



HAS COVID-19 CLIPPED THE WINGS OF THE HIGH FLYING MICRO, SMALL, AND MEDIUM- SIZED ENTERPRISES (MSMEs) SECTOR? AN OPINION SURVEY

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between both authors. The corresponding author MG designed the study, performed the statistical analysis and wrote the manuscript draft. The second author MA conducted the literature searches and wrote the analysis. Both authors read and approved the final manuscript.

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ABSTRACT

Coronavirus (COVID-19) outbreak has halted the shivering progress of the Indian economy. In recent times the Micro, small and medium-sized enterprises (MSMEs) sector is on the verge of becoming lame due to the COVID-19 outbreak. MSMEs primarily drive the socio-economic growth in our country. Still, because they typically have inadequate financial and management resources compared to big enterprises and are not prepared to deal with problems that are likely to be more severe than anticipated, they are worst hit by the COVID-19 outbreak. So, this paper aims to obtain the perception of selected MSMEs respondents to examine the effect of the COVID-19 pandemic crisis on MSMEs and provide policy recommendations to the concerned policymakers to help MSMEs manage the situation. A strategically constructed questionnaire was designed in the form of an online survey to obtain respondents' opinions. The descriptive statistical analysis and "Chi-square non-parametric test" were carried out to analyze the gathered data. The study found that most of the MSMEs were either fully or partially in operation during the COVID-19 lockdown due to the enterprises belonging to essential services, employees working from home, etc. The increased difficulty in financing and reduction of orders were the most relevant issues faced by MSMEs. The study also found out that due to Covid-19 lockdown, MSMEs not belonging to essential services had to lay off their employees to the extent that led to unemployment. Finally, to alleviate the negative impact of the COVID-19 outbreak on MSMEs, the study mentions that the most relevant relief measure announced by the government was "government to clean all receivables due to MSMEs in next 45 days".

Keywords: COVID-19 outbreak; Government relief measures; lockdown; micro small and medium-sized enterprises (MSMEs) in India.

1. INTRODUCTION

Corporate enterprises and institutions are the giant pillars of any country's prosperity and growth. With India lurking at the doorstep of extreme poverty and

unemployment, the role of Micro, small, medium enterprises (MSMEs) have become much more important. However, it is the global pandemic Covid-19 declared by WHO that halted the progress made by India. In December 2019, for the first time, there was

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a registered case of the novel Coronavirus (SARS-CoV-2), which causes the Coronavirus disease (COVID-19), which appeared in Wuhan, China, and spread across the World. On March 11, 2020, COVID-19 announced a pandemic by World Health Organization (WHO) Director-General. As per a report of (OECD [1]), the Coronavirus is the largest public health emergency in the World, causing significant loss of life and extreme human suffering. It is not just a pandemic; it is also a global economic crisis, severely affecting national and global economies. As a result of this, many governments around the World have implemented national quarantine measures to prevent the disease from spreading, which has resulted in a drastic decline in world economic activity. Many sectors of national industries around the World have undergone substantial declines in output, demand, and job losses [2,3]. The Indian government, to avoid further transmission of the infection, have ordered the highest level of security initiatives such as self-quarantine, canceling public events, restriction of crowd meetings, shutting of all industries and sports facilities except food shops, as well as shutting off highways, railroads, and flights across the country, [4]. The effect of this outbreak was not only limited to infections to the citizens. However, the Indian economy was also severely affected by the end of March 2020 (in particular, the transport, tourism, hospitality, and financial industries). An IMF report by [5] predicted global GDP to be contracted at 3.3%, leading to a once-in-a-decade recession. As per a report of (PIB 2021), India's first quarter of 2019-20 recorded a growth of 5.4%, which decreased to 3% in the fourth quarter; however it was in 2020-21 first quarter that substantiated a record negative growth of 24%. The wrath of the COVID-19 pandemic nearly impacted all the financial industries, so in the case of already suffering stressed MSME sector. The exceptional versatility, creativity, and smaller production sizes, clear organizational structure, and informal internal contact define small companies. As per [6], MSME's total contribution to the economy is nearly 30% of gross domestic product (GDP) and 50% of exports. India has about 63.3 million MSMEs, which generates around 70 million jobs to manufacture more than 6000 products. MSMEs are the foundation of many industries around the World that create earnings and work opportunities for people around the World. MSMEs are equally critical to the Indian economy [7]. Decreased demand, supply chain disruptions, failure to clear their export orders, scarcity in basic supplies of raw materials, transport disruptions, etc., are some of the main global problems industries face. The outbreak of COVID-19 has led to unparalleled unfavorable effects on Indian

