Analysis of the pharmaceutical industry in the Republic of Kazakhstan subject to the international experience

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Abstract: This article describes the ranking of leading pharmaceutical companies in the world, analysis of the pharmaceutical industry, the competitive advantages of foreign pharmaceutical corporations, dynamics of the number of active pharmaceutical enterprises in the Republic of Kazakhstan, basic dynamics in the period 2010-2014, as well as the existing main problems of the pharmaceutical industry.

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1. Introduction

The pharmaceutical industry is one of the most profitable sectors in the world economy. As food, drugs are the essential goods. Therefore, the medical drugs are included in the list of goods with inelastic demand [1, 2, 3].

The pharmaceutical industry is a branch of industry included the processes of research, development, production and distribution of drugs for the prevention and treatment of diseases. The pharmaceutical companies work with generics and original drugs [4, 5, 6].

2. Material and Methods

19 leading pharmaceutical corporations account for the major share of the global pharmaceutical industry. The total volume of sales of these corporations in 2013 amounted to USD 554.6 billion, of which the top three account for 29.8% [7].

Table 1 – Ranking of leading pharmaceutical companies in the world in 2013

No	Company name	Country	Volume of sales, USD bill.	Unit weight, %
1	Pfizer	USA	59	10,64
2	Novartis	Switzerland	56,7	10,22
3	Roche Holding	Switzerland	49,7	8,96
4	Merck & Co	USA	47,3	8,53
5	Sanofi	France	46,1	8,31
6	GlaxoSmithKline	Great Britain	43	7,75
7	Abbott Laboratories	USA	39,9	7,19
8	AstraZeneca	Great Britain	29,6	5,34
9	Eli Lilly & Co	USA	22,6	4,08
10	Sinopharm Group	China	21,5	3,88
11	Teva Pharmaceutical Industries	Israel	20,9	3,77
12	Takeda Pharmaceutical	Japan	18,2	3,28
13	AbbVie	USA	18	3,25
14	Bristol-Myers Squibb	USA	17,6	3,17
15	Otsuka Pharmaceutical	Japan	13,9	2,51
16	Novo Nordisk	Denmark	13,8	2,49
17	Merck KGaA	Germany	13,8	2,49
18	Astellas Pharma	Japan	11,7	2,11
19	Daiichi Sankyo	Japan	11,3	2,04
Total			554,6	100,00
Composed by the author based on the Wikipedia materials				

The United States is in the 1st position on geographical distribution, accounting for 38% of the production of medicines. Switzerland ranked 2d position (19%) due to two major drug manufacturers, the top three countries closes the Great Britain with a unit weight of 13%. Further, the ranking follow by Japan, France, China, Israel, Denmark and Germany.

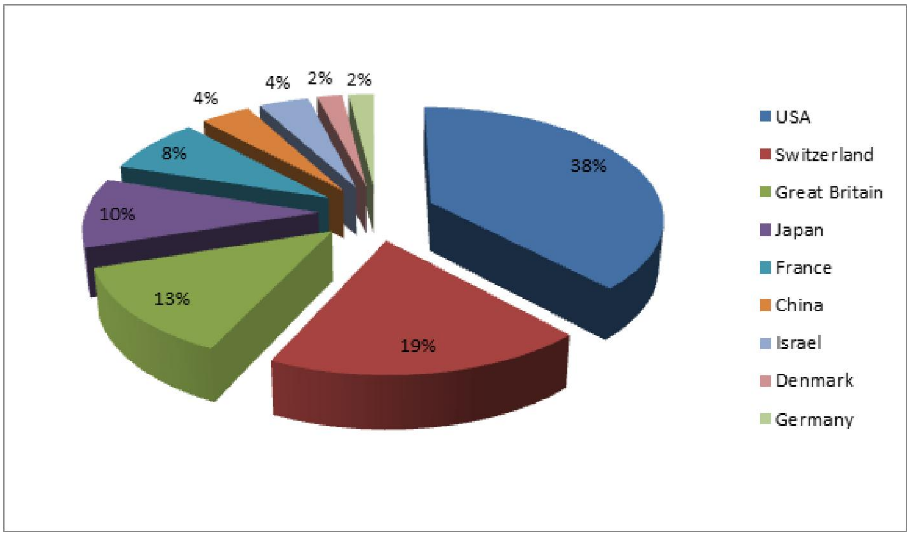

Figure 1 – Analysis of the pharmaceutical industry by country

Note - Composed by the author based on the Wikipedia materials

The foreign corporations have competitive advantages (see Fig. 2).

