

The effect of Covid-19 pandemic on financial performance of Indian SMEs: Comparative evidence from manufacturing, service and pharmaceutical sector

Ramesh Prasad

Research Scholar, Department of Commerce, SKB University, WB, India

Abstract

Objective of the study: Covid -19 has severely damaged the nation economy all over the world. SMEs sector has tremendously suffered due to outbreak of Covid-19 (2020). The present research attempts to analyse the effect of covid-19 pandemic on financial performance of manufacturing sector, service sector and pharmaceutical sector of Indian SMEs, through a comparative study. The study has undertaken four financial performance indicators; total revenue, operating profit, net profit ratio and lastly liquidity. The analysis tools used pandemic.

Design & methodology: For the purpose of the study, 100 listed Indian SMEs have been selected for two years (2019-20 & 2020-21). The sample SMEs have divided into three parts; for the present study are average values, changes in average values and percentage change in average values of different financial performance indicators during the study periods.

Findings: The present comparative study found that the pandemic (Covid-19) has negatively affected both the manufacturing & service sector (excluding pharmaceutical sector) SMEs. However, pharmaceutical sector has performed well & less affected sector. Manufacturing sector SMEs have the most affected sector rather than service sector SMEs (excluding pharmaceutical sector). Only pharmaceutical sector SMEs have generated a positive abnormal return during covid period and improved its financial performance.

Practical implication: The present study added valuable practical implication for managers, policy makers of SMEs. The sector wise covid impact reveals a clear picture before managers and helps to frame a sound strategy to minimize the negative shock arises from covid pandemic.

Key words: Covid-19, Indian listed SMEs, Manufacturing sector SMEs, Service sector SMEs (excluding pharmaceutical sector), pharmaceutical sector SMEs.

Address for Correspondence: Ramesh Prasad
Research Scholar, Department of Commerce,
SKB University, WB, India
Email: rameshprasad765@gmail.com

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The effect of Covid-19 pandemic on financial performance of SMEs in India: Comparative evidence from manufacturing sector vs. service sector vs. pharmaceutical sector

Introduction: Covid-19 is more discussion topic since the last two years. The global pandemic of Covid-19 (**World Health Organization, 2020**) has sharply disrupted the global economy. Almost every business sector has shocked cause to this pandemic. Notably, the small and medium size enterprises (SMEs) have experienced a profound impact during the Covid period (**Enesi & Ibrahim, 2021**). This pandemic has badly hit SMEs business unit in the developing economy like India. The small and medium sized enterprises (SMEs) are the key drivers of India's economic growth. The Indian SMEs contribute significantly to Indian economy towards various economic development activities, like job creation, poverty reduction, increasing industrial output, regional development, etc. India has over 6.3 crore MSMEs (www.msme.gov.in, 2021), contributed 29% in India's GDP, and 50% in export.

The pandemic has resulted to an unprecedented threat to the financial performance of manufacturing as well as service sector SMEs in India. The financial performance of majority of Indian SMEs has dropped dramatically due to disruption of demand & supply, financial burden of operational expenses, liquidity crunch, shutting down of production etc. At this point, it is important to study the drastic impact of covid pandemic on financial health of Indian SMEs.

The objective of the current study is to examine the effect of covid-19 on financial performance of manufacturing sector SMEs, service sector SMEs and pharmaceutical sector SMEs in India. Past literature unable to explain the damage in the financial performance of India SMEs by making a comparative study between manufacturing and service sector SMEs and pharmaceutical sector SMEs. The current study is the modest attempt to present new insights

through a comparative financial performance analysis among Indian manufacturing & service sector SMEs, as well as pharmaceutical sector SMEs in the presence of covid period. Moreover, it is also examine whether it is manufacturing or service sector or pharmaceutical sector SMEs having largely affected due to covid-19.

The empirical study is divided into five phases. Starting from section 1: introduction, next 2: literature review, then 3: research design & methodology, 4: data analysis & findings and section 5: conclusions of the study.