firms and the private sector, and MSMEs, in particular, are expected to be the main drivers. In India, the MSME sector was known for its immense economic, social, and environmental caliber. They are the driving force behind the growth of a nation's economy. Still, time and time again, these enterprises face several obstacles like heavy international competition, pressures to utilize key resources effectively and efficiently, and adopt eco-sustainable production processes. But due to the repercussion of this COVID-19 pandemic, MSMEs are the most vulnerable since the bigger firms' have buffer or access to capital which is not available to assist MSMEs. Disruptions in supply chain operations, migration of workers, restrictions on the availability of raw materials and export and import fluctuations, etc., have adversely distressed the lay the foundations of MSMEs. The early evidence suggests that COVID-19 has a greater effect on SMEs than the financial crisis of 2008, as per a report by OECD [1]. As MSMEs are an important part of world economies, their failure may significantly affect national economic development. MSMEs are the major victims of COVID-19 outbreaks because MSMEs typically have inadequate financial and management resources compared to big enterprises and are not prepared to deal with such problems that are likely to be more severe than anticipated. Moreover, these businesses rely heavily on regular business transactions and a limited number of customers. As a result, many MSMEs are out of stock, some are barely operating, and others will run out of stock [8,9,10,11]; and (Tambunan & Busneti, 2016). MSMEs are the foundation of many industries around the World that create earnings and work opportunities for people around the World. MSMEs are equally critical to the economy of India [7]. However, policymakers across the globe have released policy and support measures to reduce both the human and economic aftermaths of this pandemic. But, the level and quality of policy measures across the nations vary in terms of their epidemic severity and economic growth level. Such measures offer a ray of hope to improve the system and strengthen the capabilities of MSMEs in such predicament times. For this purpose, schemes for promoting micro-enterprises and initiatives that concentrate on helping small and medium-sized businesses during the crisis should be introduced. Though the Indian government has initiated several measures to enhance the MSMEs, government policies have not yet resulted in substantial changes in the system conditions. But the cooperation between business, academia, and government institutions remains weak and hence is hampering MSMEs' (including social enterprises and start-ups) innovation potential and sustainability.

1.1 Indian MSMEs Sector

India's base of MSMEs is the world's largest micro, small, and medium enterprises after China [12]. The sector offers many services and produces more than six thousand goods, from conventional to high-tech products. The MSMEs in India and abroad were high and resilient in sustaining a steady pace of growth and creating jobs during the global recession and economic slowdown (Thornton and FICCI, 2011). In recent years India's economy has seen substantial growth success by helping millions of people to create livelihoods, improving export prospects, and increasing the country's overall economic development. Timely and proper fiscal stimuli, aggressive monetary policy, and massive capital inflows are need of the hour in the time of economic turmoil. The MSME sector is a pillar of the country's socio-economic transformation to bridge the rural-urban divide, reduce poverty, and provide employment to millions (NITI Aayog, 2017). Therefore, India must follow an effective policy structure that provides the incentive needed to capture the opportunities and create a market climate for growth and holistic development. It is also critical that the MSME sector resolve infrastructural limitations and respond to emerging problems in a worldwide competitive environment for its sustainable growth and survival. The COVID-19 spread and the subsequent lockout of India have underlined economic development at the national level and placed financial pressure on the firms. With this in view, the government has proposed amendments in the categorization of MSMEs. The World Bank describes an organization categorized as MSME when it fits two of the three requirements- workforce power, asset size, or annual revenue (World Bank, 2020b). The revised definition of MSMEs excludes the

difference between the production and service industries, modifies the expenditure ceiling, and adds new revenue requirements.

MSMEs help grows rural and industrialized regions, reducing regional disequilibrium, ensuring a fairer distribution of national income and resources. MSMEs as secondary units supplement larger factories, and the sector contributes significantly to the country's socio-economic growth. Thus, the Ministry of Micro, Small, and Medium Enterprises (MSME) should create and support existing enterprises in the diverse MSME sector in collaboration with ministries/agents concerned, including Khadi, Village, and Coir Industries, through the promotion of MSME growth and development.

1.2 Objectives of the Study

The study's principal objective was to assess the negative impact of covid-19 induced lockdown on the Indian MSMEs sector.

1. To ascertain whether the COVID-19 induced lockdown has affected MSMEs operation in India.
2. To validate the claims of the past studies regarding the most relevant issues faced by MSMEs.
3. To determine whether, due to Covid-19, MSME belonging to nonessential services had to lay off its employees or considering lay off, which leads to increased unemployment.
4. To determine the most relevant relief measures announced by the Indian government to alleviate the negative impact of the COVID-19 outbreak on MSMEs.

