



Study of the Growth of Pharmaceutical Sector in India after COVID-19 Pandemic Situation

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ABSTRACT

As countries and industries continue to cope with the unparalleled challenges presented by the novel coronavirus (COVID-19), a specific area of concern has been the uncertainty surrounding the impact of the COVID-19 pandemic on the global and Indian supply chains of the pharmaceutical industry. The COVID-19 crisis has demonstrated the importance of establishing a risk management system that focuses on assessing future risks resulting from the loss of a supply chain among countries.

KEYWORDS: COVID-19, CAGR, GDP, R&D.

INTRODUCTION

- Indian pharma industry has grown 10 times in the last two decades driven by its strength in the global generics space.
- In the last few months, COVID-19 has led to significant geo-economic and geopolitical shifts, with major economies driving self-sufficiency agenda and recalibrating their global business models.
- In the light of global changes and keeping India's realities and advantages in mind, this paper aims to revisit Indian pharma's strategy in order to become a preferred global supplier of innovative medicines in the post-pandemic world.

The pharmaceutical industry, along with the healthcare sector globally, has been impacted in an unseen way due to the outbreak of the **COVID-19** pandemic leading to material impact around consumer requirements and preferences accompanied by macroeconomic, structural and microeconomic changes in the end-to-end value chain. In the midst of the pandemic and a changed world, the **pharmaceutical industry** across the world has responded with agility—from the sequencing of the novel coronavirus in January to vaccines being administered to the first recipient in the United Kingdom by December 2020, with efficacy levels over 90%, exceeding all expectations of governments and markets across the geographies. The pharma industry will be closely monitored by governments in all countries in times to come.

It is imperative that India reevaluates its current role within

the global pharmaceutical industry, explore possibilities to consolidate and strengthen its positioning in light of geopolitical and economic shifts, attain self-sufficiency as a globally competitive pharmaceutical industry with innovation as a guiding principle for future growth. This paper addresses the ambition for the current decade in consultation with industry veterans across segments, with inputs from the government, regulators and pertinent industry associations.

From March 2020 onward, the industry has been hit by debilitating restrictions and impediments to reach **customers** with expectations to operate and supply drugs to those in India and globally. The pharma industry exceeded expectations in responding to this global crisis, supplying drugs to over 150 countries besides meeting all domestic demands. Significant vaccine capacity ramp up has been achieved over the year to augment vaccine administration within India and other countries who are dependent on India for supplies.

The Indian pharma industry has grown at a compounded growth rate of (CAGR) of ~11% in the domestic market and ~16% in exports over the last two decades. While the domestic market has grown at a similar pace to the gross domestic product (GDP), the overall growth has been driven by the industry's leadership in supplying generic formulations to markets across the globe.

In the 2020-2030 period, we expect Indian pharma industry to grow at a compounded annual growth rate (CAGR) of ~12% to reach at US\$130 bn by 2030 from US\$41.7 bn in 2020. Though the pharmaceutical industry has grown at



a CAGR of approx. 13% over the two decades, in the last decade, the CAGR has been ~ 8.5% and it has currently been ~6.2% over the past five years.

In order to attain self-sufficiency and be the real pharmacy of the world, we need to refocus on the next set of avenues to feed the growth engine of this industry, which is of strategic as well as economic significance. Realizing this ambition will need a concentrated effort from the key stakeholders of the Indian pharmaceutical industry – the payers, providers, policymakers, physicians, pharma industry players, academia as well as a plethora of service providers across the logistics and distribution, IT, capital pools, packaging and other auxiliary industries.

In order to build a holistic consensus, we reached out to industry-wide stakeholders, whose views were sought over countless interactions through a structured questionnaire, coupled with secondary analysis and global primary **case studies** through EY proprietary research. Future opportunities and the way forward have been duly ratified through industry and stakeholders' roundtables. Key considerations to adopt as a call to action aimed at industry, academia and government have been outlined for actions going forward.

