

## **Impact of Covid-19 Pandemic on India's Pharmaceutical Sector with Reference to Stock Market Activity and Export Performance**

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### **Abstract**

The economies of various developing countries have suffered due to Covid-19 and shutdown pronouncements. In this study, the researcher has concentrated on the pharmaceutical industry's performance while considering the stock market, exports, and the amount of money the government has spent on its role in promoting the sector. The pharmaceutical industry played a crucial role in facilitating essential drugs and was spearheaded to flatten the virus curve. When it came to stock market performance, many sectors underperformed during the Covid-19 pandemic, but the healthcare sector shockingly outperformed them all. The current study has covered the same causes for this phenomenon. Globally, India's pharma industry has always been laudable due to cost advantages and inexpensive pharmaceuticals. Although recent export performance has been remarkable, there are still a few changes that the Indian pharma sector needs to do before it can become self-sufficient. Two factors, namely stock market activity, and exports, have been used to measure the performance of the sector. The stock market returns from the major sectors of the Indian economy, including Information Technology (IT), Automotive, Oil and Gas, FMCG, Banking, Metal, and BSE SENSEX, have been compared. The key sector is pharmaceutical. It has been inferred that the healthcare sector has performed comparatively well compared to other sectors. Data from 2016–2017 to 2021–2022 have been considered when analysing export performance. The reason for such high numbers with regard to export performance is that there was a high demand for crucial pharmaceuticals and other supplies, which India successfully met for over 150 countries. Additionally, the role of the government has also been covered.

### **Keywords**

Covid-19, Pharmaceutical sector, Stock market, Exports, Government initiatives, and Healthcare.

## **1. Introduction**

In December 2019, the new Coronavirus, also known as Covid-19, first appeared in Wuhan, a city in China. The World Health Organization (WHO) had to declare a pandemic on March 11, 2020, as a result of the lethal and extremely contagious virus's rapid global spread and dreadful effects. Being extremely contagious, the virus was primarily disseminated by coughing and sneezing, which are typical cold symptoms. Governments everywhere were compelled to impose limitations in order to slow the virus's rate of spread. In an attempt to interrupt the transmission cycle, cities were placed under lockdown, affecting all public spaces such as offices, schools, and other academic institutions. This was more than enough to affect the pharmaceutical industry as well as the entire world economy. On January 30, 2020, Kerala, India, announced the country's first coronavirus case. Following the first case to be recorded, reports of the virus spreading to further states in the nation soon followed. In order to stop the sickness from spreading, the Indian government had to make the necessary and prudent choice on March 24 to declare a strict lockdown on the nation. The pharmaceutical sector is essential in facilitating first-rate healthcare services during a pandemic since the distribution of medicines may be hampered for a variety of reasons.

The occurrence of Covid-19 has a significant negative impact on the world economy. The overall recession, the decline in demand, and the disruption in supply logistics all had an impact on the industrial sector. According to an IMF analysis from January 2020, the global economy shrank by 3.5 percent in 2020. It is predicted that this year's decline will be reversed by 5.5 percent in 2021 and 4.2 percent in 2022. The Covid-19 outbreak had varying effects on different sectors and businesses. As countries all around the world tightened travel regulations and closed their borders, the travel and tourist industries were particularly badly impacted. The travel restrictions have resulted in a decline in flights worldwide. On the other side, as more people chose to purchase their non-essential items online or were forced to do so because stores had to close due to the outbreak, online commerce took off. International stock markets also witnessed sharp decreases in value after the coronavirus epidemic, but they were able to quickly make up those losses.

## **2. Glance at India's Pharmaceutical Industry**

The world's leading provider of generic pharmaceuticals in India, and it plays a crucial role in the development of pharmaceutical and vaccination goods and is anticipated to grow even more in the years to come. The Indian pharmaceutical

industry, which was essentially non-existent in the 1960s, has gone a long way in helping to offer vital medications to more than 200 countries in their fight against the deadly coronavirus. Over 60 percent of the world's demand for vaccinations is met by the Indian pharmaceutical industry, which also accounts for 20 percent of the total supply volume. Active Pharmaceutical Ingredients (APIs), Bio-similar, Formulations, and Contract Research and Manufacturing Services are the main segments of the Indian pharmaceutical industry. India has established itself as the top supplier of the DPT, BSG, and measles vaccines in the world. Affordable and high-quality medications are the industry's main selling points, making India the "Pharmacy of the World." Affordable HIV medications are one of the industry's significant achievements; India is now the world's largest provider of low-cost immunizations. The Ministry of Chemicals and Fertilizers' Department of Pharmaceuticals reports that domestic pharmaceutical market turnover reached Rs. 129,015 crores (US\$18.12 billion) in 2018, up 9.4 percent year over year, while export income was US\$17.28 billion in FY18 and US\$19.14 billion in FY19.

