRR to 10% so that firms can take advantage of the market.

Mallick and Sur (1998) emphasized the academic debate on the impact of working capital on the profitability of the firm. While one school of academicians believes that fixed capital is the component which leads to profitability, the other school of thought argues that if there is not a minimum investment in working capital the

normal business operations cannot be maintained, and there will be no profitability for the firm.

Raheman and Nasr (2007) studied the relationship between working capital management and profitability in the case of firms in Pakistan—they inferred that both liquidity and profitability will be affected by the poor working capital management of the firms. Their study about 94 firms showed that there is a strong negative relationship between variables of working capital management to the profitability. It also showed that an increase in cash conversion cycle or operating cycle will lead to a decrease in profitability.

Teruel and Solano (2007) first studied the relationship between working capital management and profitability in MSMEs. They conducted the study on 8872 Spanish firms over 1996–2002, and they have used panel data methodology. The robust results are showing that value creation can be possible by managers through reduced inventory and the days the accounts are being outstanding. This also supports the evidence that cash conversion cycle can be shortened to achieve profitability. The importance of this study also increases as this study focuses on the endogeneity problem.

Sharma and Kumar (2008) studied the relationship between profitability and working capital management of Indian firms. They used 263 nonfinancial BSE 500 firms, for a study interval of 2000–2008, and they used OLS multiple regression analysis. Results showed that working capital management and profitability are positively correlated in Indian firms. It also showed that the number of days in inventory and the number of days to accounts payable are negatively correlated to the profitability of the firm.

Moon (2010) analyzed the impact of Indian MSMEs in its employment growth, GDP, and growth in the manufacturing sector with improvement in the export of goods. The study explained the enormous potential the Indian MSMEs have in terms of the state-of-the-art technology and a wide range of products.

Rao et al. (2010) took up a methodological analysis of working capital utilization in the Indian cotton industries. This paper analyzed the trends and patterns that have been shown by industries in working capital utilization and management. Three indices were applied here to show the results—performance index, utilization index, efficiency index. The study showed that a linear growth rate for all three indices concerning working capital efficiency for small-sized firms is significant.

Padachi et al. (2012) investigated the firm's performance to get an overview of the working capital management of Mauritian Manufacturing Firms. The survey-based study stated that poor working capital management framework is working out to be the main hindrance to their growth potential. They used both parametric and nonparametric tests for the variables. The study also revealed that SMEs depend more on internal funding and networking than relying on the effective working capital management process.

Arunkumar and Ramanan (2013) related their study with efficient working capital management and profitability of the firm. Using the CMIE database and 1198 firms over 5 years, they analyzed all the components of working capital components

like debtors, creditors and inventory turnover, current ratios, and other liquidity ratios. They used a weighted least square regression analysis along with correlation analysis.

Chaklader and Shrivastava (2013) studied the profitability of the working capital management process during the global slowdown. The study aimed to find out important working capital components and their relationship with the firm's activities and policies opted by the firm. They have taken the 500 BSE firms.

Sharma and Kumar (2011) are privy to them and performed the same kind of analysis by taking nonfinancial firms. They have done the multicollinearity check as well as the Hausman test. The results of the Hausman test showed that the random effect model that they have suggested is true. After testing that panel data regression analysis was done on the random effect model.

John (2013) has examined the relationship between profitability and working capital management of the cement industry in India. With five companies listed over NSE and a time dimension of 1 year that is 2011–2012, the study checked the correlation between long-term debt and other independent variables. Results showed that long term debts used by the firm have a negative relationship with profitability. Companies that want to make a low debt ratio have a shorter period to keep their inventory. The companies that used to earn internal finance will have higher profitability as the interest expenses are lower.

Saravanan and Ramganesh (2013) conducted an empirical study about working capital management and profitability on ACC Ltd. Empirical studies generally focus on the assessment of inventory management and receivables management. But it limited the option of analysis as working capital management has broader aspects to analyze. This study is more or less a case study approach.

Singh and Singh (2013) said that MSMEs are the most useful in generating employment for developing countries. They inferred that the distinguishing characteristics of MSMEs of generating a large number of employments contributed to the growth of the economy of many third-world countries. The study was on 100 MSMEs of Manipur district on various components of working capital management.

The various studies conducted which are stated above suggested that there is not much study has been conducted on working capital management of MSMEs of Kolkata district, which has a high concentration of small units due to their locational advantages. This study aims to fill up the vacuum.

11.3 Research Methodology

To research in an effective and systematic way, decisions should be taken on a research design which is the most crucial thing. The following five sections will describe the research methodology that needs to be adopted to complete the study.

11.3.1 Conceptual Framework of the Study

The study aims to identify and examine different sources of working capital needs that will be directed in suggesting efficient and effective utilization of working capital to the growth and development of the organization. Empirical surveys have been conducted to get the answers to the structured questionnaire. The source of information is either the manager who is handling all details or the owner in case there is no other one to manage the business other than him/her. The data are collected, tabulated, and classified systematically. The percentage method has been used to achieve the objective of the study.

11.3.2 Population and Sample Selection

Out of the total number of registered and functional MSME units in Kolkata, 15 samples have been chosen taking five from each sector of operation, i.e., five from micro units, five from small units, and five from medium units. Snowball sampling is used for the sampling of data. Managers discussed various aspects of working capital management to get a broader view of their perception and attitude toward working capital management.

11.3.3 Data Collection

The study is based on primary data as there is a very negligible chance of getting secondary data. Data is collected through a predesigned structured close-ended questionnaire. A literature review done earlier has been consulted to get an idea about various aspects that are needed to get a thorough understanding of the different aspects of working capital management, and those aspects after critical evaluation are incorporated into the questionnaire.

The questionnaire was designed to gain insight into how the units effectively manage their working capital needs. The techniques used to manage their working capital, inventories, receivables, cash are asked to respondents to get insight into the level of awareness of the technique. The current economic scenario when the study was done, whether it has any effect on liquidity, has been asked to respondents, to find out the change in the liquidity position of the units. Multiple-choice questions were asked so that the respondents can simply give their views and effectively.

Suitable changes, as and when necessary, were made to the questionnaire to make it more crisp and objective oriented. The main objectives of the study are explained to respondents so that they do not have any ambiguity before filling up the schedules or answering questions. Observation and discussion methods are also used to get a full idea of the process.

11.3.4 Data Analysis

The aim of data analysis is to inspect, clean, process, and model the data in such information that can be used to identify the objectives, help in decision-making, and suggest conclusions. Different strategies can be used to identify different solutions under various heads and different domains. Here, in this study, a percentage data analysis method has been made to get the useful decision criteria from different aspects. The responses have been tabulated in such a manner that the information can be easily processed and also can be inferred easily.

11.3.5 Limitations of the Study

Any study that is based on primary data, which is collected through a questionnaire and survey method has some inherited limitations. The basic limitation being what is recorded and what is truth cannot be matched at any point in time, how carefully the questionnaire may be devised. This occurs because the respondents may deliberately shadow the true perspective about anything they are exposed to, so there is every chance of being misinterpretation, and the difference between actual and that is predicted due to filters that exist in the communication process. This error can be tried to be minimized by meeting respondents personally and recording their views, but this cannot negate the existence of the problem. Along with this, some more limitations can be listed:

(a) The time constraint of getting a response is an issue.
(b) Some of the respondents are not fully aware of the concept of working capital management.
(c) As there is a lack of awareness about working capital management, the effect of various techniques that can be used for working capital management is not evident that much.
(d) Regarding the financing of working capital, many of the respondents were hesitant to show the true story.
(e) Some aspects of working capital management may be ignored due to the small sample size that has been taken.
(f) The reason for taking a small sample size is that there is less cooperation from the owners or managers of the units in providing data as they think they will get exposed or their internal data may be used in any other way. As there is no repository of secondary data for MSMEs, and there are no stringent norms, many of them do not show the actual financial results.

11.4 Analysis of the Data

This part of the study relates to the analysis of the data that has been collected through a survey from 15 MSMEs, five from each category of units. The analysis of the questionnaire has been done under the following headings.

11.4.1 Profiling of Sample Data

From Table 11.1 and Chart 11.1, it is found that 80% of the micro, 60% of the small, and 100% of the medium enterprises are ownership-based or sole trading units, followed by 20% of the micro and small segment about the partnership as well as private limited units.

From Table 11.2 and Chart 11.2, it can be found that there are 60% of the micro enterprises that have an annual turnover of less than ₹3,000,000. There are 40% of the micro enterprises who achieved the turnover between ₹3,000,000 and ₹6,000,000. A large percentage of small enterprises fall in the bracket of ₹3,000,000 to ₹6,000,000. In the case of the medium enterprises, 60% of the units fall in the bracket of ₹6,000,000 to ₹9,000,000.

Table 11.3 and Chart 11.3 show that 60% and 80% of the micro and small enterprises are 5–10 years of age, respectively. On the other hand, 60% of the medium enterprises are in the age bracket of 10–20 years.

11.4.2 Working Capital Requirement and Its Management

From Table 11.4 and Chart 11.4, it can be found that as the micro enterprises do not have enough capacity for higher managers, owners handle that responsibility of managing working capital which is around 60% level, while accountants and managers accumulate 20% each. In the case of small enterprises, this number accumulates to 20% for managers and accountants and 80% for the owners themselves. For medium units, owners and managers are sharing the same load with 40% each while the other one shares a 20% load.

Table 11.1 Form of the organization

	Micro	Small	Medium
Ownership/sole trading	4	3	5
Partnership	1	1	0
Pvt. Ltd.	0	1	0
Public Ltd.	0	0	0
Total	5	5	5

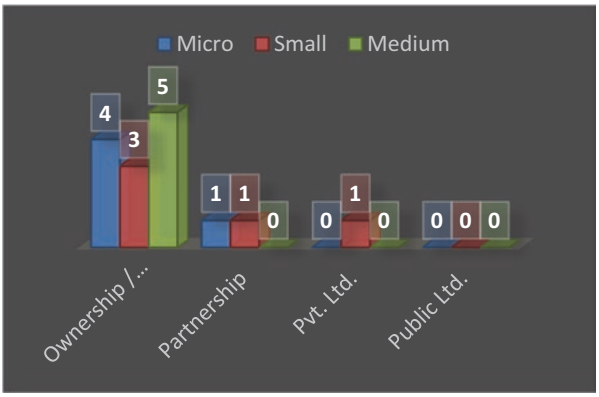


Chart 11.1 Form description

Table 11.2 Annual turnover as on 31.03.2018

	Micro	Small	Medium
Less than ₹3,000,000	3	1	0
₹3,000,000 to ₹6,000,000	2	3	1
₹6,000,000 to ₹9,000,000	0	1	3
More than ₹9,000,000	0	0	1
Total	5	5	5

Chart 11.2 Annual turnover

Table 11.3 Age

	Micro	Small	Medium
Less than 5 years	1	0	0
5–10 years	3	4	2
10–20 years	1	1	3
Above 20 years	0	0	0
Total	5	5	5

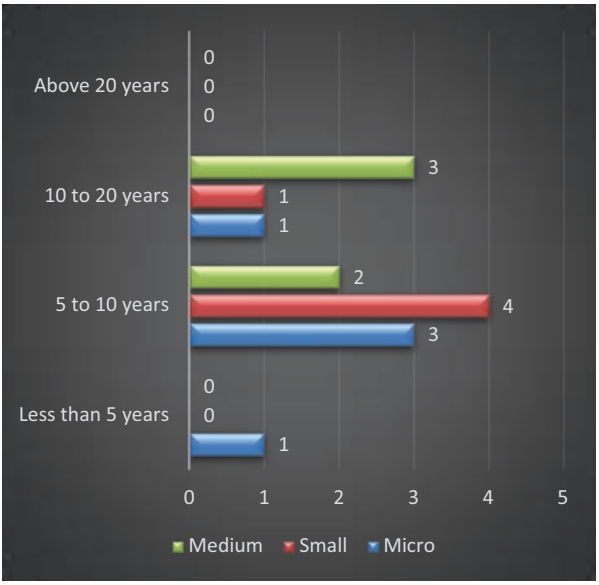


Chart 11.3 Age-wise data

From Table 11.5 and Chart 11.5, it is found that most of the respondents are having their graduate degrees, i.e., 80% in the case of micro and 60% each for small and medium level units. About 20% of the respondents of small-scale units have only completed tenth Class. About 20% of the respondents have completed 10 + 2 in the case of small and micro units, whereas 40% of the respondents have completed their 10 + 2 in the case of medium level units.

From Table 11.6 and Chart 11.6, it can be seen that only 20% of the units under small and medium enterprises can maintain a level of above ₹6,000,000, whereas 60% of the micro units are maintaining the level at ₹2,000,000 to ₹4,000,000 with the rest falling under the level of less than 20%. About 40% of the small-scale units are falling in the bracket of second and third level of the current asset bracket as shown in Table 11.6. About 60% of the medium enterprises are falling under ₹4,000,000 to ₹6,000,000, whereas the other units are under the bracket of ₹2,000,000 to ₹4,000,000 and above ₹6,000,000.

Table 11.4 Manager of working capital

	Micro	Small	Medium
Self	3	4	2
Manager	1	0	2
Accountant	1	1	1
Total	5	5	5

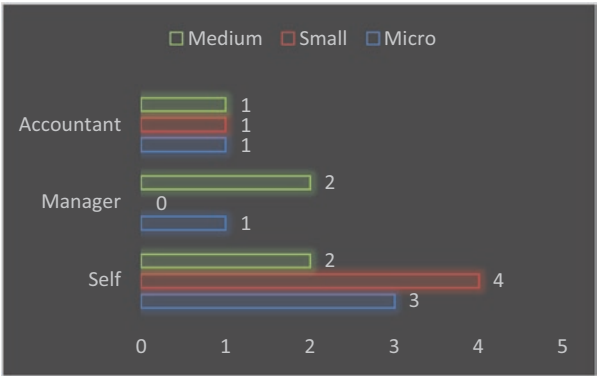


Chart 11.4 Working capital manager

From Table 11.7 and Chart 11.7, it can be easily inferred that the economic environment has taken a negative toll on the liquidity of the assets. About 80% of the micro units told that they have to shrink their liquidity position for adverse environmental effects, whereas 20% can stick to their position. In the case of small units, 60% have to face the negative toll and 20% each can remain constant or able to expand the liquidity. In the case of medium enterprises, 60% of the firms remain where they were, while 20% reported growth in liquidity position, whereas 20% have to face the negative impact of environmental effects.

From Table 11.8 and Chart 11.8, it can be found that 60% of the micro units fall under the 40–60% bracket, whereas 60% of the small units fall under the 60–80% bracket. In the case of the medium units, 80% of the units are under the 40–60% bracket. No units from either segment are under the 100% level where all the current assets consist of only the inventory.

From Table 11.9 and Chart 11.9, it can be found that for 60% of the MSMEs, cash constitutes almost 20–40% of the current assets. For 80% of the small level of enterprises, almost 20% of the CA is represented by cash. About 60% of the medium enterprises constitute the level of 20–40% of cash being part of current assets.

From Table 11.10 and Chart 11.10, it is found that the proportion of receivables that forms part of current assets are the same in the case of micro and medium enterprises. In both of them, the 20–40% category and 0–20% category get the major share of receivables in current assets. For small enterprises there are some variations, the category of 0–20% and 40–80% category get the major share.

Table 11.5 Educational qualification

	Micro	Small	Medium
Class 10	0	1	0
Class 10 + 2	1	1	2
Graduate	4	3	3
Total	5	5	5

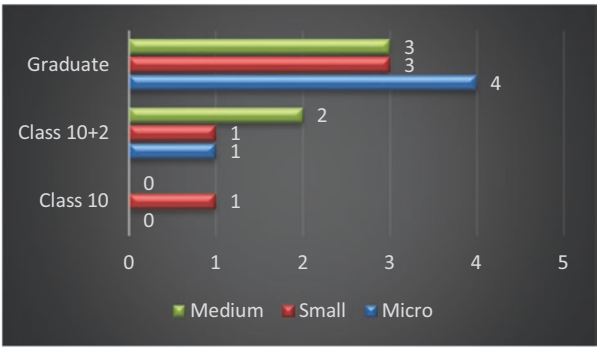


Chart 11.5 Educational qualification

Table 11.6 Current assets as on 31.03.2018

	Micro	Small	Medium
Less than ₹2,000,000	2	0	0
₹2,000,000 to ₹4,000,000	3	2	1
₹4,000,000 to ₹6,000,000	0	2	3
Above ₹6,000,000	0	1	1
Total	5	5	5

From Table 11.11 and Chart 11.11, it has been found that 80% of the firms of small units and 40% of the firms of micro units do not employ any of the methods of working capital analysis. They depend on individual factors of working capital. Only 20% of the firms from small units use fund flow analysis, no other firms from either sector uses the same analysis. Ratio analysis is used by 20% of the firms of both small and medium enterprises. Budgeting is used by 40% of the micro segments and 80% of the medium segment firms. It reveals that not all the firms are having equality in using the procedures of working capital analysis.

From Table 11.12 and Chart 11.12, it has been found that 60% of the micro units prepare the working capital budget weekly which is most common. Most of the small and medium enterprises prepare their working capital budget monthly (60% for each case) while 20% of the micro units prepare this monthly. Only 20% of each segment prepares the budget on daily basis.

From Table 11.13 and Chart 11.13, it has been found that 80% of the micro and 60% of the small and medium units agreed that they have suffered from a shortage

Chart 11.6 CA as on 31.03.2018

Table 11.7 Impact of economic environment of liquidity position

	Micro	Small	Medium
Reduced	4	3	1
Remain constant	1	1	3
Expanded	0	1	1
Total	5	5	5

Chart 11.7 Impact of economic environment

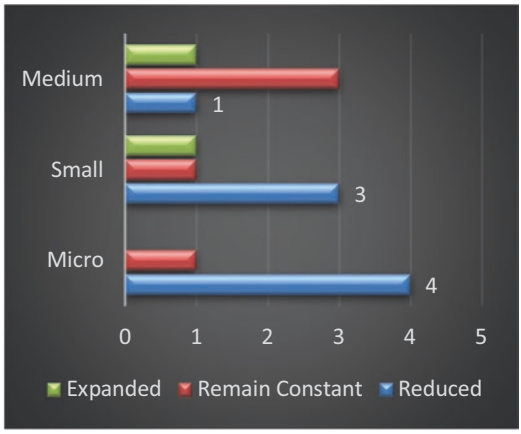


Table 11.8 Share of inventory in current assets

	Micro	Small	Medium
0–20%	0	1	0
20–40%	1	0	1
40–60%	3	1	4
60–80%	1	3	0
80–100%	0	0	0
Total	5	5	5

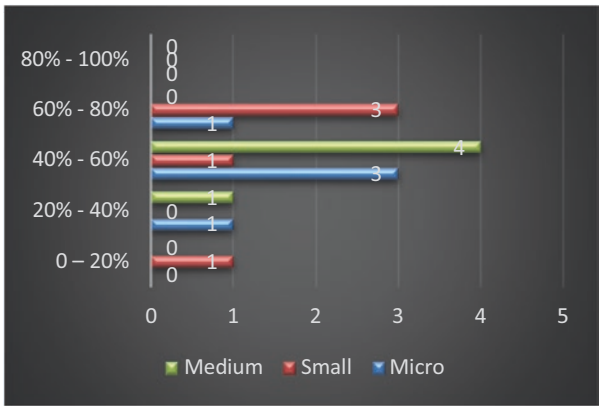


Chart 11.8 Share of inventory in current assets

Table 11.9 Share of cash in current assets

	Micro	Small	Medium
0–20%	2	4	1
20–40%	3	0	3
40–60%	0	1	1
60–80%	0	0	0
80–100%	0	0	0
Total	5	5	5

of working capital. On the other hand, rest of the enterprises have confirmed that they managed the demand for working capital well, so that there is no shortage of working capital.

