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BACHELOR THESIS

Economic Analysis of the Pharmaceutical Industry in Russia

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Declaration

I declare that I have worked on my bachelor thesis titled "Economic Analysis of the Pharmaceutical Industry in Russia" by myself and I have used only the sources mentioned at the end of the thesis.

In Prague on March 31, 2011 ……

Svetlana Khaustova

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Ekonomická analýza farmaceutického průmyslu v Rusku

Economic Analysis of the Pharmaceutical Industry in Russia

Summary

This bachelor thesis provides an economic analysis of the pharmaceutical industry in the Russian Federation.

In the theoretical part of the work, the core of the pharmaceutical industry aimed to ensure the health care of people within a society and its historical development in Russia is described.

The practical part of this bachelor thesis gives a brief overview of the country's economy and how it influences the industry as a whole. The main interest is put on analysis of structure and status of the Russian pharmaceutical industry. Further, the Russian pharmaceutical market segmentation is made based on the information on such parameters as elasticity of demand on medical services and products, the impact on public health, relatively high cost of one drug compared with drugs from the same therapeutic group.

It also provides a comprehensive coverage of pricing and regulations and helps to look beyond the recent financial economic crisis, and assess the growth potential for the largest and most populous pharmaceutical market in Central and Eastern Europe.

Based on the market analysis, the theoretical aspects of the development of the pharmaceutical industry and key recommendations for the Russian state policy in order to improve the economic efficiency of the pharmaceutical market performance are worked out.

Key words

Pharmaceutical industry, the health care system, elasticity of demand, finished pharmaceutical products (FPP), generics, import, consumption

Souhrn

Tato bakalářská se týká ekonomické analýzy farmaceutického průmyslu v Ruské federaci.

Teoretická část této práce vysvětluje jádro farmaceutického průmyslu se zaměřením na zajištění zdravotní péče lidem ve společnosti.

Praktická část této práce poskytuje přehled ruské ekonomiky a jaký má celkový vliv na tento průmysl. Hlavním cílem je analyzovat strukturu a status ruského farmaceutického průmyslu. Dále segmentaci ruského farmaceutického trhu s využitím ekonomických parametrů jako je elasticita poptávky na zdravotní služby a produkty, dále tyto dopady na lidské zdraví, relativně vysoké ceny léků v porovnání s jinými léky stejné terapeutické skupiny. Poskytuje komplexní náhled na způsob nastavování cen a regulací a umožňuje pohled za nedávnou ekonomickou krizi a vyhodnocuje růstový potenciál největšího farmaceutického trhu ve střední a východní Evropě.

Na základě tržní analýzy pomohly teoretické aspekty rozvoje farmaceutického průmyslu, dále také klíčové doporučení ruské státní politiky ke zlepšení ekonomických výsledků a zefektivnění farmaceutického průmyslu.

Klíčová slova

Farmaceutický průmysl, systém zdravotní péče, elasticita poptávky, generika, farmaceutický výrobek, import, spotřeba

Content:

1. Introduction

Imperfections of the health care system in Russia cause adverse demographic tendencies existing in the country to date. The problems, inherent in the health care system, are often connected with its underfinancing. In fact, according to the World Health Organization (WHO) in 2006, Russia placed 71st out of 194 member countries for cumulative expenses (state and private) in per capita on the health care. Nevertheless, if we consider the countries which are the market leaders in the pharmaceutical industry it appears that the life expectancy indicator in all countries is almost the same, thus it doesn't influence the WHO ranking. [1] For Russia, it means that besides the necessary increase in financing of the health care system, it is also important to consider its organizational issues, in other words, what kind of social return they can lead to.

Medications are an integral part of the health service of the population. The pharmaceutical market, being an integrated part of the health care system, should provide an adequate supply of medicine to meet the public demand, and also promote innovative development within the industry. To date, a high degree of import (not less than 75% of consumed drugs), the limited availability of qualitative medications to various strata of society, and a low level of research and development (R&D) are the key problems inherent in the Russian pharmaceutical market. [18] The high social importance of the market, along with considerations of national security, requires immediate resolution of these problems. The ideology of any state intervention in market processes should be developed first of all taking into account possible social consequences. Otherwise, similar actions of the state can only aggravate existing problems and damage other fields, which at first sight have not been connected with the pharmaceutical market. Therefore, questions concerning the creation of favorable conditions to increase the social and economic efficiency of the pharmaceutical market in Russia have become topical nowadays.

2. Objectives and Methodology

The main objectives of this research paper are to work out the theoretical aspects of the development of the pharmaceutical industry and to define key recommendations for Russian state policy in order to improve the economic efficiency of the pharmaceutical market performance.

Based on this, the research had the following objectives:

- To investigate the theoretical fundamentals of the pharmaceutical industry development and the state intervention with a view to increase its social and economic efficiency
- To reveal the main factors, which reduce socio-economic efficiency of the Russian pharmaceutical market according to its modern development tendencies and state strategic targets
- To identify the key players on the market
- To determine the position of the Russian pharmaceutical market in relation to the other global pharmaceutical markets
- To trace the future growth potential for the Russian pharmaceutical manufactures and to elaborate recommendations aimed to increase the economic efficiency of the pharmaceutical market

Theory and methodology of the research is based on propositions and conclusions formulated in papers by Russian and foreign scientists in the following areas: microeconomics, macroeconomics, trade economy, pharmaceutical economy, investment analysis and pharmaceutics. In this paper materials from scientific and practical seminars, conferences and symposiums on problems of the development of the pharmaceutical market both on national, and international levels, are used.

The genetic method, comparative, historical and systematic approaches were used. The reason why the genetic method is used is to study the origin and development of the mechanisms of the interaction between economic agents (government and business) in the pharmaceutical market. The comparative method is used to analyze

differences in key parameters between developed foreign markets and the emerging Russian market. The historical approach allows particularities within the pharmaceutical market to be traced throughout different stages in the development of Russia. The systematic approach highlights the organic link between the drug market and the national economy in order to identify the relationship hierarchy on a global and national scale.