Existing MSME Classification			
Criteria : Investment in Plant & Machinery or Equipment			
Classification	Micro	Small	Medium
Mfg. Enterprises	Investment <Rs. 25 lac	Investment <Rs. 5 cr.	Investment <Rs. 10 cr.
Services Enterprise	Investment <Rs. 10 lac	Investment <Rs. 2 cr.	Investment <Rs. 5 cr.
Revised MSME Classification			
Composite Criteria : Investment And Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing & Services	Investment <Rs. 1 cr. and Turnover <Rs.5 cr.	Investment <Rs. 10 cr. and Turnover <Rs.50 cr.	Investment <Rs. 20 cr. and Turnover <Rs.100 cr.

Fig. 1. Classification of MSMEs in India
(Source: Economic Times, May 26, 2020)

2. REVIEW OF LITERATURE

A study by Lal et al. [6] focuses upon the contribution of MSMEs to Indian GDP and the how COVID -19 affected the production capacity of MSMEs and what issues have been faced by MSMEs during COVID-19. The study used a secondary source of data. The conclusion of the study explained lack of financing and liquidity crunch as potential issues apart from a supply-demand deficit, shortage of labor force, and transportation as potential problems faced by MSMEs during a pandemic. However, the study suggested that with government measures and structural support in the form of economic and financial relief the sick MSMEs sector units could be revived for building the economy. A study was carried out by Shafi et al. [13] in Pakistan stresses the covid-19 outbreak influence upon Pakistani MSMEs and various measures and policies adopted by the government to minimize its impact. The study used an extensive literature review as a secondary source of data and administered a questionnaire from 184 MSMEs in Pakistan as a primary source of data. The findings of the study suggested that MSMEs have been encountering various issues like financial, lack of demand, poor supply chain management, and decrease in sales and profits. Apart from this more than 80 percent of MSMEs don't have strategies to overcome this situation. Singh [14] in his study focused upon the impact that covid-19 instigated upon the tripartite supply chain, demand chain, and labor force conundrum faced by the Indian MSMEs sector. The study also suggested certain measures to overcome these tripartite issues in form of increasing bank credit to MSMEs to conquer liquidity crunch, government assuring minimum wages and assistance to the labor force to avoid labor turnover, and finally reducing tariffs and duties on various inputs needed by MSMEs for production. Gawas [15] in his study investigated the impact of global pandemic corona on the already stressed MSMEs sector of Goa and suggested certain remedial measures to rejuvenate the sick MSMEs. The study discovers that with the emergence of corona already stressed MSMEs are facing many serious implications in form of liquidity crunch, confusion due to a new definition of MSMEs, and lack of any wage support measures by the government. A study by Roy and Bhusan [16] suggested problems like liquidity crunch and unemployment one positive aspect is the tremendous opportunity offered to MSMEs to make India a self-reliant self-producing country. The study discovers by suggesting several initiatives in the form of digitally transfiguring MSMEs business and government offering financial assistance and loans in form of financing working capital, offering credit in emergency and concessional loans to MSMEs. Roy et

al. [17] in their study shown the effect of covid-19 on manufacturing and retail firms as they temporarily closed down their operations and all the relief measures provided by the government don't compensate for the losses MSMEs face. The study used a secondary source of data and thematic analysis. The study used a descriptive research design and purposive sampling for data collection. The findings of the study stated that nearly 50% of MSMEs suffered losses because of inadequate relief measures, large enterprises experience a reduction in 25% of sales, and around 20% of MSMEs have been close down amid lockdown. Sahoo [18] in his study analyzed whether the growth of manufacturing, trade, and the MSME sector was impacted by covid-19. A secondary source of data was being used in the study. The study found out that covid-19 would shrink the manufacturing sector to 20%, exports to nearly 21%, imports to 25%, and MSMEs to 5%. The study discovers that credit and financial relief measures announced by governments could help struggling MSMEs. A study by Kadam and Pandey [19] aimed to analyze the challenges and developments faced by MSMEs sector post Covid-19. The objectives of the study were to oversee the expansion of employment generation by MSMEs and its contribution to export in India. The study used a secondary source of data. The study found out that government initiatives and policies during covid-19 extended support to MSMEs however issues like lack of funds and poor quality of management halts the progress of MSMEs. A study by Shinozaki and Rao [20] examined the consequences of lockdown on MSMEs in the Philippines in terms of sales, revenue, employment, wages, and financial conditions. A nationwide survey was conducted from March to April 2020 through social media platforms particularly Facebook to assess the impact lockdown had on MSMEs. The study used both descriptive statistics and regression analysis on collected data gathered through questionnaires. The study discovers that MSMEs working in the area of education, construction, accommodation, and food services, tourism, and manufacturing performed poorly; whereas MSMEs working in power and energy, information and communication technology, and real estate performed better. A study conducted by Koloma [21] in Senegal examined how determinants of credit accessibility, fall in revenue, and business growth was affected by the Covid-19 pandemic. The study made use of a primary source of data. Total 598 observations were considered for analysis. Logit, treatment effect, and propensity score matching were used as a data analysis technique. It was found that people aged 46-55 years predicts fewer chances of fall in sales revenue whereas people aged 25-35 years old assumed a higher probability of fall in sales and greater chances of obtaining a loan. It was

