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Indian pharmaceutical market: a way towards leadership in generics

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Abstract. India, as a country of 1.4 billion people, plays a dominant role in the global pharmaceutical industry. It is the largest international supplier of generic drugs (cheaper drugs but similar to brand-name drugs). The aim of this study is to analyze development prospects for the Indian pharmaceutical market to identify the barriers or drivers that are forecasted to support or slow-down the future market growth and identify influence of India on development of the global pharmaceutical market. India has a well-developed domestic pharmaceutical industry with a strong network of 3.000 companies and approximately 10.500 manufacturing units. This study discloses historical overview and explains how the Indian pharmaceutical industry was set-up from 1970s till the present day. Effective transformation of the Indian economic structure allowed Indian pharmaceutical industry to find its niche in the global pharmaceutical market. Indian economy is well prepared for growth of the pharmaceutical industry, since it has a wide and diversified economy, growing population and evolving healthcare sector. Analysis of the portfolio, financials strategies and other main aspects of the key players in the Indian pharmaceutical market shows that many major companies (e.g. Aurobindo Pharma, Dr. Reddy's) are actively fostering partnerships with international pharmaceutical companies (like Pfizer or Sanofi) and this perfectly illustrates the trend of building alliances and partnership in the market. The analysis of the market by geography shows that 47% of Indian medicines are supplied to the US and Europe, which confirms not only the low cost of goods of Indian products but also their good quality. Moreover, there is a trend of increasing export of Indian pharmaceutical products to the BRICS countries, including supplies to Russia and South Africa. Conducted SWOT analysis reveals weak points and barriers for the future market development, such as product quality, increasing competition from other global markets, difficulties in logistics inside the country. This study emphasizes the key drivers for the future market development, specifically support from the State, increasing digitalization, scale-effect of the industry and growing demand for the pharmaceutical medicines, and all these factors will support the Indian market to get a leading position in the global pharmaceutical industry.

Keywords: pharmaceutical companies, India, medicines, production, pharmaceuticals, Indian market

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Индийский фармацевтический рынок: путь к лидерству в дженериках

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Аннотация. Индия, страна с населением 1,4 млрд человек, играет доминирующую роль в мировой фармацевтической промышленности. Это крупнейший международный поставщик дженериков (более дешевых, но аналогичных фирменным препаратам). Цель исследования — анализ фармацевтического рынка Индии для выявления барьеров развития и драйверов роста, а также оценки возможностей влияния Индийского рынка на рост глобального фармацевтического рынка. В Индии хорошо развита собственная фармацевтическая промышленность с мощной сетью, состоящей из 3000 компаний и примерно 10500 производственных предприятий. Проведен исторический обзор становления и развития фармацевтической промышленности страны с 1970-х гг. по настоящее время. Установлено, что грамотная трансформация структуры экономики Индии позволила занять свою нишу в мировой фармацевтической отрасли; индийская экономика хорошо подготовлена к росту фармацевтической промышленности, имея надежную и диверсифицированную экономику, растущее население и развивающийся сектор здравоохранения. Анализ портфелей препаратов, финансовых стратегий и ключевых аспектов фармацевтических игроков на рынке Индии показал, что многие крупные индийские фармацевтические компании, к примеру, Aurobindo Pharma и Dr. Reddy's, вовлечены в формирование партнерских отношений с международными фармацевтическими корпорациями, такими как Pfizer и Sanofi, и служат наглядными примерами расширения альянсов и партнерств. Анализ географической структуры экспорта выявил, что 47 % индийской фармацевтической продукции поставляется в США и страны Европы, это говорит не только о низкой стоимости, но и о высоком качестве фармацевтических препаратов. Также наблюдается рост экспорта в страны БРИКС, где заметную роль играют Россия и ЮАР. С помощью SWOT-анализа определены потенциально слабые стороны и барьеры для дальнейшего развития рынка, включая качество продукции, растущую конкуренцию со стороны производителей из других стран и трудности в логистике внутри страны. Выделены основные драйверы развития отрасли, а именно государственная поддержка, растущая цифровизация отрасли, экономия за счет масштаба и растущий спрос на фармацевтические препараты, которые помогут отрасли в ближайшем будущем занять лидирующее положение в мире.

Ключевые слова: фармацевтические компании, Индия, лекарственные средства, производство, фармацевтика, Индийский рынок

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Introduction

Over the past few decades, the Indian pharmaceutical market has exhibited a growth rate that is faster than the global average. During this period, India has become the largest exporter of pharmaceuticals in the world and in Russia.

The advancement of the pharmaceutical sector is a fundamental necessity for the assurance of a life of dignity for individuals across all global regions, including the fulfillment of United Nations Development Goal № 3, "Ensure healthy lives and promote well-being for all at all ages". Approximately two billion individuals lack access to fundamental pharmaceuticals included on the WHO list. This figure represents 80% of the global population residing in countries with limited or no availability of approved anti-pain medications[1]. Therefore, over past two decades an increasing interest over pharmaceuticals is observed from global society. The ongoing pandemic has underscored the intrinsic relationship between public health and economic development. In 2020, the global economy experienced a 4.3% contraction due to the implementation of restrictive measures in response to the coronavirus pandemic[2]. Concurrently, the pandemic has intensified the discourse surrounding the necessity of guaranteeing human rights to physical and economic access to innovations indispensable for sustaining life and health. Conversely, the profit motive of pharmaceutical corporations has also emerged as a pivotal point of contention[3].