3. Literature Overview

3.1. Definition of the Pharmaceutical Industry with Regards to Russia

The pharmaceutical industry develops, manufactures and sells drugs licensed for use as medications in order to ensure the health care of people within a society. Since the discovery of the pharmaceutical industry in the 19th century, it has come a long way and now has become one of the most influential and successful industries in the world. The pharmaceutical industry is largely dependent on R&D, which makes the search for new types of drugs, as well as to search for new types of medications. One can also see differences in the industry for the same drug, and various companies look to follow different paths for the same thing. [7]

With it well-educated and low-cost labor force, Russia has become a major attraction for investors worldwide. That is why Russia was one of the fastest growing emerging pharmaceutical markets in recent years. With its population of 141 million, it accounts for just under a third of the total Central and Eastern European pharmaceutical market. However, this expansion is mostly driven by import growth. Nowadays Russia is an ideal branded generic market, a market of drugs produced and distributed without patent protection. Over the last decade, there has been a shift in demand from cheap, locally produced generics to more expensive branded generics of foreign origin. [8]

3.2. Pharmaceutical Market in Terms of Post-Industrial Economy

Considering the markets of socially significant goods and services, it is necessary to note the connection between social stability and economic wellbeing within a society. A sustainable consumption level, that, in turn, is proportional to the population of the country and its minimum disposable income is characterized by social

goods and services, such as, foodstuff, heating, education, medications, and transportation. Citizens have a constitutional right to their consumption, which directly defines the successfulness of the state's legislative regulation.

The pharmaceutical market is an organic part of the health care system, and its main task is to provide medicine to the population. The state, on the one hand, acts as the guarantor of market relations in the sphere of medicinal distribution. On the other hand, it uses a market mechanism for financing and managing medical provision to the population.

Within the limits of the given work, a transformation of the pharmaceutical market caused by the development of a post-industrial society is of great interest. Transition to a post-industrial society is characterized by the formation of information as the basic production resource of economic activities. As a result, a person as a bearer of knowledge and abilities, being an owner of the means of production in a post-industrial economy, receives an additional economic value, characterized by the concept of the human capital. [5]

Without going into the medical terminology, it is possible to consider that one of the purposes of consumption pharmaceutical goods and services is the elimination of physical and mental anguish, the promotion of health, the increase of life expectancy, the reduction of diseases, the growth of labour productivity, etc. In other words, the satisfaction of these requirements is connected with the aspiration to continue the ability to live that and that is why it has a fundamental value in the system of human values. In the context of a post-industrial society, the consumption purpose consists of the increase of the human capital. For the pharmaceutical market it means that market mechanisms are needed not only to solve questions of medicinal provision, but also to promote the stimulation of certain directions of pharmaceutical R&D for a more complete satisfaction of the demand of the population, expressed by the increase of the human capital.

In spite of the fact that turnover of medical products is performed by means of market mechanisms, their high social importance dictates the necessity for state regulation. [8] It is necessary to consider key social and economic properties of a medicine in the context of the increase of public health of the population and the economic return of the human capital.

Public health characterizes the viability of the whole society as a social organism, and also the individual capability of each member of a society to perform most effectively its social and biological functions. Thus, speaking about properties of the pharmaceutical goods and services, it is possible to allocate social and economic aspect. [21]

Pharmaceutical activity can be specified according to the federal law of the Russian Federation "About medical products" (22.06.1998), as "the activity performed by the enterprises of wholesale trade and pharmaceutical institutions in the sphere of distribution of medical products; it includes wholesale and retail trade and production of medical products." [12] It is important to notice that a research component is missing in this definition. The standard practice is creating and conducting the state register of medical products. In other words, a drug is allowed to be a medical product and can be used and produced legally only if it is included in the register.

Organizations and institutions participating in medicinal distribution form the pharmaceutical market. Interactions between a manufacturer and an end consumer of medicines are mediated. In Russia, key resellers are doctors and pharmacists, as well as insurance companies and distributors of medical products. Medical products as goods are divided into two categories: finished pharmaceutical products (FPP) and bulk drugs (raw materials for medicine production). A release of bulk drugs and FPP is performed at the pharmaceutical enterprises, which are pharmaceutical plants and laboratories. Later on, bulk drugs and FPP are bought by chemist's and medical institutions through a distributers' network of enterprises of a wholesale trade Only through these channels drugs can come into the hands of doctors or pharmacists whose services constitute an integral part of the final consumption of medicines.

On the one hand, the state acts as a professional buyer in the pharmaceutical market by implementing a health care policy. On the other hand, the state should promote the economic development of the pharmaceutical market, including the development of certain restrictions on market relations for the benefit of social interests. So, to date, the state regulation of the pharmaceutical market can be characterized by lack of information regarding the pharmaceutical needs of the population caused by information asymmetry within the advertising/marketing activities of pharmaceutical companies.

The main incentive for the production and provision of pharmaceutical goods to all levels of society should be to improve public health and not to increase profit. In many countries, this belief is already written into the law, as it is in the Russian Federation. In Russia, the availability of basic medicines, as defined by the WHO, is considered a right. The organization responsible for the provision of vital and essential medical substances is the government agency known as the Beneficiary Drug Provision Programme (DLO).

Throughout the world there is a distinction made between prescription drugs, which require a doctor's prescription before they can be obtained, and over-the-counter medications (OTC), which are sold directly to the consumer without a prescription from a health care professional. How this distinction is made is whether or not a doctor's instructions as to the usage of the drug are needed.

For the given work, such a distinction is important because of the conflict existing between pharmacists and doctors. From the point of view of commercial pharmaceutical firms, if their product is considered a prescription drug, this classification reduces the access to the drug and, as a consequence, reduces the demand for it. On the other hand, this classification increases marketing costs of medicine. From the point of view of the professional medical community, if the medicine is considered a prescription drug, this classification leads to an increase in income for doctors because of the increased demand for their services. For the consumers, this classification deprives them of the ability to treat themselves, and as a consequence, it improves the quality of medical care.