This factor (Table 11.14 and Chart 11.14) constitutes only the firms that assert negatively over Table 11.13. It has been found that there are four micro units and three each in small and medium units that faced a shortage of working capital. Among them, 50% of the firm attributes their reason for the shortage to excess inventory, whereas 25% of the firms attribute to an excess of receivables and shortage of inventory. In the case of small entities, an equal percentage is found for excess inventory, excess receivables, and shortage of receivables, whereas for

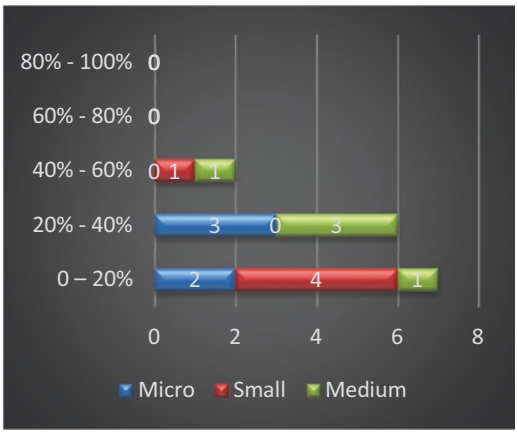


Chart 11.9 Share of cash in CA

Table 11.10 Receivables in current assets

	Micro	Small	Medium
0–20%	2	2	2
20–40%	2	1	2
40–60%	1	2	1
60–80%	0	0	0
80–100%	0	0	0
Total	5	5	5

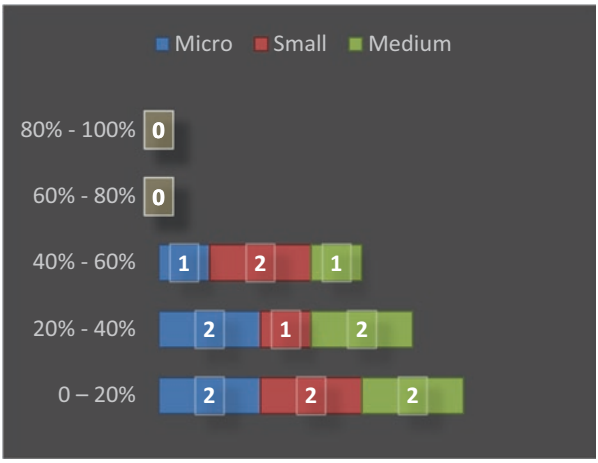


Chart 11.10 Percent of receivables in CA

Table 11.11 Methods used for working capital analysis

	Micro	Small	Medium
Ratio analysis	0	1	1
Funds flow analysis	1	0	0
Budgeting	2	0	4
None of them	2	4	0
Total	5	5	5

Chart 11.11 WC analysis methods

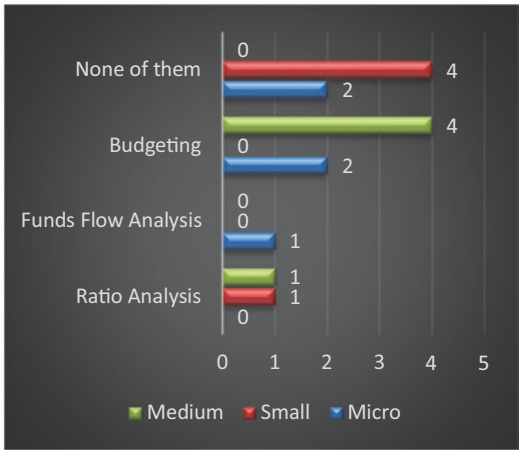


Table 11.12 Frequency of preparation of working capital budget

	Micro	Small	Medium
Daily	1	1	1
Weekly	2	–	–
Monthly	1	3	3
Quarterly	1	–	1
Yearly	0	1	–
Total	5	5	5

medium enterprises, equal weightage has been found for excess inventory, shortage of inventory, and shortage of receivables.

From Table 11.15 and Chart 11.15, it is found that 60% of the micro enterprises depend on the sales cycle duration, whereas 40% depend on the production cycle, there is no dependency on the other two factors. In the case of small enterprises, most of the enterprises depend on the sales cycle and about 20% of the units depend on the total cost incurred on raw materials, wages, and overheads. In the case of medium enterprises, an equal proportion of firms (40%) depend on the sales cycle and production cycle and only 20% of the firms depend on the raw materials conversion period.

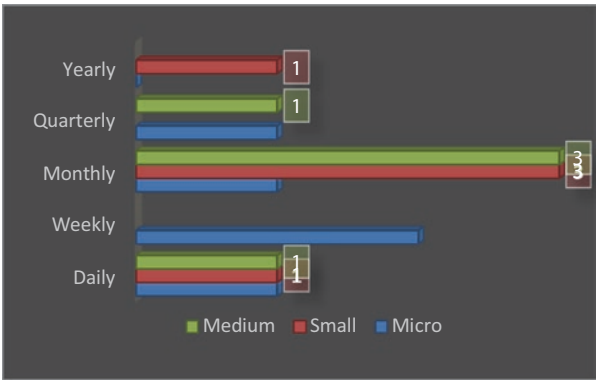


Chart 11.12 Frequency of WC budget

Table 11.13 Shortage of working capital

	Micro	Small	Medium
Yes	4	3	3
No	1	2	2
Total	5	5	5

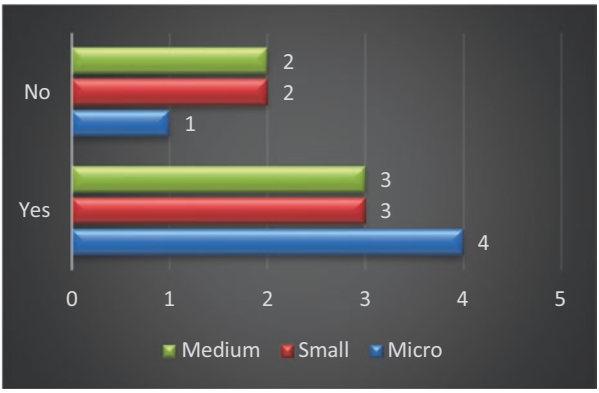


Chart 11.13 Shortage of WC (yes/no)

From Table 11.16 and Chart 11.16, it has been shown that seasonal variations and production cycle duration mostly affecting the working capital for micro enterprises (40% each) while 20% of the firm points out to earnings capacity. In the case of small enterprises, the lion's share goes for production cycle, and the other three factors like seasonal variations, credit policy, and earnings capacity will have an equal share (20% each). In the case of medium enterprises, 40% of the units point out to production cycle and credit policy as major factors, whereas 20% of the respondents point out seasonal variations.

Table 11.14 Reasons for shortage of working capital

	Micro	Small	Medium
Excess inventory	2	1	1
Excess receivables	1	1	0
Shortage of inventory	1	0	1
Shortage of receivables	0	1	1
Total	4	3	3

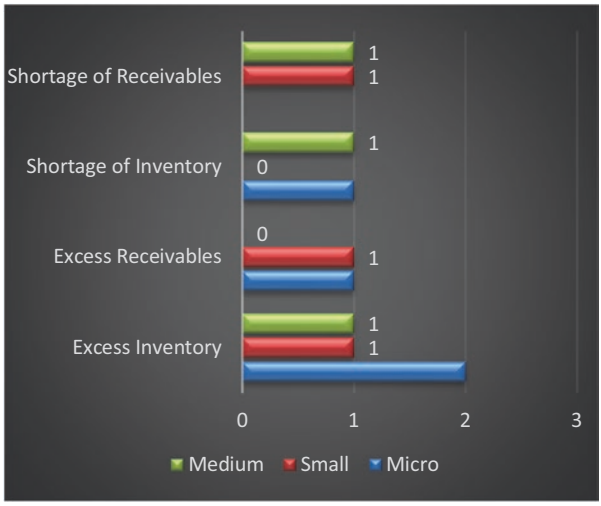


Chart 11.14 Reason for shortage

Table 11.15 Methods of estimating working capital

	Micro	Small	Medium
Total cost of raw materials, wages, and overheads	–	1	–
Time took on the conversion of raw materials into finished goods	–	–	1
Sales cycle duration	3	4	2
Production cycle duration	2	–	2
Total	5	5	5

11.4.3 Methods of Financing Working Capital Requirements

From Table 11.17 and Chart 11.17, it can be found that 60% of the units of each category falls under the category of 40–60% category share of the total finance raised for financing working capital need. About 20% of the micro and medium enterprises as well as 40% of the small enterprises fall under the 20–40% category. About 20% of the respondents of each category falls in the bracket of 60–80% category. No firm uses more than 80% of the total finance as finance raised for working capital needs.

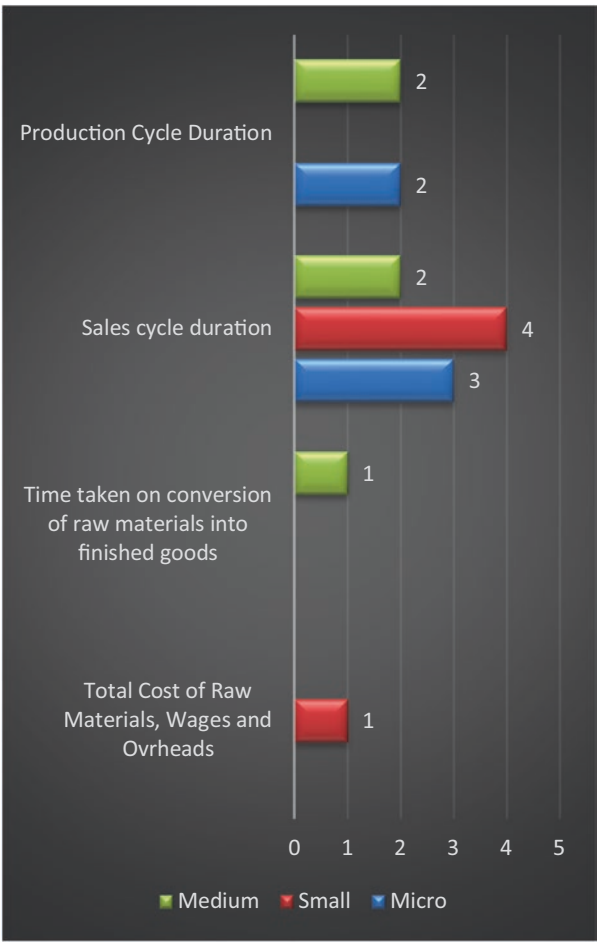


Chart 11.15 Methods of estimating WC

Table 11.16 Factors that affect working capital as per the present scenario of the study

	Micro	Small	Medium
Length of the production cycle	2	2	2
Seasonal variations	2	1	1
Credit offered		1	2
Earnings capacity	1	1	–
Anything else, please specify	–	–	–
Total	5	5	5

From Table 11.18 and Chart 11.18, it is found that micro enterprises relied most on bank overdraft (45%) rather than other means of finance which is followed by trade credit (21%). Small enterprises mostly rely on loans (30%), bank overdraft

Chart 11.16 Factors affecting WC most

Table 11.17 Share of total funds raised for financing working capital need

	Micro	Small	Medium
Less than 20%	–	–	–
20–40%	1	2	1
40–60%	3	3	3
60–80%	1	1	1
More than 80%	–	–	–
Total	5	5	5

(30%), and trade credit (25%). In the case of medium enterprises, the most dependency is found in the case of installment credit, and loans and bank overdraft follow them (22% and 25% each).

11.4.4 Receivables, Stock-in-Trade, and Cash Management

From Table 11.19 and Chart 11.19, it can be found that almost 40% of the micro units use VED analysis, whereas 20% of the units follow the other methods like ABC and JIT and another 10% of the units respond that they do not use any of the methods specified in the questionnaire. About 40% of the small units responded that they are using JIT, 20% of the units responded that they use ABC, whereas another

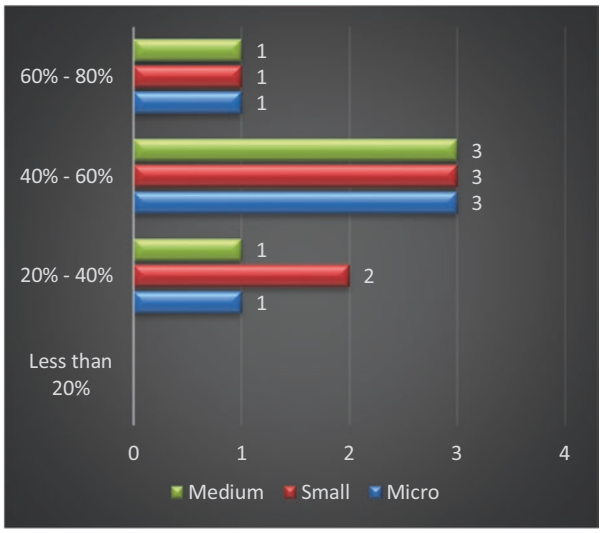


Chart 11.17 Share of total funds raised

Table 11.18 Sources for working capital finance

	Micro (%)	Small (%)	Medium (%)
Loan	16	30	22
Bank overdraft	45	30	25
Trade credit	21	25	19
Installment credit	18	15	34
Total	100	100	100

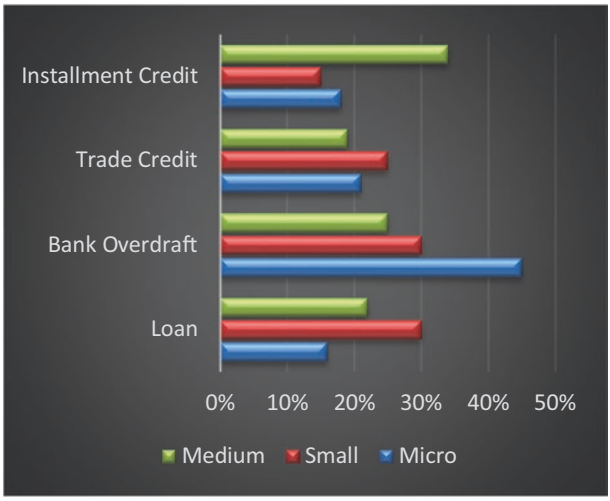


Chart 11.18 Sources for WC finance

Table 11.19 Inventory maintenance techniques

	Micro	Small	Medium
ABC analysis	1	1	2
VED analysis	2	–	1
Inventory turnover ratios	–	–	–
JIT	1	2	1
Any other	–	–	–
None	1	2	1
Total	5	5	5

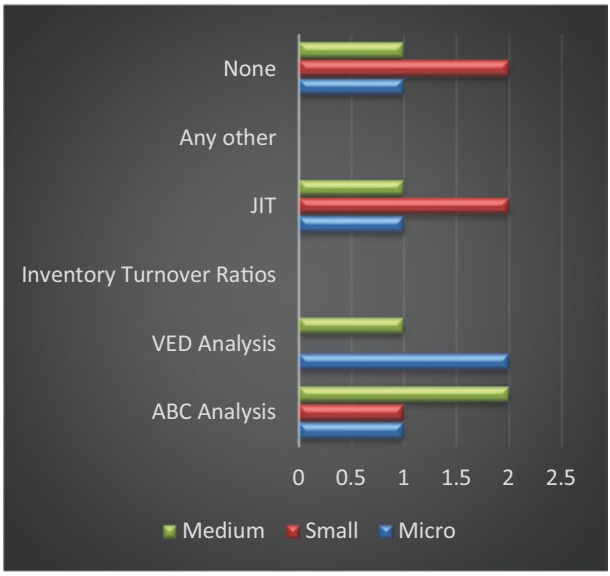


Chart 11.19 Inventory maintenance techniques

40% of the units stated that they are not using any of the methods of the inventory management. Medium enterprises rely on (40%) ABC analysis and only 20% of the respondents showed that they are using VED and JIT techniques. No units have responded to inventory ratio analysis as they are not at all conversant with that management technique.

From Table 11.20 and Chart 11.20, it is evident that most of the respondents are using the average collection period as a technique for measuring receivables management efficiency. About 80% of the micro and medium enterprises are using the average collection period technique and 40% of the small units require this technique. Only 20% of the micro units are using the receivables turnover ratio. But 60% of the small and 20% of the medium unit respondents replied that they are not using any of the techniques of receivables management.

From Table 11.21 and Chart 11.21, it has been observed that 80% of the small and medium firms are using the forecast technique of the sanctioned credit period,

Table 11.20 Receivable management techniques

	Micro	Small	Medium
Receivables turnover ratio	1	–	–
Average collection periods	4	2	4
Anything else	–	–	–
None	–	3	2
Total	5	5	5

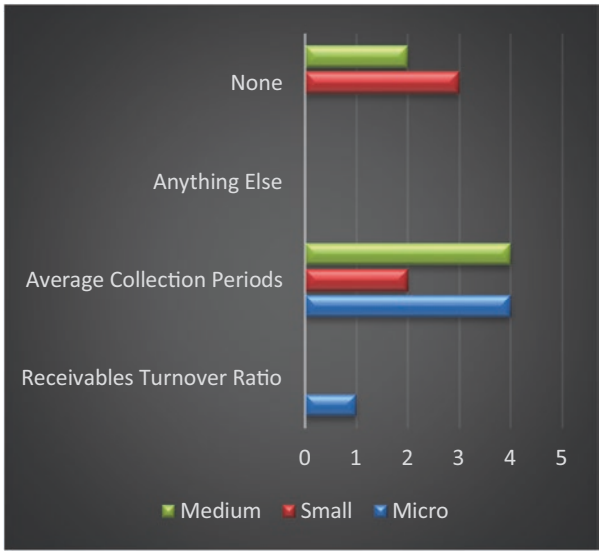


Chart 11.20 Receivable management techniques

whereas 40% of the firms of micro units are availing that technique. About 40 and 20% of the micro and medium units are also using the anticipated expenses method. About 20% each of the micro and small firms are using the average receivables size method. There are no alternatives used rather than these variables.

From Table 11.22 and Chart 11.22, it can be seen that 80% of the micro enterprises and 20% of the small enterprises are using cash budget as a tool for cash management. About 40% of the small and 40% of the medium enterprises using liquidity planning as a tool for cash management. Cash flow statement, which is an important and widely accepted technique, has been used by 20% of the micro and medium enterprises and 40% of the small enterprises. Surprisingly 40% of the medium enterprises responded that they do no use any of the cash management tools, which pushes them back in working capital management and estimation techniques.

Table 11.21 Forecast receivables

	Micro	Small	Medium
Sanctioned credit period	2	4	4
Anticipated expenses	2	–	1
The anticipation of average collection period and discounts available	–	–	–
Average receivable size	1	1	–
Anything else	–	–	–
Total	5	5	5

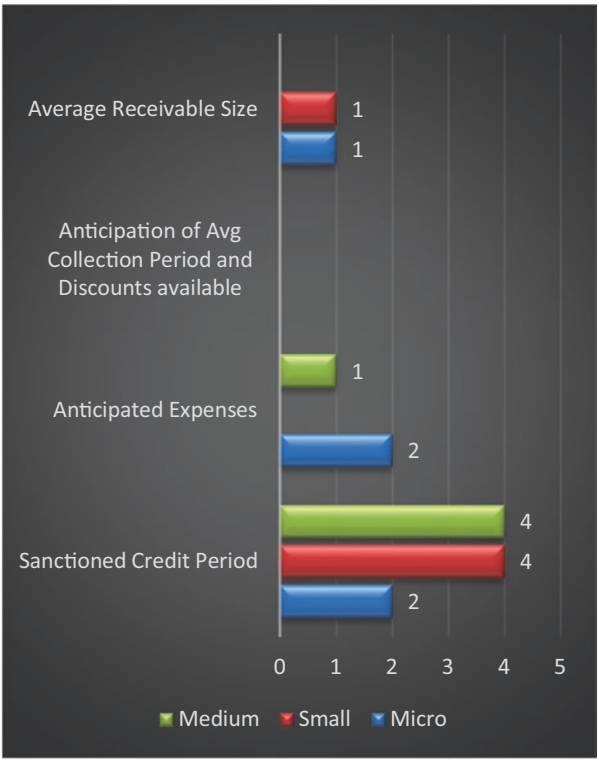


Chart 11.21 Forecast receivables

11.5 Findings

This section deals with the findings and conclusions that can be drawn from the above research data that have been tabulated.

1. MSMEs are having trouble efficiently managing working capital as they do not have an exact understanding of the concept, tools, and techniques of the working capital management.

Chart 11.22 CMT

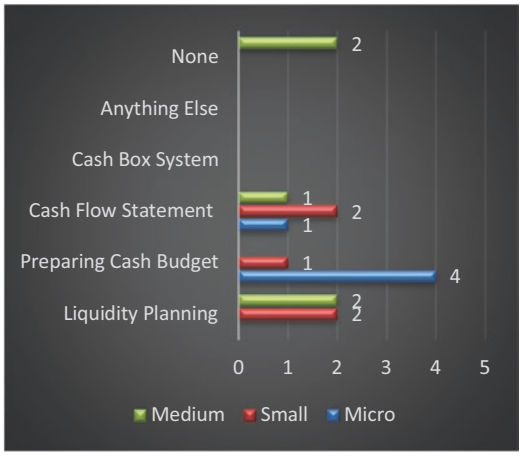


Table 11.22 Cash management tools

	Micro	Small	Medium
Liquidity planning	–	2	2
Preparing cash budget	4	1	–
Cash flow statement	1	2	1
Cash box system	–	–	–
Anything else	–	–	–
None	–	–	2
Total	5	5	5

2. Most of the micro enterprises told that they have an annual turnover of less than ₹2,000,000, while the selected small enterprise responses responded that they the annual turnover in the bracket of ₹2,000,000 to ₹4,000,000. The respondents from medium enterprises responded that they have achieved an annual turnover of ₹4,000,000 to ₹6,000,000. All the data collected are as of March 31, 2020.
3. The level of current assets maintained by the micro enterprises falls in the bracket of ₹2,000,000 to ₹4,000,000. On the other hand, majority of small and medium enterprises fall under the bracket of ₹4,000,000 to ₹6,000,000. The percentage of this count up to 40% for the small and 60% for medium enterprises.
4. About 60% of the micro enterprises, 80% of the small enterprises, and 40% of the medium enterprises are responded as they are managing their working capital themselves. This implies that owners of the business do not fully trust their employees to manage their day-to-day operations. This distrust also hampers the organization's culture as well as effectiveness. The owner may not be a know-it-all person, and if someone in business is having some knowledge and the owner is ignoring the specialty skill then also it will be an issue.

