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IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2021 Issue: 12 Volume: 104

Published: 30.12.2021 <http://T-Science.org>

QR – Issue



QR – Article



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HISTORY OF PHARMACY OF KAZAKHSTAN DURING THE YEARS OF INDEPENDENCE

Abstract: *The dynamic development of the pharmaceutical market is determined by its life priority, since the beginning of its existence, humanity needs constant consumption of medicines and medical products to maintain health at the level necessary for a full life. The pharmaceutical market is an important sector of the economy of any country and is a criterion for its economic and social development, the level of well-being of the population. The developed pharmaceutical industry of the country is considered an indicator of the high innovativeness of its economy. As far as the Republic of Kazakhstan is concerned, the development of the pharmaceutical industry originates from gaining Independence. Since it was during the years of Independence that there were significant changes in the pharmaceutical industry in Kazakhstan.*

In this article, we have analyzed the history of pharmacy over the past 30 years, given the dynamics of the development of the pharmaceutical industry over the years of Independence (1991-2021). The article indicates which production facilities have been functioning for the entire time, how the pharmaceutical market has changed, etc.

Key words: *history of pharmacy, pharmaceutical production, pharmaceutical industry of Kazakhstan, development of pharmacy over 30 years.*

Language: English

Citation: Baltabay, B. S., Kabdykanova, E. Zh., Omar, G. T., Orazbek, K. O., & Satmbekova, D. K. (2021). History of pharmacy of Kazakhstan during the years of independence. *ISJ Theoretical & Applied Science*, 12 (104), 1304-1308.

Soi: <http://s-o-i.org/1.1/TAS-12-104-145> **Doi:**  <https://dx.doi.org/10.15863/TAS.2021.12.104.145>

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Scopus ASCC: 3003.

Introduction

Goal of research

Analysis of the state of the pharmaceutical market in Kazakhstan, over the years of Independence, including a short excursion into the history of its development and immediate prospects.

Kazakhstani pharmaceutical market is relatively young; its formation began in the mid-90s. Back in 1994, drug provision of the population and state health care was carried out centrally through the State Joint Stock Holding Company "Pharmacy", which had 1832 pharmacies, including 64 hospital and 1768 independent. (5)

After the demonopolization of the Pharmacy holding and the privatization of pharmacies, the centralized drug supply system was destroyed. During this period, the Kazakhstani model of drug supply underwent a severe transformation from centralized distribution to a system based on the principles of a market economy. The key moment of this transition was the privatization of pharmaceutical production, the distribution network and the pharmacy network, the active process of creating private pharmacies, kiosks, warehouses, etc. By the middle of 1996, the entire drug supply system had completely changed, and these changes continue to this day.

In modern conditions, the pharmaceutical market in Kazakhstan is one of the most developed in the CIS. To a certain extent, the deficit has been overcome and the saturation with various types of finished medicines and medical products has been ensured. The culture of service has grown. In Kazakhstan, the main global trends in the development of pharmaceutical markets are observed - the consolidation and development of vertically integrated companies. Changes are taking place in the distribution, manufacturing and retail sectors. The number of pharmacy chains is increasing. Modern marketing technologies are being introduced.

Materials and methods

Analysis and synthesis of special literature, publications in periodicals dedicated to the field of health care and the pharmaceutical industry. The search and processing of information was carried out for the period 1991-2021. The data obtained was synthesized by data selection and structured chronologically. The processing algorithm and the principle of unambiguity are preserved.

Results and its discussion

Beginning

The formation of Kazakhstans pharmaceutical industry began in the mid-90s. It was during this period that the pharmaceutical industry of Kazakhstan

began to develop, which in the next 30 years will change quite dynamically and for the better.