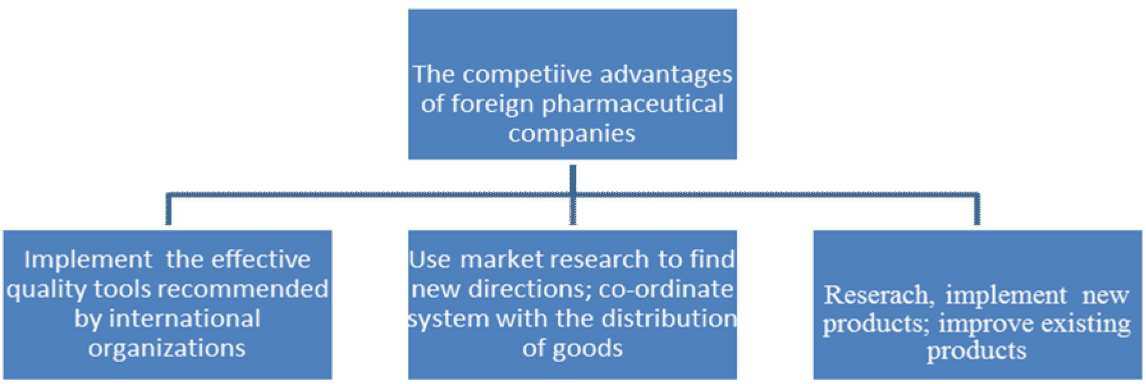

Figure 2. The competitive advantages of foreign pharmaceutical corporations

According to the Statistics Agency, the share of the pharmaceutical industry in Kazakhstan in 2013 is 0.2% of the total industry volume, and in the manufacture structure is 0.6% [8].

Also, 151 companies in the pharmaceutical field were registered in Kazakhstan on 1st of July 2014. The number of pharmaceutical companies is presented in Table 2.

Table 2. Dynamics of the number of active pharmaceutical enterprises in the Republic of Kazakhstan

No	Enterprise	2010	2011	2012	2013	2014 (on 1st of July, 2014
1	Large	1	1	1	2	2
2	Medium	10	10	12	9	10
3	Small	151	168	152	138	139
Total		162	179	165	149	151

Picture 3 shows us the basic dynamics in the period 2010-2014 and the distribution of enterprises by size.

Though the decrease of total enterprises' number in 2013, the increase of 1.3% is observed for the reporting period. The small enterprises take a major stake in the industry, they account for 92% of the total number of enterprises in the reporting period.