5. The economic environment took a toll on the firm's liquidity position, as cited by the respondents. About 80% of the micro units and 60% of the small units got hit by the economic environmental factors. On the other hand, 60% of the medium enterprises responded that they handled the situation favorably as 60% of the level of working capital management has been done by the experts and not by the know-it-all owners.
6. In the case of micro and medium enterprises, 40–60% of the working capital formed part of the inventory, whereas this number goes down to 20% in the case of the small enterprises. This points out to the fact that inventory being the decision taken area for micro and medium enterprises. If the level sore up and the working capital is more tied up with the inventory and is slow-moving, then this will hit the efficiency of the working capital management.
7. All of the units under study are using any of the working capital management techniques, with an exception of the 40% of the micro and 80% of the small units. These units are not using any of the working capital management techniques.
8. Most of the small and medium enterprises manage their working capital every week, whereas the micro units maintain their working capital on daily basis. The advantage of maintaining a daily basis need is that it helps to know and manage the working capital on a day more effectively.
9. The small units preferred the preparation of cash budgets on weekly basis, whereas the micro and medium enterprises prefer the preparation of budgets every month. Preparing weekly cash budgets to help the firms to track the variation from standard to actual in a given format.
10. Suffering from a shortage of working capital is very frequent for all enterprises. About 80% of the micro and 60% of the medium and small units responded that they have suffered from a shortage of working capital. To analyze the problem, it can be said that in the case of micro enterprises, most of the working capital is tied up in the slow-moving inventory. For small enterprises, excess of receivables and inventory with a shortage of receivables can be attributed to the problem. Medium enterprises have been affected by a shortage of receivables, excess inventory. Some of the medium enterprises attributed, shortage of inventory along with a shortage of receivables.
11. Average collection period is the most used receivable management technique for most of the micro and medium enterprises. On the other hand, majority of the small enterprises do not use any method for management of receivables which is attributed to the inefficiency of working capital management.
12. Credit period and anticipating expenses are used by almost 80% of the micro enterprises as one of their forecasting tools. On the other hand, 80% of the small and medium enterprises use only a credit period as their forecasting tool.
13. About 80% of the micro enterprises used cash budget as their cash management tool, whereas 40% of the small firms used liquidity planning for their cash management tool. In contrast, 40% of the medium enterprises responded that they do not use any of the cash management tools.

14. The majority of the micro and small enterprises have said that they use the sales cycle as a tool for the estimation of working capital requirements. About 40% of the medium enterprises responded that they use a combination of the sales cycle as well as the production cycle to measure the working capital need.
15. Almost all the firms of all three categories replied that they financed their working capital requirement of up to 40–60% level. Rest of the amount they have managed from their own or internal resources.
16. In raising finance for the working capital, majority of the micro enterprises took the lane of bank overdraft. Majority of the small enterprises combines the ways of loans and bank overdraft. The majority of the medium enterprises use the installment credit option to avail of finance for working capital requirements.
17. Various factors are present there which have a direct effect on the working capital of the enterprises. For most of the micro enterprises, almost 40% responded that the factor is seasonal variability, the production cycle is responsible for the small enterprises as responded by 40% of the small enterprises. About 40% of the medium enterprises stated that the credit policy they have adopted has a toll on their working capital management.
18. In most enterprises, it has been found that working capital is being managed by untrained and unaware people who do not know the tools, techniques, and procedures of efficiently handling working capital. Thus, the purpose of maintaining working capital gets diluted.

11.6 Conclusion

There is an overwhelming need for working capital management for the MSMEs, as this signifies maintenance of liquidity for day-to-day operations as well as meeting the current liabilities. This need for working capital arises due to the existing time gap between the production of the finished goods and the realization of cash from sales and debtors in case of credit sales. Adequate working capital helps to build a positive image on goodwill as well as the solvency of the firm. To maintain an adequate level of working capital and to avoid shortage at any point in time, an estimate of adequate working capital is needed, so that based on that estimate a proper forecast can be made and arrangements can be made.

11.7 Recommendations

Based on the responses received from the questionnaire, following can be suggested, so that the MSMEs can efficiently and effectively manage working capital:

1. Banks and other financial institutions should offer more flexible credit to MSMEs to meet their working capital needs.

2. The piling up of an inventory should be stopped. The inventory management process and procedures should be rationalized. Piling up of inventory generally decreases return on investment.
3. Going short on inventory is also a problem for some of the units. This also should be avoided as it decreases the production efficiency as well as increases the idle time.
4. Appropriate receivable policy should be in place to manage the debtors well as money tied up in receivables decreases liquidity.
5. The financing mix should be improved by the business units. The easiest and cheapest ways to finance for working capital should be found out so that when there is a need, these sources can be effortlessly working capital.
6. Unnecessary, unwanted, over, and underestimated expenses should be avoided at the very beginning. A proper working capital budget should be there whenever there is a chance of occurrence of major expenses.
7. In many of the cases, it has been found that those who are managing the working capital do not have any formal training on that. So, on-the-job training can be arranged so that there is always the right people for the right job.

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Chapter 12
Application of Machine Learning (ML) in Human Resource Management

Anupriyo Mallick

12.1 Introduction

Today, human resource management has evolved to a strategic function of an organization. The role of HR leaders in attracting, developing, and retaining talent is vital to the success of any business. For this, it was inevitable for the HRM (human resources management) to get transformed into digital, which radically altered the way the employees and the businesses work. Digital technology has completely reinvented and enhanced the processes and systems in various functions across the industries, and the HR function is no exception. In the last two decades, digital tools like online job boards, applicant tracking systems (ATS), professional networking sites, viz. LinkedIn, Facebook, and Twitter have significantly changed the HR dispensation right from a job posting or job application to recruitment and on boarding, employee engagement, performance management, and finally employee separation—capturing valuable insights during exit interview.

HR started replacing manual processes which are of repetitive in nature, with automations. The need is to connect all HR processes across the organization over a period of time for greater transparency and efficiency. However, digitalization of HRM should not simply be looked at only a makeover process. HR leaders must be sensitive to the fact that it entails a huge change, and employees must be hand-held throughout this change, failing which it is like a broken chain. Digital HR entails own challenges. It requires a considerable bandwidth of team members and has lot of potential to impact the organization's overall productivity. As per the report of the World Economic Forum, diversified workplaces would emerge in the industry due to mobile, cloud technology, big data, and computing power. In another 2 years, it predicts that AI (artificial intelligence), ML (machine learning), and advanced

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robotics drive the workforce increasingly. HRM is all about making decisions that directly influence organizations "competitiveness" (Walger et al., 2016; Lacombe & Tonelli, 2001). Indeed, the functions of the HR department have direct relevance to both the definition and implementation of organizational strategies. Its strategic role is evident in the necessary alignment between HR and organizational strategy, as well as in the fact that HR strategies, policies, and practices are always required (Wright & Snell, 1998; Lacombe & Tonelli, 2001; Bosquetti & Albuquerque, 2005). Management decisions made in the HR department affect the organization's entire value-creation process. HRM line managers play a central role because they are asked to face situations where taking complex (Fish & Hardy, 2015) and non-routine (refers to unique and non-repeated situations, such as creative problem-solving and decision-making) (Marcolin et al., 2016) decision is the norm. In many organizations, a myriad of HR-related tasks, such as filling out performance forms, interviewing candidates for employment, making salary increase recommendations, and breaking employment-related news to employees require HR managers to have the ability to act in a situation of opalescence (incomplete and asymmetric information) and with the employment of discretion (ability to choose between different options) (López-Cotarelo, 2011).

12.2 About Machine Learning

There is an increasing trend in automating jobs currently done by highly trained and experienced white-collar workers, thanks to the advance of ML and various forms of artificial intelligence. The broad idea that manual work can be carried out by machines is already familiar; as early as the nineteenth-century industrial revolution, the fear of "technological unemployment" induced English textile workers to destroy machines under the charismatic lead of Ned Ludd (Hobsbawm, 1968). Today, smarter machines can perform even more sophisticated tasks (McAfee & Brynjolfsson, 2014). Generally speaking, what makes workers vulnerable to automation is less whether their work is manual than whether it is repetitive and routinized. Machines that can already do many forms of routine manual labor are improving their performances in some routine cognitive tasks, too.

It is important, first of all, to formally define ML. One widely accepted definition is offered by Tom Mitchell: "*A computer program is said to learn from experience E with respect to some class of tasks T and performance measure P, if its performance at tasks in T, as measured by P, improves with experience E*" (Mitchell, 1997).

In the academic world, the topic has been investigated since the 1950s (e.g., Samuel, 1959); however, ML has received more and more attention in the last few years mainly because of two factors. The first one is the availability of data. As we will see, ML algorithms are trained using data, and usually, the more data they receive as input, the better their output in terms of accuracy. The huge increase in the volume of data produced (including data from social networking sites,

smartphones, and devices belonging to the "Internet of things"), which has characterized the last few years, has therefore positively affected the adoption of ML techniques. The second factor is the availability of computational power. Although ML algorithms often require vastly expanded computational resources, during the last years, the availability of such resources has increased both in volume and flexibility (e.g., Amazon Elastic Compute Cloud, https://aws.amazon.com/ ec2), and such improvements have positively affected the trend toward ML adoption.

Machine learning is the science of getting computers to learn and act like humans do and improve their learning over time in autonomous fashion, by feeding them data and information in the form of observations and real-world interactions. How it does is using lot of machine learning algorithms. The algorithm is grouped either by learning style (i.e., supervised learning, unsupervised learning, semi-supervised learning) or by similarity in form or function (i.e., classification, regression, decision tree, clustering, deep learning). Regardless of learning style or function, all combinations of machine learning algorithms consist of the following:

1. *Representation (a set of classifiers or the language that a computer understands)*
2. *Evaluation (aka objective/scoring function)*
3. *Optimization (search method; often the highest-scoring classifier, for example; there are both off-the-shelf and custom optimization methods used)*

Machine learning is a technique by which systems and machines (in the form of nuanced software programs) "learn" over time to speed up their future calculations and decisions and make them more successful. This is done by understanding and analyzing the patterns within previously made calculations and decisions. For example, the technology powers Amazon product recommendations, Google Maps, and the content that Facebook, Instagram, and Twitter display in social media feeds.

The technique boils down to a process that is simply about understanding data and statistics, a process where computer algorithms find patterns in data and then predict the probable outcomes. But this simple sounding process has over the years found increasing applications across various companies. From finance companies who use it to understand its client requirements better to tech giants using machine learning as a core driver of their operations, it is slowly becoming the bedrock of technological transformation across companies.

The benefit of utilizing machine learning is that it helps sieve through large chunks of data that many big companies generate, and by "learning" patterns, it helps make better decisions, many of which might seem counter-intuitive at first. And the benefits are seldom restricted to a single department within the company. When implemented correctly, machine learning can help companies solve problems and predict user behavior in ways that will help the organization grow. Machine learning is enabling companies to expand their top-line growth and optimize processes while improving employee engagement and increasing customer satisfaction.

12.3 Machine Learning and HR

Internally, machine learning can greatly assist the HR function. By using machine learning, many traditional activities like "talent acquisition" and "employee engagement" can be greatly improved. Machine learning can help quickly sift through thousands of job applications and shortlist candidates who have the credentials that are most likely to achieve success at the company. Thus, while also helping HR managers have access to continual insights into how their employees are feeling about their workplace and how engaged are they, a definite improvement over comparing engagement surveys.

Although the developments in computing power and cloud-based server capacity in the past 20 years has made it possible for machines to analyze data and make helpful predictions, its adoption within companies has been relatively slow. Talent restrictions along with skepticism of newer technology and inadequate management of data are some of the reasons that stop organizations from reaping the benefits of machine learning.

But if one was to move ahead of such problems, the potential benefits would be significant. By developing talent in-house and streamlining data collection and management, companies can improve their decision-making. To make a good machine learning system for their business, the following four factors are key:

1. An understanding of the machine learning process
2. An understanding of the different algorithms available and the kinds of problems to which they can be applied
3. Data (the more, the better)
4. Patience

12.4 Objectives and Methodology

The present study aims to find out how machine learning algorithms enable to generalize beyond the training samples, i.e., successfully interpret data that it has never "seen" before.

Machine learning also helps the HR staff to allocate more time and resources to all important human interactions and work on more strategic projects. They will be free of the time previously spent on the mundane repetitive but essential HR tasks that are required on a daily basis.

The present chapter uses descriptive research methodology and is based on secondary data as collected and collated from various literature reviews in the concerned subject area. Findings of the study is completely on the secondary data analysis and mostly theoretical in nature.

12.5 Capacity Building and Challenges

Building this capability in-house also would help companies have a greater control over the areas where machine learning algorithms are deployed to improve their efficacy. As more data is analyzed by the system, the prediction model improves. It also gives companies an agency over their machine learning journey. Learning service providers like plural sight already list courses that can help managers and their teams to learn more about machine learning and improve their skills.

In addition to being aware of the potential benefits of machine learning, it is important to be aware of the pitfalls as well. The first is simply understanding of what kind of algorithm to use for the problem that needs to be solved. A clustering algorithm could be used to classify a restaurant customer as more likely to dine-in than take out, but it cannot be used to predict how raising menu prices would impact sales. Likewise, a regression algorithm would be able to address the effect of price changes on sales, but cannot predict one of a closed set of outcomes. Such clarity is key to reaping maximum benefits out of a machine learning algorithm.

There is also a risk of "overfitting" the data, which is simply training the system to understand a set of data so well that it loses the ability to generalize, learn, and make predictions based on new data. In this case, the model tends to make inconsistent predictions and becomes worthless.

Third, it is also important to know that there are limits to what machine learning can improve within the organization; some problems may just not be solvable with machine learning. Since the process of machine learning from data never ends, it is difficult to always predict which problems can be solved. This might lead to a situation where an organization chases a problem but never ends up developing a functional model. In this case, the solution is knowing when to quit trying.

Although machine learning has traditionally been within the domain of tech companies, the benefits of investing in its development are slowly accruing across various companies. If implemented with the right vision and expectations, machine learning can help companies make great strides in an environment which is becoming increasingly unpredictable.

The scale of the change in the HR function has been staggering and has witnessed an exceptional surge over the last few years. Global companies who have established a presence in India over the last decade have brought with them different perspectives and some new HR practices as well. Technology has significantly influenced the HR function. It has led to new business models coming into existence, allowing technology platform companies to make a significant impact. Competition has come not from within the known set of businesses but from different industries by leveraging technology. The velocity of change has posed unique challenges for the HR function, and HR professionals have seized the challenges and are equipping themselves to meet the needs. It has become quintessential to reimagine the way that we work. HR is already evolving from a process-centric function to be more agile. Leaders today are moving away from a "process" mindset, to a more "outcome"-based mindset.

In this digital era, an organization's competitiveness will depend on its talent readiness, skill-sets, and how it will bring in diversity of thought and perspectives for organizational excellence. Along with the digital age come opportunities, challenges, and trends for the HR function around the globe. Rapidly changing requirements for novel skill-sets in fields such as data science, AI, cloud, block chain, security, etc. signal a need for flexible recruiting practices that allow organizations to reach out to these fresh talent pools. How skills can be deployed in an agile manner within the organization or with its clients has become important. This also creates the need to build an enabling environment for constantly re-skilling talent. Skill will become the new currency, and skill-based wage differentiation will increase. This will also require a fundamental compensation redesign by HR.

Finally, there is an important shift in the expectations of the workforce as employees demand work experiences that are more personal, engaging, and authentic. Deploying new technology platforms to enhance the employee experience will hence get increased attention. Building on existing HR investments in technology and processes, including core HR platforms, cognitive solutions, for example, provide an opportunity to enhance employee experience, reduce costs, and increase the quality and accuracy of HR services through the discovery of new workforce insights. The focus should be on developing leadership skills in the new era which will also be a key area for HR.

As far as the outlook for the industry in 2018 is concerned, HR must act as a catalyst to leverage and deploy technology to enhance the overall employee experience. HR professionals will also have to focus on reducing costs, increase the quality and accuracy of HR services, and provide talent insights for business impact by deploying analytical platforms to discover new workforce insights.

Another key area is to focus on developing leadership skills that can succeed in the new cognitive era. Lastly, it is essential that HR professionals build more effective listening skills and pay heed to their employees on a continuous basis and keep taking corrective action as and when necessary.

12.6 Insights from HR Data

HR gathers vast amounts of data on all aspects of employee activity, but without some form of machine learning to digest and analyze this information and present usable reports, it will be near impossible to identify important trends, threats, and opportunities. The data needs to provide meaningful usable insights, and machine learning can do this. Workflows can be improved, training outcomes will be better understood, and hiring trends, sick days, and vacation requests can all be optimized through machine learning.

Human resources as a function has experienced significant changes in the last decade due to the evolution of technologies. Today, artificial intelligence (AI) and machine learning (ML) is reshaping the way companies hire, manage, and engage with their workforce. Advanced data-driven technology is rapidly making its way

into the HR industry as businesses are focusing more on creating an employee-oriented corporate culture. Recruitment is no more a tedious process for HR practitioners as it no longer entails time-consuming activities such as manually screening the resumes of the prospective candidates, making phone calls, or replying to candidates via emails. These mundane errands are now managed by smart technologies designed to replicate human conversation, thus enabling HR experts to contemplate the bigger picture.

According to the India Report of Deloitte's fifth Annual Global Human Capital Trends, 53% of companies are revamping their HR programs to deploy digital tools, while 22% have already leveraged AI to deliver HR solutions.

Today, employee engagement is crucial for every business agenda because it plays a key role in boosting productivity and helping businesses stay competitive in the market. Gone are the days when HR experts relied on burdensome annual surveys to evaluate employee engagement that often generated erroneous results. In order to redefine performance management, the progressive HR leader can count on real-time data to measure employee engagement and identify problem areas to improve work culture by predicting workforce trends. Moreover, real-time data enables HR experts to take prompt action in a personalized manner.

AI and machine learning (ML), the current buzzwords in technology, have significant implications for human resource management practices. AI breaks down and transforms data into a format that is easy to construe; ML, on the other hand, is an advanced form of AI that scans data to identify patterns and modifies program actions correspondingly.

The insights put forward by AI/ML generate suitable data to help HR practitioners retain and motivate existing employees and to also recruit new ones. Moreover, AI- and ML-powered suggestions utilize historical records to recommend the best solutions to resolve expected problems, thus helping HR leaders develop HRM programs based on smart data.

12.7 Impact of Machine Learning in HR

Nowadays, the understanding of the HR department has been changing. HR used to be about finding the right candidates, managing assessments, giving offers, and managing employee careers and exits.

Human resources today need to step up because the expectations have risen. The HR department has to be able to predict attrition and candidate success.

Before machine learning has come to the rescue, HR managed data in a manual and semi-automated manner. To create analytics, it is necessary to gather, store, and process data. All of the above needs to be done in a short period of time because the data would quickly become irrelevant as the situation is changing and the data needs updating.

Let us investigate what machine learning can contribute to HR.

12.7.1 Automation of Workflows

This was one of the first application of machine learning in HR. Scheduling is generally a painful and time-consuming task. Whether it is enhancing onboarding, scheduling interviews and follow-ups, performance reviews, training, testing, and handling the more common and repetitive HR queries, machine learning can take most of this tedious work away from the HR staff.

This will streamline the process and give the HR department more time to focus on the "bigger issues" at hand.

12.7.2 Attracting Top Talent

A range of machine learning applications are already being used by many companies to improve their chances of attracting suitable recruits. Companies such as Glassdoor and LinkedIn have effectively used machine learning to narrow searches and seek out suitable candidates based on advanced intelligent algorithms.

Another machine learning application used to find and attract top talent is a system developed by Phenom People. It combines keywords with machine learning to seek out prospects on a number of job platforms and social media sites.

FedEx and Johnstone and Johnstone are both successfully using machine learning products (Cloud Jobs) developed by Google to enhance communication with those seeking to work for them. It analyzes characteristics of potential applicants to show them positions that are a good match to their skills, experience, and personality. The same system also makes the positions more likely to be seen by suitable candidates.

12.7.3 Less Time, Reduced Bias, and Greater Accuracy in Recruiting

One of the most important yet extremely time-consuming functions of HR is recruiting. Properly applied machine learning technologies can save time through the use of predictive analysis to reduce time wasting in recruiting and make the process more reliable and accurate.

Machine learning can aid HR in managing the recruitment process from start to finish. It will streamline the process, reduce errors, and improve results.