Literature reviews: There are several relevant literatures reviewed for conducting the current study. **Grondys et.al, (2021)** studied the threats of SMEs in Poland caused to the covid pandemic. Survey based analysis revealed that intense competition, higher amount of energy price & inadequate profit have major threats to SMEs. **Juergensen et.al, (2020)** investigated the effect of covid-19 on manufacturing SMEs in Europe. The study reported that majority of SMEs has faced logistic problem, disruption in demand during covid period. **Harel, (2021)** examine the revenue status of small businesses and also studied the changes in their business operation. The study highlighted that revenue of all small business was not affected and unaffected businesses not interested to change their business operations. **Belas, (2021)** analyzed the effect of pandemic (Covid-19) on different financial management areas of SMEs in Czech Republic and Slovak Republic. The study found that covid-19 has negatively affected the financial performance of SMEs in both the countries. **Kumar et.al, (2020)** discussed about the adoption of technology to survive during covid-19 period in the context of Indian SMEs. **Chowdhury et.al, (2020)** emphasized on the impact of covid pandemic, particularly food & beverage industry in Bangladesh and feasible strategies to minimize the negative impact of pandemic on these industry. They highlighted that insufficient amount working capital, expiry of usage of product, supply chain problem, shortfall of ROA and decreasing in employee size are serious impact of pandemic. Further, added that building network with new distributor &

redesigning supply chain would be fruitful strategies to deal with difficult time. **Verma et.al, (2021)** conducted a sector wise impact of covid-19 by using event study method and reported that majority of the business sector has earned abnormal positive return at the time of initial lockdown.

After analyzing the recent studies, it has been observed that there are limited studies in India, concerned on a comparative study relating to the impact of covid-19 on manufacturing, service and pharmaceutical sector SMEs. The present study would bridge this literature gap.

Research design & methodology: The aim of the current study is to investigate a comparative study relating to the impact of covid-19 on manufacturing SMEs, service sector SMEs. and pharmaceutical SMEs in India. Furthermore, it has also attempted to identify among the three sample sector SMEs which sector has most affected by the corona pandemic and which one is least affected sector. To fulfill the above research objectives, 100 Indian SMEs have been divided into three sectors, consist of 56 manufacturing sector SMEs , 35 service sector SMEs and 9 pharmaceutical sector SMEs. Pharmaceutical sector SMEs have kept under separate sector category. The past literature discussed that pharmaceutical sector has performed well during covid (**Mittal & Sharma, 2021**). Hence, to figure out the actual negative impact of covid-19 on SMEs business, the sample has been distributed into three segments. These sample SMEs have been selected on the basis of listing criteria and availability of financial data. The study period has separated into two time frames. The Pre covid phase lasts from 2019 to 2020, and the covid period lasts 2020 to 2021. Four financial performance proxies have used during the study period. Total revenue, operating profit, net profit ratio and liquidity are the indicators of financial performance.

Table 1 showing financial performance indicators used for the study

Financial performance Indicators	Formula
Total revenue	Operating revenue+ non operating revenue
Operating profit	Operating revenue- operating expenses
Net profit ratio	$\frac{\text{Net profit}}{\text{Sales}}$
Liquidity	$\frac{\text{Current asset}}{\text{Current liability}}$

Source: Own calculation

Table 2 showing formula used to calculate the negative impact of covid-19 on financial performance

Change in financial performance indicators = financial performance indicators value in 2019-20 - financial performance indicators value in 2020-21.
Impact of Covid-19 on financial performance(%) = Percentage Change in financial performance indicators
$\frac{\text{Change in financial performance indicators}}{\text{Value of financial performance indicators during pre-covid period}}$