The opportunities that have emerged have been classified into four sections in this report: **Innovation** and R&D, Healthcare Delivery, Manufacturing & Supply Chain, and Market Access.

On the domestic front, the ambition translates into a growth rate of 10-11% over the coming decade. Below-average social health indicators and a low proportion of total healthcare spend as a proportion of GDP indicate an opportunity to improve healthcare delivery in the country.

With estimates that the Indian pharma industry supplies over 40% of the generics in the biggest pharma market – the US and about 25% of the prescription drugs in the UK, along with catering to over 60% of the global vaccine demand, India is one of the leading suppliers of pharmaceuticals in the world. While the global formulations trade value is about US\$652 billion (2019), India's share of exports in the global trade was only about 2.5%. With increased pricing pressure on the global generics trade as well as increased competition in India's established export corridors, the current portfolio of products is expected to further extend this divide. The global pharmaceutical trade is expected to reach a size of US\$1-1.3 trillion by 2030, the ambition is to garner a global share of 6-7% by value to attain a size of ~US\$73 billion.

Accelerating Research and Innovation

- One of the key action areas that resonated across all interactions was the need to move up the value chain to achieve the ambition and consider way forward to discuss the sets of action needed to be put into place to move up India's share of trade in value.

- To meet this objective, this section deliberates on set of actions to help the industry move towards this objective including setting up an overarching regulatory body and a Central body to streamline research infrastructure and financing from all government bodies, exploring new models for financing R&D to increase private investments and also make available funds for high risk / long term projects, measures to improve industry-academia collaboration and establish a strong innovation ecosystem, the role of industry to leverage **technology** for improving productivity and efficiency in research to name a few.

Achieving Equitable and Sustainable Healthcare

- The increased acceptability of digital technologies has the potential to improve healthcare delivery. This section explores the progress towards achievement of universal healthcare access, establishing efficient processes such as the potential use of Aadhar card to identify as well as simplify the delivery based on healthcare coverage category. The next steps to creating, maintaining and leveraging healthcare data to identify and prioritize focus areas for healthcare have also been discussed in depth.
- Considerations for enabling teleconsulting, focus on preventive healthcare have also been dealt with, in detail, and the role of the industry, government, healthcare sector and insurers carved out.

Strengthening Manufacturing and Supply base in Domestic and Global Markets

- The focus of manufacturing & **supply chain** initiatives would be to develop capabilities in APIs and enable manufacture of complex generics, bio-similars, gene & cell therapies etc.
- **Ease of doing business** is the most important enabler to set up world class manufacturing facilities
- Attractiveness of manufacturing sector would also need to be enhanced in order to attract the best talent in India and abroad
- Given the growth ambitions, it is vital to encourage and setup of pharmaceutical machine manufacturing facilities in India that would result in lower fixed costs, savings in forex and reduction in time to set up additional facilities
- Strong and all-round focus on excellence and compliance is a must to facilitate a "Made in India" phrase that is synonymous with high quality
- Government would need to bolster the logistics **infrastructure** for connecting the key pharma hubs in the country in order to facilitate quick and cost efficient movement of goods (including facilities for cold chain)

Improving access to Medicines

- This is the last section that explores the key opportunities that need to be realized in order to improve the market access of the drugs in the country.
- This section revolves around various global best practices in drug pricing and procurement models, contextualized for developing geographies.
- Deliberations on digital marketing of pharmaceutical products in India.

Indian Pharma Industry Post Covid

India's existing advantage of large-scale pharmaceutical production allows it to significantly leverage its soft power by investing in the outward growth of the healthcare sectors of other nations by:

- a) ramping up exports in pharmaceuticals;
- b) becoming a preferred medical tourist destination for those seeking affordable treatment in quality secondary/tertiary health services,
- c) Pursue medical diplomacy