While the human element is still required to get a feel for the candidate, machine learning will provide accurate and usable analytics to improve the effectiveness of recruitment. It will also help to eliminate human bias and other human elements that could be hindering your company from hiring suitable candidates.

FMCG giant Unilever uses a combination of machine learning platforms and techniques to screen the vast amount of applications they receive. Candidates go through three rounds of machine learning-based "interviews" and assessments before meeting a human for the first time for the final interview. The result was a saving of more than 50,000 h of time spent on recruiting and reduced the time to hire new recruits from 4 months to 4 weeks.

Many start-ups are also using machine learning to speed the process up as well as remove bias from the system.

12.7.4 Applicant Tracking and Assessment

Machine learning applications are able to track new applications as they come through the system to streamline the process and save time and money. This process also helps to reduce bias and eliminate human error.

Citigroup is an example of a large corporation using machine learning to get top recruits that will be a good fit for the group. The machine learning system they use is Koru, and it analyzes and interoperates data from a range of online tests.

Using predictive analytics, it is able to determine if the person is a suitable candidate for the job and a good fit for the company. Other companies such as Reebok, Deutsche Bank, and Airbnb are using the same technology. Feedback has been extremely positive.

12.7.5 Personalization

Given the changing nature of the large amount of "new generations" entering the workforce, personalization has become an important part of attracting, hiring, and retaining top talent.

Machine learning is better able to understand the unique needs of different individuals and create personalized training, rewards, and recognition as well as incentive programs for each individual.

12.7.6 Forward Planning and Efficiency Improvements

Machine learning can better understand the data to provide usable insights that will help HR with predicting turnover trends, communication issues, project progress, employee engagement, and a host of other crucial developments and issues. This will enable them to gain an early awareness of any problems and take remedial action before these issues become major problems.

12.7.7 Attrition Detection and Understanding

Finding and hiring top talent is an essential function of HR. Retaining that talent depends on more than just the HR department, but it is important for them to predict, understand, and manage attrition rates.

Machine learning will be able to provide valuable insights into these factors allowing HR and management to deal with this more effectively and quickly.

The prediction functionality will enable them to plan ahead before they face skill gaps. More importantly, by understanding the data around staff turnover, they will be in a better position to take corrective action and make the necessary changes to minimize the problem.

12.7.8 Measure and Understand Employee Engagement

Again, another popular buzzword at the moment is employee engagement and rightfully so. Numerous studies have been conducted and although the exact figure varies, most show that on average, fewer than 70% of current employees are engaged in their work. This is an alarming statistic.

Machine learning is able to process the data in order to measure and understand this far better than a team of human would. These insights can prove invaluable in increasing productivity and reducing staff turnover rates. Solutions have already been developed by companies like Workometry and Glint that are in use by a number of top companies. These software systems measure, analyze, and report on employee engagement and general feelings related to their work. Data is collected from a range of sources, many of which were not easy to extract any meaningful information from the past.

12.7.9 Individual Skill Management/ Performance Development

While machine learning is proving invaluable in finding, attracting and hiring the best candidates for the position, it is also useful in developing new recruits as well as existing staff.

12.8 Conclusion

The examples we have discussed above are all already in use in some shape or form. Clearly, there is still much development to be done, and this is happening at an amazing rate. The human element of HR will never disappear but machine learning can guide and assist to ensure the functions of these departments are streamlined and faster while strategic and day-to-day decisions will be more accurate. These are exciting times in the HR industry, and it is important that those involved are aware of the solutions already working as well as new trends that continue to develop. Improving recruitment, training, development, and retention will have a profoundly positive effect on a company's bottom line. Those companies that are slow to adapt and adopt the new opportunities provided by machine learning will soon find themselves at a competitive disadvantage while those using them successfully will flourish. Change is the only constant. And it is technology that is at the forefront of driving change at the modern-day workplace.

Machine learning would prove to be of great advantage. Machine learning expertise would impact HR domain significantly. It would lead to better decision-making due to behavior tracking. But as of now, machine learning cannot replace human resources completely. It can be applied as a tool only. It is not only helping people to do their jobs but also can replace them where it is needed to give HR employees more time to focus on more important tasks. Machine learning can bring a better future to the HR world.

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Chapter 13
Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM) and Tribal Livelihood Promotion: An Indian Experience in Pre-post COVID-19 Pandemic Era

Manidipa DasGupta

13.1 Introduction

Human civilization, since its inception, is supposed to bear with inequality in accessing basic amenities among different caste–religion–class (economic)–gender–regional categories. This malpractice calls upon deprivation in absolute (physical abuse, starvation, and poverty) and relative (discrepancy between what one expects in life and what one gets) terms in general populace and thus hinders their objective (external activities that influence an individual's life) and subjective (personal activities of their own life consisting level of self-satisfaction, happiness, etc.) quality of life aspects (Campbell et al., 1976). The deprived community ultimately shapes the concept of '**vulnerability**,' i.e., the defencelessness against the exposures to shocks, stress and risks or 'living on this edge'.[1]

The agony of deprivation seems aggravated in recent times due to health–hygiene–economic–structural dysfunction in tune with **COVID-19 pandemic** which throws tough challenges to human civilization in its survival context worldwide as grabbed by unemployment, starvation, child mortality, malfunctioning of mental state of people, domestic violence on women, social unrest, etc.[2] The viral

[1] https://ideas.repec.org/a/ags/inijae/302271.html

[2] As per World Health Organisation (WHO) Report (https://covid19.who.int/table 60,074,174 people among total world population [in US 12,444,925 (death 165,091), India 9,266,705 (44,489)] were found active patients of COVID-19 where, till date 577,198 lives were claimed worldwide. As per International Labour Organisation (ILO) June 2020 Report, the pandemic eliminated 277 billion hours of paid work which was equivalent to 400 million full-time jobs (https://care.org/news-and-stories/ideas/overcoming-global-unemployment-during-covid-19-i-still-have-hope/)

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effect in this context slapped harshly on the **developing economy** like ours found over-populated, depending on agriculture, small enterprises, forest and other natural resources for livelihood maintenance of general populace; suffering from illiteracy, malnutrition, poverty and unskilled manpower. Present pandemic hindered the respective countries to sell out their output in local/outside markets crossing their geographic border which pushed them in more severe situation.[3]

The socially cornered people with meagre livelihood standard like **tribes**, the traditional wing of human civilization, face tremendous hardship in continuing 'fuel burning' at their home to survive in pandemic era and thus are being pointed out under **vulnerable community** due to their extreme inefficacy in dealing with the shocks and risks with emergency funds.[4] Severity can be extended for tribes having huge dependence on forestry, tourism, etc. for livelihood maintenance as crossing the border of the local constituency may be legally restricted in pandemic, and therefore, the tribes without such administrative support and infrastructural facility to fight against the hurdles are regarded as **Particularly Vulnerable Tribal Groups (PVTG)**. Thus, the tribes without being acquainted with basic education–skill–resources to accept COVID-19 shock, seem to be smashed under extreme starvation, malnutrition, child mortality, lack of medical treatment, and death.

This situation is experienced in India[5] also where recent pandemic brings new socio-economic repercussions and affects over 476 million indigenous and tribal people (constituting over 6% of the global population) substantively as per the Report of International Labour Organization (ILO) in May 2020.[6]

In this issue, the Department of Economic and Social Affairs, United Nations (May 2020) has emphasized on the effect of health–hygiene disasters of the indigenous section of our society where it made '**isolation of the tribes in society**' as responsible for their devastation. Moreover, the solidarity and disintegrated social

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with 147 million total unemployment worldwide (https://www.nationalheraldindia.com/international/covid-19-pandemic-has-left-147-million-people-unemployed-globally-study).

[3] As per United Nations Development Program (UNDP) Report, the income losses in developing economies for COVID-19 was in excess of $220 billion (Hawker, 2020). It pulled up 40–60 million people to extreme poverty and forced many developing countries like Nigeria, India, Democratic Republic of Congo to face tremendous hardship in matching per capital growth rate of real GDP (0.8%, 2.1%, 0.3%, respectively) and population growth rate (2.6%, 1.0%, and 3.1%, respectively) (https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty).

[4] https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty

[5] As per 2011 census report, in India, tribal people constitute 8.6% of the country's total population, i.e., 104 million people which is the largest in the world (Ministry of Tribal Affairs Statistics Division, 2013, statistical profile of scheduled tribes in India). As per government records (Anthropological Survey of India), there are 461 tribal communities out of which 174 are identified as sub-groups. In India, tribal groups are particularly prominent in the states of Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Odisha, West Bengal, Tripura, Assam, etc. While 89.97% live in rural areas, 10.03% reside in urban spaces (https://blogs.icrc.org/new-delhi/2020/09/04/covid-19-and-management-of-the-dead-in-tribal-communities/).

[6] Mohanty & Mohanty, Indian Express, 8th September, 2020, https://www.newindianexpress.com/opinions/2020/sep/08/why-covid-will-affect-tribals-disproportionately-2193927.html

affairs of tribes sometimes allow political misconduct as found in Maoist movement in Chhattisgarh, West Bengal (Jungle Mahal), etc.

Therefore, a systematic structured movement in shape of an organized group effort can give a scope to the unorganized, unskilled, uneducated tribes to restructure their lives with prosperity by standing against shocks and risks. In this very context, **Self-Help Groups (SHGs)**, special form of social enterprise (an approach to solve societal problems through innovation, sustainable and scalable business model), accepted the vulnerable to club to ensure livelihood opportunity with group effort. Another essence of SHGs in societal context is that the groups welcome only **women** under their purview who also do not have sufficient power to stand against the shocks and risks with lack of freedom in movement. Inclusion of tribal women in SHGs additionally builds up social promotion by empowering their members in socio-economic–familial–political issues.

But as the new-normal phase demands social distancing, use of mask and sanitizer; challenges may also be faced by SHGs in handling human capital mainly for the tribes who already do suffer from lack of health awareness, illiteracy and affordability of medical treatment. Authorities, therefore, in addition to ensuring empowerment to the indigenous people, should ensure special attention to protect them from every circumstance related to COVID-19 viral effect.

In this context, SHGs under the scheme of **Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM)** previously **NRLM** with community institutional platform offers special systematic approach towards livelihood promotion of all indigenous groups including tribes in view of alleviating multidimensional poverty through gainful self-employment and wage employment opportunity.[7] The institutional approach of the said scheme somehow can offer special effort to build-up economic–marketing–technical efficacy of the unskilled–illiterate–unbanked tribes. But how much the scheme will make the respective group of people able to fight against the odd is a question of time.

In this issue, many researchers (Patty, 2003; Shinde & Ahiwale, 2018) explored their studies in ‘deprivation and indigenous people’ and government promotional practice to curb the devastation. But though, a nominal number of people (Holmes et al., 2008; Sarkhel & Mondal, 2015) considered the socio-economic–health–hygiene crisis of tribes as their field of study, no study till now reviewed, aimed at focusing on the approach of DAY-NRLM in livelihood promotion of the vulnerable clubbed in SHGs.

Therefore, the present study would like to focus on the questions like (1) What is the tribal participation penetration in SHGs in India in both pre and post pandemic phases? (2) How would DAY-NRLM make effective policies for indigenous tribes clubbed in SHGs?

Accepting the knowledge gap and research questions accordingly, the study takes its attempt to (1) assess the inter-state variation in tribal participation in SHGs

[7] About 10–12 crore rural households and 7 crore rural poor households are targeted to be mobilized under DAY-NRLM within 2014–2025.

in India considering both pre (up to March 2020) and post (April–November, 2020) COVID-19 phases with a focus on the present socio-economic–health–hygiene status of tribes in India and impact of COVID-19 on them, (2) highlight on the policies of DAY-NRLM for indigenous people like tribal community in pre and post COVID-19 phases, (3) recommend suggestions for further improvement.

Keeping in mind the above-mentioned fact, the scope of the study is designed into six more sections. Section 13.2 considers the review of related literature. Section 13.3 deals with the materials and methods used in the present study. In Sect. 13.4, tribes and their participation in SHGs under DAY-NRLM in India are considered. The constitution and policy of DAY-NRLM is framed in Sect. 13.5 under 'DAY-NRLM: A journey towards livelihood promotion'. Section 13.6 takes attempt to sketch the conclusion and recommendations of the study, while Sect. 13.7 deals with the limitations of the present study and scope of further research.

13.2 Review of Related Literature

Tribal vulnerability, deprivation and livelihood promotion through community movement are supposed to claim attention of policy-makers and researchers from national and international levels. Attempt, therefore, can be taken to highlight on the previous findings of the study as mentioned below.

Sustainable livelihood promotion could be accepted as the catalyst in ensuring socio-economic development of any community where under a stable, democratic, independent government system, the natural resources could sufficiently be used to meet its basic needs in a self-reliant manner with a balance between community and environment under minimal disastrous consequence (Krantz, 2001). But multidimensional human deprivation in poverty, social inferiority, isolation, physical weakness, seasonality, powerlessness, humiliation (Chambers, 1997) could somehow make the developmental pace imbalanced. Deprivation would also produce 'vulnerability' in different forms—intrinsic (internal risk factor), human centred (likelihood to experience harm), dualistic (susceptibility and coping capacity), multiple (susceptibility, coping capacity, exposure, adaptive capacity), multidimensional (physical, social, economic, environmental and institutional) (Brikmann, 2013).

In rural economy, deprivation would explore a complex interplay between the restricted livelihood choice of the vulnerable group of people and the factors associated with income, social circumstances and access to services (Ellis, 1997; Farmer et al., 2001)[8] which portrayed it differently from urban economy (Patty, 2003; Ellis et al., 2002).[9] The marginalized rural poor with discrimination and inequality in every pace of life than non-indigenous ones would face severe challenges in their

[8] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1314032/

[9] www.migrationdrc.org

livelihood aspects[10] which could be echoed in the survival context of tribes in worldwide phase. Deprivation showed devastation to the indigenous tribes by not allowing them to arrange basic supports for survival like nutritious provision, safe drinking water, clean sanitation, education, health–hygiene maintenance facilities, insurance, etc. for their own and their dependent family members (Shinde & Ahiwale, 2018). This consequently would expose doubt in tribal existence where additionally, the no/minimal formal education, skilful technical knowledge and financial strength would play as accelerators to their un-employability in organized world and forced them to continue livelihood in isolation in unorganized areas curbing their dignity and identification in society (Holmes et al., 2008). Vulnerability of indigenous people would touch its maximum severity in any natural devastation as experienced by the present worldwide pandemic outbreak where like entire human civilization, the marginalized people like tribes with low immunity and sometimes with co/multi-morbidity would have to face challenges to maintain lives, longevity, mental peace and employment.[11]

The socio-economic devastation, therefore, would encourage an innovative movement to eradicate poverty, deprivation and inequality among different classes of people through hand-holding with institutional effort where SHGs could be accepted hugely (Kundu & Mukherjee, 2011). This was previously echoed in the reports of World Bank (1990) and also by other Government Agencies [United Nations Development Programme (UNDP), Cooperative for Assistance and Relief Everywhere (CARE), British Department for International Development (DFID)] where mission of livelihood promotion for sustainable poverty reduction consisting of efficient income-earning opportunity with improved access to education, health care and other social services for the vulnerable rural poor could be assured. Therefore, to survive in a risk-prone uncertain world and to maintain sustainable livelihood opportunities, the indigenous people should accept group cohesive work (Chambers, 1997).

The requirements of livelihood protection, security and promotion of rural indigenous people was also felt by developing economy as India, the second largest tribal penetrated country in the world after Africa (Patty, 2003). It proposed Inclusive Rural Development Strategies reflected in National Rural Livelihood Mission (NRLM) (June, 2010), the latest ongoing programme [renamed as Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM) since 2016] and applied policies in institutions dealing with rural in group activities like SHGs (Ministry of Rural Development, Government of India, 2019). DAY-NRLM under its purview considered mainly the marginalized indigenous people including tribes accepting their different survival requirements as per culture and community (ibid). Likewise, beside sanctioning financial support, marketing promotional facility and technical training to the poor in regular period, the Mission also took special focus

[10] https://blogs.worldbank.org/voices/poverty-and-exclusion-among-indigenous-peoples-global-evidence

[11] https://www.youthkiawaaz.com/2020/06/impact-of-covid-19-on-the-tribals-across-the-country/, www.un.org/development/desa/indigenouspeoples/covi-19.html

on emergencies of the poor specially in disastrous like COVID-19 through financial facilities, other health–hygiene protection and livelihood promotional scope (ibid).

But as the 'poor' would form heterogeneity in material well-being and as poverty could be detected differently in different geographic aspects (Ansoms, 2008), the livelihood promotional packages should be based on the requirements of native community of a specific society (Krantz, 2001). In this context, the main challenge would be to make the poor aware of the collective movement through an organized institution which would offer them empowerment in different dimensions (Bluffstone et al., 2008). The movements of SHGs under DAY-NRLM towards promoting marginalized rural poor were found positive requiring proper attachment of Gram Panchyet in building up consciousness among the rural populace in this regard (Mondal, 2014; Sarkhel & Mondal, 2015). Therefore, alone group effort could not empower the marginalized rural people and unless proper awareness of them to club within a group along with ownership of land right, tenancy right, minimum wage rate would be assured; inequality, deprivation would persist in their community (Patty, 2003).

13.3 Materials and Methods

13.3.1 Materials

The present study has collected data from different sources (research article, working papers, reports, etc.). Table 13.1 reflects some of the sources of materials collected against the areas found in the study.

Table 13.1 Sources of materials used in this study

Areas of study	Sources
Status of tribal community	Ministry of Tribal Affairs, Government of India (www.tribal.nic.in); Ministry of Health and Family Welfare (www.main.mohfw.gov.in), Census Report, 2011
DAY-NRLM	SHG Report (DAY-NRLM.gov.in); Ministry of Rural Development, Government of India (www.rural.nic.in)
Pandemic effect on indigenous groups	Department of Economic and Social Affairs, United Nations (un.org/development/desa/indigenouspeoples/covi-19.html); United Nations Department of Economic and Social Affairs (www.un.org)

13.3.2 Methods

The study follows predominantly an **analytical** research methodology where attempt has been made to analyse the data collected from different above-mentioned sources in pre (up to March 2020) and post (April–November 2020) COVID-19 phases and is being interpreted too.

The study focuses on the promotional packages as introduced by DAY-NRLM in pre and post COVID-19 phases for the vulnerable, especially tribes where information as reflected in SHG Report and Ministry of Rural Development, Government of India has been used.

Attempt is made to highlight on the status of tribal community in socio-economic–health–hygiene-related issues in India where emphasis is also made on the impact of COVID-19 on the vulnerable. Attention is also found on tribal participation penetration along with the overall participation in SHGs in India based on the data collected from DAY-NRLM, Ministry of Health and Family Welfare, Census, 2011, etc.

It also makes a comparative assessment of overall participation in SHGs along with savings where special emphasis is on tribal community in pre and post COVID-19 phases. In this context, results reflected in e-Governance Application, Ministry of Rural Development, Government of India, 2019, have been analysed, and accordingly, growth rate (%) of overall participation is calculated $[(T_1 - T_2)/T_1 * 100]$ (where T_1 = Period 1 (pre-COVID-19) and T_2 = Period 2 (post-COVID-19).

Table 13.2 reflects the process of calculation of participation penetration.

Table 13.2 Description of the participation penetration indicators

Indicator	Description	Proportional measure
SHG penetration (SP_1)	Share of SHG members of the state as a proportion of share of women population of the state	$SP_1 = A/B$. A = SHG member of the state/SHG members in India, and B = total women population of the state/total women population in India[a]
Tribal penetration (SP_2)	Share of tribal SHG members of the state as a proportion of the share of tribal population of the state	$SP_2 = C/D$. C = tribal-SHG members of the state/tribal-SHG members in India and D = tribal population of the state/total tribal population in India

Source: Author's own explanation

[a]As only women could be members of SHGs, only women population has been taken

13.4 Tribes and Their Participation in SHGs in India: An Overview

13.4.1 Status of Tribes in India

Ministry of Tribal Affairs in support of the declaration of the Government of India, Census, 2011, announced **10.45 crore total tribal population** (8.6% of total population in India) having **990 sex ratio** (991 in rural and 980 in urban) with 93,819,162 rural (11.3% of total rural population) and 10,461,872 (2.8% of total urban population) urban population. In India, out of 640 districts, no tribal individual was found in 50 districts of Punjab, Chandigarh, Haryana, Delhi and Puducherry, while 90 districts were detected to hold 50% or more tribes as their habitants. In their livelihood promotion and maintenance, tribes always have to face challenges which can be summed up as below.

As per Census, 2011, tribal community experienced huge burden of **drop-out** (class I–X) (62.4% whereas in India it was 47.4%) though the Statistics of School Education (2010–2011)[12] Report announced that the tribal girl child confirmed more enrolment in class I–V per hundred boys (94) as compared to non-tribe category (92). The drop-out of girls from school would have to be taken as a serious concern as 71.3% tribal girls left as compared to 4.9% non-tribes in India. The **literacy rate** (ability to read and write) was also not very impressive in the said community holding 69% for male and 49% for female with gaps of 12% and 15% from the overall percentage of Indian literate male (81%) and female (65%), respectively.