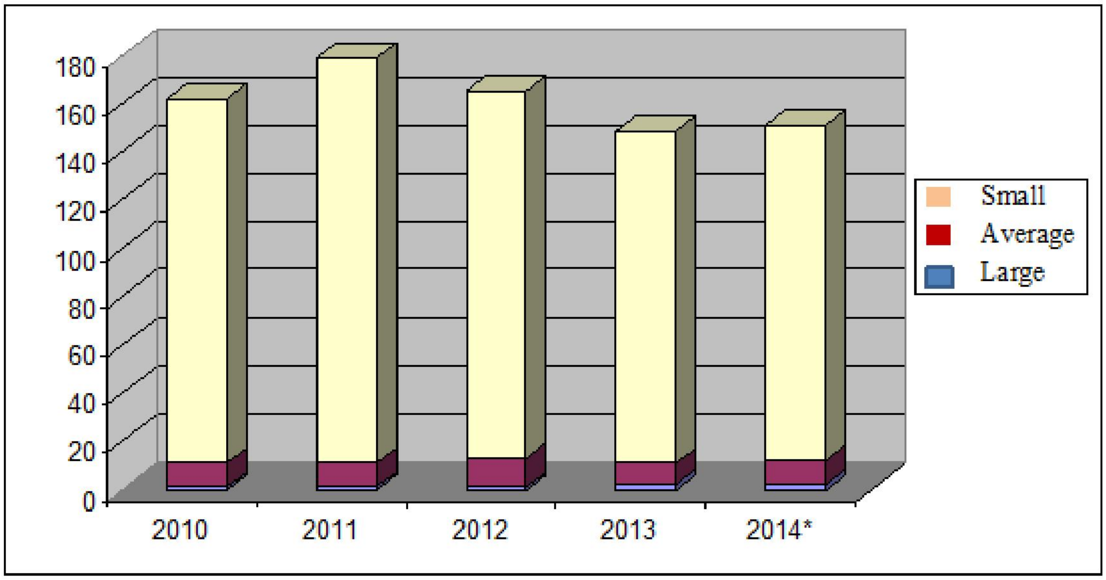

Figure 3. Dynamics of the number of pharmaceutical enterprises by size

Note – data for 2014 год are presented on July 1st, 2014

The internal pharmaceutical market is characterized by sustainable development, which is confirmed by statistic data. From 2008 to 2013 there is the increase of the production of basic pharmaceutical products of Kazakhstan, money means - from KZT 11.3 billion to KZT 33.6 billion or 3 times in nominal terms. The real growth was 220.1%.

Export of products for the pharmaceutical industry amounted in 2013 to USD 23.5 million, which was 17% more than in 2008. The main export was drugs (USD 20.1 million or 85.5%) and the immune serum, blood and vaccines (USD 2.5 million or 10.6%).

The main product markets were in 2013:

– Kyrgyzstan (USD 8.8 million or 37.4%);
– Russia (USD 3.7 million or 15.7%);
– Mongolia (USD 2.2 million or 9.4%);
– The Netherlands (USD 1.9 million or 8.1%).

Import of products for the pharmaceutical industry amounted in 2013 USD 1.6 million, which was 23.7% more than in 2012 and 2.2 times more than in 2008. The main import in 2013 was drugs (USD 1.3 million or 81.3%) and the immune serum, blood and vaccines (USD 278.1 million or 17.4%). The main suppliers in 2013 were: Germany (USD 254.8 million or 15.9%), France (USD 144.5 million or 9%), Russia (USD 136.5 million or 8.5 %), and India (USD 101.2 million or 6.3%).

3. Results

The development of national pharmaceutical segment is a complex, expensive and necessary process in the country. To achieve an optimal and efficient level of provision of medicines in the country, the domestic pharmaceutical manufacturers must implement the following measures:

- To increase the production capacity of pharmaceutical products;
- To research and invest the scientific and laboratory activity in search of new effective drugs;
- To get the trust of the population by providing quality pharmaceuticals.

The basic problem of domestic pharmaceutical companies is the lack of funds for investment of the production and marketing goals. It is very difficult to compete with well-known foreign corporations, and they do not stand competition.

The features of pharmaceutical field in the Republic of Kazakhstan [9]:

– This industry is characterized by a lack of qualified specialists;
– The dominance of the production of generic drugs and products «in bulk»; - The low level of production of original products;

– The low level of scientific research, development.

The is the main cause of weak competition imported drugs.

Though, the following steps leads to the development of the pharmaceutical industry.

The state support of the pharmaceutical industry:

– Reduction of taxes for manufacturers of drug for modernization of production;

– Competition of public research projects to find effective options and methods for the production of new drugs;

– Development of human resources;

– Strengthening marketing - market research, exhibitions, online conferences;

– Attraction of foreign investments in small-cap companies, and others.

Implementation of standards GMP (Good manufacturing practice)

GMP certificate is a certificate of conformity to international standards. Our manufacturers do not have this certificate, so they cannot export its products outside the country (excluding CIS). Go to GMP standards is very difficult, but it is possible. To achieve it, the government should follow the actions:

1. To improve the legislative source for transfer to GMP standards;
2. To create the state certified structure according to GMP;
3. To create in the Republic the system of test laboratories for determination and confirmation the quality of drug.

The implementation of government measures will help our manufacturers to follow meet GMP standards, which cause the development of the internal market. According to foreign experts, Kazakhstan is followed to Russia, Belarus and Ukraine by GMP. We hope that in a few years, our manufacturers will follow GMP standards in several years and will export the products outside the CIS.

4. Discussions

In conclusion, I would like to note the program of development of pharmaceutical industry in Kazakhstan for 2010-2014 was approved in 2009. The program focuses on the development of this segment and an increase in exports of pharmaceuticals. Key points of the program are implemented, but require further activity on this direction.

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