Source: Own calculation

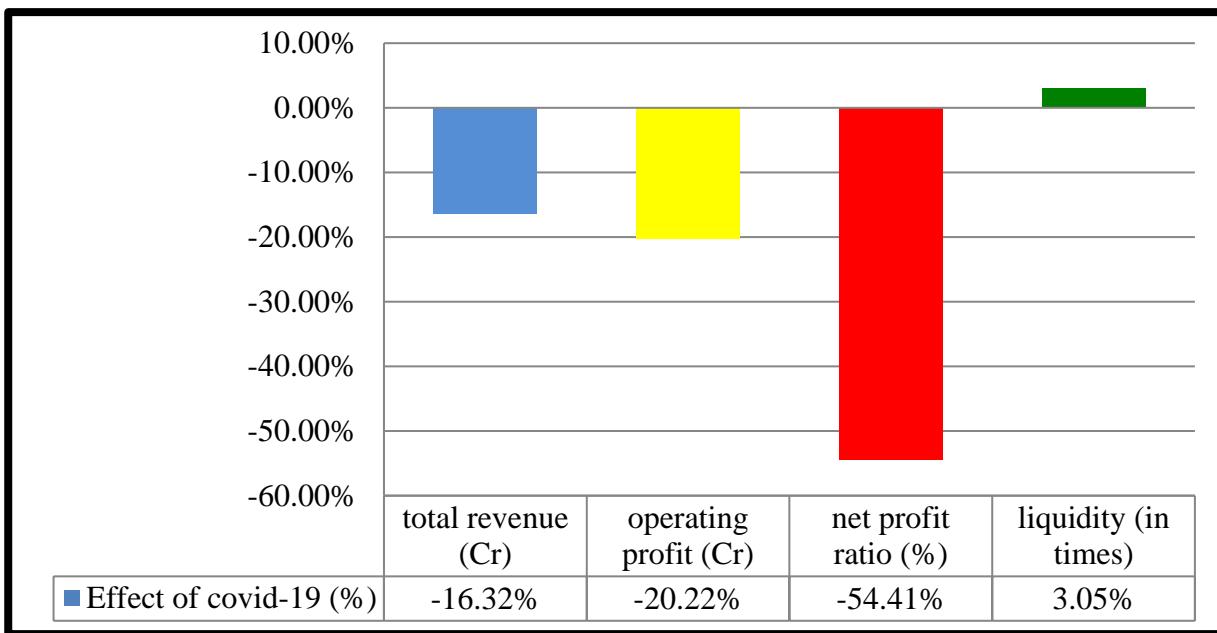
The mean/ average values of above variables have recoded, collected from annual report of sample SMEs. Then change in the average values between two study periods has separately recorded of each financial performance indicators. Thereafter, the respective change values have been expressed in percentage form.

Data analysis & findings: The objective of the study is to investigate the impact of covid-19 pandemic on financial performance of Indian SMEs belonging to manufacturing & service sector. The empirical results are explained in the following tables & graphs. In the below tables, financial performance of 2019-20 (pre-covid period) and 2020-21 (during covid period) are presented. Moreover, the respective change in financial performance indicators, both in absolute value as well as in percentage form has shown in the respective tables.

Table 3 showing effect of covid-19 on financial performance of Indian manufacturing sector SMEs.

A= Financial performance of a indicators (A)	B= Average value before covid (2019-2020)	C= Average value during covid (2020-2021)	D= Change	E= Percentage Change between two period (D/B*100)
Total revenue (Cr)	229.08	191.69	-37.39	-16.32%
Operating Profit (Cr)	22.74	18.14	-4.6	-20.22%
Net Profit ratio (Net profit to sales)	3.40	1.55	-1.85	-54.41%
Liquidity (in times)	1.97	2.03	+0.06	+3.05%

Source: Own calculation

Figure 1 showing the effect of covid-19 on Indian manufacturing SMEs

Source: Own calculation

Interpretation: The above table & graph indicates the financial performance of manufacturing SMEs during the study period. The average values of total revenue, operating profit, net profit ratio & liquidity position of sample manufacturing SMEs during before covid period (2019-20) are 229.08 Cr, 22.74 Cr, 3.40 % and 1.97 times respectively. However, these financial performance indicators have changed during covid period. Total revenue, operating profit, net profit ratio have been dropped to 191.69 Cr, 18.14 Cr, 1.55 % respectively and liquidity position has improved a little bit as 2.03 times. Total revenue, operating profit, net profit ratio have been declined during covid period in comparison to before covid period by -37.39 Cr, -4.6 Cr and 1.85%. in case of liquidity, it has raised by 0.06 times during covid period. There has been a negative impact on three financial performance indicators selected for the study. These indicators are total revenge (-16.32%), operating profit (-20.22%) and net profit ratio (-54.41%). While, liquidity has quiteley