[1] Access to medicines: making market forces serve the poor. WHO, 2017. Retrieved June 5, 2024, from https://cdn.who.int/media/docs/default-source/essential-medicines/fair-price/chapter-medicines.pdf?sfvrsn=adcffc8f_4&download=true

[2] World economic situation and prospects. United Nations, 2021. Retrieved June 5, 2024, from https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2021_FullReport-optimized.pdf

[3] Report of the United Nations High Commissioner, 2023. Retrieved June 10, 2024, from https://documents.un.org/doc/undoc/gen/g23/093/51/pdf/g2309351.pdf?token=MBZ37AWBXYZ7ofXTMB&fe=true

In the context of this discussion, the market for more affordable generic drugs, in which India is a world leader, has been the subject of particular attention. India has set itself the objective of doubling its pharmaceutical market from 2024 to reach a value of 130 billion US dollars by 2024. This includes Indian pharmaceutical companies that intend to capitalize on the expansion of production with drugs whose patents will expire in the next 10 years.

In recent years, Russian scientific literature has addressed a number of key issues related to the Indian pharmaceutical industry. These include the role of import substitution in its development prepared by (Gubina, 2019), the regulatory factors necessary for the growth of the pharmaceutical industry in BRICS countries, and the Indian economy in general, as mentioned in the studies prepared by (Kostin, 2019) and (Galishcheva, 2017).

At present, the Vision Pharma 2047 strategy outlines India's objective to become a global leader in not only affordable drugs but also innovative and high-quality drugs. This will be achieved by incentivizing the production of substances, value-added pharmaceutical products, and the establishment of shared laboratories in technology parks[4].

As outlined in the Strategy for the Development of the Pharmaceutical Industry until 2030, the Russian government plans transition from a reliance on generic drug production to a comprehensive approach encompassing the full spectrum of drug development and manufacturing, particularly within the domain of essential medicines[5]. Therefore, an investigation into the transformation of the Indian pharmaceutical industry and an evaluation of its prospective influence on global economic development is a subject of scientific interest within the Russian market.

The objective of this article is to examine the forecast of the Indian pharmaceutical industry and its contribution to the global healthcare industry. To analyze the forecast of the Indian pharmaceutical industry and its role in the global healthcare industry, this article explores the historical and contemporary background of the rapid growth of the Indian pharmaceutical industry, business models of key Indian pharmaceutical manufacturers, regulatory and behavioral incentives for domestic consumption, and the potential for expanding presence in the global pharmaceuticals market. To identify the interdependence of the evolution of various sectors of the Indian economy and pharmaceutical regulation and their impact on the development of the Indian pharmaceutical industry, the article utilizes the method of historical and economic analysis of statistical data.

This article focuses on the study of factors that will influence the growth of the Indian market over the next five to ten years. The objective is to identify which of these factors could ultimately strengthen or slow down the market.

[4] Ankit Agrawal, Pharmaceutical Sector Spotlight: Driving Innovation in India. Invest India, 20.11.2023. Retrieved June 1, 2024, from https://www.investindia.gov.in/team-india-blogs/pharmaceutical-sector-spotlight-driving-innovation-india

[5] Strategy for the development of the pharmaceutical industry of the Russian Federation until 2030. Retrieved June 1, 2024, from http://static.government.ru/media/files/HqCzKkoTf7fzVdKSYbhNiZHzWTEAAQ3p.pdf

For that purpose, the study analyses the external and internal macroeconomic and industry aspects that affect the supply and demand of pharmaceuticals and market structure.

Global pharmaceutical market

The global pharmaceutical market has demonstrated a consistent pattern of expansion, irrespective of economic downturns and fluctuations in commodity markets. This growth is driven by two key factors: the sustained increase in the global population and the emergence and discovery of new diseases as mentioned by (Khanna, Nagin, 2002). Over the past decade (2013–2023), the global pharmaceutical market has exhibited a 60% growth in dollar terms, reaching an annual value of approximately US$1.4 trillion. The global pharmaceutical market is expanding at an average annual rate of US$1.4 trillion. The market demonstrates an average annual growth rate of 5–6% (Fig. 1). Concurrently, the market expansion is accompanied by both an annual increase in drug costs of 2.5% and a growth in consumption of 3–3.5%.

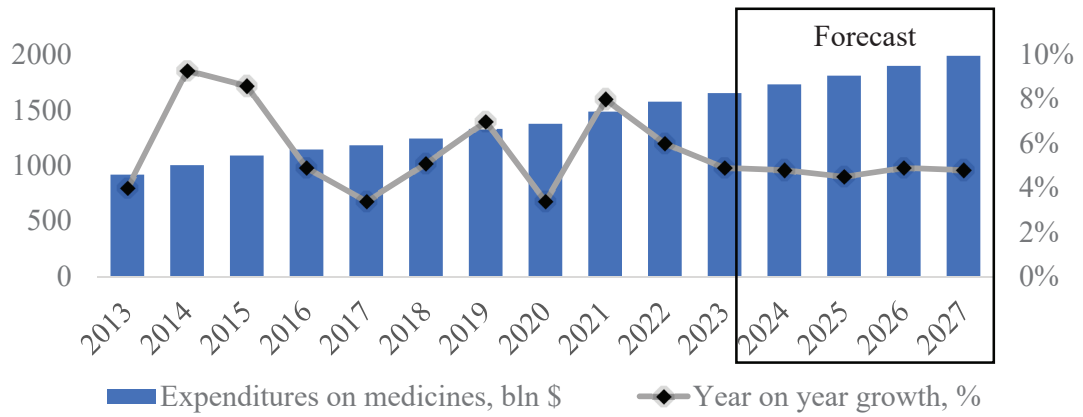

Figure 1. Dynamics of the global pharmaceutical market
Source: prepared by D.V. Ilin, I.V. Lazanyuk on the basis of data from IQVIA6.