3.3. Distinctive Features of the Russian Pharmaceutical Market Development

The development of the modern pharmaceutical market in the Russian Federation is closely connected to the history of its development. Historians point out that pre-revolutionary Russia wasn't among countries with the developed chemico-pharmaceutical industry. The basic reasons for such situation, marked out by different analytics, were a weak position of the domestic chemical industry and high taxes on

import of raw materials relative to foreign FPP. The biggest portion of the Russian pharmaceutical market was occupied with imported goods, mainly from Germany, because of its leading position in the field of pharmaceutics. The pharmaceutical industry condition before the First World War was characterized by the following data: at the country's general requirement of 14.6 million rubles of chemico-pharmaceutical products in monetary terms, only the amount of the total of 1.3 million rubles (9 %) was produced domestically. Import of inorganic and organic medical products accounted for 88.7 % and 89.3 %, respectively. [8, p. 11] Therefore, before the First World War distribution, packing and sale of FPP were the main participation form of entrepreneurs in the Russian pharmaceutical industry.

Naturally, with the outbreak of the First World War, the deterioration of relations with Germany, the main monopoly supplier (about 90% of all import), has resulted in the drug hunger in the Russian Empire. This factor played a decisive role in the development of the chemico-pharmaceutical industry. [8, p. 25] During the prewar years many plants had been built and refurbished in Moscow, Kazan, Gorky, Sukhumi, Kharkov, Baku and other cities. The foremost needs of drug safety had been provided, but the demand wasn't satisfied enough, besides there was a serious shortage of professional staff. In this regard, many small-scale production factories have been escalated and expanded, the construction of new chemico-pharmaceutical plants and research institutions took place. This in turn led to the expansion of production. During the Second Word War chemico-pharmaceutical plants in the Urals and Western Siberia were established.

Mainly, the soviet pharmaceutical industry intended to produce bulk drugs and pharmaceutical substances. The objective of this sector, initially focused on the issue of simple, proven and life-saving drugs, was to ensure the basic health care needs of the population. By 1970 the number of chemico-pharmaceutical plants in the territory of the Union of Soviet Socialistic Republics (USSR) did not increase. Production of the main mass of FPP was carried out in the Eastern Europe in factories of Hungary, Poland, East Germany, and Czechoslovakia. As a result, during the period from 1975 to 1990 there were made five times more investments in the chemico-pharmaceutical industry of the countries-members of The Council for Mutual Economic Assistance (COMECON) than in the same branch of the USSR. This situation was due to factors of economic

expediency of displacing manufacturing facilities. The pharmaceutical industry had been developed in the framework of the prevailing COMECON's division of labor. Until the mid-80's FPP were the drugs derived from chemical synthesis. From an economic point of view it was more profitable to bear the costs associated with transport of manufactured drugs, rather than to bear the costs associated with provision of all necessary components for their production.

With the development of microbiology, genetics, biotechnology and other areas of the health care system, the countries of COMECON had built modern factories in order to become closer to the major foreign markets. In general, the pharmaceutical industry had been developing dynamically, the average annual rate of growth in physical volumes of production from 1980 to 1991 accounted for more than 7%. [1, p. 56] In 1991 there had been made the maximum amount of production, both in natural and real value.

"When the Russian Federation emerged from the former USSR in 1991 all the structures of the past social net that provided for the complete healthcare needs of citizens were just a memory of the past – nothing was left when the centralized distribution of medication of the former USSR stopped. No drug registry existed during the first few years of independence and foreign pharmaceutical companies were able to sell just about anything they had in stock into the newly created private distribution structure. As the production of consumer goods including pharmaceuticals had taken place in other socialist countries in Central and Eastern Europe, regional players were able to leverage name brand recognition and functioning production assets to dominate the Russian market. Multinationals entered the fray but many retreated when the economy was crushed in 1998 by the ruble meltdown, which made the currency 300-400% less valuable against the US dollar almost overnight." [26] "However, the Russian economy quickly rebounded from the crisis thanks to its immense natural resources, and continued to manufacture medicines and attempted to implement a code of Good Manufacturing Practices (GMP) for pharmaceutical products. However, inconsistencies between Russian and European GMP standards curtailed export and growth opportunities for Russia's pharmaceutical sector. At present only 50 of Russia's 528 drug factories meet international GMP standards, while the process of registering newly developed drugs in Russia lacks transparency." [9]

Nowadays domestic pharmaceutical manufacturers in Russia largely focus on low-cost drugs, while the foreign players dominate the expensive drugs segment. “This is evident from the fact that locally produced drugs in the country account for about 22% of the market value while about 70% of the market volume.” [12] One of the important drivers for the growth in Russian pharmaceutical market had been the governmental DLO. Under the program, the government provided free medicines to people. However, plenty of industry insiders were concerned about the hasty implementation and corruption in the unsophisticated program, which had resulted in budget overruns and more than $1 billion in outstanding bills and in many cases subsequently greatly reduced or halted drug deliveries. [26] So in June 2008, the Prime Minister Vladimir Putin announced that the DLO would be replaced by a system of compulsory health insurance in 2010. The new system would provide free or low-cost prescription drugs to all Russian citizens. The new system is expected to offer subsidies on Russian-produced drugs only. “…the government's priority is to allocate money to our pharmaceutical industry and to create an environment which would allow the establishment of modern advanced enterprises producing modern medicines...” (President of the Russian Federation, Dmitriy Medvedev, February 2010) [13]

Therefore the ongoing globalization of the pharmaceutical industry may provide Russia with opportunities to improve its pharmaceutical sector facing with two major options: continue to focus on the factory-manufacturing of generic drugs that means to adopt policies that discriminate against foreign companies and give preferences to domestic companies, a protectionist approach that would violate the World Trade Organization’s (WTO) national treatment principle, or become innovators of new medicines, so that to pursue policies that prioritize the strengthening of domestic innovation, enabling Russian companies to create new drugs and compete with similar companies in other emerging innovative markets. According to the recently proposed plans there is an indication that the Russian government has an interest in changing its policies to increase the role of innovation in the domestic pharmaceutical industry but to make it possible Russian and foreign companies will need to seek an alignment of mutual self-interest.