Data of Census, 2011 also highlighted the fact that the tribes were duly arrested for **health–hygiene** issue having infant mortality rate (IMR) per 1000 live birth ranging from 89 (Madhya Pradesh) to 60 (Maharashtra); while under-5 mortality rate (U5MR) per 1000 live birth proved as more severe ranging from 123 (Madhya Pradesh) to 76 (Maharashtra). For life expectancy at birth, reversely Maharashtra held the maximum (69) and Madhya Pradesh the minimum (61) years.

For **livelihood status** maintenance, 23,329,105 houses were detected as owned by tribes in India of which 40.6% was supposed to be in good condition, while 22.6%, 53.7%, 17.3%, and 6.7% of the houses could only enjoy the facilities like latrine in their premises, separate kitchen, bathroom inside their house and waste water outlet connection with drainage, respectively. More than 87% of the respective community still continued cooking meal with fire-wood/crop residue/cow-dung cake/coal, lignite, charcoal, etc., 37.3% tribes did not have any facility of modern technical world—television, mobile phone, computer and self-transport. About 26.6% tribes in India could not avail of safe and pure drinking water as they have to carry on uncovered well, spring, river/canal, tank/pond/lake, etc. for their water sources. As per Tendulkar Methodology (2009–2010),[13] in India, 47.4% and 30.4%

[12] https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/SES-School_2010-11.pdf

[13] https://pib.gov.in/newsite/PrintRelease.aspx?relid=81151

tribes were detected as **below poverty line (BPL)** in rural and urban areas comparing all India picture as 33.8% and 20.9% among rural and urban populace, respectively. Tribes might also restrict their **financial inclusion** as only 44.98% tribes was found attached with banks in India.

Among the tribes in India, only **5.08 crores** was found as **working** where majority participation of workforce (about 80%, i.e., 2.26 crores) was in agriculture, followed by participation as marginal workers (1.79 crores) and cultivator (91.75 crores). Work participation of tribes in mainstream activities varied from 26.8 to 54.5% in India where Tamil Nadu held the maximum and Lakshadweep the minimum tribal participation. Among workers participation, 63.9% male and 36.1% female were detected as main workers, while 40.2% and 59.8% male and female participants, respectively, were recognized as marginal workers.[14]

- Threats of COVID-19 in Tribal Livelihood:

The worldwide COVID-19 effect showed survival threatening to all the indigenous people including tribes who already were arrested under several diseases like Malaria, Tuberculosis, and due to their remote habitation mainly in rural area, they could not avail modernized healthcare access as other communities in urban could get. Apart from this, the rural tribes might not get an opportunity to have clean water, soap, disinfectant, sanitation, etc. Even, the nearby available medical facilities like testing and monitoring of disease might be for the urban areas and ineffective for the indigenous people. Moreover, lack of education, health awareness, guidance to arrest virus and excessive belief in traditional rituals to make social gathering without protection made the tribes vulnerable again on health-safety ground (www.un.org/development/desa/indigenouspeople/ccovid-19.html).

State and central governments could only meet up nutritional needs up to certain level to the tribes having ration or Aadhar card where maximum group of tribes due to not having those cards could not avail of those support. Thus, public distribution system was often out of the accessibility of the vulnerable section. Many of the PVTGs who usually depended on forestry could not stand by maintaining basic amenities during April–June 2020, the period when they basically engaged in collection of forest products and thus were arrested by starvation, malnutrition and even death (https://voiceofmargin.com/marginalisation-of-the-tribal-community-a-graphical-analysis-from-census-2011-to-covid-19/, groundxero.in). Tribes mainly would have to compromise with low immunity with high riskiness to deal with COVID-19 situation (www.youthkiawaaz.com).

Now, as per Ministry of Health and Family Welfare, the present pandemic hit harshly to the livelihood of the Tribes and taking the recent experience of Brazil having same economic structure with huge pressure of tribal population, India should fight back for tribes against the disease with structured policy and programme (Meena & Singh, 2013).

[14] www.tribal.nic.in

13.4.2 Tribal Participation in SHGs in India: An Inter-state Assessment

13.4.2.1 Tribal Participation in SHGs in India

UNDP (2013) in its report mentioned the implication of 'push' (absence of livelihood opportunities at home, the significant burden of debt and the indignities of lower castes) and 'pull' (hope of making a living, the search for stable incomes and the freedom from caste-based indignity that dislocation to cities would provide) factors behind involving vulnerable in any economic activity. Likewise, the poor tribes would like to avail food security at household level (Mondal, 2013) with assurance in other deprived areas like health, education and entertainment (Patel, 2014). They would also appreciate the outcome of participation in SHGs as upliftment in the asset value, annual income, risk taking capacity with freedom in movement, social recognition and self-esteem (Umdor & Panda, 2009; Abraham, 2011; Savitha & Rajashekhar, 2012; Jain & Mathur, 2012; Arora & Arora, 2012; Mondal, 2013; Meena & Singh, 2013; Das & Bhowal, 2013; Mukherjee & Kundu, 2013; Sarma & Mehta, 2014). SHGs under DAY-NRLM could give people greater voice to link with institutions (such as markets), access to information from which they were previously excluded and empower in different dimensions (Holmes et al., 2008; Kundu & Mukherjee, 2011), while no significant relation might not be established in between time of involvement in SHGs and empowerment of the vulnerable (Mondal, 2018).

Now, the variant demands of tribes in attaching with SHGs as members, forced them to join or drop-out in/from the groups. This portrayed a picture of disparity in participation of the vulnerable female like tribes in SHGs throughout the country. Following this link, in India, the North and North-Eastern states got low participation rate of female in SHGs comparing with the other regions like Southern, Eastern, etc. Likewise, as per overall SHG participation penetration of female, when **Andhra Pradesh** contained the maximum penetration (1.31), as followed by Kerala, West Bengal, Delhi, Chandigarh were found at last of the list. In tribal penetration in SHGs, **Telangana** (2.17), **Andhra Pradesh** (2.17), **Kerala** (1.9) held upper side place, where Puducherry, Andaman and Nicobar, Delhi, Haryana, Chandigarh were at least to maintain tribal participation in SHGs in India. It would be very depressing picture that more than 75% of our states (Tamil Nadu, Madhya Pradesh, Jharkhand, Karnataka, Maharashtra, Rajasthan and so on) were found below average for tribal participation in SHGs (State Wise Achievement Report, Ministry of Rural Development, Government of India, 2019 and Census, 2011). Table 13.3 reflects the overall inter-state and tribal participation penetration in SHGs in India.

Table 13.3 Overall inter-state and tribal participation penetration in SHGs in India

Region/state	$SP_1 = A/B$	Rank (SP_1)	$SP_2 = C/D$	Rank (SP_2)
Jammu and Kashmir	0.05	16	0.202033569	25
Himachal Pradesh	0.02	19	0.191902455	26
Punjab	0.02	20	0	30
Uttar Pradesh	0.17	10	0.550746625	16
Uttarakhand	0.03	18	0.502882842	18
Haryana	0.05	17	0	30
Delhi	0.00	34	0	30
Chandigarh	0.00	34	0	30
Assam	0.13	12	1.5379592	4
Sikkim	0.00	27	0.438054257	22
Manipur	0.00	31	0.045504143	28
Meghalaya	0.02	21	0.543805631	17
Mizoram	0.00	28	0.486829464	19
Nagaland	0.01	25	0.442159862	21
Arunachal Pradesh	0.00	30	0.226606182	24
Tripura	0.01	22	0.344205457	23
Bihar	0.35	6	1.242275051	7
Odisha	0.20	9	1.318921555	5
Jharkhand	0.06	15	0.862286438	12
West Bengal	0.61	3	1.259187396	6
Chhattisgarh	0.06	14	1.204461814	8
Madhya Pradesh	0.15	11	0.95079415	11
Goa	0.01	24	0.486275899	20
Gujarat	0.25	8	1.070656501	9
Maharashtra	0.38	5	0.763748871	14
Rajasthan	0.12	13	0.6189623	15
Dadra & Nagar Haveli	0.00	33	0.026263573	29
Daman and Diu	0.00	32	0	30
Andhra Pradesh	1.31	1	2.166608235	2
Karnataka	0.27	7	0.828000884	13
Kerala	0.82	2	1.896045456	3
Tamil Nadu	0.53	4	0.98815925	10
Telangana	NA	NA	2.174684169	1
Puducherry	0.01	23	0	30
Andaman and Nicobar	0.01	26	0	30
Lakshadweep	0.00	29	0.18784298	27

Source: Author's calculation based on the data of State-Wise Achievement Report, Ministry of Rural Development, Government of India, 2019 and Census, 2011 Note: $SP_1 = A/B$. A = SHG member of the state to total number of SHG members in India, and B = total women population of the state to total women population in India. $SP_2 = C/D$. C = tribal-SHG members of the state to tribal-SHG members in India and D = number of total tribal population of the state to tribal population in India

13.4.2.2 Impact of COVID-19 on Tribal Participation in SHGs in India

The present pandemic outbreak and its consequences put an unprecedented situation for SHGs functioning in India which could be reflected in lesser participation progress in SHGs from April to November 2020. The vulnerable tribal members of SHGs in view of assuring food security at their home would migrate from SHGs membership where social distancing among the members might be very difficult. Moreover, lack of awareness, default in maintaining loan repayment (www.microsave.net), etc. might force the community to leave the groups. The pandemic effect did not allow the vulnerable to join freshly in SHGs. Hence, without active participation of members in SHGs, the group could not conduct regular meeting, training, workshop, awareness programme, etc. which could be taken as pre-condition of effective performance of the groups and for developing group cohesion.[15]

The present pandemic effect could be echoed in the inter-state position of overall SHGs and SHGs dominated by tribes in India. The states proved as prominent for SHGs participation penetration up to March 2020, now could be found not to have any one SHG promotion from April to November 2020. This could include the states like Andhra Pradesh, Kerala, Manipur, Telangana, etc., while somehow, Bihar (6.744%), Rajasthan (2.508%), Punjab (2.281%), Uttar Pradesh (1.71%), Jharkhand (1.294%), etc. could explore positive growth in promoting SHGs during the pandemic phase. The same view could be found for tribal-SHGs where except Jharkhand (4325), Rajasthan (1981) and Bihar (1192), no state could exhibit notable improvement with SHGs progression. Quite surprisingly, during the pandemic, the states like Andhra Pradesh, Telangana, Manipur, Puducherry, Ladakh and Lakshadweep did not show any fund mobilized from SHGs, while other states, e.g., West Bengal (Rs. 30,310), Assam (Rs. 21,999), Bihar (Rs. 18,844), Maharashtra (Rs. 18,047), etc. somehow manage this crisis. Rural Development Minister in his speech declared about Rs. 94,977 crore loan as outstanding against SHGs under the bank-linkage scheme on 31.07.2020 (www.mmeconomictimes.com). Table 13.4 reflects the overall inter-state and tribal-SHGs and savings in pre-post COVID-19 phases in India.

13.5 DAY-NRLM: A Journey Towards Livelihood Promotion

13.5.1 Formation of DAY-NRLM

With an emergence to develop a special purpose vehicle in the form of autonomous societies, the Ministry of Rural Development (MoRD), Government of India (GoI) in commensurate with the recommendation of **Radhakrishna Committee** replaced **Swarnjayanthi Gram Swarozgar Yojana** (SGSY) with **National Rural**

[15] https://aajeevika.gov.in/sites/default/files/nrlp_repository/The%20Challenge%20of%20implementation_0.pdf

Table 13.4 Overall inter-state and tribal-SHGs and savings in pre-post COVID-19 phases in India

States	SHGs		Growth (%)	Tribes-SHG (post-COVID-19)	Savings by SHGs	
	Pre-COVID-19	Post-COVID-19			Pre-COVID-19	Post-COVID-19
Jammu and Kashmir	37,374	0	0	0	10,048	1598
Himachal Pradesh	9132	84	0.920	1	2297	677
Punjab	10,038	229	2.281	0	3658	750
Uttar Pradesh	148,888	2544	1.71	12	22,697	6376
Uttarakhand	26,862	230	0.8562	3	11,026	4287
Haryana	35,852	321	0.895	0	12,592	4415
Delhi	0	0	0	0	0	0
Assam	170,255	15	0.0088	3	52,413	21,999
Sikkim	1642	0	0	0	608	177
Manipur	1718	0	0	0	682	0
Meghalaya	10,548	105	0. 995	105	1312	517
Mizoram	3382	0	0	0	763	125
Nagaland	9069	33	0. 364	33	906	205
Arunachal Pradesh	2743	1	0.0365	1	566	202
Tripura	8676	0	0	0	2372	490
Bihar	932,366	62,880	6.744	1192	198,524	18,844
Odisha	253,275	2	0.0008	0	63,976	7330
Jharkhand	1,499,167	19,404	1.294	4325	29,420	5294
West Bengal	606,129	33	0.0054	0.09	243,475	30,310
Chhattisgarh	132,695	276	0.208	38	18,866	2666
Madhya Pradesh	247,931	199	0.080	27	59,000	8077
Goa	121	0	0	0	1592	423
Gujarat	274,926	254	0.0924	132	85,329	5373
Maharashtra	266,918	655	0.245	26	139,238	18,047
Rajasthan	171,930	4295	2.508	1981	17,925	3136
Dadra & Nagar Haveli	0	0	0	0	0	0
Daman and Diu	0	0	0	0	0	0
Andhra Pradesh	6704.73	0	0	0	3127.51	0
Karnataka	98,768	461	0.467	29	65,805	8594
Kerala	23,597	0	0	0	466,623	16,210
Tamil Nadu	303,447	49	0.0016	0	281,872	4133
Telangana	321,643	0	0	0	146,737	0
Puducherry	1532	0	0	0	1655	0
Andaman and Nicobar	0	0	0	0	0	0
Lakshadweep	0	0	0	0	0	0
Ladakh	557	0	0	0	137	0

Source: Author's calculation based on the data of e-Governance Application, Ministry of Rural Development, Government of India

Note: Growth (%) = $[(T_1 - T_2)/T_1 * 100]$ (T_1 = Period 1 (pre-COVID-19) and T_2 = Period 2 (post-COVID-19)

Livelihood Mission (NRLM) in 2010, renamed as **Deendayal Antyodaya Yojana** (DAY-NRLM) since 2016. DAY-NRLM took its **mission** like 'to reduce poverty by enabling the poor households to access gainful self-employment and skilled wage employment opportunities, resulting in appreciable increase in their incomes, on a sustainable basis through building strong grassroots institutions of the poor' (Ministry of Rural Development, Government of India, 2019) in tune with the then millennium development goals (MDGs) and recent sustainable development goals (SDGs) (Goal 1: No Poverty, Goal 2: Zero Hunger and Goal 5: Gender Equality and Goal 11: Sustainable Cities and Communities).

Besides emphasizing on rural poverty alleviation, DAY-NRLM was also introduced to catch up the uneven geographic spread of SHGs, high attrition rates among the members of SHGs, lack of adequate banking sector response, appropriate delivery system and efforts for skill training among the rural poor. The structural reform is also echoed in state-level functioning where for successful promotion of the mission in state, district and sub-district levels, a special purpose vehicle like **State Level Rural Livelihood Mission** has been formed as an autonomous body as society.

13.5.2 Conceptualization of Livelihood and DAY-NRLM

Livelihood, the **means of making living** or the **various activities and resources that allow people to live** (Food Security Information for Action, 2007) can **strategically** (market access, support services, productivity, cost efficiency and technology) be maintained for accessing **livelihood assets** (natural, human, financial, physical and social) required to sustain and **utilizing livelihood context,** i.e. social norms, land ownership policies, culture, religions, etc. as reflected in social relation (gender, culture, history, religion, etc.), social-political organization (social rules, norms, democracy, leadership, power, authority, etc.), governance (form and quality of government System, structure, power, effectiveness, right, etc.), service delivery (effectiveness of state and private sector agencies engaged in delivery of services such as education, health, etc.) and resource access institution (social norms, customs, behaviour, etc.). With this promotional attitude of livelihood strategy in availing of assets and utilizing context, **livelihood outcome** can be produced in shapes of **security**, **protection** and ultimately **promotion**.

DAY-NRLM, in its progressive journey towards sustainability of rural vulnerable (poor, ST, SC, religious minorities, single women, person living with disabilities, landless, migrant labours, isolated communities and those living in disturbed area), started with these **triangular goals—livelihood security, livelihood protection and livelihood promotion.** In assuring **security** with an objective of increasing accessibility and affordability of the basic services, the mission considered focusing on '**vulnerability vector'** having greater poverty impact like safety nets, food–health security, literacy and life skills and shelter. Likewise, it stretched its hands to **protect** the needy in livelihood scheme for reducing vulnerability and enhancing

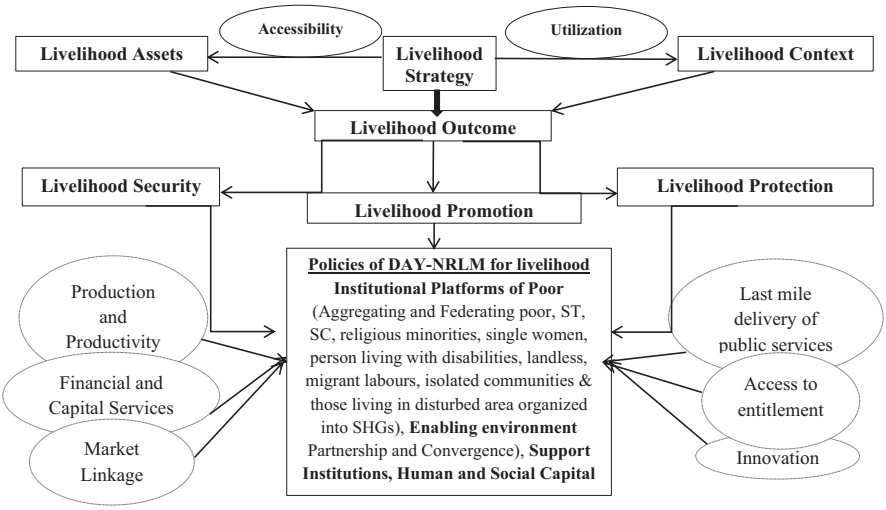

Fig. 13.1 Conceptualization of livelihood and DAY-NRLM policies. (Source: Ministry of Rural Development, GoI and Author's own compilation)

reliability of coping mechanism through ensuring access to entitlements, debt restricting, insurance and pensions, skills transferability and managing climate risks. While promoting the target groups, DAY-NRLM would try to mobilize them to **self-managed institutional platforms** like groups, federations and producer collectives with a view to accessing techno-economic services from DAY-NRLM, other Government programmes [Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)] and from commercial banks. In the institutional platforms, the poor would be benefitted with financial and capital services, production and productivity enhancement services, technology, skills, inputs and innovation, market linkage, etc. The institutions would also offer an environment of partnership and convergence with stakeholders in view of enabling the poor to access rights, entitlements and public service This would ultimately support the institution and socio-individual capital.

Figure 13.1 reflects the concepts of livelihood and its linkage with DAY-NRLM.

13.5.3 Promotional Activities of DAY-NRLM

13.5.3.1 Programme and Strategies of DAY-NRLM

Introduction of DAY-NRLM offered a devastating change in the role of Ministry of Rural Development (MoRD) where instead of only providing capital subsidy with focusing on a single livelihood requirement as had offered by SGSY in 1999, different promotional activities were confirmed like (1) investing in **effective**

institutional structure at all levels through **institutional reform**, (2) ensuring **participatory identification of the poor**, (3) promoting **high-quality technical assistance and hand holding support**, (4) organizing **robust institutional platform**, (5) building **community institutions for livelihood**, (6) promoting **intensive facilitation support**, (7) establishing **federations to overcome market constraints** and (8) offering **pro-poor financial services and leveraging**.

DAY-NRLM accepted four inter-related tasks like (a) mobilizing rural poor by promoting diversification, gainful self-employment and wage employment opportunity; (b) enriching rural poor with credit and other financial, technical and marketing services; (c) enhancing capacity and skill of rural poor and (d) ensuring socio-economic support to achieve sustainable income and livelihood promotion.

Moreover, the mission emphasized on **social mobilization** of all identified below poverty line (BLP) households particularly rural vulnerable into organized and self-managed institutions where the community resource persons (CRPs) ensured their support through social mobilization campaign. The financial capacity of SHGs could be improved by **revolving fund (RF) assistance**[16] **and capital subsidy fund** as seed capital. This would ultimately assist the said institutions to approach to banks for further financial services (opening savings account, offering all banking services like savings, credit, remittances) and thus assured **financial inclusion** of the poor. DAY-NRLM in its **economic inclusion** strategy promoted intensive effort to stabilize the livelihood effort of the poor in farm and non-farm sectors through activity/trade clusters with emphasizing on the productivity-quality improvement, cost-effectiveness and marketing facilitation of the respective poor producers.