In 1992, the Pharmaceutical Company "Romat" was founded as a wholesale and retail structure. The first private pharmacy "Romat" was opened in the city of Semipalatinsk. In a short period of time, Romat has become the largest pharmaceutical holding, built on the principle of "vertical integration", in which all processes from the production of medicines to the delivery of the final product to the consumer are combined. In 1997, the first plant was acquired - a plant for medical preparations in the city of Semipalatinsk, which was launched in 2004. In 1999 it was replenished with the Pavlodar pharmaceutical plant. And two years later, a plant for the production of medical polymer products became the property of the company. In 2006, the first in Kazakhstan chamber for gas sterilization of medical products was launched there. In 2006, a representative office was opened in Beijing, where it is planned to export our products. (7)

After Kazakhstan gained independence, it became necessary to develop its own pharmaceutical industry in the country. This was especially true for the manufacture of finished dosage forms. Therefore, the management of the company "Chimpharm" developed and confidently implemented a program for the creation on the basis of JSC "Chimpharm" of a large modern production facility for the production of finished medicines. In 1993 the plant was transformed into a joint stock company. JSC "Chimpharm" starts production of finished dosage forms.

In 2000, the Chimpharm Company put into operation the third stage of the workshop for solid dosage forms for the production of tablets, coated with gastrointestinal and enteric-coated tablets, with a capacity of 1 million packages per month, a workshop for sterile disintegrating antibiotics with a capacity of 2.1 million bottles per month was built, a second line was installed for the production of injection solutions in syringe ampoules with a volume of 1 ml, 2 ml and 5 ml with a capacity of 1.4 million packs per month. In 2002, the Company installed a line for the production of dosage forms in capsules. (3)

In the early 2000s, the pharmaceutical industry begins to recover from the crisis and is growing by tens of percent per year. Several enterprises appear on the market at once: the Nobel AFF project and the Global Pharm JV are launched. (2)

The company "NOBEL" entered the market of Kazakhstan in 2002, and immediately with investments and with the intention to organize production here. In fact, this is the first production that was created in our country in accordance with GMP standards. It was the first to pass the inspection and receive the GMP certificate. (Director of JSC "NOBEL" Almaty Pharmaceutical Factory Svetlana Kil). In 2004, the production of six drugs was

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launched on advanced production equipment worth \$ 30 million. (4)

In general, the share of the pharmaceutical industry in the volume of industrial production was 0.12 - 0.13% in the period from 2004 to 2007. Over the past decade, the Kazakh pharmaceutical market has grown significantly in volume, increasing by 10% annually since 1999; in the period from 2003 to 2008, the average annual growth rate was 14.48%. (8)

MARKETING ANALYSIS

The capacity of the pharmaceutical market of Kazakhstan in value terms by 2008 increased in comparison with 2000 by 5 times. The deficit was overcome and the saturation with various types of finished medicines and medical products was ensured. The culture of service has grown. This was facilitated

by the high rates of socio-economic development of the country, the growth of the well-being of the population. From 2005 to 2008, high growth rates of the domestic pharmaceutical market were observed. The average annual growth in the volume of sales of pharmaceuticals on the domestic market in 2005-2008 amounted to 19%. The share of the Pharmaceutical sector of the Republic of Kazakhstan in 2004 was less than 0.97%, and in 2008 it was only 0.87%. (state and forecast of development of the pharmaceutical market in Kazakhstan according to BTA analyst).

Trends for 2003-2007

The increase in the number of pharmacies by 2003 by 3.7%, especially due to the growth of pharmacy chains, outstripping the growth of pharmacy space (115.5%).

Table 1. Resources and use of pharmaceutical preparations, 2005-2008, thousand tenge.

	2005	2006
Resources	59 032 555	66 801 229
Production	6 137 167	7 861 900
Import	52 895 388	58 939 329
Use	59 032 555	66 801 229
Export	691 660	1 499 639

According to official data, against the background of growth in the country's GDP and industry from 2009 to 2013, there was an increase in the production of pharmaceutical products, which was 16% annually. Despite the positive dynamics of production volumes, the contribution of the pharmaceutical industry to Kazakhstan's GDP remained rather low. (According to the Statistics Agency of the Republic of Kazakhstan)

The pharmaceutical industry in Kazakhstan in 2014 is characterized by a general decline in production by 20.5% (from 37 to 29 billion tenge), as well as a decrease in the share of a local product in sales on the domestic market from 14% to 9%. The share of imported products in the total volume increased by 5%, respectively. At the same time, the export of pharmaceutical products for the period from 2009 to 2013, increased by 17% (from 20.1 to 23.5 million USD). In January-July 2014, exports amounted to USD 10.3 million, which is 18% less than in the same period of the previous year.