The pharmaceutical market can be segmented into two groups based on the type of drugs:

- Innovative pharmaceuticals under patent protection with a global market share of 64% in monetary terms (as of 2022);
- generics or drugs similar to the originals that have lost patent protection, with a share of 36% in monetary terms (as of 2022).

It is crucial to acknowledge that innovator and generic drugs exert disparate influences on market growth. For instance, originator drugs having higher prices exert a pronounced impact on market growth in monetary terms while generic drugs, due to their comparatively lower costs, influence market growth primarily in terms of drugs availability and therefore drive market growth in packs (consumption).

In terms of monetary value, the North American pharmaceutical market represents the largest share (45%) of the global market, with Asia accounting for 24%, Europe for 20%,

Latin America for 7%, and Africa and Arab countries for 3%. Furthermore, as illustrated in Fig. 2, the pharmaceutical markets of the USA and India (which is classified as part of the Asian region) demonstrate the most significant growth.

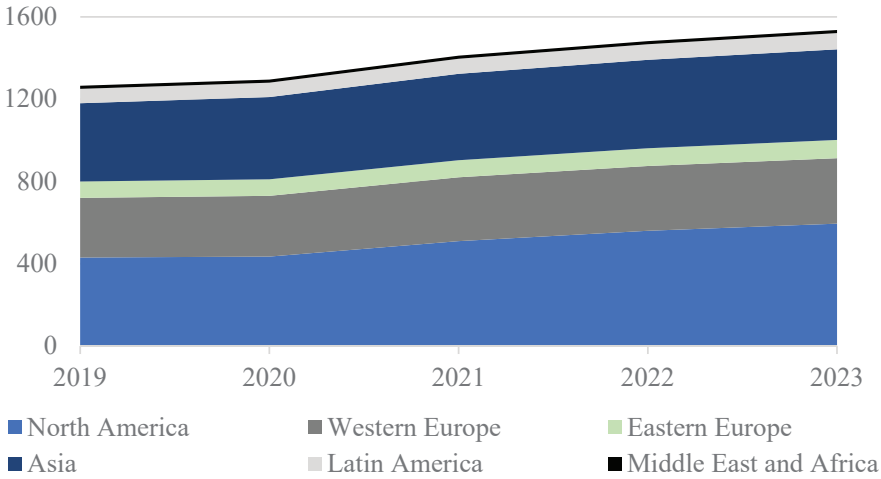

Figure 2. Geographic structure of the global pharmaceutical market in 2019–2023, USD billion
Source: compiled by D.V. Ilin, I.V. Lazanyuk on the basis of data from the Economist Intelligence Unit7.

Analytical forecasts indicate that the Indian pharmaceutical market, along with other Asian countries, will experience one of the most rapid growth periods in the next four years. This is evidenced by a projected cumulative consumption growth of over 18% and a drug cost growth of 40–55% (Fig. 3).

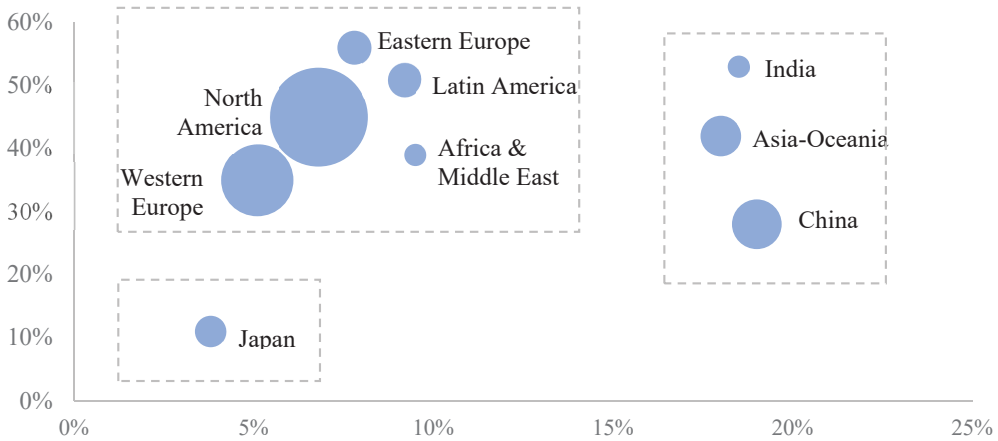

Figure 3. Pharmaceutical Market Forecast to 2028 by Country
Source: compiled by D.V. Ilin, I.V. Lazanyuk on the basis of IQVIA6 data.