In **livelihood strategy,** the mission adopted some sub-sectors: (1) agriculture (protection of natural resources and environment-friendly activities), (2) livestock and dairying (partnering with public dairy federations and large private chains), (3) partnership (between large employment sectors and sub-sectors players), (4) micro entrepreneurship (package of linked activities around skill development, business training and credit linkage for small businesses). DAY-NRLM in its **human capital enhancement** strategy adopted three avenues like training and capacity building of all program staff; application of integrated circuit (IC) technology for both monitoring, management information system (MIS) and partnerships of different kinds.

13.5.3.2 Specific Protocol for Inclusion of Tribes in Mainstream Activities

DAY-NRLM accepted three situations while working with tribes: (1) **exclusive tribal areas, with/without habitations for specific tribes**; (2) **exclusive tribal habitations**; and (3) **tribal households in general villages**.

Respecting tribal cultural profile, the mission sketched its protocol of tribal inclusion like:

[16] SHGs, maintaining 'Panchasutra', performing for minimum period of 3/6 months, did not receive RF earlier would get Rs. 10,000–15,000 as RF.

- **Prioritization** to work with tribes in tribal dominated areas where the tribes could enjoy entry point priority and SHGs could access **relaxation in group and institutional norms** (group size could be 5–20 members depending on the distance, hilly area, population density, etc.).
- **SHG federation** considered s**pecial SHGs for vulnerable** as their members along with other SHGs with due representation. From apart, the members/SHGs of PVTGs could be federated as a separate/exclusive federation and/or solidarity federation.
- **Skill and capacity building** would be extended to traditional agriculture, forestry, traditional culture, health-nutrition, education and legal support.
- Special attention would be taken in **financial inclusion of tribes** where the mission initiated **vulnerable reduction fund** along with **livelihood fund, revolving fund (RF)** and **community investment fund (CIF)** with flexible terms to meet the specific needs of PVTGs and other tribal households.
- DAY-NRLM activated **social inclusion of tribes through security** and **other schemes** where **vulnerability analysis** would need to focus on (1) availability of food, water, fuel wood, basic entitlements, education, healthcare facilities adequately to tribes, (2) linkage with seed banks, grain banks, etc., (3) accessibility of land resource use, forestry, organic agriculture/horticulture, etc.
- The mission circulated **sensitization of all staff on tribal inclusion** (and convergences) through workshops and a 3-month campaign for sensitizing existing community cadres [active women, community leaders and institutions (SHGs and federations), other stakeholders] and thus could create trainers, resource persons at state, districts, block and community levels.

13.5.3.3 DAY-NRLM Approach to COVID-19

As per the recently published government document (vide file no.: J-11060/37/2017-RL-Part (1) (369933), the mission took several steps to combat the devastating effect of present pandemic (COVID-19) on indigenous livelihood.

DAY-NRLM empowered **state rural livelihood promotion (SRLM)** to take necessary measures in ensuring liquidity level at SHGs. Special compensation in due course and time could be given to members and/or community cadre engaged directly in addressing of **COVID-19**. Apart from this, in present pandemic, an additional **vulnerable relief fund** would be proposed to be offered to the village organizer (VO) belonging to the vulnerable areas and community and an **ex-gratia** of Rs. 10 lakhs would also be in place for CRP, community professionals, community cadres, etc. engaged in the battle against the pandemic and were deceased for the disease. In addition, considering the wage loss of community cadres/professionals/CRPs community staff, etc., SRLM took its responsibility to pay honorarium from the mission funds for 3 months at least. SRLM would pursue the sanctioning of loan to the vulnerable in consultation with **state level bankers' committee (SLBC)** where during the lockdown phase, withdrawal of cash/transfer from SHG bank account could be possible without the submission of meeting resolution also.

From apart, the mission promoted **community institutions and their cadres** which made their responses to the requirement of the needy people and supply accordingly the essential products like masks, sanitizers, personal protective equipment (PPEs), etc. at field level. The mission would also grant capital as loan from bank or any community institution to any SHG member/VO which required purchasing raw material for production and distribution of sanitizers, soaps, masks and gloves.

13.6 Conclusion and Policy Recommendation

DAY-NRLM in India extended its promotional support to all rural indigenous people with basic aim at alleviating poverty through assuring livelihood security, protection and promotion to them. As per NABARD Report on Status of Microfinance in India, 2019–2020 DAY-NRLM reported respectively 57.89 lakh and 36.89 lakh savings and loan disbursement to SHGs members in physical count amounting to Rs. 14,312.70 crores and 67,717.07 crores which could establish its promotion in rural poor empowerment. But the present pandemic situation somehow has curbed the progression of the very mission as proved by constant declining figure of number of SHGs (overall and tribal-dominated) and amount of savings during April–November 2020 period. Basically, uncertainty in carrying out the economic activities through group gathering, fear from health hazard, failure to sale-out the produce to market in pandemic would be responsible for not to promote SHGs during that phase. COVID-19 has changed the effectiveness of the respective groups through (1) social distancing (group meeting in digital platform instead of physical), (2) economic shocks and social protection (reduce viable market linkage, lack of capital-intensive support, insurance and investment scope) and (3) partners in community responses (social network and existing governance).[17] Therefore, the availability and accessibility of digital platform can be considered as the pre-condition to sustain in the present pandemic where social distancing is the prime requirement for health–hygiene maintenance. The indigenous people, especially tribes, would additionally suffer due to their ever-present devastating health condition, low/no skill, technical know-how and financial strength which would not allow them to switch over to other organized sectors without group involvement and also to afford smart phone or like to somehow remain in group practice of SHGs through online meetings. Moreover, different languages, community rituals, culture sometimes would also bind them to approach to get training from CRPs in pandemic phase on health–hygiene issues and livelihood promotion.

The distressful condition of the respective community especially of particularly vulnerable tribal groups (PVTGs) was also echoed in the UNDP Report, 2013

[17] https://womensgroupevidence.org/shgs-and-covid-19-challenges-engagement-and-opportunities-indias-national-rural-livelihoods-mission

which would somehow shape up structural inclusion of the said community in the principles of DAY-NRLM. The report also indicated the severe poverty level, remote or scattered habitation and poor savings attitude of the tribes as responsible for their lesser participation in SHGs. The poor had to accept many types of exclusions related to natural and socio-economic–political context. Sometimes, they would not get support from the institutions (formal and informal) for reasons like distance, affordability, prejudice (UNDP, 2013).

Though DAY-NRLM declared so many promotional policies for the rural indigenous in time of pandemic also, some recommendations may be offered to get further improvement in this process.

The authorities having responsibility to promote policies under DAY-NRLM might consider **regular health–hygiene campaign** for the **indigenous sickness-prone people** without having proper adequate knowledge and economic strength to get outside treatment. In this issue, CRPs could get special responsibility to **interpret the guidelines** to be followed during pandemic in local language. They could intervene in group formation among indigenous people where NRLM management could provide proper handholding and closer supervision (UNDP, 2013). The mission might also take responsibility to distribute **masks and sanitizer** to the respective SHGs members and would assist the SHGs to **sanitize the premise** regularly. Additionally, **workshops** could be organized to train-up the rural SHG members in dealing with the digital mode while connecting with banks for their loan disbursement and attending group meetings. To avail of the present livelihood requirement, the SHG members would also have to get **training to make health–hygiene accessories** of the current pandemic like masks, sanitizer, etc. apart from their regular product in groups. Moreover, DAY-NRLM could make a **monitoring** of the members awareness regarding present pandemic, health–hygiene, livelihood alternative promotion, migration, etc. through a holistic **survey** where the troubles of the indigenous people would be highlighted and tried to be solved.

Now, though in COVID-19 pandemic, every country in our world has faced socio-economic imbalanced position, several new scopes of livelihood have been evolved also. The SHG members can get entered into cooking in community canteen, production of mask, sanitizer, protective equipment, etc. Our Honourable Finance Minister in a press conference argued that 12,000 SHGs over the country produced 3 crore masks and 1.2 lakh litres of sanitizer during the pandemic. Therefore, the way and time to accept the pandemic challenge in economic practice would decide the survival probability of the SHG members in and after the COVID-19 outbreak.

13.7 Limitations and Scope for Further Research

Due to time and resource constraints, the researcher could not pursue with other integrated rural developmental policies in other countries acted as to curb vulnerability of the rural indigenous in crisis. Thus, the study could not make any

comparison with the other existing rural developmental policies with DAY-NRLM and recommend further improvement based on that.

The limitation would force to spread the study in other arenas like consideration of other rural developmental policies of other countries and comparing their policies with that of DAY-NRLM in pandemic for (1) indigenous people and (2) non-indigenous people.

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Chapter 14
How Microcredit Supports the Employability in the New Normal Era? A Study on Rural Backdrop of India

Srimoyee Datta and Tarak Nath Sahu

14.1 Introduction

COVID-19 had sparked a universal catastrophe. This entire new circumstance gives rise to serious economic crisis. Not only that, it has significant disorder to health, psychological and social well-being of people across the globe. This sudden disaster emerges as a pause to the continuous workflow in the job market worldwide. Manpower, both in organised and unorganised sector, suffers a lot from one of the biggest recession due to this. The question of uncertainty will sustain in the job market for a while, and a large number of people already lost their job all of a sudden. Rising level of unemployment encounters increasing level of significance on the global framework. Institutional bodies around the world have implemented and followed myriad policies to manage this pandemic involving all sorts of revitalising initiatives. Covid-19 crisis is engulfing the whole world. Due to the sudden threat and uncertainty to the employment status of the people, a large gap of income and expenditure has been witnessed in every sector. It creates adverse effect on the formal financial institutions and their functioning. The growing socio-economic advancement struggle faced by certain financially excluded population worldwide today raised new questions as well as expectations about social responsibilities and position of financial institutions functioning globally. Sharp increases in non-performing and restructured loans during the early months of the pandemic can be observed. The same observation is applicable to the microfinance institutions (MFIs) too. People especially engaged in unorganised sector face the highest risk and unable to manage their loan burden and other financial issues. The unexpected

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loss of livelihoods and consequent drops in household income is high in case of people engaged in unorganised segment. Non-banking financial institutions (NBFC) MFIs, being specialised for offering collateral free loans to low-income groups, are particularly exposed to credit risks in this scenario. But the risk of insolvency can be backed by strong capitalisation for most MFIs.

According to World Bank Report, 2019, India caters to a large number of workers. Outbreak of COVID-19 creates issues like job retrenchment, distressed equilibrium of supply and demand for manpower, very limited job opportunities, stiff competition, economising, depression and anxiety, behavioural changes, disturbed household and so on. All these contribute to the increase of poverty level worldwide. So, to overcome this crisis, bringing out various scopes of income generation and employability can be a way specifically in case of unorganised sector in rural set up where the opportunities are restricted.

West Bengal, situated in the eastern zone of our country, comprises a huge number of skilled and unskilled workers living in backward rural zone or migrates to other advanced areas for earning purpose. But now the situation gave birth to unemployment and uncertainty among them. Looking back, it has been seen that the growth of microfinance institutions (MFIs) evolves from 1991 in the light of financial sector reforms in our country. The approach of microfinance institutions towards improving the status of women's lives is well recognised and much appreciated. Due to certain unique features of MFIs like flexibility and collateral-free credit, the loan burden can be handled more conveniently compared to other formal financial institutions. India has been considered as the biggest emerging market for microfinance institutions (Ferdousi, 2013). In this circumstance, a question can be raised about the viability of MFIs and its role as saviour as they are constantly focusing on the self-independent income-generating activities and empowerment from the very beginning with small loan burden and assistance services.

Different studies are available on the functionality and influence of financial institutions especially of microfinance institutions on employment generation, sustainable lifestyle creation, entrepreneurship, enhancing the quality of life, women empowerment and many more. But literatures on the participation and contribution of MFIs in this sudden distress situation is something very limited in nature. The backdrop of rural zones is way too different from the urban set up. The occupant of the rural areas needs to struggle more due to limited resources, accessibilities and opportunities. The pandemic implied more stress to the rural populations in terms of income and employability. So, the present chapter is an attempt to observe how far the MFIs are able to act as a supportive body to generate employment in this distress situation. This study incorporates female beneficiaries who reside in one of the rural dominated and backward districts of West Bengal, i.e., Purulia. Purulia is situated in the extreme southern part of West Bengal, sharing its border with Jharkhand. The profile of the district is dominated mostly by rural areas (90% population lives in rural settings) and has a good number of skilled and unskilled workers. So, a study on this specific area can give us perspective on the role of MFIs towards employability and sustainable growth in the new normal era.

The rest part of this study has been divided into five sections. Starting with the first section, relevant literatures along with their findings has been discussed here to have a better understanding on the topic involving both national and international context. The next section portrays research methodology, detailing about the sample design, variables and statistical tools used in this study. Following this, the next section explores the analysis and findings where the result of collected primary data and the analysis have been documented in detail. The next section gives an explanation about the result with proper justification and reflection of the findings about the MFI's impact in terms of employability in this new normal era. As a part of the ritual every study has a conclusion and implication section. Our study is also following the same route because it gives a conclusive idea about the whole observation and analysis and acts as the reason for further studies.

14.2 Literature Review and Hypothesis Development

Human development can be hugely influenced by global poverty (Morazes & Pintak, 2007). The relationship between distribution of income and development prevails from the very beginning of human society. Different policies, agendas and initiatives have been taken from time to time to combat the issue (Chibba, 2009). Unemployment has become one of the biggest challenges in the world. It enhances the levels of inequality and poverty within the periphery of the society (Ukpere & Slabbert, 2009). Among the vivid responsibilities of different financial institutions, certain activities like credit lending, pushing for income generation initiatives, employment generations, progress of the vulnerable and exploited section of the society, rural development, etc. act as superior tool for a progressive and sustainable economy. This section discusses about the issue of employment generation, how it can be achieved through microcredit and in the current scenario MFIs are pursuing their objective of employability or not, to what extent they got success, the challenges, etc.

14.2.1 Studies on Microfinance and Employability

Microfinance is always in focus as a poverty reduction tool (Okibo & Makanga, 2014). It offers various ways to create income opportunities, inspire entrepreneurship, empowering people and so on (Datta & Sahu, 2020). The necessity of MFIs is felt more in the developing and backward countries globally (Hussain et al., 2019). There are multiple mechanisms by which the MFIs help to reduce poverty. One of such way is to increase employment (Kahn et al., 2016).

Traditional financial institutions in a country contribute to economic escalation and employment generation mainly among the poor who are typically at the margins of society (Lenka & Sharma, 2020). Generally low income and employment

generation have been associated with less outreach of formal financial institutions particularly in backward countries (Sarma & Pais, 2011; Mutua et al., 2020). In this backdrop, almost all the institutional bodies are coming forward with their constructive and revival strategies. But MFIs are extending their outreach mostly in the extreme location with their wide network and huge human chain. The dualities of MFIs, i.e., sustainability and outreach, are the driving force to incorporate livelihood modifications for the excluded population (Nurmakhanova et al., 2015). Our country is no exception to that. Globally, research has shown that the poor and vulnerable people are the most excluded from benefiting from formal financial systems (Deb & Suri, 2013). This exclusion generates obstacle to sustainable development and growth of the economy (Akpalu et al., 2012; Schuetz & Venkatesh, 2020). One of the basic objectives of every MFI is to encourage the deprived excluded or poor people to break down the vicious cycle of poverty by starting up various kinds of micro and small entrepreneurial ventures (Kongolo, 2010). It supports the mobilisation of income, empowerment, financial literacy, self-employment (Pathak & Gyawali, 2010; Datta & Sahu, 2017). It helps to create consistent income for the household and employment opportunities for themselves and beyond (Zheng & Zhang, 2020). Our country has huge share of labours working in informal sector. The uncertain nature of job in this sector makes the workforce more vulnerable in this current situation (Harriss-White & Gooptu, 2001). So, accessing the offerings of MFIs and start their own ventures motivate towards sustainable growth and employment generation gradually (Babajide et al., 2015). But there is an issue related to employment generation by MFIs. According to Kahn et al. (2016), there can be two types of employment generation by MFIs: 'self-employment' and 'employment-for-pay'. Self-employment can increase the overall earnings of the household but could not add on the employable population. Here we are considering employment for others as it helps to increase the number of employment and thus help to create a better situation.

14.2.2 Studies on Microcredit, COVID 19 and Employability

COVID-19 has forcefully underscored the interdependence involving business and society. It has impact different spheres of life like economy, business, market, agriculture, health care, etc. (Kumar & Nayar, 2020). This section highlights the influence of microfinance institutions in the creation of employability in this distress situation reviewing selected previous studies.

In the present time, the position of employability especially in the unorganised sector with both skill and unskilled workforce turns into a terrible state (Fana et al., 2020). This situation is severe in the developing and least developed countries (Martin et al., 2020; Ranasinghe et al., 2019). This pandemic creates an uncertainty in the job market and puts a question on the issue of employment generation (Atlig et al., 2020). A country's economic development depends on the employable

workforce, their contribution to GDP and per capita income (Mustapha & Greenan, 2002). But this sudden breakdown crashes the flow upside down.

The scope of income or work is very limited in rural settings (Sengupta & Jha, 2020) that is the reason a large number of people every year migrate to advance urban settings to ensure income, family stability and prosperity (Imbert & Papp, 2020). Also, with the urbanisation, the possibilities of getting work enhances in cities (Sato & Zenou, 2015) and developed areas every time.

From the above-reviewed literature, it is evident that in this pandemic time frame, the issue of survival faces most challenges. It is true especially for those who are linked with formal or informal sector but lived in rural settings (Fana et al., 2020; Harriss-White & Gooptu, 2001). As the biggest recession hit the job market and the recovery time is still not known, MFIs can offer a better living by creating the opportunities of micro ventures (Kongolo, 2010; Fan & Zhang, 2017; Datta & Sahu, 2017; Babajide et al., 2015). But most of the literature in this corona phase is concerned with the overall outcome or effect of corona ranging from health to mental well-being. But very limited literatures give emphasis on the way towards mental and physical well-being. Further, a lot of studies have been taken place on migrant labour and their status and helplessness. But the other members of their home front and their initiatives and roles to cope up with the current crisis are not portrayed in most of the literatures. Moreover, most of studies are discussing about the outcome of MFIs in terms of empowerment. But very few studies focus on the basic elements of empowerment, i.e., economic independence. Moreover, micro level studies with the reference to employment in the pandemic situation are also less in number. In line with that, considering backward areas, very limited job opportunities with extreme weather and their struggle for existence with the support of microcredit is also very limited in number.

14.3 Research Methodology

14.3.1 Sample Design

This study has been focused on the task of microcredit towards employment generation of the selected beneficiaries of the sample area. Here impact of microcredit has been reflected by employability provided by the borrowers through the workings of micro enterprises. Concerning the safety measures and government restrictions, we are unable to cover wider area to understand how far MFIs act as a saviour in this tough situation. Here, the selected areas are the two blocks (Block I and Block II) of Purulia. Firstly, due to this pandemic situation, the traditional mode of doing survey got somehow restricted. So, we could not conduct the survey in the whole district. But due to pandemic, we have to limit the study within the periphery of Purulia town. The town is composed of two blocks: Purulia I and Purulia II with 62,187 households. Both the blocks are having marginal workers, unorganised sector labour

and a few small industries. Further, these areas are having five commercial banks, one Grameen bank and about ten MFIs. So, a study on this specific area can give us perspective on the role of MFIs towards employability and sustainable growth. Apart from that, it is our hometown, and as the movement is restricted in present times, we have considered the two blocks of Purulia (Purulia I and Purulia II) as these have been ideally positioned to fulfil all the criteria for this study. The survey has a low response rate because we were not able to meet the participants during their loan group meetings. We need to follow all the safety measures and social distance issues for the sake of safety and precautions. So, majority of the questionnaires have been sent through the SHG leaders and collected after an interval. The question patterns have been kept straight, simple and mostly close ended to avoid doubt and confusion and less direct interaction. In the first stage, 430 questionnaires have been distributed for the sake of survey, but only a total of 300 borrowers from two blocks on the basis of effective and bias-free complete questionnaire have been taken into consideration for analysis. While selecting the respondents (one time or repetitive MFI borrower), the study only considered those borrowers who completed at least 1 year of post loan phase and beyond or continuing the loan repayment cycle during the survey. For this study, the researchers collected the required primary data from June 2020 to September 2020.

14.3.2 Variable Used in the Study

Here, for analysing MFI's role towards employability (dependent variable), duration of credit, volume of credit and category of microenterprise (independent variables) have been considered.