Meanwhile, the Russian Security Council has established two major plans to develop Russia’s healthcare-related industries over the course of the next decade. The

first plan is the Health 2020, a project under the Ministry for Health Care and Social Development designed to increase life expectancy and provide medical insurance to Russia's entire population. The plan is expected to result in improved levels of access and quality in medical services; establish a proactive, prevention-focused healthcare system; and change the role of private medical services and insurance companies. The second plan, Pharma 2020, is an initiative headed by the Ministry of Industry and Trade that aims to develop R&D and manufacturing of drugs by Russia's domestic pharmaceutical industry. The plan will elevate the market share of domestically produced generic and original medicines, stimulating local innovation through increased investments in technology as well as R&D. [17]

Overall, these plans would reduce Russia's dependence on foreign drug manufacturers, improve the transparency of the Russian government's medicine-related programs, reduce irrational government spending on expensive imports of branded generic drugs, and highlight the importance of intellectual property rights for Russian enterprises, which are divided broadly into two major segments, commercial and state-owned.

Commercial segment includes retail drug sales and 'Para-Pharmaceuticals' (health and beauty products and other non-medicinal products) but excludes medical drug sales under the Federal Reimbursement Programme (FRP). The segment forms about 70% of the market by value. State-owned segment includes sales of medicines through pharmacies under the FRP, as well as sales through various prevention and treatment facilities and clinical chains. The segment accounts for about 30% of the market value. Both of these segments compose a fragmented industry with no clear-cut dominance of any player. The market is replete with large number of small players. Top ten drug manufacturers collectively account for about 40% of the market value. [19]

Therefore, the Russian pharmaceutical market looks quite promising at the present time, even despite certain difficulties. Russia has been one of the fastest growing emerging pharmaceutical markets in the world in recent years. The Russian healthcare industry is also experiencing robust growth which is primarily driven by several initiatives by the government such as improvement in primary care, efficient implementation of health insurance and an increase in the healthcare financing. Russia's well-educated and low cost workforce is one of the main attractions for investors all

over the world. Russia is an ideal branded generic market, as consumers are willing to pay higher prices for brands associated with quality. This is due to the fact that several domestic manufacturers operate plants that are not GMP compliant. As a result, foreign pharmaceutical companies have been effective at driving growth by promoting their brands over local products. That's why the main aim of the government is to increase local producers' share of total drug sales in Russia to 25 % by 2012 and 50 % by 2020, from 20 % now, and for that reason it has introduced a range of measures to meet the target. [19] The government already favors locally produced drugs in a program to help low-income Russians, and analysts believe the practice would likely be expanded if a proposed universal prescription drug insurance system gets off the ground. The state also provides a speedier drug registration process for local producers, saving them money and time when launching new drugs to the market, and a price control policy to rein in inflation and to avoid social unrest in tough economic times.

4. Analysis and Interpretation

4.1. Elasticity of Demand on Medical Services and Medications

Besides state interventions, the pharmaceutical market allows to involve private tenders for financing medicinal provision to the population. Therefore it is necessary to dwell on the factors determining equilibrium price and production volume for various medications and market structures, corresponding to them for lack of the state intervention.

The majority of medicines are characterized by the some degree of an inelasticity of demand.

For example, the demand on services of a single ambulance, covering a particular geographical area, from patients arriving with serious injuries, most precisely corresponds to the absolute inelastic demand. Regardless of prices for medicines and other services of the first aid department the number of people, which get severe injuries or traumas, will never be reduced, as in most cases such events are unpredictable and can't be controlled by a human.

Naturally, the demand curve differs from the vertical line corresponding to an absolutely inelastic demand regardless of a price.

In Figure 1:

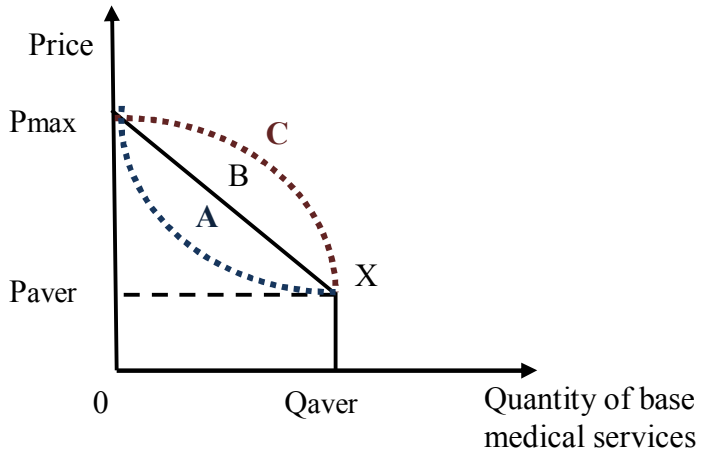
Paver – average affordable price on base medical services, which is deducted from the minimum disposable income adjusted on the average level of incomes of households in a particular region;

Pmax – maximum price on base medical services, which people are able to pay;

Qaver - average demand level for services of a first aid (or a degree of a traumatic level of population correlating with it) for the fixed period, which is statistically reliable for a given region;

QaverX – perfectly inelastic area of a demand curve, i.e. demand will be perfectly inelastic with any increase in price till *Paver*.

Figure 1. Dependence of price and quantity demanded on base medical services (e.g. first aid services)



* Microeconomics, 6th edition; own processing

In Figure 1, we consider a situation at which it is supposed that the average level of income exceeds minimum disposable income. In other words, consumers do not face a choice between spending on health care services and purchasing foodstuff necessary for maintaining their living. Otherwise speaking about perfectly inelastic area of a demand curve has no sense, as the point *X* will coincide with point *Qaver* on the figure above. Demand will remain inelastic until prices start exceeding level of *Paver*, as now the price will matter to consumers. Some households will have to refuse their spending on medical services, because of inability to bear expenses exceeding their income level, to the benefit of more compelling needs. It is important to notice that expenses on a health care are the base expense item, and its refusal occurs only in case of existence of the more pressing questions, which require immediate solution (e.g. acquisition of clothes, food, a place for residence). According to the income distribution among households in a particular region, the demand curve with an increase in price will deviate in one (curve *XAPmax*) or other side (curve *XCPmax*), shown on the figure as dotted lines. In the first case, the part of the population, having the highest income in the region, constitutes a smaller part. The higher the price is the more inelastic will be demand, right up to the price at

which even the most prosperous households will start refusing consumption of so expensive services. In the second case, the part of the population, having the highest income in the region, constitutes a bigger part. Demand will be more elastic at maximum prices, and it will be close to perfectly inelastic at lower prices, which a bit exceeds *Paver*.