Therefore, the global pharmaceutical market is rapidly developing, with the United States and Western Europe representing the dominant markets in terms of market size. It is also important to note that over the past ten years and the next four years, one of the key growth drivers will be the Indian and Asian markets, while the European and American markets will demonstrate more moderate growth.

India's Economy and Health Care System

India's economy is one of the largest and fastest-growing economies in the world. As the fifth largest economy by GDP and with one of the highest growth rates, India lags behind other countries in terms of GDP per capita (Table 1). This is primarily due to the country's high population size. Nevertheless, India's economy is significantly influenced by innovative sectors such as information and communication technology (ICT), biotechnology, and pharmaceuticals, which are predominantly export-oriented.

Table 1

Top 10 largest economies in the world

Location, Name of country	GDP, US$ trillion	GDP per capita, thousand USD	Expected GDP growth in 2024, %
#1 USA	28.783	85.37	2.7
#2 China	18.536	13.14	4.6
#3 Germany	4.590	54.29	0.2
#4 Japan	4.112	33.14	0.9
#5 India	3.942	2.73	6.8
#6 Great Britain	3.502	51.07	0.5
#7 France	3.132	47.36	0.7
#8 Brazil	2.333	11.35	0.7
#9 Italy	2.332	39.58	2.2
#10 Canada	2.242	54.87	1.2

Source: compiled by D.V. Ilin, I.V. Lazanyuk on the basis of IMF data[8].

The Indian market has become a key player in the global economy due to the fulfillment of several essential prerequisites:

- **India is the largest country in the world in terms of population**[9] (1.43 billion people, representing 17% of the world's population). The country's population grew substantially from 2000 to 2024, by more than 34%

[8] IMF, GDP 2024. Retrieved June 10, 2024, from https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD

[9] United Nations. India Retrieved June 10, 2024, from https://population.un.org/ (Accessed: 10.06.2024).

or an average annual growth rate of 1.2%. According to UN projections, the country's population will continue to grow to 1.5 billion by 2030 and about 1.7 billion in 2050. India is also the 7th largest country in the world in terms of land area.

- **Dynamic growth of real disposable income of the population10.** Consequently, over the past five years, there has been a notable increase in income per person, from 2.1 thousand USD in 2019 to 2.8 thousand USD in 2023. Concurrently, income growth will persist. In accordance with the World Bank's projections, India's GDP per capita is anticipated to reach 4.4 thousand dollars by 2029. It is projected that India's GDP per capita will reach US$4.4 thousand per year by 2029.
- **Development of various market sectors such as banking, consumer goods, and digital technologies.** The robust growth of these sectors can be attributed to the relatively low cost of labor, which has prompted numerous multinational corporations to establish their international operations in India, thereby influencing the expansion of the domestic market. In conclusion, this has resulted in a notable enhancement in labor productivity as mentioned in the studies of (Hoque, Das, 2021).

In India's GDP structure[11], the main share is occupied by the services sector (55%), followed by industry (31%) and agriculture (14%). Considering industry, most of which is accounted for by the production of various sectors of the economy, and health care, which accounts for 2.2% of GDP. Health expenditure in India is categorized into three major groups:

- Paid by the people of India from their own resources (47%);
- Paid by the government (41%);
- Other private expenditures (11%).

Furthermore, healthcare expenditures are classified according to their respective categories, including those pertaining to the remuneration of services, the procurement of pharmaceuticals, and other miscellaneous expenditures. For example, expenditures related to the pharmaceutical industry represent approximately 35% of total healthcare spending, amounting to approximately $60 billion annually. The pharmaceutical industry accounts for approximately 35% of total healthcare expenditures, amounting to approximately $60 billion annually. It is also important to note that, despite the fact that over the last two years the share of healthcare in the GDP structure has increased by 0.6 p.p. (from 10.6% in 2021), there is a significant growth potential, as healthcare expenditures in India as a percentage of GDP are significantly lower than in developed countries. Estimates suggest that the percentage is between 1.2 and 3% of GDP, while in developed countries it is 10 or more percent (see Fig. 4).

[10] Statista, Retrieved June 10, 2024, from https://www.statista.com/outlook/co/consumption-indicators/india#household-income

[11] India brand equity foundation. Retrieved June 10, 2024, from https://www.ibef.org/industry/pharmaceutical-india#