(A) Boosting pharma exports

- According to the Indian Brand Equity Foundation (IBEF), pharmaceutical exports of India from the financial year 2012 to 2019 have steadily grown from \$10 billion to \$19 billion.
- | As per recent estimates, India accounts for about 10% of world's pharmaceutical production by volume and 1.5% by value. The industry is the world's largest supplier of generic drugs and controls around 18% of the global market.
- | It is also a leading producer of vaccines in the world and caters to about 50% of global vaccine demands.
- This is due to an already high demand for Indian drugs because of cheaper pricing, making these more affordable to both developing and developed nations.
- | Not only states, but many international NGOs and public health non-state actors have been using generic Indian drugs for affordable treatment in countries within Africa, parts of Latin America over the last decade.
- | For instance, Doctors Without Borders, a humanitarian organisation, estimates that treatment of AIDS using generic Indian drugs is two to three times cheaper as compared to treatment using branded drugs.
- Consequently, UNICEF and UNITAID too rely heavily on generic drugs manufactured in India for their aid programs.
- | There is a much greater potential for India's pharmaceutical sector now to increase trade partners both regionally and in other parts of the world.

- | The government can encourage this by investing in more R&D for drug and pharma research within India (public medical colleges and universities can be used for this purpose) and provide for more incentives to the private sector to enhance its production for export channels.

(B) Encouraging medical tourism into India

Over the last few years, particularly since 2014, the number of people coming to India for medical treatment has grown annually at about 55%.

- | According to Ministry of Tourism, the medical tourism space was valued at around \$3 billion (US\$) in 2015 and at \$9 billion in 2020.
- | The Indian government has also promoted India as a better medical tourist destination by issuing fast-track medical visas and rapid airport clearances for those visiting as medical tourists.

(C) Medical Diplomacy

Opportunities to Pursue medical diplomacy by providing medical training and technical expertise to many other developing nations whose healthcare systems are much worse than India.

Digital Transformation in Pharma Industry Post Covid

- Lockdowns, mobility limits, and social distancing protocols have rapidly pushed healthcare services and patient monitoring to remote alternative, increasingly opening the door for greater use of tele medicine, digital therapeutics, and decentralized clinical trials.
- The pandemic has also altered conventional sales and marketing methods by increasing need for online marketing and communication technologies.
- Since the pandemic, the industry has been taking small steps toward digital adoption, but there is still a long way to go before adopting an end-to-end, digital strategy. Therefore, before we dive any further into this, it is crucial to go back to basics and really understand what this 'digital transformation' requires.
- Pharmaceutical companies all across the world are using advanced machine learning algorithms and AI-powered technologies to accelerate the drug discovery process. Adoption of AI can enhance the success rates of new drugs and treatments, develop more economical treatments and cures, and, most notably, lower operating expenses.
- Machine learning and IoT, including Robotics, have also been leveraged for automation of warehouses, driverless transportation, drone-based deliveries etc., all which can all be of vital significance for temperature-controlled Pharma supply chains.

Beyond the Pill and Building Trust

- Pharmaceutical industry does rely on social media and content marketing to advance their product and messaging, but their approach is limited. The use of digital media for the pharmaceutical industry is a very small part of the 'digital transformation', the need of the hour is a consumer-based approach which goes beyond the pill. Building consumer interactions is becoming increasingly important.
- Pharmaceutical companies have traditionally relied on customer trust to sell their products, but what lies beyond trust is a long-term relationship. This is where we see pharma firms no longer being a 'solution' to a problem.

Digital Tools and Data Analytics

- Since COVID-19, companies have been forced to upgrade their systems and learn how to facilitate employees working from home. This shift, which was expected to occur over the next 5 to 10 years, has instead occurred in a few of months.
- Since many patients do not feel as safe attending to in-person visits as they did before Covid-19, the usage of digital health has grown in popularity among physicians during the pandemic. Furthermore, virtual medicine has been important in minimising the virus' transmission and the strain on emergency departments.
- Before COVID-19, the percentage of patients using remote consultation was very low (only 6%); however, digital health has gained momentum and at least 19% of consultations are expected to continue remotely after the pandemic subsides (Source: Statista).
- Pharmaceutical businesses have also viewed digitization as an opportunity to strengthen their business models.
- It offers a new potential stakeholder experience that allows them to engage directly with customers.

