

**FOREIGN DIRECT INVESTMENT IN INDIA'S PHARMACEUTICAL INDUSTRY:
GROWTH, INNOVATION, AND GLOBAL COMPETITIVENESS**

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Abstract

The Indian pharmaceutical industry has undergone significant transformation since the enactment of the Indian Patent Act in 1970. Liberalization in the 1990s further enabled Indian enterprises to expand into global markets, positioning the sector as the third-largest in the world by volume and fourteenth by value. Foreign Direct Investment (FDI) has played a crucial role in shaping this growth, with policies permitting 100% FDI in greenfield projects and 74% automatic approval in brownfield projects. Despite the industry's impressive expansion, there remain research gaps in understanding FDI's impact on post-pandemic recovery, specific sub-sectors such as biologics and contract research, and its contribution to research and development (R&D) and intellectual property generation. Additionally, the effectiveness of government policies in attracting sustainable investments and India's competitive positioning in global pharmaceutical markets remain underexplored. This research aims to analyze the interplay between FDI and the pharmaceutical industry's growth, GDP contribution, and global competitiveness through a literature review and quantitative analysis of secondary data. Findings highlight FDI's role in driving innovation, technology transfer, and market expansion, while also identifying key challenges that need to be addressed. Insights from this study can aid policymakers, industry stakeholders, and investors in formulating strategies to enhance the sector's sustainability and growth.

Keywords: *Pharmaceutical sector, FDI inflows and regulatory framework.*

Introduction

After the Indian Patent Act was passed in 1970, the Indian drugs and pharmaceuticals industry began to develop. Multiple domestic enterprises began operations at the period. Owing to liberalization, Indian businesses were able to introduce their products to the global market in 1990. The main sectors of the pharmaceutical industry are biologics and biosimilars, contract research and manufacturing, over-the-counter medicines, API/bulk medications, generic drugs, and vaccines. In terms of volume, the Indian pharmaceutical sector is third globally, while in terms of value, it ranks fourteenth. In 2019–2020, the pharmaceutical industry had a total annual turnover of Rs. 2,89,998 crores. According to the Annual Report of the Drug & Pharma Industry, the total

value of pharmaceutical imports and exports in 2019–20 was Rs. 42,943 crore and Rs. 1,46,260 crore, respectively. Sector and industry finance are crucial to the expansion of any business. One source of funding that benefits the growth of the economy as well as a single sector is foreign direct investment (FDI). One of India's top ten industries attracting foreign investment is pharmaceuticals. Under the automated method, medical devices are eligible for 100% foreign investment. Pharma industry growth in India and foreign direct investment (FDI) in the industry are both on the rise. Additionally, exports are growing at a steady pace through 2019–20. However, the COVID–19 pandemic damaged this industry in 2020–21, but as of right now, it is returning to normal. Products must have high quality and features in order to improve turnover.

FDI limit in pharmaceutical sector:

Pharmaceuticals	% of equity/FDI Cap	Entry Route
Greenfield	100%	Automatic
Brownfield	100%	Automatic up to 74% Government route beyond 74%

Literature review

The table shows the various studies done by the researchers to investigate the effects of foreign direct investment:

YEAR	TITLE OF PAPER	NAME OF AUTHOR	OBJECTIVES	FINDINGS
2022	Impact of FDI on Economic development of India (Pharmaceutical)	Donipudi, Harshita, Shri, Satya	To research the role of FDI in pharmaceutical sectors in India's development, Analyzing the contribution of FDI in the	It found that FDI in the pharmaceutical sector is increasing in the country. Stronger intellectual property (IPR) rules are luring innovative technology and R&D to the Indian pharmaceutical sector. It has been recognized that there is considerable opportunity for FDI concentration in the industry, particularly in terms of export and

	Sector) and difficulties faced during Pandemic		pharmaceutical industry to India's GDP, to discuss the challenges faced by pharmaceutical sector during 2019 pandemic and how did they overcome it becoming “largest vaccine producer in world.”	profitability. During the period 1991-2019, the sector's rate of return increased significantly.
2021	A STUDY OF FOREIGN DIRECT INVESTMENT IN INDIAN PHARMACEUTICAL SECTOR	Maheshwari, T., Vasadiya, H., Rohit, V., Maheshwari, R.	To obtain data regarding foreign direct investment information. to determine the impact on the pharmaceutical sector of the FDI and Nifty Pharma Index.	Increase in healthcare spending such as Healthcare insurance policy, life insurance policy results in growth in pharmaceutical industry which attracts investment. Improved literacy rates compared to past times have led to a rise in household medication demand. India intends to become a significant hub for end-to-end drug discovery, according to the government's Pharma Vision 2020 initiative, under the Department of Pharmaceuticals.
2021	Foreign Direct Investments In Indian Medicinal And Pharmace	Muthukumar, V., Aishwarya, P.	To study the role of FDI in Medicinal and Pharmaceutical industries in the development of India, to analyze the contribution of Medicinal and	It was discovered that the growth of foreign direct investments in the pharmaceutical and medical sectors is not occurring at a steady pace. But still India has competitive advantage in Pharmaceutical Industries because of skilled labor force and the support from government of India for the