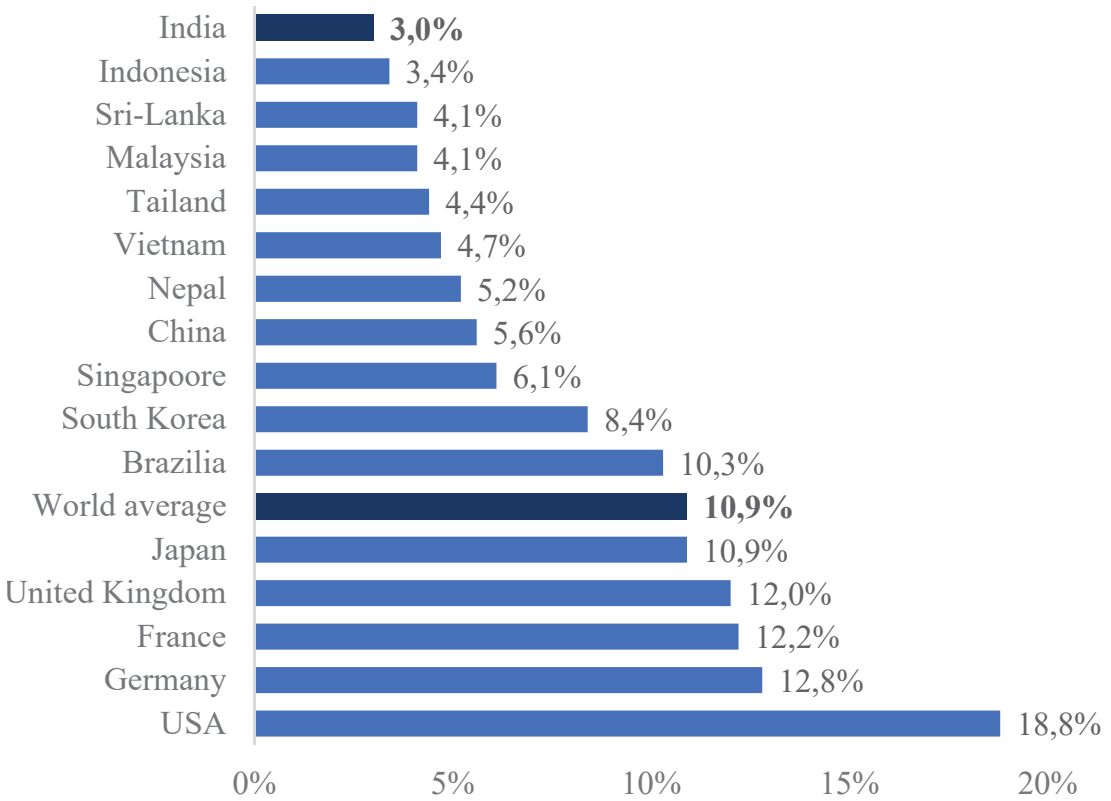

Figure 4. Health expenditure as % of GDP in different countries
Source: Estimates of global and Indian pharma industries. CRISIL12.

Furthermore, the potential for increased healthcare expenditure is corroborated by analysts in an article published by The Economic Times. As indicated in their analysis, The Ministry of Health in India is engaged in efforts to augment budgetary allocations for healthcare[13].

A synthesis of the data analysis on India reveals that the country currently ranks among the world's leading economies, while simultaneously exhibiting substantial growth potential as mentioned in the studies of (Bokachev, 2019). The expansion of the economy will be driven by the active advancement of diverse sectors of production and services, including healthcare and pharmaceuticals, which exhibit considerable growth potential due to the relatively low expenditure on these sectors in comparison to developed countries worldwide.

[13] The Economic Times, Retrieved July 20, 2024 from https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/india-rubbishes-lancet-report-says-spending-on-healthcare-is-at-all-time-high/articleshow/109306882.cms?from=mdr

India pharmaceutical market overview

The pharmaceutical industry in India is undergoing a period of dynamic development. Consequently, over the past four years, the industry has exhibited an average annual growth rate of 10.5% in monetary terms. The total market size is estimated at $60 billion, positioning India as the 13th largest market in the world in monetary terms and the third largest in terms of pharmaceuticals produced[12].

Historically, the Indian pharmaceutical market has gone through several stages of development. In general, it is accepted to distinguish three main stages of development of the Indian pharmaceutical market:

- 1900–1970
- 1970–1990
- 1995 to present

The initial phase of market development at the advent of the 20th century is distinguished by a proliferation of nationalistic sentiment, which precipitated a surge in industrial growth within the country, including the pharmaceutical industry. A number of significant pharmaceutical manufacturing companies were established in the country, including Bengal Chemical & Pharmaceutical Works and Alembic Chemical Works Co Ltd. These companies continue to operate to this day. Additionally, during this period and up to the 1970s, the Indian pharmaceutical industry exhibited a significant reliance on the importation of active pharmaceutical ingredients (APIs) from external suppliers.

A more detailed presentation of the development of the Indian pharmaceutical market in its second and third phases can be found in Table 2.

Table 2

Stages of development of the Indian pharmaceutical market

Stage 1. Beginning of formation - Mostly international companies are on the market - Small share of Indian companies	**Stage 2. State Control** - Patent Act of 1970 - Price control. - Beginning of growth of Indian companies	**Stage 3. Development** - Development of improvement of internal processes - Development of pharma infrastructure - Start of export development	**Stage 4. Growth:** - Export growth of local players - Focus on local R&D	**Stage 5. Innovation and Research** - New law on intellectual property - Development of R&D
1970	1980	1990	2000	2010+

Source: compiled by D.V. Ilin, I.V. Lazanyuk on the basis of (Gulshan, 2013; Karunakar, 2016).

Since the late 1980s, the Government of India has been engaged in efforts to facilitate the growth of the pharmaceutical industry, which has resulted in accelerated expansion. The primary objective of the government is to establish India as a global leader in the production of pharmaceutical substances and medications.