In the regional context, the pharmaceutical industry is as follows: 53% of manufactured products are in the South Kazakhstan region, 28% - in the city of Almaty; the production capacities of other regions of the republic are insignificant. (6)

2015 -2018

In 2015, the domestic market is estimated at USD 1.8 billion in pharmacy prices. At the same time, devaluation, the creation of a single market for

medicines between the countries of the Eurasian Economic Union (EAEU) and Kazakhstan's accession to the WTO put the industry in a difficult position. After Kazakhstan's transition to a free exchange rate regime in August 2015, the situation became more complicated. First of all, this state of affairs has led to an increase in prices for both domestic and foreign drugs.

In 2016–2018, the GMP standard was introduced, which allowed many companies to significantly update their fixed assets and receive compensation for their investment. Only one of the companies - "Nobel AFF" - the volume of investments amounted to about 600 million tenge over three years. (1)

In total, in the Republic of Kazakhstan from 2016 to 2021, there are more than 29 facilities of pharmaceutical manufacturing organizations that currently operate in accordance with GMP requirements.

2019-2021

The COVID-19 pandemic has created both challenges and opportunities for pharmaceutical manufacturers in Kazakhstan. Since the substances for most of the drugs are imported from abroad, a disruption in supply chains has hit enterprises. During the pandemic, there was not only an increase in output volumes, but also an increase in the investment attractiveness of the sector. It is based on measures of state support.

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Thus, according to the data of the international analytical company IQVIA, the value of the Kazakhstani pharmaceutical market, taking into account retail sales and purchases for guaranteed volume of medical care for 11 months of 2020, increased by 22% compared to the same period of the previous year. At the same time, the volume of sales of pharmaceutical products in the retail segment increased by 18%. The main factors behind the positive dynamics of the market in 2020 were a sharp increase in demand for drugs, an increase in their cost and the emergence of new drugs. Due to the coronavirus pandemic, many new drugs have appeared on the market that have helped in the prevention and control of the consequences of the coronavirus.

If in 2019 the share of domestic manufacturers in monetary terms was 14%, then by the end of 2020 this figure increased to 16% of the total pharmaceutical market of the Republic of Kazakhstan.

According to the JSC Kazakhstani Center for Industry and Export "QazIndustry", the main driving factor for the development of the pharmaceutical industry remains a stable increase in the volume of production and imports of products. In January-July 2021, domestic pharmaceutical companies produced products worth 125.1 billion tenge, thereby demonstrating an increase of 78.2% over the same period in 2020. The industrial production index (IPI) was 138.9%.

It was during this period that the Government established an urgent need for the development of its own medicines and medical products. Thus, at the end of 2020, the Government adopted a Comprehensive Plan for the Development of the Pharmaceutical Industry for 2020-2025. The comprehensive plan is aimed at solving problems in the field of circulation of

medicines and medical devices, which includes support for OTPs in the conditions of the common EAEU market, the development of personnel policy and science in the pharmaceutical sector, attraction of investments with the implementation of the ideas of major players, development of measures of state support for the pharmaceutical sector, development pharmaceutical cluster, digitalization of the pharmaceutical sector, introduction of labeling and traceability of medicines. This, in turn, will ensure the further continuous development of the pharmaceutical industry in the Republic of Kazakhstan.

Conclusion

As can be seen from the above data, over the past 30 years, the country's pharmaceutical industry has noticeably changed and improved. In conclusion. It is important to note that despite its "young age", the pharmaceutical industry of Kazakhstan is developing dynamically, and the drug market of Kazakhstan is regulated by international standards (GxP, ICH, ISO), primarily with the aim of ensuring the safety, effectiveness of drugs circulating on it and an acceptable level their qualities. Establishing a strong pharmaceutical industry of its own is a fairly time-consuming, laborious and costly process. Creation of conditions for import substitution of pharmaceutical and medical products based on modern technologies in accordance with international GMP standards is one of the main tasks for the development of the pharmaceutical industry in the Republic of Kazakhstan, which is what the pharmaceutical industry of Kazakhstan is heading for, as it has favorable prospects for the development of the pharmaceutical industry.

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