India holds a 5.92 percent share of the global market for medications and pharmaceuticals. Formulations and biologics account for most of India's exports, accounting for 73.31 percent of total exports, followed by bulk pharmaceuticals and intermediates. In 2020–21, exports increased by 18 percent YoY to US\$ 24.4 billion, while in 2021–22, US\$ 24.62 billion worth of pharmaceutical products were sent abroad. This outstanding performance was accomplished despite challenges like supply chain disruption, prolonged lockdowns, and compliant manufacture. India exported medications and pharmaceuticals worth US\$ 2.4 billion in March 2022, a 23 percent increase from US\$ 1.97 billion in February 2022. Additionally, India boasts the most US Food and Drug Administration (USFDA)-compliant businesses outside of the USA.

### **3. Related Studies**

The Covid-19 pandemic increased uncertainty and risk around the globe and affected both developed and emerging economies like the United States, Italy, Spain, Brazil, and India. Existing studies recorded varied observations. The study by (Tirivangani et al., 2021) attempted to assess the impact of Covid-19 on the pharmaceuticals systems and supply chain in an environment which was resource-limited. The study reported a negative impact on assessing important medicines and there were bureaucratic obstacles resulting in discrepancies in the logistics supply chain in Namibia. Through their study (Almurisi et al., 2020) they were able to explore that there is an urgent need to acknowledge the dysfunction of

production in the economic system. Major policy changes should be implemented in areas of research & development in the pharma sector. In the study of **(Dapke et al., 2021)** the authors attempted to shed light on the present condition of the pharmaceutical industry and its impact on public health. It further emphasized the need to relax the strict government policies by giving more power to the public sector and making amendments to the company laws for workers. The study by **(Szczygielsk et al., 2022)** provided a comprehensive analysis to study the influence of Coronavirus on a global level by taking in consideration the sample of 68 global industries. The results indicated that the industries had to suffer a huge blow due to Covid and the financial performance of the firms were affected by it.

Talking about the Indian stock market, there have been few studies among which **(Varma et al., 2021)** observed a huge fall of around 40 percent of major stock indices' value but certain sectors like pharma, FMCG goods, and, IT faced the least negative impact. The study by **(Behera et al., 2021)** investigates the effect of Coronavirus on the Indian pharma sector and their results identified that the average return of the pharma sector is positive during Covid-19 but there was a mixed response at the firm level. There has been an empirical investigation conducted by **(Bora & Basistha, 2020)** on the fluctuations of stock prices in India and they also tried to make a comparison of the return of stock price in the pre-Covid and during the pandemic. They were able to identify that the returns were higher in the pre-Covid period. Taking into consideration the existing literature, it has been observed that the stock prices of various sectors are negatively affected but there have been studies in which there has been a significant positive abnormal return in the healthcare and pharma sectors. The study **(Mittal & Sharma, 2021)** used event study methodology to make a comparison among different sectors with health and pharma being the test factor. The study observed that there have been abnormal returns in the test sector.

Focusing on a specific sector like the pharmaceutical there arises a need to go through literature regarding policy and regulations because no sector is independent of them. There have been several studies conducted centralizing the regulation policies. A study by **(Ahmed et al., 2020)** commented on the need to acknowledge the opportunities for trade for the Indian pharmaceutical sector and the latest interventions regarding the export policy. It concluded that for India to meet the global demand, the country needs to strengthen its productivity through an active and meticulous policy structure. The article by **(Guerin et al., 2020)** emphasized the crucial role of the Indian pharmaceutical sector to not only meet domestic demand but also cater globally and it is only possible when there is

significant prevention in the disruption of the supply chain. The study (**Rakshit & Paul, 2020**) highlighted the impact of Covid-19 on a different sector of the Indian economy and attempted to acknowledge the reasons through which India might be able to boost its business strategies in the post-pandemic period. (**Gupta et al., (2022)**) focused on using a socio-economic framework by considering parameters such as unemployment, foreign trade, industrial production, and equity markets. It is quite evident through the study that India has proven herself as a major player in the global economy. The short and long-term impact of the Covid-19 pandemic on the pharmaceutical sector was assessed by (**Ayati et al., 2020**). They further concluded that changes in demand, revisions in regulations, and R&D processes were the result of short-term impact while a move towards self-sufficiency might be a long-term impact on both domestic as well as global levels.