The Indian government has invested considerable resources into the development of this industry, which has assumed greater significance in the 20th century due

to shifts in the country's demographic and economic landscape. The government's approach to the development of the industry has been characterized by a process of trial and error, with a focus on learning from the experiences of other global countries. In summary, the measures taken by the Indian government over the past three decades can be classified as follows: simplification of the process for obtaining licenses for manufacturing of pharmaceuticals and substances;

- establishment of patent regulation from 1995 onwards;
- establishment of a fund for research and development, including medical and pharmaceutical research and development in 1999;
- establishment of a lower level of VAT on pharmaceuticals in the country (4%) in 2005;
- reduction of duties and taxes related to the development and research of new drugs in 2008–2009.

As a consequence of these developments, the Indian pharmaceutical market has undergone a considerable expansion by 2023, enabling Indian pharmaceutical enterprises to markedly enhance the value of their shares as mentioned in the work of (Jangir, Rathaur, 2024) and, in turn, establish India as a pivotal player in the global pharmaceutical landscape.

The Indian pharmaceutical industry produces products for the domestic market (which is exhibiting accelerated growth) and for export (Table 3). Furthermore, the Indian pharmaceutical industry encompasses the production of drug substances or API (active product ingredient), which is not included in Table 3.

Table 3

Comparison of exports and imports of pharma products in India

Type	Size, billion Rs	% of total market size	Average growth between 2018 and 2023, %	Expected average growth between 2023 and 2028, %
Local market	1.858 (22 bln $)	54	9	9–10
Export	1.583 (19 bln $)	46	7	7

Source: compiled by D.V. Ilin, I.V. Lazanyuk on the basis of material (Sonwane, Pandey, 2024).

As evidenced in Table 3, and as mentioned in the work of (Sarwal et al., 2021), the Indian market is exhibiting robust growth, with an annual increase of 7–9%. Analytical agencies project that the total market size may reach USD 130 billion by 2030. It is projected that the total market size will reach US$130 billion by 2030. The Indian pharmaceutical market is almost equally divided between products intended for domestic consumption and those intended for export.

Local pharmaceutical market

The Indian pharmaceutical market is home to a multitude of pharmaceutical companies, with a notable concentration of market participants. The top 20 largest pharmaceutical companies collectively account for 68% of the market. As illustrated

in Table 4, the top 20 pharmaceutical companies are comprised of 16 Indian and only 4 international companies. Concurrently, the majority of companies have demonstrated robust annual growth, exceeding 8% on average over the past four years, thereby outperforming the industry average.

Table 4

Top 20 players in the local pharmaceutical market in India

Number	Company title	Sales, 2023, Rs	Market share, %	Average growth for 2019–2023, %	Company title
1	SunPharma	159	8.4	9.2	Indian
2	Abbott	121	6.4	8.7	International
3	Mankind	98	5.2	13.6	Indian
4	Cipla	96	5.1	7.2	Indian
5	Zydus cadila	73	3.9	7.1	Indian
6	Torrent Pharm.	69	3.6	12.3	Indian
7	Alkem	66	3.5	8.2	Indian
8	Lupin	65	3.4	5.7	Indian
9	Intas	64	3.4	11.8	Indian
10	Macleods	62	3.3	12.7	Indian
11	Aristo	56	2.9	13.2	Indian
12	Dr. Reddy's	55	2.9	8.1	Indian
13	Emcure	53	2.8	10.8	Indian
14	GSK	49	2.6	5.2	International
15	USV	39	2.1	9.9	Indian
16	Glenmark	39	2.0	8.1	Indian
17	Ipca	36	1.9	15.6	Indian
18	Pfizer	34	1.8	2.7	International
19	Micro Labs	32	1.7	7.9	Indian
20	Sanofi	31	1.6	2.0	International
	Others	599	31.6		
	Total market	1 895	100.0	8.2	

Source: Global and Indian pharma industry assessment CRISIL[12].

As evidenced in Table 5, the main Indian pharmaceutical companies were established during the 1970s and 1980s. The primary area of specialization for these companies is the production of generic pharmaceuticals, which currently constitute the majority of their product portfolio. Moreover, numerous Indian pharmaceutical companies, including SunPharma, Dr. Reddy's, and Lupin, are engaged in the active

development of biosimilars, defined as biological medicinal products containing the same active ingredient as the original biological medicinal product that has already been approved for use in medicine. It is noteworthy that, despite the fact that the majority of Indian pharmaceutical manufacturers produce a diverse range of pharmaceuticals, each company has a distinct business model with regard to drug development. For instance, Glenmark focuses on respiratory diseases, while Dr. Reddy's specializes in pain management drugs. The annual revenues of these corporations are in the vicinity of or in excess of $1 billion. These corporations have annual revenues approaching or exceeding US$1 billion, which positions them among the largest generics producers in the world. Thus, according to the PharmaShot analysis[14], among the top 20 largest generic companies in the world, eight manufacturers are Indian companies.