- Duration: Duration of the microcredit stands for the gap between day of taking credit from any MFIs and the day of survey has taken place (Tria et al., 2020; Latif et al., 2020).
- Categories of microenterprise: In consideration of collecting primary data, microenterprises have been divided into six different broad categories (animal husbandry, business, agriculture-based, cottage industries, service and transport-related microenterprises). Depending on the average incremental annual income, all these six categories have been assigned values ranging from 1 to 6 (Hameed et al., 2020).
- Volume of credit: The volume of borrowings stands for the amount of loan one individual gets from the MFIs (Lavoori & Paramanik, 2014; Memon et al., 2014).
- Employability: The employability is the dependent variable, which has been calculated with the number of total manpower engaged in a microenterprise, daily working hours and the number of days work per week and converts the total number into a monthly basis (Memon et al., 2014; Gebru & Paul, 2011).

14.3.3 Statistical Tools Used for the Study

To inspect the stated objectives both open and close-ended questionnaire has been used in this study. To measure the effectiveness of the questionnaire, an appropriate reliability test has been carried out on a pilot study considering 25 samples. The value of Cronbach alpha is found to be 0.641. According to Shelby (2011), alpha score above 0.60 is treated as good in social sciences. So, in this study, the designed questionnaires are considered as reliable considering the entire questionnaire. For analysing the impact of microcredit on employability, multiple regression analysis has been carried out.

14.4 Analysis and Findings

The majority of different demographic dimensions of the selected 300 borrowers are: 76% belong to 25–40 years of age, 67% respondents are informal workers, 78% samples are married, 84% are illiterate, 56% respondents are ST, 85% of respondents are Hindu, 74% belong to the nuclear family and 73% earn within Rs. 6000–8000.

14.4.1 Role of Microcredit on Employment Generation

The result of the multiple regression analysis presented in Table 14.1 shows that three independent variables, i.e., category of microenterprise, duration of credit and the volume of credit are significant at 5% level of significance, which indicates that these variables have a significant positive impact on the employability generation of microenterprises.

The Regression equation is:

$$\text{Employability} = 1281.091 + 158.21\text{category} + 44.03\text{duration} + 0.14\text{volume} + \varepsilon$$

Table 14.1 Results of multiple regression analysis considering employability as dependent variable

Independent variable	Coefficient	*t*-Values	*p*-Values	VIF
Category of microenterprise	158.21	2.13	0.03	1.00
Duration of credit	44.03	1.98	0.04	1.00
Volume of credit	0.14	2.33	0.02	1.02
Constant	1281.09	2.77	0.01	
Value of R = 0.68**, R^2 =** 0.46		***F*-value** 4.95	**0.000**	

Source: Calculated by authors

where category, duration and volume represent the three independent variables, namely category of microenterprise, duration of credit and volume of credit considered in the study, respectively. Further, the R^2 value of 0.461 significant at 1% level of significance indicates 46.1% of the variance of the dependent variable is explained by the independent variables used in the model. The statistically significant coefficient of determination (R^2) also indicates the proper fitness of the model used in the study.

14.5 Results and Discussion

The future of work has become uncertain and raised concerns worldwide due to the Covid-19 pandemic. Covid-19 has had a distressing impact on livelihoods around the globe. It has a huge influence on health crisis leading to financial and economic crisis. The distressing scenario can be observed in every economy. Rural and backward areas suffered the most due to restriction or very limited job opportunities. In India, the general occupation of rural belt is mostly agriculture based, but as Purulia is geographically not ideal for agriculture or cultivation, a major percentage of labour force is migrated outside or to industrial areas for earning livelihood. But this pandemic takes a toll on the whole circumstances. In this study, most of the respondents are engaged in informal sectors and belong to their prime age. As the job sector is in turmoil, specifically informal sector's condition is very depressing. The indecisive nature of this sector brings the skilled and unskilled labour force attached with this sector in front of uncertainty and desperation. They are mostly illiterate and having dependents back in their home. So, the issue of surviving gets the prime focus now-a-days. Beyond that, as most of them belongs to nuclear family set up, the urge of alternate earning gets acceleration after the emergence of pandemic and crashing of job market. Respondents realise the need for savings and systematic financial planning due to the current situation. Microcredit with its small amount and easy repay structure gets accessibility in this chaos as the coming days may have more challenges in job and employment scenario. It steps forward to finance a sustainable and reasonable retrieval post Covid-19. Covid-19 crisis outspreads beyond 2020, considerably with more financial and other support, microcredit industry will be able to play a crucial role in helping the poor to cope up during this shattering situation, and then in rebuilding their lives and communities gradually. So, respondents are aggressively looking for their own venture initially within the household and gradually engaging external manpower. They are able to deliver their offerings and cater the demand of the customer with the help of capital amount and associated assistance from MFIs. As Purulia is not an agriculture friendly zone, respondents start their micro venture with animal husbandry, cottage industries, service, business, retailing, transport-related business and a few percentage of agriculture-oriented microenterprise. With the helpful backing and future projections, micro ventures are doing well in this disturbed period. The acceptability of microenterprises may be due to the fact that online dependency gets increased by

leaps and bounds in this social distancing phase as we all prefer contactless shopping. But certain segment of society like old age people or computer illiterate people or areas with poor Internet connectivity or issues like high Internet charges (like rural or backward areas), etc. still prefer traditional mode of purchasing goods or services. So, when the lockdown affects the transportation and delivery system, these micro venture offerings are able to capture the local market. Also, the threat of cybercrime or online fraud prevents certain groups to prefer offline mode of purchasing goods or services. But in case of urban zone where online purchasing becomes a trend, all the local artisans and micro ventures can sell their products with collaboration with the top online portals. This can help in the growth of local ventures and micro and small enterprises. Beyond that, the agenda of vocal for local can motivate the launch and growth of various micro set ups in the present time and enhance employability.

In this study, we have found that MFIs are able to generate employability. Generally, microenterprises are run by the family members in the initial stage. As the business grows, demand of the product grows; extra manpower will be needed to handle the operations productively. Here microcredit utilisation enhances the growth of the business and provision for job has been created for the external manpower. In a word, utilisation of micro credit sensibly creates employment for the non-family members and helps them to be economically independent. It has been observed that in this current situation, jobless population aggressively search the way out for income generation and micro ventures act as a supporting companion in this journey. The perception and awareness about the microcredit and other allied offerings of the MFIs are getting into focus because of its nature, easy repayment, flexibility, outreach, etc. The MFIs help to build up the confidence and business skills of the budding entrepreneurs. As a result, the respondents are able to take risks, calculate the demand and supply and able to design and execute their business strategy with ease. This is the reason for the study in this chapter. Three independent variables (category of microenterprise, duration of credit and volume of credit) have significant impact on the employment generation ability of the microfinance institutions. This is due to the fact that selecting the right category of micro setup would bring sustainability, expansion, income and profit. As Purulia is mostly suffered from less natural ground water level (though some raindrop harvesting has been started lately), and the weather is not ideal for cultivation, most of the micro ventures are composed of animal husbandry. As the time grows with the earning of experience and market exposure, the entrepreneurs are able to manage their ventures. In case of duration, with the right category of micro ventures and time, the respondents are able to generate employability and bring changes in the associated society. Also the systematic financial planning and timely loan repayment enable them to upgrade their creditability for future capital investment. Here the respondents have already completed at least 1 year of their loan cycle. So, they are experienced enough to handle their business and develop their habit of systematic savings for repayment and other household burdens. Generally, microcredit amount is small, but with the right productive motive and managerial skills, anyone can manage their own venture. Here the volume of microcredit seems to be an independent variable,

and the result shows the positive attitude towards utilisation of credit and effective associated training program to create economic independency and create employability for others. This helps to empower them and boost up their confidence. As they have already crossed 1 year of loan repayment cycle, sudden recession of job market due to corona could not distress their livelihood much. Moreover, they are able to offer others a way of income and help the excluded population to be in the mainstream. In this pandemic, people realise the importance and need for microcredit, entrepreneurship and so on for a better living.

14.6 Conclusion and Implications

MFI offerings have made their positioning in delivering credit and other sustainable development services to the deprived population in a non-traditional way. They are quite successful to bring out major changes in remote and backward locations. Economic independence is the basic foundation towards a sustainable and better lifestyle. This opportunity has been taken away from a huge number of populations all of a sudden due to the spread of corona. This chapter attempts to quantify the impacts of microcredit in the time of global crisis. As MFI's acceptability is higher in rural backdrop, flow of employability generation for others can act as saviour in this situation. In this chapter, an in-depth study considering primary data gives the overall picture of employment generation through MFIs among the rural female in the selected areas of Purulia town.

The influence of MFIs is extending to different avenues. MFIs are able to create changes in the individual front, in household and beyond. By setting up micro enterprises, an opportunity of income can be generated through microcredit. Further, the utilisation of local resources with comparatively less expenditure on raw material collection and manpower engagement, less transportation cost, initially less infrastructural cost (as most micro enterprises start with the home front), etc. can be enjoyed. In line with that, due to Covid-19, a huge number of marginal labour lost their job and return home. In many cases to run the household smoothly, the female member of the family started income-generating activities. Some individuals started up their venture with the help of family members initially and engage external manpower gradually.

The sudden threat due to corona has adverse effect worldwide. The WHO has also expressed its concern over the pandemic's mental health and psycho-social consequences (World Health Organisation, 2020). Especially with sudden downsizing of unorganised sector due to prolonged lockdown and uncertainty during the pandemic, immigration of migrant labour and stress over maintaining social distancing make the rural economy more vulnerable. A gap between demand–supply manpower has been created due to this. Reserve Bank (RBI) reconsiders its credit policy to keep the liquidity flow continuous, supporting the enhancement of agriculture, small industries and housing companies, 3 months moratorium, etc.

In the present time, building up health infrastructure, employment protection, social safety, etc. issues need to be taken care of with utmost urgency. Research may be considered on the alternative earning opportunities, household budgetary changes and decision, personal finance behaviour, substitute and self-employment projections, job creation for others and the findings would likely be very useful for stakeholders, especially for policy-makers, financial service providers in the emerging economies. Financial institutions should use pro-poor credit risk management technique like provision of managerial training, regular loan scrutinising and group loan to manage the disturbed economy and encourage micro and small-scale entrepreneurial setups. On the one hand, this will build up the confidence of MFIs to extend the needed credit to micro ventures; on the other hand, it will boost up confidence and business skills of the entrepreneurs to prosper in their ventures.

The intension of MFIs is to poverty elimination, inclusion of the excluded into the mainstream, inculcating savings habit and gradually winding up related issues associated with it. Microcredit has been generally regarded as the linking bridge for low-income or no income individual or households that willing to engage in earning or try to set up and operate micro ventures to support their living. The target of MFIs, both towards employment generation and struggle against poverty to advance the economic eminence of the women lives is well applauded. But the influence of microcredit on income opportunities can be influenced by certain factors like short time frame, credit allocation to the wrong segment, lack of awareness, biased attitude, unproductive usage of loan amount and borrowers with high burden of debt, etc. The current study is primarily confined to understand the scenario of backward rural areas, the associated environments and the effect of Covid in terms of employment on them. This is a primary micro level survey with specified areas. But as the whole nature and related consequences of Covid is widespread and still unknown and uncertain in nature, this area needs in-depth observation in order to comprehend the future. A lot of studies can be followed on the extend of awareness, outreach of the institutional support both from government and non-government end, the acceleration of anxiety with the passage of time regarding income and support the livelihood, the comprehension and effect of social distancing on business and economy, the effect of better financial planning to manage the crisis, disaster management considering urban, semi-urban and rural setup and the role of FIs in it, the pandemic and associated urge of economic independence, changed role of gender towards managing the financial burden, household budget management of informal workers, preparedness for the future, create and exploring more job opportunities in new-normal economy, the effect of public distribution system on the home front, health consciousness, hygiene management and modifications, the aggravation of joblessness, stress and mental health issue, situation of self-employment and entrepreneurship in post pandemic arena, changed lifestyle and economy, etc.

In the face of economic slowdown, the financial institutions follow the unconventional monetary policies to combat the situation. The nature of job, population and dependency profile of the formal and informal workers will catch the attention to the policy makers as it holds the workgroup in India. The emergence of Covid-19 opens up a lot of possibilities for further exploration and studies which previous

studies lack. As most of the previous literatures did not experience pandemic like this, empirical and qualitative research may be attempted to counter the same further. Further, studies that will compare different elements like urban-rural, family profile, state-wise observations, etc. may be attempted to assess the lifestyle changes and related effects of the economy due to it. In the present time, building up health infrastructure, employment protection, social safety, etc. issues need to be taken care of with utmost urgency. Research may be considered on the household budgetary changes and decision, personal finance behaviour, alternative and self-employment. Projections and the findings would likely be very useful for stakeholders, especially for policy-makers, financial service providers in the emerging economies.

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Chapter 15
Post Covid-19 Challenges and Economic Development Through Micro, Small, and Medium Enterprises in India

Suhail Ahmad Bhat, Shambhavi Singh, and Surendra Meher

15.1 Introduction

There has been a long history of pandemics in the world, which includes smallpox, malaria, influenza pandemic (Spanish flu 1918), influenza pandemic (H1N1 2009), and many others. At present, the entire world is again suffering from one of the greatest health and economic crises, i.e., Covid-19 crisis. Nonetheless, the outbreak of the past pandemic diseases had not affected so disastrously as much as Covid-19 has affected the world economy. The outbreak of this pandemic has started in China's Wuhan city and has quickly spread across the world. Covid-19 pandemic has led to the shutdown of global economy. Therefore, Covid-19 is not only a global health crisis, but it has turned into a global economic crisis. Despite the fact, Covid-19 has affected more terribly to the developing nations of the world, and the same is true case with India (WHO Report, 2020). Indian economy was already suffering from a sluggish growth rate for last 3 years. The shutdown of economic activities caused by Covid-19 crisis has further exacerbate the growth rate of Indian economy. The growth rate of Indian economy had declined to 4.18% in 2019, which were 8.26% in 2016 (Bhat & Meher, 2020). However, with this pandemic of Covid-19, lockdown was imposed due to which the economic activities of the economy got affected, and it hits hard the economic growth rate to −10.58% in the country.

The World Trade Organization (WTO) has estimated that global trade of goods and services will decline dramatically between 13 and 32% in 2020–2021. Hence, there is a huge challenge for the developing counties in general and India in particular to overcome from this economic crisis. The government of every country is struggling to adopt the new sustainable strategies, in order to save human lives and

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to protect their countries from the economic crisis. In this perspective, the digital technologies and SMEs can widely help to face more rapidly the Covid-19 crisis (Omrane, 2020). The micro, small, and medium enterprises (MSMEs) can play a vital role in reconstructing the economic growth of developing countries particularly to Indian economy. Nonetheless, the micro, small, and medium enterprises have become a cornerstone of every economy throughout the world. This sector plays a crucial role not only in manufacturing of goods and services but also in employment generation, poverty alleviation, and creation of wealth with equitable distribution of income and brings out local and regional development in the country (Sharma, 2014). Development of many countries in the world is often measured by the industrialization, equitable distribution of income, urbanization, and decent employment (Aremu & Adeyemi, 2011). Simultaneously, the role of MSMEs in terms of easing the industrial development, eradicating regional disparities, and bringing economic development is widely recognized in both developing and developed nations of the world (Srinivas, 2013). In developed countries such as Germany, USA, UK, South Africa and also many other countries of the world, micro, small, and medium enterprises are contributing significantly in the national income, employment generation, gross domestic product (GDP), manufacturing of goods and exports of the country (Bala, 2007). In USA, eight out of ten jobs are created by small business (Valadez, 2012). In Japan, 70% of the wage earners are working in small-scale industries (SIDBI report, 2010). In Brazil, 59% of the employed population are working in small-scale industries, In Vietnam, there are about 4.9 million of MSME establishments that provide 18.9 million jobs in the country (Chuc & Thai, 2017). The World Bank review on small enterprises stimulates that the World Bank Group should make the development of small and medium enterprises as a core element in their strategy for fostering the economic growth, employment generation, and poverty alleviation (Ayyagari et al., 2003; Bhat & Singh, 2020). Therefore, small and medium enterprises have emerged as an engine of growth in the new millennium, for both developing nations and developed nations of the world and the same is true case with India.

MSME sector also performs a key role in the development of effective, efficient, and innovative entrepreneurial spirit in the entire nations of the world. Therefore, this sector is indispensable for developing counties such as India, as it is the solution for the major economic problems, such as the problems of unemployment, poverty alleviation, economic disparities, lack of entrepreneurship, and low economic development of the country (Rathore & Mathur, 2019). MSME sector also decentralizes industrial activity, utilization of locally available resources, and widens the entrepreneurial base in the country. Apart from this, MSME sectors are the supplement to large-scale industries and are considered as ancillary for large-scale industries (Muthu, 2015). The growth rate of this sector is much higher as compared to large-scale industrial sector. Therefore, the present book chapter explores the role of micro, small, and medium enterprises in promoting and reconstructing the economic development of India during post Covid-19 era.

15.1.1 Methodology and Data Sources

The present study is an exploratory research, based on secondary data. The secondary data has been collected from various authentic data sources, such as PwC's MSME Survey 2020, ITC Market Analysis Tools for trade statistics, Statista.com, and the official website of Ministry of Micro, Small, and Medium Enterprises of India. The purpose of this study is to explore how MSMEs can play a vital role in the economic development of India in post Covid-19 era. The study also explores, the impact of Covid-19 pandemic on the small business in the developing and less developed countries of the world.

15.1.2 How to Survive This Covid-19 Pandemic

The Covid-19 pandemic and lockdown pursuits an impetus for entire nations of the world to resolve economic problems. The world has begun to breathe and regenerate again. However, the world economy is still facing huge economic crisis, more particularly developing countries of the world. The economic activities have been shut down, and it has led to industrial and business sickness determinately. The large-scale businessmen are facing financial constraints to resume their business activities, and many other business enterprises have break off their business operations. In this scenario, the startups through MSME initiatives can help to promote a sustainable and long-term economic growth to world economy. MSMEs will be able to take advantages of the emerging market problems in post Covid-19 period. It is mainly because MSME sector is considered as sustainable and low capital-intensive sector. However, taking advantages, through MSMEs would necessitate regional initiatives and policy framework. Therefore, MSME policies should be promoted in greater participation ratio, through financial instruments and knowledge transfer. In developing countries like India, majority of the population are living in rural areas, and due to Covid-19 pandemic, reverse migration occurred, i.e., the shift of migratory labors/workers from urban to rural areas. This reverse migration gave much rise to labor crises in urban as well as at metropolis areas. On the other hand, in rural areas, there exists the problem of unemployment, because agriculture sector is the only sector in rural areas which employs a vast chunk of labor force. However, over the period of time, decline in the land holding size and decline in the share of agriculture sector in the gross domestic product (GDP). The agriculture sector of India has witnessed a decline in the share of employment opportunities. Moreover, the agriculture sector is providing only a substantial wage rates to the agriculture labors in the country. Therefore, India must learn lessons from the developed countries, who have advanced the MSME sector in their economies, and this sector is contributing significantly to the developed economics in terms of GDP contribution, businesses opportunities, entrepreneurship development, and employment generation.

Table 15.1 Growth of top expenditure areas for small to medium-sized businesses (SMBs) worldwide between 2016 and 2021

Business services	Software	IT services	Hardware
7.1	6.9	3.7	1.8

Source: Statista.com

15.1.3 Growth of Top Expenditure Areas for Small to Medium-Sized Businesses (SMBs) Worldwide Between 2016 and 2021

We have already discussed that MSME sector has become a cornerstone of world economy. Therefore, the present section explores the growth of top expenditure areas for small to medium-sized businesses (SMBs) worldwide between 2016 and 2021. It has been observed from Table 15.1 that the business services have remained all time high as 7.1% between 2016 and 2021, of top expenditure areas for small to medium-sized businesses (SMBs) worldwide, followed by software sector, which shows the growth rate of 6.9%. Similarly, the growth rate of IT services has remained 3.7%. Whereas, growth rate of hardware-related small, medium enterprises has remained 1.8% in the recall period. It is quite low as compared to business services and software-related SMEs.

15.1.4 Top Countries Having Highest Share MSME Businesses in the World

Small and medium enterprises (SMEs) accounts for 90% of businesses and more than 50% of total employment worldwide. Therefore, the present section explores the top countries having highest share MSME businesses in the world (PwC's MSME Survey 2020). Table 15.2 reveals that South Africa, UK, and Germany account for 99% of MSMEs of the total number of businesses in the country, while USA accounts for less than 99%. Moreover, it has been also observed from the table that MSME contributes to 52% of GDP in South Africa, 44% in USA, 51% in UK, and 54% in Germany. Moreover, in terms of employment, it accounts for 29% of total employment in South Africa, 48% in USA, 54% in UK, and 63% in Germany. Therefore, the overall results reveal that the MSME sector is the core sector in these countries, which is contributing significantly in the economic development of these countries (Fig. 15.1).