also found out that those MSMEs who undertake manufacturing operations were pessimistic about the future and the managers concerned with financial health expect a higher probability of an increase in sales. The study concluded that MSMEs having greater access to credit has a higher difference in decline in sales between MSMEs having credit and not having credit. The authors in this study suggest that support measures should be provided by the government to revive already struggling and pessimistic businesses.

In this section, various aspects of MSMEs have been explored through popular and world famous published research which would assist in encapsulating relevant findings. The intention of scrutinizing the relevant literature was to ensure that it conveys a path for research methodology. While in most of the countries including India, MSMEs have continued to be the dominant industrial field, not many country-specific works of literature and studies were published in the field of impact of the covid-19 crisis on MSMEs sector. The literature demonstrated above suggested some gaps and holes which need to be adequately addressed.

3. METHODOLOGY

After a comprehensive analysis of the available literature, the study followed an exploratory research design. The study made use of both primary and secondary sources of data. An online survey in the form of a structured questionnaire used to gather primary data from the respondents was sent to potential MSMEs through Google Forms to obtain respondents' perceptions regarding the effect of the covid-19 outbreak on the MSME sector. The secondary data source in the form of available research articles, existing publications in the reputed journals, textbooks, and electronic information available on internet websites was being used in the study. The selection of respondents done in this study was similar to various prior studies done by Lal et al. [6,14,15,16] and [13]. A strategically constructed questionnaire in the form of an online survey was prepared using Google Forms. The questionnaire in some of the questions made use of 5 points Likert scale ranging from least relevant to most relevant. It was then sent to senior management of potential MSMEs through their official emails and with the help of online platforms such as Facebook, Linked In, and WhatsApp to obtain respondents' perceptions. The strategically constructed questionnaire comprised questions related to basic facts and features of the MSMEs, the influence COVID-19 had on the operations and business of MSMEs, and relief measures announced by the government to alleviate

the negative impact of the covid-19 crisis. The study's sample size comprised 89 MSMEs from different cities of India, out of which 2 MSMEs did not respond appropriately, thus selecting a total of 87 MSME responses for analysis. The study made use of Non-probability sampling in which convenience sampling was being used as a sampling method. The selection of respondents done in this study was similar to various prior studies done by Lal et al. [6,14,15,16] and [13]. For conducting data analysis on the gathered or collected data it was transferred into Microsoft excel, and then IBM SPSS was used to perform the responses. The hypotheses of this study were tested by way of a Descriptive analytical approach and "Chi-square goodness of fit" (non-parametric test) at a 5% level of significance. To measure the reliability and internal consistency of the designed questionnaire, key reliability statistics Cronbach's alpha was being used. If the value of Cronbach's Alpha was more than 0.7, then that data is said to be reliable.

Participants from various cities of India had participated in the survey. The significant participation was from the North zone (95%), followed by equal involvement of the South and west zones (2.5%), and none from the East zone. Of the total MSMEs, 91% are private enterprises, 6% are public enterprises, and 3% were joint ventures. In terms of annual turnover as recorded in 2019, around 78% of the enterprises had turnover below Rs. 5 crores, 21% had turnover between Rs. 5 to 50 crores, and the remaining 1% had turnover between Rs. 50 to 250 crores. In the given figure below, around 55% of the participants belonged to Service industries, whereas the remaining 45% belonged to manufacturing industries.

3.1 Data Analysis

The outbreak of COVID-19 has brought a significant impact on various industrial sectors functional across the country, the worst-hit sector being the MSMEs. About 44% of the enterprises were not active, mainly due to the lockdown implemented across the country starting from March 24, 2020. The remaining 56% of the MSMEs were primarily functional and running because they belonged to essential services, employees working from home, and enterprises with comparatively less workforce. The survey interpreted that 51% of the enterprises are fully functional despite the COVID-19 scenario, 24% are partially available, and the remaining 25% are temporarily closed due to COVID-19 and lockdown across the country. Around 29% of the participating enterprises admitted that it is difficult to finance. The survey revealed that 23% of the participating enterprises had their number of orders declined, 16% of the enterprises said they were