Table 5

Analysis of leading Indian pharmaceutical companies

Number	Title	Year of foundation	Medical direction	Revenue, 2023 $ billion (India + exports)	Market capitalization, $ billion
1	SunPharma	1983	Antiepileptic, dermatology (psoriasis)	4.63	22.0
2	Dr.Reddy's	1984	Pain medications, gastro, biosimilars	2.8	9.5
3	Cipla	1935	Antiviral drugs, Asthma, antidepressants	2.6	7.0
4	Lupin	1968	Antibiotics, Cardiology drugs	2.2	4.5
5	Aurobindo Pharma	1986	Antibiotics, antivirals.	3.1	6.2
6	Biocon	1978	Endocrinology (Type 2 Diabetes Mellitus), Oncology	1.2	5.5
7	Torrent Pharm	1959	Cardiovascular system, CNS	1.1	3.8
8	Cadila Healthcare	1952	Gastroenterology, Cardiovascular system, painkillers	1.9	4.9
9	Pharmaceuticals DivisLaboratories	1990	Pharmaceutical ingredients and constituents	960	8.6
10	Glenmark	1977	Dermatology, oncology, respiratory diseases	1.5	2.5

Source: compiled by D.V. Ilin, I.V. Lazanyuk based on PharmaShot data[14].

[14] PharmaShots. Top 20 Generics Pharma Companies Based on 2022 Revenue. Retrieved June 10, 2024 from https://www.pharmashots.com/16187/top-20-generics-pharma-companies-based-on-2022-revenue

The majority of the companies presented below supply their products not only to local markets but also to international markets. It is also noteworthy that the largest Indian companies are listed on Indian stock exchanges, while some pharmaceutical companies are listed on international stock exchanges. For instance, Dr. Reddy's, Lupin, Cipla, and Aurobindo are listed on the New York Stock Exchange. The prospective growth of these companies is also indicated by their market capitalization. For example, the ratio of market capitalization to revenue (multiplier) for many companies is 3x or more, which indicates their robust financial position and future growth potential in terms of stable cash flow generation. This is also confirmed by the analysis from McKinsey[15], stating that Indian companies have demonstrated the highest return on invested capital over the past two decades.

Furthermore, it is noteworthy that the majority of prominent Indian pharmaceutical companies are engaged in the formation of collaborative relationships with international pharmaceutical corporations. The international companies Pfizer and Sanofi, which entered into partnerships with Indian companies Aurobindo Pharma and Dr. Reddy's, serve as illustrative examples of the expansion of alliances and partnerships.

Concurrently, the Indian government perceives prospective avenues for growth not only in the expansion of generic drug production, but also in the advancement of biosimilar manufacturing and the advancement of medical technology solutions[16].

Export market

India's export market encompasses both pharmaceuticals and active pharmaceutical ingredients (APIs). Consequently, the aggregate value of Indian pharmaceutical exports has increased by over USD 6 billion over the past five years, from 2019 to 2023. This represents an average annual growth rate of 7% (see Fig. 5). In a distinct initiative to bolster the export market, exports of supplied products increased by USD 4 billion between 2021 and 2022 due to government support and robust demand, particularly in the wake of the global pandemic caused by the SARS-CoV-2 virus. The geographic scope of shipments expanded to encompass 160 countries[17].

[15] Obi E., Chantal L., Siddharth P., & Felix R. McKinsey. Chemicals and capital markets: Regional differentiation. 2023. Retrieved June 10, 2024, from https://www.mckinsey.com/industries/chemicals/our-insights/chemicals-and-capital-markets-regional-differentiation

[16] Indian pharmaceutical industry moving ahead from generics to biosimilars and MedTech. The Economic Times, Retrieved June 26, 2024, from https://health.economictimes.indiatimes.com/news/pharma/pharma-industry/indian-pharmaceutical-industry-moving-ahead-from-generics-to-biosimilars-and-medtech/111274389

[17] Kumra, G. Why the next decade in healthcare is India's decade. McKinsey. Retrieved July 10, 2024, from https://www.mckinsey.com/featured-insights/future-of-asia/why-the-next-decade-in-healthcare-is-indias-decade#/160

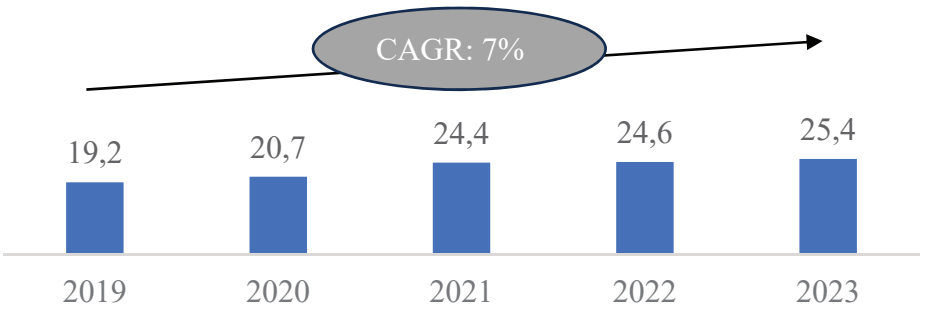

Figure 5. Pharmaceutical exports from India 2017–2023, US$ billion
Source: IBEF, 202418.

As illustrated in Table 6, the primary export markets for India are the United States and Europe, collectively accounting for 47% of exported goods. Additionally, India provides its products to a vast majority of countries globally. For example, Indian drugs account for 25% of the global market share for generic drugs, while in the United States they represent 40% of the market in 2022 (as confirmed by Arunish Chawla, Secretary of the Department of Pharmaceuticals in India).

Table 6

India's key export markets

Country	Size, bln Rs	% of total market size
USA	550	35
Europe	187	12
South Africa	48	3
Great Britain	43	3
Nigeria	35	2
Canada	35	2
Russia	35	2
Australia	32	2
Brazil	31	2
Kenya	25	2
Others	562	36

Source: Compiled by D.V. Ilin, I.V. Lazanyuk on the basis of IBED data[18].