#### **4. Significance of the Study**

Research into Covid-19 and its effects on the economy is ongoing and receiving a lot of attention. Evaluation of the effects of specific sectors on account of Covid-19 is crucial. In previous studies, extensive research has been conducted in the area of tourism and hospitality, aviation, and automobile sector, etc. and the findings shed light on the notion that Covid-19 had a detrimental effect on the above industries. One such dynamic industry that makes relatively significant contributions to the Indian economy is the pharmaceutical sector. Among the academicians, corporates, and economists' the pharma sector is considered an industry which is not only dynamic but also reputable and forward-thinking one. Hence, it is interesting to explore this industry and how such a deadly virus influenced it.

#### **5. Objectives of the Study**

- 5.1** To analyse the impact of Covid-19 on the performance of the Indian Pharmaceutical industry.
- 5.2** To explore the initiatives taken by Govt. of India to strengthen the Indian Pharmaceutical industry.

#### **6. Research Methodology**

In order to obtain clarity on the performance of the pharmaceutical industry during the Covid-19 pandemic, analysis has been done at several levels. A comparative analysis has been conducted between the stock market returns from different leading sectors of the Indian economy like Information Technology (IT), Automobile, Oil & Gas, FMCG, Banking, Metal, and BSE SENSEX with

pharmaceutical being the key sector. The top 30 firms in India are spread among different sectors in the combined weighted stock index known as BSE SENSEX. The BSE SENSEX and other selected sectorial indices' closing data were derived from the official BSE (Bombay Stock Exchange) website. To calculate the return, we have taken closing data of selected indices from 27<sup>th</sup> January 2020 to 14<sup>th</sup> April 2020. Results paint a hazy picture of how various sectors have fared; keep in mind that these returns pertain to a time period following the announcement of the first incidence of Covid in India.

To analyse the export performance of the pharmaceutical sector, data from FY 2018-2019 to FY 2021-2022 has been extracted from the *Directorate General of Commercial Intelligence and Statistics* (DGCIS). Other secondary data has been derived from official websites like the *Department of Pharmaceuticals* under the Ministry of Chemical & Fertilizers, India Brand Equity Foundation (IBEF), and RBI Handbook of Statistics.

**Table 1:- Comparative Analysis between Stock Market Returns from Different Leading Sectors with Pharmaceutical Sector**

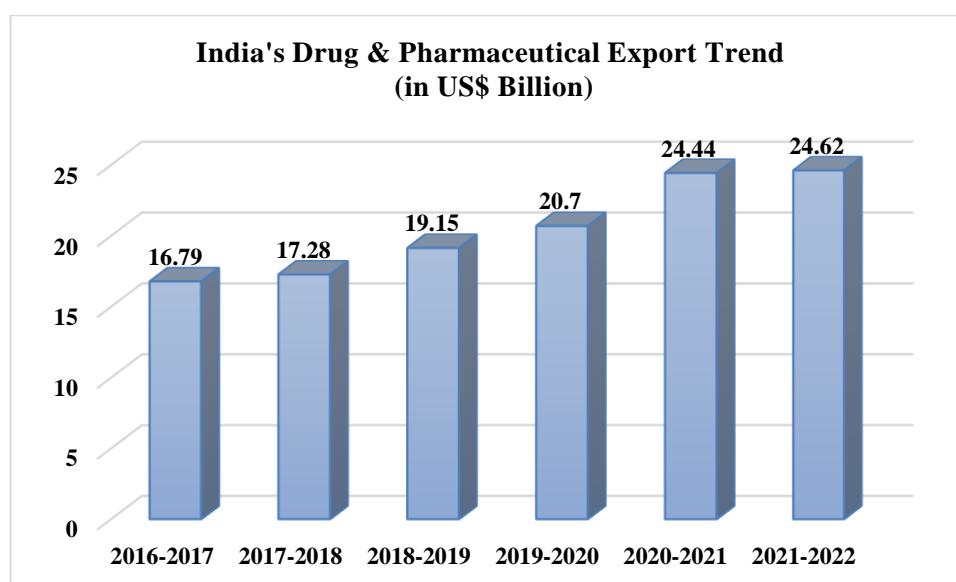
Sector	Return
BSE SENSEX	-24.84%
BSE HEALTHCARE	4.74%
BSE IT	-21.38%
BSE AUTO	-31.52%
BSE OIL & GAS	-23.68%
BSE METAL	-39.5%
BSE BANK	-35.75%
BSE FMCG	-8.49%

*Source:* Author's Compilation

From the observation of the trading return of the last 30 days from 27<sup>th</sup> January 2020 to 14<sup>th</sup> April 2020 in which India witnessed its first Covid case and the nation-wide lockdown, we considered several indices like BSE SENSEX, IT, automobile, oil & gas, healthcare, metal, bank and FMCG and among these only healthcare sectors witnessed positive returns. The test sector which was BSE Healthcare had produced a 4.74 percent return, higher in comparison to any other sector. Every other sector produced negative returns. The worst affected sector was metal as its return came crashing down to a negative 39.5 percent.