facing logistics disruption. Around 11% of the companies face upstream, downstream chain disruption, and 9% of the enterprises face problems delivering existing orders. Nearly 4% of the enterprises have insufficient protective equipment (e.g., masks), and the remaining 1% of the enterprises have difficulty getting payments from governmental clients. As interpreted among the most significant financial problems, staff wages and social security charges (29%) and repayment of loans (21%) are the most critical financial problems that are a subject of worry by the enterprises during the pandemic. Other economic issues MSMEs face are paying invoices (18%) and rent (17%). Unemployment is the most significant repercussion arising out of this COVID-19. The response survey shows that 74% of the participant enterprises have done or considering layoff due to Covid-19, while 26% have neither retrenched nor planning to reduce the number of employees. It was evident from the survey response that the majority of the businesses face a shortage of cash flow. In the survey, 90% of the enterprises reported cash flow shortfalls problem. Therefore, we asked the participating enterprises how long they can maintain their company's cash flow. The participants' response to keep their businesses running and functioning was related to the enterprises looking for funds from loans from commercial banks, microfinance companies,

equity finances, and others. The survey shows that 22% of the enterprises are looking to reduce the cost of operation, 20% of the enterprises are looking to negotiate with the lenders, and 20% of the enterprises are looking for funding from microfinance or private individuals. The response survey interpreted that 25% of the MSMEs adopted work from home policy amidst the lockdown, whereas 75% of the MSMEs did not adopt work from home policy owing to MSMEs belonging to essential services. Nearly 42% of the MSMEs witness a decrease in their total revenue in 2020 compared to 2019, whereas 13% witnessed an increase in total revenue while 45% of MSME enterprises were unable to judge whether total revenue was increased or decreased. The response survey revealed that around 34% of the MSMEs considered none of these relief measures as adequate support for the revival of MSMEs, whereas 12% of respondent enterprises choose "A 25 percent reduction of the current tax deducted from the Tax Deduct at Source (TDS) and Tax Collected at Source (TCS)" as an effective measure. Around 21% of respondents, MSMEs consider "Government to clear all receivables due to MSMEs in next 45 days" as the most effective relief measure announced by the government. "Credit guarantee scheme" was found effective by 9% of the respondent MSMEs.

Table 1. Composition of sample

Reliability test of Cronbach's Alpha:

Cronbach's Alpha	N of Items
.844	10

Basic Demographic Profile:

Factors	Percentage of participants
<i>Designation of Participants</i>	
Chairman	8%
General Manager	10%
Director or Deputy General Manager	14%
Head of Finance or Accounting	9%
Head of Operations (Finance)	25%
Technical Director	7%
Others	27%
<i>Zone</i>	
North Zone	95%
South Zone	2.5%
West Zone	2.5%
East Zone	0%
<i>Type of MSME Industry</i>	
Private Enterprises	91%
Public Enterprises	6%
Joint Ventures	3%

Factors	Percentage of participants
	<i>Annual Turnover (in Crores) in 2019</i>
Under 5	79%
5-50	20%
50-250	1%
250 and Above	0%
Total No. of Employees	
Below 10	22.5%
10 to 50	43%
51 to 100	19%
101 to 200	12.5%
201 to 500	2%
501 to 1000	1%
1001 and Above	0%
Type of MSMEs	
Manufacturing Industries	45%
Service Industries	55%

3.2 Testing of Hypothesis

The above mentioned objectives of the study were converted into subsequent null hypotheses. The Chi-square goodness of fit statistical tool at a 5% level of significance was being used to test these formulated hypotheses.

$$X^2 = \frac{\sum (fo - fe)^2}{fe}$$

fo = Observed frequency

fe = Expected frequency

The computed X^2 value using the “chi-square goodness of fit” formula is compared with tabulated X^2 at a 5% level of significance with degrees of freedom. If calculated X^2 value is greater than tabulated X^2 value then the null hypotheses will be rejected and vice versa. The level of significance is 5%, Degrees of freedom (k-1=2-1) is 1 and Tabulated value of X^2 is 3.841.

H01: There is no statistically significant difference exist between Covid-19 induced lockdown and MSMEs operation in India.

Whether your business was in operation during Covid-19 lockdown?

Observed frequency	Expected frequency	Residual frequency
Yes 38	43.5	-5.5
No 49	43.5	5.5
Total 87		

Chi-Square		1.391 ^a
Df		1
Asymp. Sig.		.238
Monte Carlo Sig.		.278
95% Confidence Interval	Lower Bound	.269
	Upper Bound	.287

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 43.5.

b. Based on 10000 sampled tables with starting seed 743671174.