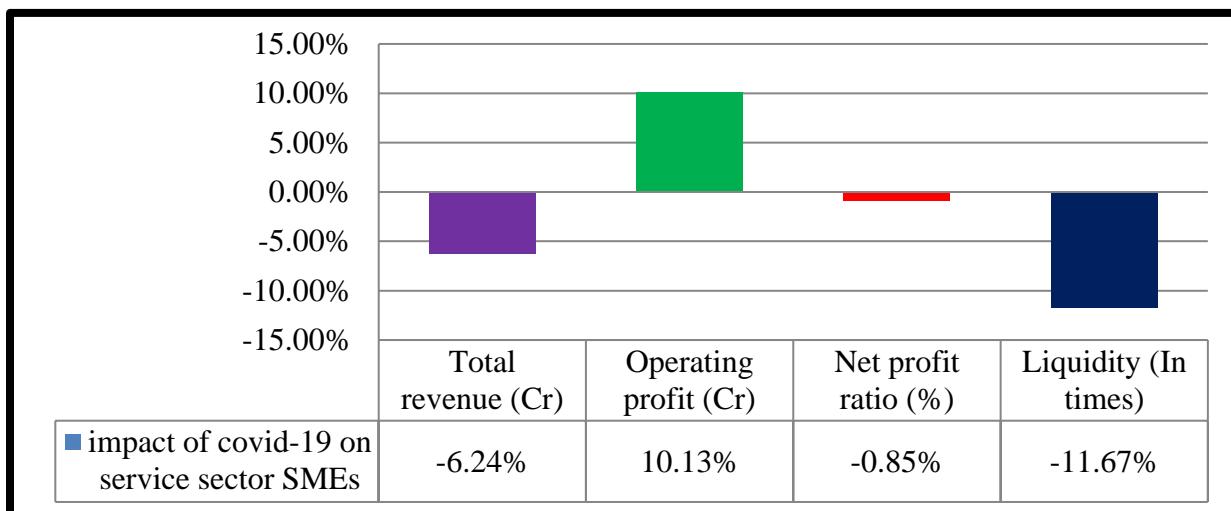
improved by 3.05%. The overall evidence from the above table confirmed that during covid-19 manufacturing SMEs have been severely affected.

Table 4 showing effect of covid-19 on financial performance of Indian service sector (excluding pharmaceutical sector) SMEs.

A= Financial performance of a indicators (A)	B= Average value before covid (2019-2020)	C= Average value during covid (2020-2021)	D= Change	E= Percentage Change between two period (D/B*100)
Total revenue (Cr)	113.99	106.88	-7.11	-6.24%
Operating Profit (Cr)	13.42	14.78	+1.36	+10.13%
Net Profit ratio (Net profit to sales)	7.04	6.98	-0.06	-0.85%
Liquidity (in times)	2.40	2.12	-0.28	-11.67%