360-Degree View of Physician and Patient

- Using big data in health care may give a 360-degree perspective of physician, patient, and consumer trends, allowing companies to increase customization and efficiency of treatments. COVID-19 underlined the significance of converting data into a digital format in order to create worldwide databases.
- These databases store large amounts of data to help scientists and physicians increase understanding of both medications and patients in order to promote innovation. This infrastructure will enable open partnerships throughout the sector, which will result in enhanced outcomes.

Digitization Toward Sales and Marketing

- During COVID-19, pharmaceutical firms had difficulties

in attracting certain target groups. It is uncertain how pharmaceutical companies will establish relationships with various stakeholders such as physicians and patients. These unexpected social lockdowns and restrictions are pushing new, meaningful methods of connecting with others through multi access. COVID-19 has compelled pharmaceutical companies to adopt reactive, rather than proactive, sales strategies that are focused on the crisis and short-term fixes.

Building and Omni Channel Strategy

- Pharmaceutical companies must tailor their marketing with new enticing commercial models in the long run.
- Companies should evaluate how to create an integrated experience that comprises a mix of channels with relevant information and a tailored approach to customer communication. To enhance the experience, each customer should be reached via their preferred channel and delivered both personalised and branded documents.
- The development of an omnichannel strategy allows pharmaceutical companies to be adaptable and ready for changes in client behaviour or requirements.

Mapping the Journey

- Pharma companies have concentrated on the disease and the remedy but charting the consumer's full journey from illness to health is more involved and occurs in phases.
- These steps are often handled by diverse parties, but if pharmaceutical companies were to take command of each point along this path, they might effectively serve consumers with continuous care.

Leading to Transformation

- This is where technology leads the way. The industry must produce assets that can be built and developed individually.
- This involves optimising digital tools and developing interactive interfaces to create ecosystems that advise and assist patients throughout their healthcare experience.
- This can be done in a number of ways such as artificial intelligence; data analytics; and using apps and software.
- In the unprecedented times that we are in, digital transformation must happen at a rapid pace.
- We can re-imagine and re-define how the pharmaceutical sector is regarded overall by using AI and data analytics, and now is the best time for this transformation to happen. This won't be easy but there are ways to navigate this journey and that's where communication plays a crucial role.

- The two things that drive business in the pharmaceutical industry are narrative and necessity.
- The necessity is established and now there is a need for digital transformation.
- Now, people will increasingly look for 360-degree solutions rather than running from pillar to post seeking medical assistance.
- It is time to reinvent the pharma narrative and digitally shift into an era of 'disease to wellness' collaboration, and communication agencies will lead the way.
- As the world has witnessed the second wave, the number of affected patients is set to rise which naturally increases the requirement of pharmaceutical science professionals because the patients are staying in hospitals for a prolonged period.
- In the domain of Pharmaceutical Sciences, Students can pursue bachelor's degree programmer, diploma programmer, master degree programmer and doctoral-level programmer.

Post Covid: Pharma Industry has become an Alluring Career Option

- As per the report of IES (Indian Economic Survey)2021, in the next decade the domestic market is expected to grow 3x.
- India's domestic pharmaceutical market is estimated at US\$ 41 billion in 2021 and likely to reach US\$ 65 billion by 2024 and further expand to reach US\$ 120-130 billion by 2030
- The current pandemic has brought the entire world to its knees and the whole world has observed the adverse catastrophe of this Global Pandemic.
- As the healthcare sector across the globe is growing, it has opened great career opportunities to thousands of students of pharmaceutical science because the rate of growth of the pharmaceutical sector is interlinked and is directly proportional to the growth of the healthcare sector.
- According to IBEF, Indian pharmaceutical sector supplies over 50% of global demand for various vaccines and also states that India is the largest provider of generic drugs globally.
- In the current Scenario the demand of medicines is increasing day by day, so the employment in pharma sector is also rising.
- According to sources of government statistics, over 300 institutions impart diplomas or degrees to nearly 20,000 students in India every year.
- Indian Pharmaceutical Industry is one of the largest pharma industries in the world and this widens the scope of pharma studies in India and abroad
- In India, Pharmacy Council of India (PCI) is the regulatory body which has been designing the Education Regulations pertaining to Pharmacy which outlines the conditions to be followed by pharmacy colleges, Institutions and Universities. PCI grants approval to the universities and colleges in India to run the various programmes in the domain of Pharmacy. The PCI has well-defined standards, norms, and guidelines to be followed by the entities seeking approval from the regulatory Council.