As the results from above table interpreted that calculated X^2 value (1.391) is lower than tabulated X^2 value (3.841) and the calculated value of significance is also higher than the actual value of significance 0.05 which means that null hypotheses cannot be rejected. Therefore it could be concluded that even though the risk of covid-19 crisis was looming MSMEs continued to operate its business due to multiple factors like the enterprises belonging to essential services, employees working from home etc.

H02: There is no statistically significant difference exist between the impact of Covid-19 and MSMEs forced to lay off its employees or considering doing it.

Is your company currently considering layoffs, or has already done some because of the COVID-19 pandemic.

Observed frequency	Expected frequency	Residual frequency
Yes	64	43.5
No	23	43.5
Total	87	

Chi-Square		19.322 ^a
Df		1
Asymp. Sig.		.000
Monte Carlo Sig.		.000
95% Confidence Interval	Lower Bound	.000
	Upper Bound	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 43.5.

b. Based on 10000 sampled tables with starting seed 2000000.

As evident from the above table, it can be interpreted that the calculated X^2 value (19.32) is higher than tabulated X^2 value (3.841) and the calculated value of significance is also lower than the actual value of significance 0.05 which means that null hypotheses can be rejected. Hence it can be summarized that MSMEs due to Covid-19 induced lockdown were forced to lay off its employees and workers which ultimately resulted into unemployment.

H03: There is no statistically significant difference between most relevant issues which have been faced by MSMEs as given by previous researchers with the current study.

One-Sample Statistics

N	Mean	Std. Deviation	Std. Error Mean
Frequency	8	11.13	8.442

One-Sample Test

Test Value = 0

t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
				Lower	Upper	
Frequency	3.727	7	.007	11.125	4.07	18.18

As the outcome from the test presented in the above table indicated that calculated t value (3.727) is greater than tabulated t value (2.365) which states that null hypotheses is rejected. Therefore it could be concluded that "there is statistically significant difference exist between most relevant issues which have been faced by MSMEs as given by previous researchers with the current study".

H04: There is no significant difference to corroborate past claims regarding the relief measures announced by the government to reduce the negative impacts of the Covid-19 crisis on MSMEs.

Table 2. Mean Response and Standard Deviation

Relief measures	Mean response	Standard Deviation
Credit guarantee scheme	1.33	0.693
25% reduction in TDS & TCS 12%	1.71	0.834
Global tenders disallowed	1.57	0.816
Government to clean all receivables due to MSMEs in next 45 days	1.78	0.895
Equity infusion fund	1.49	0.791
Subordinate debt for stressed MSMEs	1.33	0.604
Vivad se Vishwas Scheme	1.39	0.653

The participating enterprises were asked to provide the ratings to the different relief packages as announced for the MSMEs by the Government of India on a scale of 1 to 5, where 1 is 'least relevant' and 5 is 'most relevant'. As interpreted from the above table it was evident that government relief measures with higher mean were rated as most relevant whereas government relief measures with lower mean were rated as least relevant. The findings of the study revealed that cleaning all the receivables which have been due to MSMEs in the next 45 days was the most relevant relief measure announced by the government for MSMEs with a higher mean of 1.78 and higher standard deviation of 0.895, whereas the Credit guarantee scheme and Subordinate debt for stressed MSMEs was the least relevant relief measure announced by the government with lower mean of 1.33 and lower SD of 0.693.

4. FINDINGS AND DISCUSSION

After carrying out the necessary analysis to fulfill stated objectives, the survey revealed that since most MSMEs belong to essential services, the calculated X^2 value (1.391) is lower than the tabulated X^2 value (3.841), leading to the non-rejection of null hypotheses. It means there was not much effect of covid-19 induced lockdown on MSMEs business operation. Therefore even though the risk of the covid-19 crisis was looming, MSMEs continued to operate their business due to multiple factors like the enterprises belonging to essential services, employees working from home, etc. However, closure in MSMEs operations not belonging to critical services due to covid-19 induced lockdown leads to MSMEs sacking their employees or considering discharging off since the calculated X^2 value (19.32) is higher than the tabulated X^2 value (3.841), which means rejection of null hypotheses. Hence, due to Covid-19 induced lockdown, MSMEs were forced to lay off their employees and workers, resulting in unemployment. However, there was some relief as (56%) of the MSME businesses in operation adopted work from home policy. However, 44% of the MSME businesses didn't adopt a work from home policy that closed due to covid-19 lockdown, resulting in decreased employees. The objective related to relevant issues was analyzed using a one-sample T-test. The analysis revealed that the calculated t value (3.727) is greater than the tabulated t value (2.365), which means rejecting the null hypothesis. Therefore "the most relevant issues that MSMEs have faced were similar to those given by previous researchers. About the objective related to the most appropriate relief measure, the descriptive analysis revealed that cleaning all the receivables due to MSMEs in the next 45 days was the most relevant relief measure

announced by the government for MSMEs with a higher mean of 1.78 and a higher standard deviation of 0.895. In contrast, the Credit guarantee scheme and Subordinate debt for stressed MSMEs was the least relevant relief measure announced by the government, with a lower mean of 1.33 and a lower SD of 0.693, which was consistent with numerous previous studies by Lal et al. [6], Shafi et al. [13], Roy et al. [17] and [20].