Table 15.2 Top countries having highest share MSME businesses in the world

Country	% of businesses	% of GDP	% of employment
South Africa	99	52	29
USA	>99	44	48
UK	99.7	51	54
Germany	99.5	54	63

Source: PwC's MSME Survey 2020

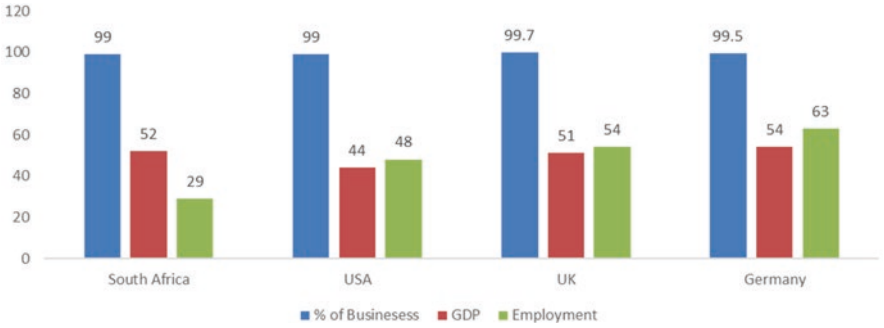

Fig. 15.1 Top countries having highest share MSME businesses in the world

15.1.5 Supply Chain Disruption and Expected Trade Plunge Due to Covid-19 Crises in the World

Exports of industrial inputs are forecast to fall by 71.4 billion dollars in Asia, with the majority of the decline due to trade restrictions in China and the European Union. The EU trading partnership accounts for approximately half of Asia's exports to European Union. Electronic supply chains are at the core of Asian countries' exports to China. On the other hand, India's exports are primarily related to automotive parts trade with European Union. The factory closures in China and the United States have had a significant impact on Europe, which is mostly due to direct ties between the G3 hubs, and the non-European countries depend heavily on the EU market and are therefore disproportionately impacted by the blockade, with an estimated loss of 6.6 billion dollars in manufacturing input exports.

Many other African countries are affected as a result of their raw material exports to China, such as copper from Benin, Mauritius, Namibia, and Zambia, and cotton from Burkina Faso. Small island developing states (SIDS) are the most vulnerable to China's lockdown, i.e., 2.7%. The EU is expected to see the biggest decrease in exports in dollar terms for landlocked developing countries (LLDCs), but disruptions in supply chains with the US are expected to be more important. About 3.2% of LLDC exports to the United States are expected to be lost due to the factory shutdowns in the United States. The Covid-19 lockdown has affected the supply chains of all developing and least developed counties of the world (SME Competitiveness Outlook Report, 2020).

Table 15.3 Supply chain disruption and expected trade plunge due to Covid-19 crises in the world

Importer / Exporter	Projected reduction of trade within manufacturing supply chains							
	China		European Union		United States		G3	
	$ billion	%	$ billion	%	$ billion	%	$ billion	%
Africa	0.4	0.4	1.8	1.2	0.3	1.2	2.4	0.9
Americas	**4.5**	**2.0**	**8.7**	**2.0**	**11.3**	**1.6**	**24.5**	**1.8**
Asia	**25.9**	**3.1**	**28.3**	**2.5**	**17.1**	**1.7**	**71.4**	**2.4**
Europe	**10.8**	**3.3**	6.6	1.5	9.3	1.7	**26.8**	**2.0**
Oceania	0.4	0.4	0.2	1.1	0.2	2.3	0.8	0.6
World	**41.9**	**2.7**	**46.1**	**2.1**	**38.2**	**1.7**	**126.3**	**2.1**
Landlocked developing countries	0.2	0.6	0.4	0.8	0.1	3.2	0.6	0.8
Least developed countries	0.4	0.8	0.3	0.5	0.1	0.4	0.7	0.6
Small Island developing states	1.3	2.7	0.6	1.7	0.7	1.8	2.6	2.1

Note: The data for the EU include EU27 and the United Kingdom. The data for Europe exclude intra-EU trade. Trade values indicate the expected loss of trade in inputs with G3 in 2020. Percentages indicate the share of the expected loss with the corresponding G3 country in 2020 in the total trade (inputs and final goods) with the world as measured in 2019. Darker colors indicate higher losses. World total includes free zones and areas not elsewhere specified. Projected supply chain disruption is calculated as the loss of imported inputs by the G3, assuming a 2-month shutdown of all factories within the G3, and taking into account the direct effect only (one link in supply chains, i.e., the reduction of exports in countries supplying inputs to the G3). Source: SME Competitiveness Outlook (2020)

Table 15.3 reveals that due to Covid-19 pandemic, the reduction of imports by China, European Union, United States, and G3 countries will affect badly to the entire nations of the world. It has been observed from the table that due to import restrictions by Covid-19, the projected loss of Africa in terms of exports to European Union, will be 1.8 billion dollars, for G3 nations, it will be 2.4 billion dollars. The Americans will face the plunge of exports of 4.5 million dollars to China, 8.7 billion from European Union, 11.3 billion dollars from United States and from G3 countries, it will be much higher of 24.5 billion dollars, i.e., 1.8% of exports. However, Asia will face the highest plunge of exports, and it has been observed from the table

that the exports of Asia to China will be plunged to 25.9 billion dollars, which comprises 3.1% of exports and for European Union, the exports from Asia will be plunged by 28.3 billion dollars, for United States the exports will drop by 17.1 billion dollars. However, for G3 nations, the exports of Asia to G3 countries will hit drastically to 71.4 billion dollars.

Similarly, the exports of Europe to China will be dropped by 10.8 billion dollars and the highest plunge of exports will be dropped from G3 nations, i.e., by 26.8 billion dollars. Moreover, the landlocked countries will face a plunge of 3.2 billion dollars exports to United States. Whereas, the Small Island developing states will face the reduction of 2.6 billion dollars exports to G3 countries respectively. The world will face reduction of 41.9 billion dollars exports to China, 46.1 billion dollars from European Union, 38.2 billion dollars from United States, and the highest plunge of exports of world will be dropped from G3 countries, i.e., the G3 counties will reduce the imports by 126.3 billion dollars from other countries of the world. Therefore, the overall results reveal that the highest plunge of exports will be from Asia and Americans.

15.1.6 Impact of Covid-19 on Indian Economy

Unlike previous crises, the persistent Covid-19 crisis has affected global economy. It has begun with a health crisis, which later turned into an economic crisis and has put a negative impact on both demand and supply, in the almost all countries of the world. Covid-19 has affected adversely the growth rate of the developing countries of the world. India has witnessed a sharp decline in the growth rate of the economy. Indian economy was already experiencing a slow growth rate from the past 2 years. The shutdown of economic operations triggered by the Covid-19 crisis has further worsened the economic growth rate of India. India's growth rate had already declined to 4.18% from 8.26% in 2016. However, with this lockdown of Covid-19 pandemic, the growth rate of Indian economy has declined drastically to negative −10.29% in 2020. The policy-makers of India are seriously concerned with this declined growth rate of Indian economy. Hence, policy-makers are highly in favored to ease the business opportunities by liberalizing the MSMEs sector of the country. Therefore, in order to bring Indian economy back on track, the finance minister of India has announced special economic packages to boost the MSME sector and has set to achieve a targeted growth rate of 8.8% in 2021 financial year (Table 15.4).

Figure 15.2 shows the growth rate of India from 2015 to Jan 2020. The graph clearly indicates that Indian economy had already faced the economic crises from Jan 2016 onwards. The growth of Indian economy had already declined from 7.04% in 2017 to 4.18% in 2019. But due to Covid-19 pandemic, the growth rate of Indian economy has declined drastically to −10.29% in 2020.

Table 15.4 Impact of Covid-19 on Indian economy

Year	GDP growth rate
2015	8
2016	8.26
2017	7.04
2018	6.12
2019	4.18
2020	−10.29

Source: Statista.com

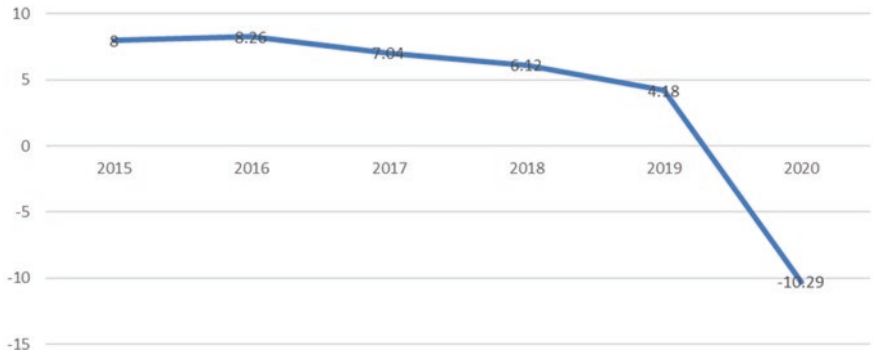

Fig. 15.2 Growth rate of India from 2015 to 2020

15.1.7 Current Scenario of Micro Small and Medium Enterprises in India

MSME acts as a pillar of Indian economy and is one of the most critical segments of the economy that can lead the economy to grow by leap and bounds. This sector provides employment to over 114 million people in India and contributes to more than 30% to the GDP, although is going through one of the tough phases. Nonetheless, MSME constitutes 80% of the total number of industries in India. In terms of the size and structure of the units, variety of products and services, scale of production and application of technology, micro, small, and medium enterprises offer a heterogeneous and varied nature of fabric in India (Das, 2016). Table 15.5 shows that in case of rural areas, the highest number of units are micro units, which comprises 324.09 lakhs, which means that 99.76% of units are micro units, followed by small units, which consists of 0.78 lakh units and medium units which consists of 0.01 lakh units, respectively. Similarly, in case of urban areas, the total numbers of micro units are 306.43 lakh units, which comprise 99.17%, followed by small units 2.53 lakh units, which comprises 0.82% and medium units 0.04 lakh, which comprises 0.12%, respectively. The total numbers of micro units in both rural and urban areas are 630 lakh units, followed by small units 3.31 lakh units and medium units 0.05 lakh units respectively with 51% share in rural area and 49% share in urban area.

Table 15.5 Distribution of micro, small, and medium in rural and urban areas (in lakhs)

Sector	Micro	Small	Medium	Total	Share (%)
Rural	324.09 (99.76)	0.78 (0.24)	0.01 0.01	324.88 (100.00)	51
Urban	306.43 (99.17)	2.53 (0.82)	0.04 (0.12)	309 (100.00)	49
Total	630.52 (99.47)	3.31 (0.52)	0.05 (0.01)	633.88 (100.00)	100

Source: MSMEs Annual Report 2017–2018

Table 15.6 Percentage distribution of male/female ownership of MSMEs in India

	Male	Female	Total
Rural	77.76	22.24	100
Urban	81.58	18.42	100
Total	79.63	20.37	100

Source: MSME Annual Report 2017–2018

15.1.8 Percentage Distribution of Male/Female Ownership of MSMEs in India

Table 15.6 shows the distribution of enterprises among male and female wise in rural and urban areas of India. Table 15.2 highlights that in rural areas 77.76% of the enterprises are owned by male entrepreneurs and 22.24% of the enterprises are owned by female entrepreneurs. While in case of urban areas, 81.58% of enterprises are owned by male entrepreneurs and 18.42% of enterprises are owned by female entrepreneurs, which is 3.82% less as compared to rural female entrepreneurs. Therefore, the overall results show that in both rural and urban areas, MSME units are dominated by male entrepreneurs in India.

15.1.9 Share of MSME Exports in Total Exports (in %)

Figure 15.3 shows that the MSME sector is contributing significantly in the export basket of the country. However, the total export contribution of MSMEs has increased sharply from 2015 to 2016, but its contribution in total export basket has declined from 50% in 2016–2017 to 48% in 2018–2019. Although the total exports of MSMEs have declined in India, its contribution to total exports stood at 48%. Nonetheless, the declined percentage is mainly attributed with demonetization and implementation of GST in this sector, due to which the export percentage of MSMEs in India have declined.

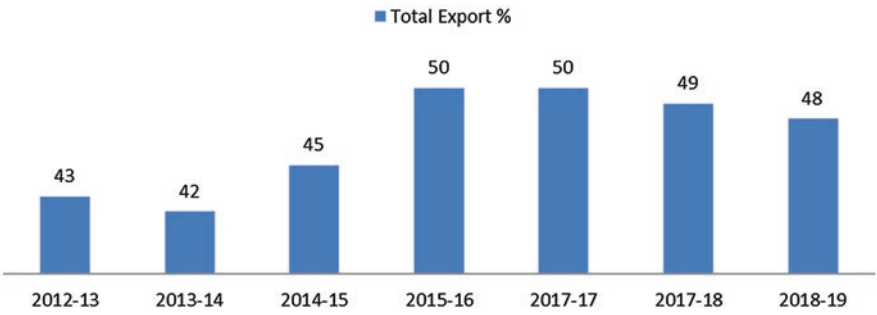

Fig. 15.3 Share of MSME exports in total exports (%). (Source: Report of the Expert Committee on Micro, Small and Medium Enterprises, June 2019)

Table 15.7 Activity-wise estimated employment in rural and urban area (in lakh)

	Rural	Urban	Total
Manufacturing	186.56 (51.80)	173.86 (48.20)	360.42 (100.00)
Trade	160.64 (41.50)	226.54 (58.50)	387.18 (100.00)
Other services	150.53 (41.60)	211.69 (58.40)	362.22 (100.00)
Total	497.73 (44.80)	612.09 (55.20)	1109.82 (100.00)

Source: MSME Annual Report 2017–2018

15.1.10 Activity-Wise Estimated Employment in Rural and Urban Areas (in Lakh)

The present section explores, the activity-wise estimated number of employment in MSMEs in rural and urban areas in India. Table 15.7 shows that in case of employment in manufacturing activities in rural areas, it is providing employment to 186.56 lakh persons, which comprises 51.80% of manufacturing employment of MSMEs in rural areas, and in urban areas, it is providing employment to 173.86 lakhs, i.e., 48.20% of manufacturing employment of MSMEs in urban areas. Similarly, in case of trade activities in rural areas, it is providing employment to 160.64 lakh persons, i.e., 41.5% of employment of trade activities in rural areas, and in case of urban areas, it is providing employment to 226.54 lakh persons, i.e., 58.5% of trade-related activities employment from MSMEs in urban areas. Moreover, in case of other services of MSMEs, it is providing employment to 150.53 lakh persons in rural areas, which comprises 41.6% of employment from other services, and in case of urban areas, it is providing employment to 211.69 lakh persons with 58.40% of employment from other services.

Table 15.8 Employment distribution of MSMEs in rural and urban areas in India

	Micro	Small	Medium	Total
Rural	489.30	7.88	0.60	497.78
Urban	586.88	24.06	1.15	612.10
Total	1076.19	31.95	1.75	1109.89

Source: MSME Annual Report 2017–2018

15.1.11 Employment Distribution of MSMEs in Rural and Urban Areas in India

Table 15.8 explores that the micro enterprises of rural areas are providing employment to 489.30 lakh persons, while small enterprises are providing employment to 7.88 lakh persons, and medium enterprises are providing to 0.60 lakh persons. Similarly, in urban area, micro enterprises are providing employment to 586.88 lakh persons, while small enterprises are providing to 24.06 lakh persons, and medium enterprises are providing to 1.15 lakh persons. Therefore, the overall result shows that MSMEs are providing the highest employment in urban areas as compared to rural areas. Moreover, results also show that small enterprises are providing a significant employment opportunity in urban areas, as compared to rural areas in India.

15.1.12 Male/Female-Wise Employment Distribution in India

This section explores the male/female-wise distribution of employment in India. Table 15.9 highlights that in case of rural areas, MSMEs are providing employment to 360.15 lakh male persons, which comprises 72.40% of total male employment of MSMEs in rural areas, and for female, it is providing employment to 137.50 lakh females, which comprises 27.60% of employment from MSMEs in rural area. Similarly, in case of urban areas, MSMEs are providing employment to 484.54 lakh male persons, i.e., 79.18% of male employment, and for urban female, it is providing employment to 127.42 lakh females, which comprises 20.82% of employment of MSMEs for females in urban areas.

15.1.13 Distribution of Top Ten States in MSMEs Units and Employment

This section explores the distribution of top ten states in terms of MSME units and employment. Table 15.10 shows that the highest number of MSME units are in Uttar Pradesh, i.e., 89.99 lakh units, which are providing employment to 165.26 lakh persons, followed by West Bengal 88.67 lakh units, with an employment of

Table 15.9 Male/female-wise employment distribution in India

	Male	Female	Total
Rural	360.15 (72.40)	137.50 (27.60)	497.78 (100.00)
Urban	484.54 (79.18)	127.42 (20.82)	612.10 (100.00)
Total	844.68 (76.10)	264.92 (23.90)	1109.89 (100.00)

Source: MSME Annual Report 2017–2018

Table 15.10 Distribution of top ten states in MSMEs units and employment

State	Units (in lakh)	Employment		
		Female	Male	Total
Uttar Pradesh	89.99	27.27	137.29	165.26
West Bengal	88.67	43.51	91.95	135.52
Tamil Nadu	49.48	32.27	64.65	96.73
Maharashtra	47.78	17.97	51.11	70.84
Karnataka	38.34	19.73	51.11	70.84
Gujarat	33.16	13.71	47.44	61.16
Andhra Pradesh	33.87	21.01	34.98	55.99
Bihar	34.46	4.79	48.26	53.07
Madhya Pradesh	26.74	10.13	38.61	48.80
Rajasthan	26.87	8.01	38.31	46.33
Total	261.03	35.69	262.81	287.86

Source: MSME Annual Report 2017–2018

135.52 lakh persons, Tamil Nadu which is having 49.48 lakh units and are providing employment to 96.73 lakh persons. However, from Table 15.10, it has been observed that West Bengal and Tamil Nadu are the two states where the disparities in terms of employment among male and female is very low as compared to other top ten states, whereas in Uttar Pradesh, Bihar, and Rajasthan, they are having higher disparities in terms of employment in MSMEs, the employment ratio of male workers are much higher than female workers.

15.2 Conclusion

Undoubtedly, the micro, small, and medium enterprises have become a cornerstone of world economy. This sector is playing an essential role in providing employment generation, entrepreneurship development, and poverty alleviation in the developing countries. Although there is quite low number of MSME units in India as compared to other developed nations of the world, this sector is still contributing significantly to the GDP of India. Moreover, during the pandemic of Covid-19, this sector has contributed significantly in the production of goods and services although this sector was suffering from the shortage of necessary inputs, which led to supply

shock. Results also reveal that South Africa, UK, and Germany accounts for 99% of MSMEs of the total number of businesses in the country, while USA accounts for less than 99%. MSME contributes to 52% of GDP in South Africa, 44% in USA, 51% in UK, and 54% in Germany. Moreover, in terms of employment, it accounts for 29% of total employment in South Africa, 48% in USA, 54% in UK, and 63% in Germany. Therefore, the overall results reveal that the MSME sector is the core sector in these countries, which is contributing significantly in the economic development of these countries. Therefore, there is a strong need to boost further MSME sector and to develop new business models through MSMEs, so that it will play an adequate role in the economic reconstruction of Indian economy like it is playing in the developed nations like USA, UK, and Germany.

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Conclusion

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With the aim to address new business models during the COVID-19 pandemic, the present book has been the occasion to go through different businesses, including the higher education sector, consumer behavior perspectives, digital marketing, rural entrepreneurship, MSMEs' development, etc. Meanwhile, the current situation is becoming worse and other waves of the coronavirus contagion are starting again to dismantle the economic and business development worldwide. Scientists, policy-makers, as well as leading persons have expressed their confusion and their great concern about the awful drawbacks of this crisis whose end seems endless. They are even incapable of predicting how many other waves are in the queue in the long term. Nevertheless, what remains certain is that those persons and all humans have to cope with this new ambiguous context by considering all these environmental dampers and hazards. Indeed, such situations, emanating from natural disasters, economic turmoil, and/or other political issues, should be taken into account and well managed in order to ensure the continuity of businesses all over the world.

In the light of the observations cited above, the present book explains, analyses, and decrypts the experiences of different kinds of business houses from various parts of the globe, and mainly those who lived through the COVID-19 crisis in the South Asian countries. Such meaningful experiences may enlighten managers, entrepreneurs, decision makers, and all concerned parties on the best strategies, solutions, processes, and measures to implement to tackle such a turmoil. It may also offer them some recommendations and guidelines to fight other similar unpredicted abnormal and adverse business situations in the near future.

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In another perspective, this book will be helpful for businesspersons, by enabling them not only to demystify the VUCA digitalized world but also to pursue and exploit the Glocal (Global and local) business opportunities that could emerge from outbreaks and crises. They may in turn find out the best ways to reshape their thinking to encompass new ideas, responsive business models, and innovative operating systems.

On the other hand, researchers and scientists may also learn and extend their knowledge about the effects of COVID-19 pandemic on national and international business contexts, in order to come up with the best anti-virus policies and schemes for doing business in similar constraining situations.

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