	utical Industries		Pharmaceutical products Exports to the total exports of India.	promotion of Drug and Pharmaceutical Industries.
2020	Indian Pharmace uticals Industry in Global Scenario: An Appraisal	Chakrabort y, Prabal	To analyze the Indian pharmaceuticals industry— opportunity and threats, strategies of the Indian companies particularly after trade-related aspects of intellectual property rights (TRIPS).	The IBEF 2017 report revealed that generic medicine constitutes 70 per cent, OTC 21 per cent and patented drug 9 per cent in the Indian pharma sector (launched by MNCs). The largest market share (16%) is contributed by anti-infectives, which are followed by cardiovascular (13%) and gastrointestinal medicine (11%).
2020	Foreign Direct Investmen t in Pharmace utical Sector: Role Analysis and Case Study	Mishra, Pandey, Ranjana	This study looks at the inflows of foreign direct investment into the IPI company.	It has been discovered that one of the world's most alluring investment locations is the Indian pharmaceutical sector. Investor interest in this market is higher than ever thanks to the industry's predicted multifold expansion, decreasing dangers, and consistently rising profits. The pharmaceutical and drug industry has drawn some of the largest inflows of foreign direct investment (FDI) since 2000, totaling about \$12,689 million.
2017	Exports Cause Outward Foreign	Surji, F, K, Banerji	To examine the two-way causal relationship between the Indian	It was discovered that, in the Indian pharmaceutical industry, exports drive outward foreign direct investment (FDI),

	Direct Investment in Indian Pharmaceutical Industry?		pharmaceutical market's exports and outward FDI	which in turn directly influences exports this year.
2014	Problem and Prospect of FDI inflows in Indian Pharmaceutical Industry	Akhtar, Gulshan	to examine FDI inflows, tactics, and implications for FDI in the Indian pharmaceutical sector.	There was a significant increase in the sector's rate of return between 1991 and 2008. According to the traditional theory, FDI aims for large returns. According to that notion, the Indian pharmaceutical industry ought to see a surge in international investment. However, there isn't much statistical evidence to back up this theory. This suggests that structural barriers continue to be a major factor influencing foreign direct investment into India. The economy has not yet produced the favourable investment environment needed to attract more foreign direct investment.
2013	Indian Pharmaceutical Industry: An Overview	Akhtar, Gulshan	To study that what is the development of Indian pharmaceutical industry, trends of R&D Expenditure in Indian Pharmaceutical Industry, employment in Indian	It set up that the country accounts for an estimated 10 of global product and 2 of world requests in medicinals. Under all major remedial classes, the assiduity presently produces bulk medicinals. Its technically skilled workforce is large and proficient in both process development and downstream processing. Research and development is receiving more attention and funding.

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Research Gap

Most studies focus on pre-pandemic and pandemic-era FDI trends, with limited analysis of post-pandemic investment patterns and their long-term effects on industry recovery. Additionally, while research highlights the overall impact of FDI, there is inadequate examination of its influence on specific sub-sectors such as biologics, biosimilars, contract research, and bulk drug production. The role of FDI in promoting research and development (R&D) and innovation is acknowledged, but empirical validation quantifying its direct contribution to intellectual property generation and technology transfer is scarce. Furthermore, the effectiveness of government policies, including 100% FDI in greenfield projects and 74% automatic approval in brownfield projects, remains underexplored, with limited studies assessing their success in attracting sustainable investments. Comparative analyses with other emerging markets like China and Brazil are also lacking, preventing a broader understanding of India’s competitive position in global pharmaceutical investments. Moreover, while some studies establish a link between FDI and export competitiveness, they do not extensively explore the mechanisms through which FDI enhances export potential, such as regulatory compliance, quality improvements, and market access. Addressing these gaps will provide a more nuanced understanding of FDI’s role in shaping the Indian pharmaceutical industry and offer valuable insights for policymakers, industry stakeholders, and investors.

Purpose of the research

The research paper aims to explore the relationship between foreign direct investment (FDI) and the Indian pharmaceutical industry. It examines how FDI has impacted industry growth, GDP contribution, and global competitiveness, particularly in light of challenges like the COVID-19 pandemic. Through a literature review, it synthesizes existing research findings to shed light on the dynamics between FDI, industry expansion, export competitiveness, and R&D expenditure. The paper seeks to provide insights for policymakers, industry stakeholders, and investors regarding FDI's role in shaping the Indian pharmaceutical sector's development and global standing.

Research methodology

- **Data collection:** The study is based on secondary data collected from relevant government reports, industry publications, academic journals, and existing research studies.
- **Research Design:** The research will adopt a quantitative approach to analyze the relationship between foreign direct investment (FDI) and various aspects of the Indian pharmaceutical industry.

Conclusion

In conclusion, this study has provided valuable insights into the relationship between foreign direct investment (FDI) and the Indian pharmaceutical industry. The Indian pharmaceutical sector has witnessed significant growth and development since the passage of the Indian Patent Act in 1970, with multiple domestic enterprises entering the market and liberalization enabling global market access in 1990.

Despite facing challenges such as the COVID-19 pandemic, which temporarily disrupted the industry, the Indian pharmaceutical sector has demonstrated resilience and adaptability. With a total annual turnover of Rs. 2,89,998 crores in 2019–2020 and a significant contribution to India's GDP, the industry has emerged as a key player in the global pharmaceutical market.

Through a comprehensive literature review, this study has explored various aspects of FDI in the Indian pharmaceutical industry, including its impact on industry growth, export competitiveness, and R&D expenditure. The findings indicate that FDI plays a crucial role in driving innovation, technology transfer, and market expansion within the sector. Stronger intellectual property rights (IPR) regulations and government support have further facilitated FDI inflows into the industry.

The research methodology employed in this study utilized secondary data collected from government reports, industry publications, academic journals, and existing research studies. A quantitative approach was adopted to analyze the relationship between FDI and key industry indicators, providing a comprehensive understanding of the dynamics at play.

Overall, this study underscores the importance of FDI in shaping the trajectory of the Indian pharmaceutical industry and its implications for economic development and global competitiveness. The insights provided in this study can inform policymakers, industry stakeholders, and investors in making informed decisions to further enhance the growth and sustainability of the Indian pharmaceutical sector in the years to come.

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