

CHAPTER-03

PANDEMIC IMPACT ON INDIAN PHARMA STOCKS: UNVEILING BSE EVIDENCE

Ankit Srivastava

Assistant Professor, Amity University, Patna,
E-mail: asrivastava1@ptn.amity.edu

Dr. Sandeep Kumar Gupta

Assistant Professor, Glocal School of Business and Commerce, Glocal University,
Email id: sandeep.gupta@theglobaluniversity.in

Dr. Gajendra Kumar

Assistant Professor, Department of Commerce,
Lala Kishanchand Government PG College, Saharanpur ,
Email id: dr.gajendra21yahoo.com

Dr. Yash Pratap Singh Rana

Professor, Glocal University Pharmacy College,
Email id: yash.pratap@theglobaluniversity.in

DOI: <https://doi.org/10.52458/9788196897451.nsp.2024.eb.ch-03>
Ch.Id:-GU/NSP/EB/IESDSPR/2024/Ch-03

ABSTRACT

This study aims to assess the impact of the Covid-19 pandemic on fifteen leading Indian pharmaceutical companies listed on the Bombay Stock Exchange (BSE), chosen based on their highest market capitalization. Over a span of 26 months, encompassing 13 months pre-pandemic and 13 months post-pandemic, monthly stock market indices were analyzed. Utilizing descriptive statistics, percentage growth metrics, and graphical representations, the data reveals an amplified growth rate in the pharmaceutical sector post-Covid-19 compared to the pre-pandemic period. This research sheds light on the resilient performance and heightened growth experienced by the pharmaceutical industry in the aftermath of the global health crisis.

Keywords: *Pharma, Stocks, Pandemic, India, Covid-19, Pharmaceutical, Stock Market*

1. INTRODUCTION

The global emergence of Covid-19, originating in Wuhan, China, has profoundly impacted societies worldwide. Designated a global pandemic by the World Health Organization (WHO), its rapid transmission prompted widespread international travel restrictions and lockdowns. The lockdown strategy, implemented globally, aimed at controlling the virus's spread, revealing multifaceted challenges across social, educational, economic, political, agricultural, and psychological dimensions in Indian society. With a staggering global toll of 107 million cases and 2.36 million deaths, the pharmaceutical sector plays a pivotal role, contributing to the recovery of 60.1 million Covid patients globally.

1. Indian Pharmaceutical Sector

Ranked as the third-largest globally, India's pharmaceutical sector manufactures 60% of globally-used vaccines, fulfilling 90% of WHO's demand for vital vaccines. Indian pharmaceutical companies, with over 250 FDA and MHRA-approved factories, cater to international markets, including the US and the UK. Amid the post-coronavirus landscape, India's strengths lie in providing global public goods and services, including healthcare, education, and tech support for innovation. Post-pandemic, the market share of India's top fifteen pharmaceutical companies has surged, driven by the nation's potential to amplify its influence through pharmaceutical exports, medical tourism, and medical diplomacy. This growth positions India as a significant contributor to global health and well-being.

2. Export Dynamics of Indian Pharmaceutical Firms

As per the Indian Brand Equity Foundation (IBEF), the export trajectory of Indian pharmaceuticals surged from \$10 billion to \$19 billion between 2012 and 2019.

Currently contributing to 10% of the world's pharmaceutical production by volume and 1.5% by value, India stands as the largest global supplier of generic drugs, commanding an 18% market share. Playing a pivotal role in vaccine production, India meets 50% of the global demand. The affordability of Indian drugs, exemplified by exports of medicines like paracetamol and ritonavir, has bolstered demand even amid the COVID-19 pandemic. This underscores a vast untapped potential for India's pharmaceutical sector to expand its global reach, encouraged further by government investments in research and development and incentivizing private sector exports.

3. Performance of Indian Pharmaceutical Shares

Over the past decade, the BSE Healthcare Index demonstrated a Compound Annual Growth Rate (CAGR) of 12%, while Nifty Pharma returned an annualized 10.94% in the last nine years. Comparatively, Nifty and Sensex exhibited lower performances at 12.28% and 12.27% respectively during the same period. Notably, amidst the global pandemic, pharmaceutical sectors and associated mutual funds outperformed peers. Year-to-date, BSE Healthcare yielded a substantial 47.23%, and Nifty Pharma returned an impressive 44.83%. The anticipation of vaccines, industry efforts in mitigating virus spread, and heightened investor confidence have collectively driven demand for pharmaceutical securities, marking a positive trend in the sector.