Bachelor Studies

Pharmaceutical science offers a wide range of opportunities. Interested candidates can pursue their career in Bachelor of Pharmacy programme and can study major areas like are Pharmaceutics, Pharmaceutical Inorganic Chemistry, Physical Pharmaceutics Pharmaceutical Analysis, Human Anatomy and Physiology, Pathophysiology, Computer Applications in Pharmacy, Environmental Science, Communication Skills and Biochemistry etc.

Post Graduate Studies

The Post Graduates process for the Pharmacy programs includes a written test. The national level entrance test for admission to the Masters Level Pharmacy programs is GPAT (Graduate Pharmacy Aptitude Test). The National Testing Agency (NTA) organizes this test every year for admission in M Pharma Programs.

Career Options

In the rising demand of pharma Industry in India, Pharma students have oceans of career opportunities Hospital pharmacist & Manager, Community Pharmacist Drug Control Administrator, Drug Inspector, Pharmaceutical Marketing Representative, Research Manager, Health Inspector, Chemical Analyst, Drug Technician, Drug Therapist, Customs Officer, Pharma Data Analyst, Trainer, Assistant Professor, Food and Drug Administrator, Hospital Drug Administrator, etc. there are plenty of options to choose your career wisely.

Opportunities

- Students can easily find jobs after completing their graduation.
- Both Central and State Government hospitals and private hospitals need pharmacists. It is an easy task for brighter students to get employment in Hospitals, Labs and Various Pharma Companies.
- There are lots of private hospitals like Apollo, Fortis etc. which needs lots of Pharmacists in their Pharmacy.
- As internet users are increasing in India rapidly the online pharmacy stores are more on demand.
- E-commerce pharmacists going to be a big pharmacy career options for students.
- Pharmaceutical industry is likely to offer promising and enriching careers for young minds in the fields of

pharmaceutical and healthcare sector at the global level with lucrative salary packages.

The COVID-19 pandemic has prompted pharma companies to rethink their organizational strategies

A New Operating Model for Pharma

- The changing paradigm of access to health in the new normal Teleconsultation has always been a quick and simple way to reach your doctor.
- Most individuals can recount consulting their doctor on a phone, or using a network or video link like Facetime, WhatsApp or Zoom at some point.
- The 'Now' has witnessed a massive expansion of teleconsulting as doctors and patients are restricted to interact in person. Most patients have refrained from getting in-person doctor consultations for acute ailments due to the lockdown and risk of infection.
- They mostly relied on self-medication/self-diagnostic apps.
- Some even took medical consultations with general practitioners or family doctors on calls/virtual tools during the first few months of the pandemic. However, with the pandemic extending beyond a few months, patients were forced to explore new channels for reliable acute care.
- Patients with chronic ailments, such as diabetes, are identified as a high-risk group, resulting in an increase in adoption of digital channels for disease management and control for such chronic diseases.
- Healthcare providers, such as hospitals and e-pharmacies, have integrated teleconsultation platforms and scaled-up their existing digital offerings.
- Teleconsultation and e-pharmacy platforms have showed a steep growth in adoption by both, doctors as well as patients.

In response to the growing need for **teleconsultation**,

pharmaceutical companies are also proactively engaging with teleconsultation platform providers to establish a connect between the doctors and the patients.

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