5. CONCLUSION

Nearly every country in the world suffers from the catastrophic COVID-19 pandemic. The strongest markets are weak, and the crisis is uncontrollable. India will have to quickly withstand the effects of COVID-19 to bring everything back to normal. This study aimed at taking the opinion of MSMEs respondents to examine the impact of the COVID-19 outbreak on MSME business operations and whether MSMEs forced to lay off or considering lay off their employees to the extent that leads to unemployment. The study also aims to analyze whether any statistically significant difference exists between MSMEs' most relevant issues, as previous researchers have with the current research. To determine the most appropriate relief measure announced by the government to reduce the negative impacts of the Covid-19 crisis on MSMEs.

From the analysis, it was interpreted that as the majority of MSMEs belonging to essential services, there was not much effect of covid-19 induced lockdown had on MSMEs business operation. However, closure in MSMEs operations not belonging to critical services due to covid-19 induced lockdown impacted MSMEs sacking its employees or considering discharging off and on MSME business's adopting work from home policy. As demonstrated in the study survey, most (56%) of the MSME businesses were in operation by adopting position from home policy. However, 44% of the MSME businesses were closed due to covid-19 lockdown, resulting in decreased employees. The analysis also revealed a statistically significant difference between the most relevant issues faced by MSMEs as given by previous researchers in the current study. The study's findings revealed that cleaning all the receivables due to MSMEs in the next 45 days was the most relevant relief measure announced by the government for MSMEs with a higher mean of 1.78 and a higher standard deviation 0.895.

In contrast, the Credit guarantee scheme and Subordinate debt for stressed MSMEs was the least relevant relief measure announced by the government, with a lower mean of 1.33 and a lower SD of 0.693,

which was consistent with numerous previous studies by Lal et al. [6], Shafi et al. [13], Roy et al. [17], and [20]. So to conclude, that though MSMEs faced a dismal state due to the covid-19 induced lockdown, which led to closure in their operations, several of the MSMEs belonging to essential services were in operation due to the adoption of new normal work from home policy. The adoption of work from home policy by MSMEs could also help counter the reduction of employees that could solve the unemployment problem to a certain extent. Though it was evident from the study that covid-19 induced lockdown has setback on some MSMEs, for some of the MSMEs working in the sector of Ed-tech, fin-tech, and health-tech, it was a blessing in the disguise. India has one of the world's largest working-age middle-class populations. The make-in-India initiative offers an excellent opportunity for Indian MSMEs to reduce dependency on foreign supplies. As quoted by Union Transport Minister of India, [22] "*China's weakened global position is a "blessing in disguise" for India to attract more investment.*" So MSMEs are a kind of bud that needs to blossom to grow this economy and to take India out of a dismal state of poverty and unemployment; therefore, it is imperative to have a proper system infrastructure and government support for the MSMEs sector.

6. RECOMMENDATIONS/SUGGESTIONS FOR POLICYMAKERS

The MSMEs Ministry must draw up a multi-scenario policy plan to help keep businesses in line with the spread of the virus. Globally, policymakers have used different policy initiatives to ease the economic blow to their MSME industries. The Indian MSME sector should establish a policy structure focused on improving its resistance to the attacks of this emergency, not just in the short run but also in the longer and medium run, given both the impacts on supply and demand. It is important to note that limited information of MSMEs sector due to absence in carrying out a dedicated MSME census. Also, the lack of a centralized (and verified) MSME database can impede the targeted provision of relief and access to credit for businesses that need it the most. The policy mechanism suggested, however, should take the following into account:

A. Measures to Mitigate Impact on MSME Labor Workforce

A significant percentage of the eleven Crore persons working in this sector operate in these highly informal enterprises, with 99% of MSMEs classified as micro-enterprises. Employees working in such units may benefit from pay assistance. For example, in Brazil,

part of the Government's wages for micro and small units have been approved and paid. Countries such as Canada and New Zealand have provided (capped) temporary wage subsidies for three months. In India, the Government has not declared a compensation or grant plan to enable employers to keep workers in this crisis, even though employers in all commercial establishments are obliged to pay employee salaries, on the due date, without any cuts.