The healthcare and pharma sector witnessed positive returns because during the Covid-19 outbreak, the demand for generic and branded generic drugs rose

significantly leading to a rise in the pharma stocks thereby delivering positive returns. India's standing in the global pharma industry has always been commendable as it has a cost advantage and the drugs manufactured here are affordable. These factors played a catalyst in making a good image in front of domestic as well as global investors thereby encouraging the demand for drugs made in India.



Source: India Brand Equity Foundation (IBEF)

### Graph 1:- Performance of Indian Pharmaceuticals Export

In the recent past, the performance of pharma exports has been commendable despite global trade discrepancies due to Covid 19. Even when there were supply chain disruptions due to the pandemic Indian pharmaceutical exports increased significantly from 16.79 US\$ in 2016-17 to a whopping 24.62 US\$ in 2021-22. The reason behind such good numbers is that there was a huge demand for critical drugs and other supplies which India successfully catered to over 150 countries. This growth momentum was carried forward even in the year 2022.

Due to the global stockpiling of pharmaceuticals and the increasing demand for the Covid-19 pandemic-related vaccines and medications that India was able to supply, exports have surged significantly in recent years.

Although Indian pharmaceutical exports have seen a growth trend but it cannot also be denied that there has been an increased dependency of Indian pharmaceutical companies on Chinese APIs. In the recent past, India has focused on finished formulations rather than in-house manufacturing of Active

Pharmaceutical Ingredients (APIs). This had led to dependence on China for raw materials. Larger imports of raw materials tend to improve the export performance.

## **7. Government Initiative**

The pharmaceutical sector of India is known to play a very important role in contributing to global health by providing high-quality yet affordable generic medicines. But that does not spare the industry from loopholes and challenges. The biggest hurdle comes from inadequate funding with respect to R&D which somewhere leads to dependence of raw materials on other countries hence contributing to the reasons as to why India is lagging in becoming the largest producer of pharmaceutical products with respect to value.

The Government of India has taken some initiatives in order to boost the pharmaceutical sector. The budget passed by the Union Government for FY 2022-23 clearly mentions the allocation of Rs. 3,201 crores (US\$ 419.2 million) solely for research purposes. In fact, in November 2021, the *Hon'ble* Prime Minister of India Mr. Narendra Modi set in motion a Global Innovation Summit with respect to the pharmaceutical sector. The main aim of the summit is to have a rigorous discussion among speakers both international and national on a variety of topics like funding for infrastructure, collaboration of industry and academics, regulations, and innovation funding.

The Ministry of Health and Family Welfare Rs. 83000 crores (US\$ 10.86 billion) has been set aside. Apart from this, under the Pradhan Mantri Swasthya Suraksha Yojana, the Union Budget has set aside Rs. 10,000 crores (US\$ 1.28 billion). Rs. 3,050 crores (US\$ 399.4 million) has been allocated to the Ministry of AYUSH. In order to improve the existing infrastructure of the pharmaceutical sector and to further assist small and medium enterprises, the Strengthening of Pharmaceutical Industry (SPI) Scheme has been launched in March 2022 for the FY 2021-22 to FY 2025-26 with the financing of Rs. 500 crores (US\$ 665.5 million). In order to boost the development and production of domestically produced vaccines, in May 2021, Aatmanirbhar Bharat 3.0 mission was launched. In order to enable India to be more self-sufficient in the production of bulk drugs, a Production Linked Scheme (PLI) has been launched by the Dept. of Pharmaceuticals with a total outlay of Rs. 6940 crores (US\$ 951.27 million) from FY21 to FY30.

## **8. Findings and Conclusion**

Covid-19 has had a significant impact on practically every nation's economy in addition to its health. Lockdowns were implemented in many nations in order to



stop the virus's spread. The healthcare industry bore a great deal of responsibility in this circumstance because they were leading the effort to flatten the virus's upward slope. The lockdown was crucial, but it also dealt serious damage to the economies of many nations since it reduced corporate activity, which was a significant shock to the world's emerging economies. On the one hand, the proactive adoption of lockdown was successful in containing the infection, but on the other hand, there were significant economic consequences.

This analysis has led to the conclusion that the healthcare sector in India was performing far better than other sectors at the time of Covid-19, despite apparent contradictions. India's enormous contribution to the supply chain of critical pharmaceutical products was a major factor in the growth of the healthcare sector. When it comes to the health sector's export performance, a growth tendency has been observed.

## **9. Limitation of the Study**

Future academicians should explore a broader time period for the examination of the export performance which can exhibit better findings and how much has exporting activity has altered. An action framework can be created to provide a solution for how to address the gaps that the industry faces in achieving self-sufficiency.

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