To explain better such behavior of a demand curve, it is important to make allowance for the insurance model of the health care system, which usually operates in many countries. Thus, an increase in prices for these services will increase households' expenses on payment of invoices of the insurance companies. If a consumer has a comprehensive insurance, his demand on medical services will be perfectly inelastic until he changes conditions of his insurance contract. Elasticity of demand increases, when consumers are sensitive to changes in prices or when there a competition factor exists.

Depending on availability of medicines-substitutes and consumers' loyalty to a certain brand production, quantity demanded and the corresponding price will change.

For patents those medicines, which have appreciable therapeutic advantages in comparison with those medicines already presented in the market, a monopoly model with inelastic demand curve can be applied to.

In Figure 2:

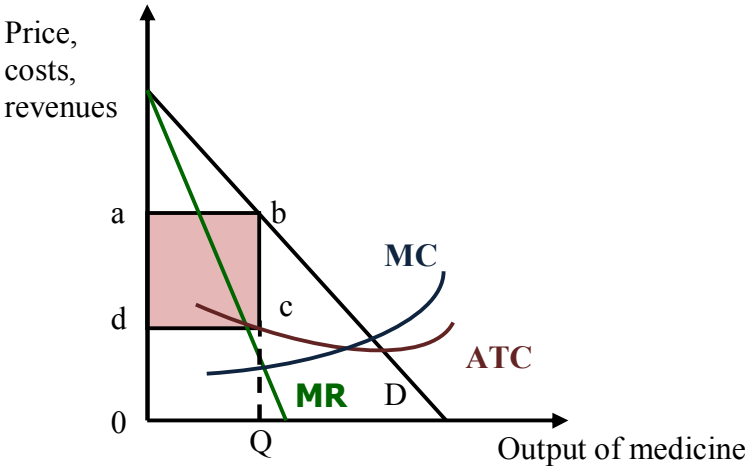
abcd – monopolist's profit;

a monopolist faces a downward sloping average revenue or inelastic demand curve (D) with a marginal revenue curve (MR) with twice the gradient of D;

an output volume Q will be defined where the marginal cost curve (MC) intersects the marginal revenue curve (MR), in order to maximize profits;

the area beneath average total costs (ATC) shows the total cost of producing output Q.

Figure 2. A monopoly model with inelastic demand curve: dependence of price, costs, revenues and volume of output on medicine, which have appreciable advantages against those already presented in the market



* Microeconomics, 6th edition; own processing

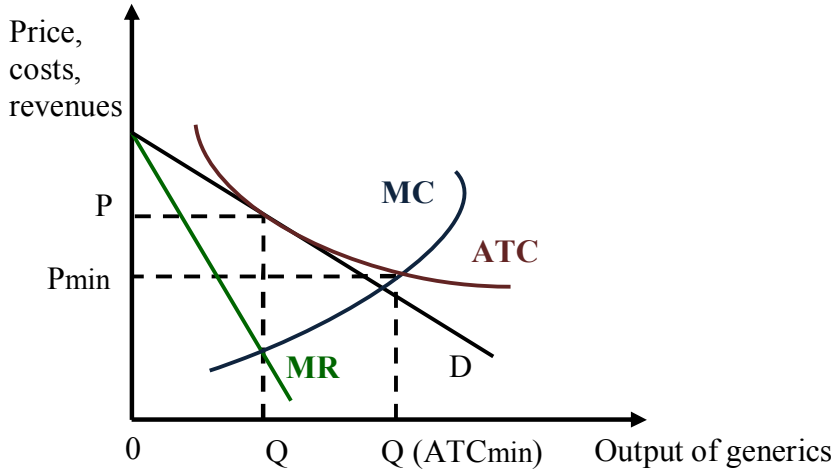
For patents those medications, which are similar with therapeutic effects to those medicines already presented in the market, the oligopoly model with a demand curve of a bit less inelasticity than in case of monopoly can be applied to. But it is impossible to build explicitly its long-term behavior model, because of various strategies, which are practiced by participants of the oligopoly.

The market presented by unlicensed analogs of drugs or generics can be characterized by a model of monopolistic competitor with a demand curve even less inelastic than in the case of oligopoly. A generic drug is a copy of a brand name drug whose patent has expired. The original manufacturer of a drug receives a patent on the drug and is the only manufacturer who can produce and sell the drug during this patent period. Once the patent expires, other manufacturers may produce and sell the drug. These manufacturers usually sell the drug under its common or generic name. Generic drugs are usually cheaper because manufacturers have not had the expenses of developing and marketing a new drug.

Earning a profit will attract new companies on the market that as a result will lead to a decrease of demand on medications of already existing firms and to an increase

of costs and expenses on promotion of goods. In Figure 3, in the long run in a monopolistic competitive market the process of entry and exit continues until the demand curve (*D*) touches the average total cost curve (*ATC*), where the firms are making exactly zero economic profit. Ones the market reaches this equilibrium, new firms have no incentive to enter, and existing firms have no incentive to exit. An optimum output is determined by point *Q*, derived from the intersection of marginal revenue curve (*MR*) and marginal cost curve (*MC*). Equilibrium price (*P*), corresponding to this output (*Q*), exceeds marginal cost, and moreover, it is clear that firms operate with excess capacity, because their output (*Q*) is less than *Q(ATCmin),* which minimizes average cost. Thus, even if an efficient allocation of resources is not reached, the situation in this case is more close to the distribution, inherent in a perfectly competitive market.