B. Specific Measures for Self-Employed or Owner-Managed Enterprises

The safety nets required to tackle the recession would be crucial for the self-employed MSME groups. The self-employed firms that can show a reduction in turnover may be compensated (subject to a limit). For example, by reporting a decline in expected revenue due to canceled orders, restricted movement of goods and labor, etc., the Government may authorize such payments subject to demonstrations of reduced incomes. It will also make cash flow calculations crucial for organizations to decide how they work if the compensation is given for a defined duration. The policy system must be autonomous. It requires hawkers, small traders, others providing private services such as plumbers, electricians, drivers, etc., that are not working routinely or indirectly in other businesses. Germany and New Zealand provided targeted subsidies to one-person firms and micro-units.

C. Measures to Defer Utility and Social Security Payments

This measure focuses on the treatment of power, water, and other utility bills. The deferment, or just the partial payment of property taxes, maintenance, and other services, would considerably benefit the MSMEs to prevent any extra expenses and liquidity limitations. In India, the Government has agreed to pay the share of employees to companies of less than 100 workers, 90% of which earn less than Rs. 15,000 a month. For the next three months, 24% of earnings deductions will credit to PF accounts. While 80 lakh jobs will benefit from the initiative and 4 lakh facilities are encouraged to maintain their personnel, it is unclear how much MSME would gain from it because of the lack of details. The EPF and Miscellaneous Provisions Act are only limited to organizations with 20 or more workers. Most small and informal economic units cannot provide PF accounts for their employees and are exempt from this relief measure.

D. Measures to Enhance Access to Credit

Formal credit networks like banks and NBFCs would have a substantially more significant role in supplying

funding for this sector effectively. MSME loans now represent a relatively small share of the overall outstanding credit to this sector, with credit development showing signs that the pandemic was long before it began. While SIDBI will play a role in encouraging banks to lend to medium enterprises, a viable model of lending must be established for this market, in which banks are encouraged to innovate and practice due diligence in their lending strategies. On the request of priority sector lending norms, where PSBs target 60 percent of their loans only on micro-commercial sectors, this would only be necessary if loans are a crucial business practice for banks. FinTech lenders' position needs to be strengthening to make structural improvements to these sectors' lending activities. Because of the current economic landscape, digital lending platforms would be more suited to deliver unsecured loan commodities, considering the higher risk profiles for most micro and small enterprises. Since historical cash flows are made use of, along with the market opportunity, it is time to continue to be part of the MSME loan ecosystem. The financial report for 2019-2020 outlined the need for PSBs to accept and partner with FinTech lenders to make smoother and brighter lending decisions using research methods that they also use to determine the funding potential of small firms.

E. Measure to relieve cash flow problem

Liquidity plays an integral part in the management of the crisis. Maintenance of cash flow is a bigger problem for firms currently facing loss due to fewer cash reserves or unstable cash flows. The World Health organization has already quoted that the Coronavirus is here for the long haul, so even the firms with sound financial positions may soon lose their immunity. It is essential since nobody knows how much time it would take to demand and supply chain to be normal. So, the Government should endorse these undertakings by providing more tax incentives, budgetary assistance, incentives for jobs, and operational subsidies. Access to external finance can mitigate several risks in cash flow interruption and reduce financial costs. The availability of funds can be boosted by effectively reducing the interest rate for loans, improving the loan renewal policy, and increasing credit and medium- and long-term credit. To get them out of this economic recession, the Government should consider setting up an SME Recovery Fund.

F. Measures for Repayment of loans problem of MSMEs

MSMEs face various financial problems due to this COVID-19 pandemic and face difficulty in repaying

their loans. It is a subject of worry for the MSMEs, so; the Government should extend the Repayment of loans for a longer time to alleviate the pressure from them. Central banks from many countries worldwide, including Canada, Australia, New Zealand, the United States, and the United Kingdom, have also adopted similar strategies (ILO, 2020a).

7. LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

This study, which provides space for further studies, has certain limitations with informative theoretical and functional implications for the effects of COVID-19 on microeconomics.

1. Since this study only uses purposive sampling, it only takes the perception of selected MSMEs without giving importance to a particular industry, which leads to sampling size becoming too small (87). Therefore, sample sizes can be increased in future prospective studies by including other MSME industries.
2. The COVID-19 crisis created new challenges to workers' safety and wellbeing, public welfare, and a new organization's ethos in the workplace. Therefore, future research should also analyze these concerns and provide a more comprehensive view of the implications for industries in the pandemic.
3. This study was mostly limited to MSMEs in the north zone. Future researchers may explore other zones better to understand the effect of covid-19 on MSMEs in India.
4. This study uses an opinion survey to examine the impact of covid-19 on certain aspects. Future researchers could use various other data collection tools and data analysis techniques to investigate the validity of the effect of covid-19 on the MSMEs sector in India.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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