Consequently, as a consequence of governmental assistance, the Indian pharmaceutical industry has undergone a substantial transformation over the past few decades, becoming one of the most prominent markets in the world and the largest exporter of pharmaceutical products to the global market. In terms of market size, the Indian pharmaceutical market is valued at approximately $60 billion and is experiencing growth that exceeds the global average. Notable Indian pharmaceutical companies are

internationally regarded as significant players in the industry, demonstrating rapid growth and actively developing their portfolios to meet future needs.

It is projected that the Indian pharmaceutical market will double in size from 2024 to reach USD 130 billion by 2030.

Indian market features and barriers to future development

In order to gain a deeper understanding of the Indian pharmaceutical market and its potential for future growth, it is essential to examine the fundamental characteristics of the market and identify the challenges and prerequisites for growth. The result of a SWOT analysis, which summarizes the key characteristics of the Indian pharmaceutical market, is presented in Table 7. This analysis was compiled based on the analysis of scientific articles by several authors.

Table 7

SWOT analysis of growth prospects of Indian pharmaceutical industry

S — Strengths • Low cost of production (including labor, research costs, etc.). • Good level of technological and intellectual base of production, including digitalization • Government support	**W — Weaknesses** • Lack of focus on R&D of innovative pharmaceuticals • Product quality — there are several major complaints over the last decade, including from the FDA (Food Drug Administration, the U.S. department of drug regulation) • Complex supply chain
O — Capabilities • Strong prerequisites for future market development (In terms of consumption and price growth) • Opportunity for generics development (a large number of original drugs will lose patent protection in the next 10 years) • Development of digitalization and artificial intelligence (efficient use of costs) • Development of insurance programs to compensate for the purchase of medicines	**T — Threats** • Increased competition on the global market: development of the pharmaceutical industry in other countries (e.g. China) • Constantly changing regulatory requirements for production and registration of medicines

Source: compiled by D.V. Ilin, I.V. Lazanyuk based on (Podolskaya, Singh, 2024; Festa et al., 2022; Wahab et al., 2023) and Times of India[19].

As illustrated in Table 7, several constraints impede the advancement of the Indian pharmaceutical industry, including product quality and the intricate nature of the supply chain as mentioned by (Narayana et al., 2019). Notably, as mentioned by (Saifu, 2024) Indian pharmaceutical industry is a well-known country in terms of its capabilities of producing generics drugs, currently faces unique problems and opportunities in terms of development of supply chain, particularly it is caused by complex regulatory documents requirements, different growths and evolving internal standards. Nevertheless, the low cost of production (including economies of scale), the development of digitalization, and the steadily increasing demand for pharmaceuticals both domestically and globally should ensure that India meets its growth target of doubling the market size 2030 as mentioned in the study of (Jakovljevic, 2021)

It is also important to note that in the future, it will be crucial for the state to achieve an appropriate equilibrium between regulating the industry and providing it with support. This is because the state's role is twofold: on the one hand, it must implement programs aimed at reducing mortality, promoting longevity, and ensuring access to medicines; on the other hand, it must foster the creation of a transparent and competitive market for pharmaceutical companies that are able to grow and develop as mentioned in the studies of (Chitra, Nandan, 2020). As the analysis demonstrates, the Indian state has historically showed proficiency in this regard. India's industrial policy has consistently considered two fundamental components: economic and social. The New Industrial Policy of 1991 further introduced a third dimension, namely environmental, to this dual framework. In other words, while promoting economic growth, it facilitated the resolution of a multitude of social issues, including the creation of new employment opportunities, the reduction of poverty and malnutrition, and the mitigation of social inequality as mentioned in the work of (Galishcheva, 2019).

Conclusions

The conducted analysis shows that over the last 10 years, the global pharmaceutical market was actively developing thanks to new emerging markets, such as India. India is well prepared towards future growth of the pharmaceutical market, since it has a reliable and diversified economy, growing population and evolving pharmaceutical healthcare sector.

The research reveals that the Indian pharmaceutical industry over the last 30 years significantly transformed, becoming not only a dominant local player, but also a major supplier of pharmaceutical products to the global market. Over the last five years, the export of Indian medicines has been growing at 7% per annum and in the next 4–5 years the Indian pharmaceutical industry will become one of the major growth drivers for the global pharmaceutical market. Indian pharmaceutical companies are well known and recognized amongst the largest pharmaceutical producers and demonstrate a sustainable growth in terms of financials and operations while actively developing new portfolios.

Most experts forecast doubling of the Indian pharmaceutical market which is to reach 130 billion US dollars by 2030. This will place India within top-10 biggest pharmaceutical markets.

The SWOT analysis revealed certain weak points and barriers for the future development of the Indian pharmaceutical industry. Among them are product quality, increasing competition from other global players, difficulties in logistics inside the country. Despite the weak points mentioned above, the Indian pharmaceutical industry is ready for a sustainable market growth in future at a compound average growth rate of 7–10% a year. This growth will be sustained by a variety of factors such as support from the State, increasing digitalization, scale-effect of the industry and increasing demand for pharmaceutical medicines.

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