Figure 3. A monopolistic competitor model with inelastic demand curve: dependence of price, costs, revenues and volume of output on generic medications



* Microeconomics, 6th edition; own processing

Therefore, according to the market structures described above we can make a conclusion that price competition is mainly observed in the monopolistic competitive market of generics. While, in other cases, pharmaceutical companies are guided by their own market power for price making.

4.2. Medicine Market Segmentation

Considering the pharmaceutical market in Russia, different market structures, typical for different classes of drugs are identified. Taking into account the social aspect, the analysis of the domestic pharmaceutical market segmentation allows to get information on such parameters as its elasticity of demand, the impact on public health, relatively high cost of one drug compared with drugs from the same therapeutic group. Thus, all medications in the market can be roughly divided into the following four broad classes depending on their socio-economic impact:

1. Main generic drugs from the list “Vital and Essential Medical Substances” of the WHO. Necessary condition for classifying drugs in this class is either the mass of their use, or a vital necessity. Consumption of these drugs provides a minimal level of public health.

2. Other generics that do not fall into the first list, as a rule, are OTC, or branded generics. This class includes the so-called lifestyle drugs to enhance the comfort of life, such as "Viagra” or nicotine patches, as well as outdated drugs, which have a replacement by more efficient generics. Their distribution is associated with a particular brand of marketing promotion.

3. Innovative medications with improved therapeutic efficacy. They are patented drugs, primarily for mass application, dramatically increasing the chances for an extension of life of patients in case of diseases with fatal consequences. In the general sense they can be called a "blockbuster" - an extremely popular innovative medicine with sales exceeding $1 billion. Nevertheless, the evaluation of their safety is complicated by the fact that side effects can be greatly delayed in time. But provision of the population with innovative medications sets the highest attainable standard of the public health.

4. New drugs with little change in therapeutic efficacy, as a rule, are having a new form of consumption, or so-called “me too drugs”. This class includes both patented drugs, and a wide range of generic drugs with a new dosage form, which is actively promoted in the market. They are a valuable indicator that shows a change in demand.

The classification above is presented in Table 1, where "+" means yes, or the presence of a particular property, "-" means no, or the absence of a particular property, "+ +" - a significant increase in a public health compared with other classes having "+"; «+/-» means a property is not typical for this class goods.

Minor market barriers for new pharmaceutical companies operating in the segment key generics are responsible for the emergence of monopolistic competition. The market price of major generics is relatively small, since it does not include significant marketing expenses, as in the segment of "me too drugs", or amortization related to previous research, as in the segment of "blockbusters".

Table 1. Features of the different segments of the pharmaceutical market

Medicinal class	**Patent status**	**High Elasticity of Demand**	**Improvement of a Public Health**	**High Price**	**Market structure**
Generic drugs	-	-	+	-	Monopolistic Competitor
Other Generic drugs	-	+	-	+/-	Monopolistic Competitor
«Blockbusters»	+	-	++	+	Monopoly
«Me too drugs»	+/-	+	+	+	Oligopoly

*Own processing

4.3. Structure and Status of the Russian Pharmaceutical Market

Due to its size the Russian pharmaceutical market is one of the most promising among the countries of Central and Eastern Europe. Market size is the biggest in this region and will remain so for the foreseeable future. The Russian market growth potential is very significant, although the full realization of this potential requires

substantial effort. Thus, the growth of the market in 2003-2004 reached 15% annually in terms of the national local currency, the ruble, but in 2005 there was a sharp increase to 33%, that it was possible to achieve the level of 7.7 billion dollars in absolute value. Intensive growth has continued in 2006 (27%) and 2007 (20%). In 2007 and 2008 sales of drugs were about 310 billion rubles and 365 billion rubles, respectively. [15]

4.3.1. Russia's Economy and Russian Pharmaceutical Market

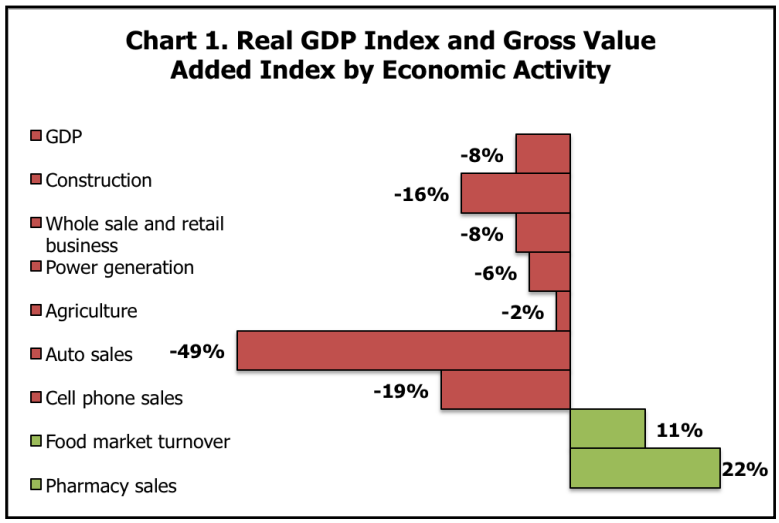
Economic and financial crisis of 2008-2009 also affected Russia. Primarily, this resulted in reducing the country's GDP. Russia's GDP in 2009, according to preliminary estimates, at current prices amounted to 39,016.1 billion rubles. Its real-term amount stood at 92.1% relative to 2008. [11]

The Russian economy is based on export of raw materials. It was easy to assume that during the crisis period export revenues will drop, but the specific indicators could only be guessed. Reduction in export earnings from oil and gas, largely forming budget revenues, was more significant than ever. Russia's exports in 2009 amounted to 301.6 billion dollars and compared to 2008 decreased by 35.5%, imports decreased by 37.3% and amounted to 167.4 billion dollars. All this is naturally reflected in the trade balance, whose surplus for the year decreased by 33% to the amount of 134.3 billion dollars. [11] [10] As in previous years, to move away from the raw material-based export model, consisted of fuel and energy products, wasn't successful. Russia just started selling less for less money.

Against the given declining key indices of the Russian economy, the growth in the pharmaceutical market is surprising (see Chart 1).