Source: Own calculation

Figure 2 showing the effect of covid-19 on Indian service sector SME



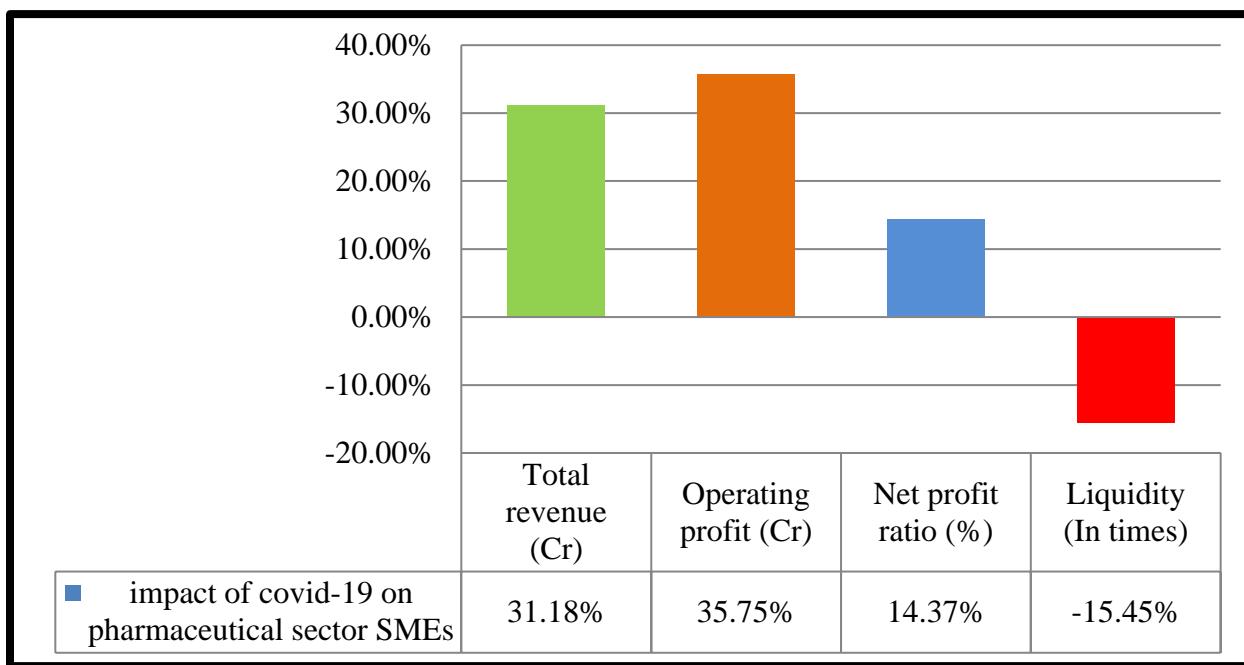
Source: Own calculation

Interpretation: The above table represents the financial performance of service sector SMEs before covid and during covid period. The average values of total revenue, operating profit, net profit ratio & liquidity position of service sector SMEs are 113.99 Cr, 13.42 Cr, 7.04% & 2.40 times respectively. However, total revenue, net profit ratio & liquidity have decreased to 106.88 Cr, 6.98% & 2.12 times during the covid period than 2019-20. But operating profit is higher during covid period than pre covid period. After comparing two years data, total revenue, net profit ratio & liquidity have decreased by -7.11 Cr (-6.24%), -0.06% (-0.85%), -0.28 times (-11.67%) respectively than 2019-20 financial performance.

Table 5 showing effect of covid-19 on financial performance of Indian pharmaceutical sector SMEs.

A= Financial performance of a indicators (A)	B= Average value before covid (2019- 2020)	C= Average value during covid (2020- 2021)	D= Change	E= Percentage Change between two period (D/B*100)
Total revenue (Cr)	161.93	213.44	+51.51	+31.81%
Operating Profit (Cr)	29.56	40.13	+10.57	+35.75%
Net Profit ratio (Net profit to sales)	9.67	11.06	+1.39	+14.37%
Liquidity (in times)	2.33	1.97	-0.36	-15.45%

Source: Own calculation

Figure 3 showing the effect of covid-19 on Indian service sector SME

Source: Own calculation

Interpretation: The above table & graph has indicated the financial performance of pharmaceutical sector SMEs. The financial performance indicators (excepting liquidity) of pharmaceutical sector SMEs is comparatively higher during covid period than last year(2019-20) financial performance. Total revenue during period is 51.51 Cr higher than pre covid period, which is approximately 31.18% higher of last year revenue. Similarly, positive phenomenon has found in case of operating profit & net profit ratio. Operating profit is 35.75 and net profit ratio 14.37% higher than pre covid period. However, liquidity position has declined more than 15% than last year liquidity positive. It might be the case that, they have utilized more and more liquidity into their business operational activities, due to the high demand of healthcare services.

Conclusions: The current study makes an attempt to investigate a comparative impact of covid-19 pandemic on three different sectors; manufacturing, service & pharmaceutical sector SMEs in India. For conducting the study, Indian listed SMEs have selected. After performing the comparative

study, it is found that, the impact of covid is not similar for each sector. Financial performance of both manufacturing and service sector SMEs has been declined during covid period in comparison to pre covid period. However, pharmaceutical sector SMEs has been affected differently due to pandemic. This sector has gained abnormal return during covid period. The study concludes the following remarks. The manufacturing sector SMEs have largely been suffered due to covid19 outbreak in terms of total revenue, operating profit & net profit ratio rather than service sector SMEs. Decline in total revenue of manufacturing SMEs has more than two time of the decline in total revenue of service sector SMEs. Manufacturing SMEs has incurred operating loss during covid period. Both manufacturing & service sector SMEs has suffered net loss, which is comparatively higher in manufacturing SMEs than SMEs in service sector. Liquidity position has badly influenced to service sector than manufacturing SMEs. The possible explanation for this phenomenon might be that, government relief package would help at first manufacturing SMEs for strengthening their liquidity position. The sample pharmaceutical SMEs has achieved double digit positive impact on total revenue, operating profit & net profit ratio. Finally, after conducting this novel attempt, it is found that manufacturing sector SMEs has become the major victim of covid-19, drastically declined their financial performance. In addition, Service sector SMEs has also affected but comparatively lower than manufacturing sector SMEs. In case of pharmaceutical sector SMEs, particularly this sector has accelerated their financial performance, even pandemic period.

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