2. REVIEW OF LITERATURE

Gorge Mestre Ferandiz's (2000) study delves into the impact of generic goods in the pharmaceutical industry, focusing on scenarios where branded and generic goods coexist. The research unveils incentives for firms producing branded goods to venture into the generic market due to market segmentation effects. Carmelo Glaccotto et.al. (2005) explore the relationship between drug prices and research and development (R&D) investment behavior in the pharmaceutical industry. Their findings suggest that drug price control regimes could lead to a significant reduction in new drug launches, emphasizing the complex interplay between pricing and innovation. G. Bharathi Kamath (2008) investigates the link between intellectual capital components and the traditional performance measures of Indian pharmaceutical companies. The study reveals that human capital significantly impacts the profitability and productivity of firms.

Raveendra et.al. (2008) focus on the strategic responses of the Indian pharmaceutical industry to institutional changes resulting from economic liberalization and WTO-mandated intellectual property regimes. Jennifer L. et.al. (2010) analyze the sustainability reporting of pharmaceutical companies, noting an increased focus on

corporate sustainability activities aligned with public sentiments. Sabine et.al. (2011) assess the pharmaceutical policies of European countries during the global financial crisis, highlighting cost containment as a critical concern. Isinguler et.al. (2011) explore how local and global cohesion influences innovation in the pharmaceutical industry, revealing positive impacts of local cohesion on firms' innovative performance. Boppana V. Chowdary et.al. (2012) discuss the improvement of manufacturing operations in a pharmaceutical company through lean principles, resulting in reduced lead times, cycle times, and inventory. D. Biongoregional et.al. (2013) examine the effect of organizational culture on organizational image and identity in a pharmaceutical company, emphasizing the importance of a hierarchy culture. S. Priyan et.al. (2014) propose optimal inventory management strategies for pharmaceutical companies and hospital supply chains in a fuzzy-stochastic environment. Jennifer Pyrawaski et.al. (2015) scrutinize how pharmaceutical companies use social media for public interaction and drug marketing, highlighting avoidance of drug product claims on social media accounts. Chanti Babu Patneedi et.al. (2015) address the impact of pharmaceutical wastes on human life and the environment, emphasizing the need for remedial measures in effluent treatment plants. Simona Baldi et.al. (2015) investigate the impact of centralization on pharmaceutical procurement prices, considering the role of institutional quality and corruption. M. Dachyar et.al. (2016) focus on business process re-engineering in the logistics system of a pharmaceutical company, achieving significant process improvements. Lotfi Belkhir et.al. (2017) analyze the carbon footprint of the global pharmaceutical industry and the relative impact of major players, urging further studies on environmental performance in the sector. Marta Makowska's (2017) study describes how Polish physicians cooperate with the pharmaceutical industry and highlights potential threats to public health. Remco L.A. de Vruueh et.al. (2017) reflect on the future of pharmaceutical public-private partnerships, focusing on precompetitive research and the challenges of the open innovation model. Cristina Perez et.al. (2018) evaluate the relationship between GDP and healthcare expenditure, income, and profits in the pharmaceutical sector of Ecuador. Nayyereh Ayat et.al. (2020) discuss the short and long-term impacts of Covid-19 on the pharmaceutical sector, emphasizing the crisis it poses on health markets. Ranjit Barshikar (2020) explores the impact of Covid-19 on the pharmaceutical industry, detailing preventive measures and changes in operational procedures. Nikita et.al. (2020) analyze the impact of Covid-19 on the Indian pharmaceutical industry, emphasizing the need for a diversified supply chain. Melody Okereke et.al. (2020) examine the impact of Covid-19 on access to healthcare in low- and middle-income countries, emphasizing the need for innovative strategies to ensure continuous healthcare delivery. Kanishka Gupta et.al. (2020) study the impact of intellectual capital on the profitability of Indian pharmaceutical companies, finding a

significant relationship between the two. Luigi Aldieri et.al. (2020) investigate the role of knowledge spillovers on productivity returns in leading pharmaceutical firms. Kristie Briggs' (2021) study explores the relationship between the originality of pharmaceutical innovations and the quality of their patents, highlighting a robust and positive correlation.