According to a study of the domestic pharmaceutical market, conducted by one of the leading marketing agency DSM Group, its volume in 2009 exceeded 538 billion rubles in the end consumer prices (including VAT, or 17.1 billion dollars (see Chart 2.)), which is 18% more than a year earlier (see Chart 1). There are other data on the size of the market. According to Pharmexpert, the market volume in 2009 amounted to about 16.5 billion rubles, or 495 billion dollars, and another well-known company IMS Health estimates the Russian pharmaceutical market in 2009, at 4.33 billion units of

natural calculus for the sum 465.58 billion rubles or 14.7 billion dollars, in the end consumer prices. Lack of the state statistical observation does not allow such a reliably determination of the actual size of the market, but nonetheless, we can safely say that the volume of the domestic pharmaceutical market in 2009 was formed at 465 - 538 billion rubles.



*DSM group, own processing

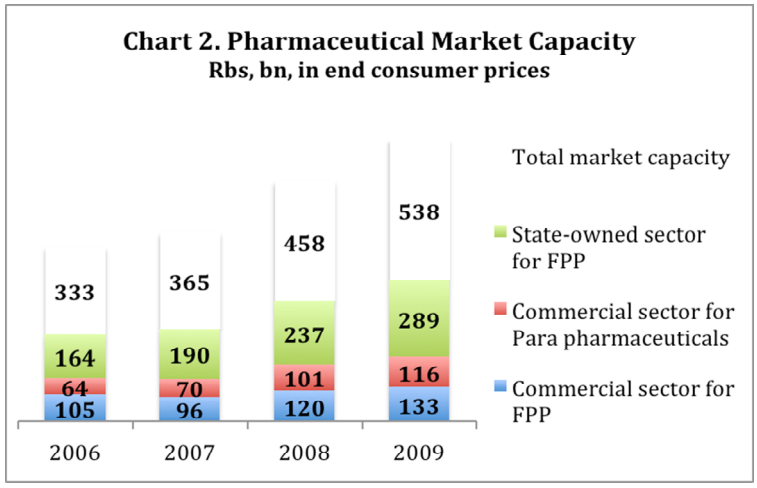
Despite the market downturn in the U.S. dollars (see Chart 2.), the fact, which remains important, is that in terms of the national currency market has grown so far (see Chart 1), because currency fluctuations slightly affect the actual spending of the population on medicines, as all payments are still made in rubles.

4.3.2. Pharmaceutical Market Capacity

Russian pharmaceutical market is generally divided into three segments: the commercial segment of the drugs (retail sales), the segment of non-drug range (Para pharmaceutics) and the State segment of medicines (hospital sector). In 2009 growth rates were recorded in all three segments, with the commercial segment increased 22%, mainly due to price increases caused by rising costs for imported products in terms of weakening the national currency. State segment grew by 11%; growth in Para

pharmaceutics was 15%. Sales in the commercial segment was approximately 290 billion rubles (9.1 billion dollars), sales in the public sector amounted to about 133 billion rubles (4.2 billion dollars) and in the segment Para pharmaceuticals amounted to about 116 billion rubles (3.7 billion dollars). [11]

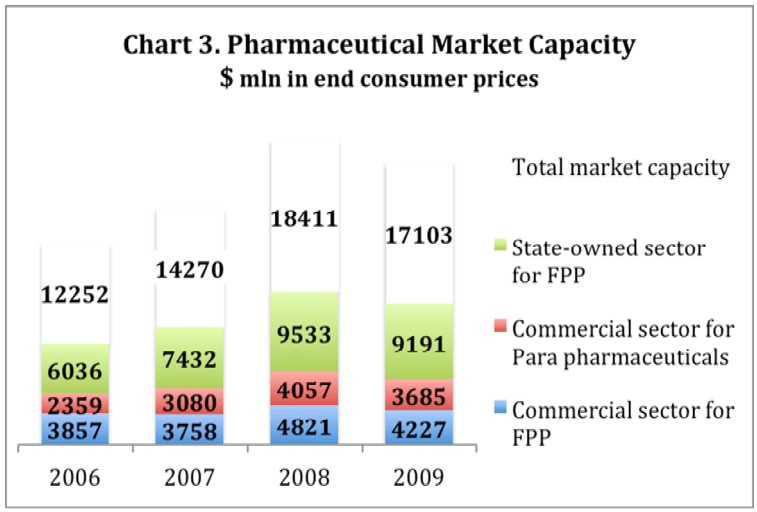
According to the forecast DSM Group, the Russian pharmaceutical market will grow in 2010 by more than 11% in rubles and 16% in dollars and will reach about 600 billion rubles, or $ 20 billion. More significant growth is expected in 2011, when the difficulties will be overcome the crisis period. Given the current situation in the Russian economy, the Ministry of Industry and Trade forecasts that by 2011 the volume of the domestic market of FPP can reach 400 - 500 billion rubles, and by 2020 it will be about 1-1.5 trillion rubles. In terms of US dollar, the volume (the final cost to consumers) will already exceed the mark of 20 billion dollars in 2011, and by 2020 will reach, according to various estimates, 25-35 million dollars. Growth will be mainly ensured by an increase in household incomes and the associated increase in private health insurance market. Enactment of the pharmaceutical insurance, which is currently being discussed in government, which means prescribed drugs to be paid out of insurance funds, according to market participants, can provide an increase in the money market by 18-20%. [19]



*DSM group, own processing

Support of the market at the state level has already been promised and it is enshrined in the text of the "The Pharmaceutical and Medical Industry Development

Strategy of the Russian Federation until 2020 and beyond" (Pharma 2020), which was adopted by the Government of the Russian Federation in the late 2010. Federal target programme aims at achieving high levels of economic, social and environmental performance of pharmaceutical and medical industry, and will determine their technological capabilities over the long term, will provide a basis for improving the quality of life and health of the citizens of this country, economic growth, and exit the country on the world market of high-tech pharmaceutical and medical products. Until 2020, the program provides funding of 188 billion rubles, of which 122.5 billion will be federal money. According to the document, the state will finance the modernization of pharmaceutical production, which will be funded up to 75%, and private investors will fund the remaining part. [17]



*DSM group, own processing

Consumption of drugs is one of the few industries where the volume of sales in 2009 increased as compared with 2008. People in crisis did not have to spend less. Against the background of other segments and markets, growth in consumption of drugs in 2009, 22% looks impressive. [11] [10] For example, auto sales fell by half, wholesale and retail trade as a whole decreased in comparison with 2008 by 8% (see Chart 1).