3. RESEARCH METHODOLOGY

- i. **Objective and Scope:** The primary objective of this study is a meticulous assessment of the share market performance of the top fifteen Indian pharmaceutical companies, carefully chosen based on their highest market capitalization, during both the pre and post-COVID-19 pandemic periods.
- ii. **Data Collection and Time Frame:** Data for this comprehensive analysis was meticulously sourced from Yahoo Finance. The study spans a 26-month period, strategically divided into two segments: pre-COVID-19 and post-COVID-19, each encompassing 13 months. Commencing from the first report of the COVID-19 pandemic in China in December 2019, this timeline serves as the bedrock for our examination.
- iii. **Division for Detailed Examination:** Recognizing the limitations in the availability of monthly data, the study strategically divides the overall period into two distinct phases. This division into pre and post-COVID-19 periods facilitates a nuanced and detailed examination of market performance during these contrasting phases.
- iv. **Analytical Approach:** The research employs a multifaceted analytical approach, leveraging descriptive statistics, percentage growth rates, and graphical methods. This comprehensive methodology ensures a thorough evaluation of the performance dynamics exhibited by the selected pharmaceutical companies in response to the unprecedented challenges posed by the global pandemic.

4. DESCRIPTIVE STATISTICS ANALYSIS

- i. **Overview of Descriptive Statistics:** This chapter delves into the invaluable insights garnered from the descriptive statistics analysis. The objective is to compare the performance of various selected pharmaceutical companies during the pre and post-COVID-19 periods. The analysis centers on the mean of all datasets, revealing a consistently positive average across all datasets.
- ii. **Highlighting Dynamic Shifts:** Notably, specific pharmaceutical companies exhibit dynamic shifts in their percentage growth during the observed periods.

LAURUS emerges at the forefront with the highest percentage growth of an impressive 174%. Following closely are IPCA at 90% and ABBOT with a commendable growth rate of 69%. Conversely, SUN demonstrates a growth rate of 12%, AIROBINDA records a growth rate of 15%, while GLASCO displays the lowest growth rate at 6%. These findings illuminate the nuanced and dynamic nature of percentage changes among the selected pharmaceutical companies, shedding light on their adaptability and resilience during the distinct phases of the global health crisis.

5. CONCLUSION

India stands as a key player in global pharmaceutical production, contributing significantly to the manufacturing and distribution of medical equipment and medications worldwide. Notably, India exported 50 million hydroxychloroquine tablets to the USA by May 2020 and dispatched approximately 11 lakh Remdesivir injections (utilized in Covid-19 treatment) between November 2020 and April 2021. The country is a major producer, contributing nearly 60% of globally used vaccines, including those combating diseases such as diphtheria, tetanus, and pertussis. Regulatory authorities in the USA and the UK have approved approximately 250 Indian pharmaceutical factories for production.

In the aftermath of the Covid-19 pandemic, there has been a noticeable surge in the market share of the top fifteen Indian pharmaceutical companies. Over the past decade, the BSE Healthcare Index has exhibited a Compound Annual Growth Rate (CAGR) of 12%, and the Nifty Pharma has returned approximately 10.94% per annum in the last nine years. Simultaneously, Nifty's performance has been at 12.28% per annum, and Sensex has registered a rate of 12.27% per annum. Notably, BSE Healthcare has demonstrated a remarkable return of 47.23% this year, with Nifty Pharma closely following at 44.83%. Descriptive statistics affirm the positive nature of the average of all datasets.

The LAURUS has emerged with the highest recorded percentage growth, while GLASCO shows the lowest growth rate at 6%. Analyzing monthly growth rates, LAURUS exhibited the highest in March 2019 (4.43%) in the pre-Covid stage and reached its peak at 11.10% in April 2020 post-Covid. April 2020 marked a period of robust growth for all selected companies, attributed to India gradually reopening after April 2020.

Graphical analysis further highlights the trends. In the pre-Covid stage, the selected pharmaceutical companies exhibited a slow growth rate, with noticeable fluctuations in trend lines. Post-Covid, a positive growth trajectory is observed,

indicating market responsiveness to the demand and supply dynamics of various Covid-related medications, alongside the production of sanitizers, antibiotics, medical equipment, and preventive/cure-based medicines.

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