If we consider our country on such criteria as the consumption of drugs per capita, here we are barely in the top-50. For comparison: in the USA volume drug consumption per capita is 704 dollars, in Japan – 622 dollars, in the UK – 223 dollars

and in Russia – 82 dollars. In order to reach the European average, the Russians must start spending for drugs four times more than they do now. Health is one area of life where is not taken to save money on.

4.3.3. The Concept for Long-Term Social and Economic Development of the Russian Federation until 2020

The current structure of the Russian pharmaceutical market is significantly different from the markets of developed countries towards the predominance of branded generics, mostly of foreign manufacture. The result is an overpayment of the end user (including government) for the trade names of drugs, sometimes obsolete. As a result of the underdeveloped health care system the main buyer of pharmaceuticals often the patient himself, performing non-professional choice, mainly under the influence of advertisements. Pharma 2020 provides a significant increase in per capita consumption of medicines in Russia, which by 2020 should reach 10 thousand rubles for the implementation of innovative ways of development of domestic pharmaceutical industry. This situation indicates the existence of a significant pent-up demand, as well as the high potential of market growth, as improving economic performance.

In this regard, it should be noted that the upward trend in the pharmaceutical market gives good chances to domestic producers. The situation on the drugs market, allows the Russian manufacturers of pharmaceutical products to substantially increase its share. In some segments of the pharmaceutical market it is already happening. A year ago, the country's leadership has set a target that 350 Russian pharmaceutical enterprises should receive 50% of the domestic market. This fact gives a hope for the future positive changes in the market.

Due to government programs in the past two years, the annual growth of consumption of drugs amounted to about 26%. [11] [10] Given the enormous potential of the Russian pharmaceutical market (perhaps it is the understanding that it is not only about the state of drug safety, but also a unique investment attractiveness of the industry), which in the near future may become the locomotive for the Russian economy. The potential capacity of the pharmaceutical market growth will be achieved

by increasing market segment, backed by public money (DLO and hospital sector), as well as increasing the consumption of drugs and Para pharmaceuticals against raising the living standards of the average Russian citizen. To this end, the Russian government is implementing several projects, directly affecting the industry: the Programme for Additional Provision of Medications (APM) and the reform of the drug supply to hospitals. These projects significantly grow the purchase of medicines for budget money. If in 2009 to ensure the program of favourable drugs and hospitals were purchased drugs at 122 billion rubles, in 2010, according to forecasts this figure will reach 140 billion rubles. The share of Russian manufacturers in this segment increased to 9.24% as compared with 5.53% a year earlier.

Furthermore, an additional market growth is possible if:

- The introduction of GMP: an extra growth will be at 3 - 5% due to increase in the average cost of packaging. This process is likely to occur no earlier than 2013 [15]

- The introduction of pharmaceutical insurance - the emergence of a new segment will give a significant boost for market development. In this case, possible additional market growth at 18-20% in value terms and 10.8% in packages. Formation of this system is going to be probably no earlier than 2012 [15]

In 2112, patent protection finishes for many drugs. Thus, we can expect the market growth of branded generics. According to the results of year 2009 the share of branded generics accounted for more than 51% of all drugs sales.

The growth of the hospital market is due to growth in gross domestic product, inflation for drugs and the budget available for these expenditures. Therefore, this segment will grow in proportion to these indicators. In the future the government predicts the inflation rate to be below 10%. The hospital market will grow at the same figures. Upgrading the distribution sector, which provides hospitals with drugs, will lead to the additional growth in this segment. But this process will possibly occur not earlier than 2013.

With the significant increase in the state control over the market of drugs, the segment of Para pharmaceuticals (especially cosmetics and dietary supplements) may be one of the priorities in the pharmacy business. More and more people are paying

attention to disease prevention and health care. Therefore, in this segment will see an increase in sales over the high rates of 15 - 20% per year.

Thus, the main growth drivers of the pharmaceutical market in the next 10 years will be:

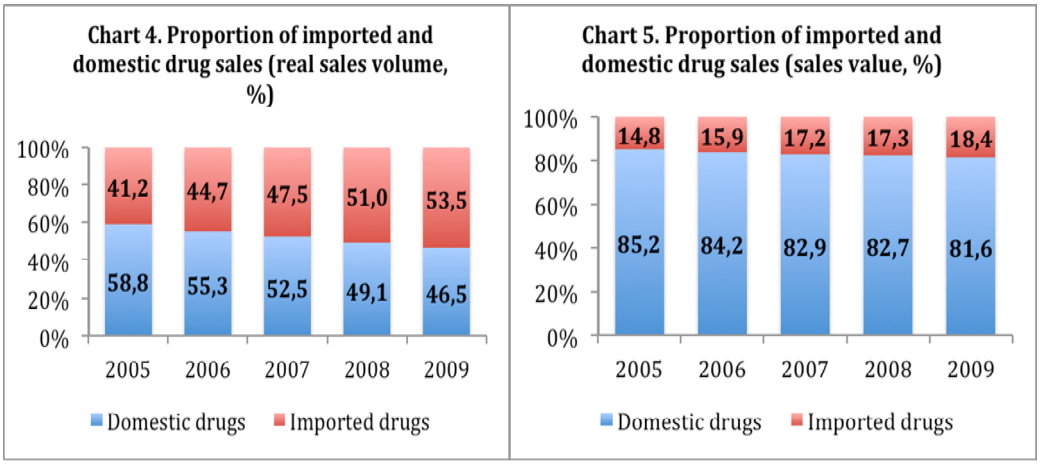
- APM
- Implementation of the voluntary pharmaceutical insurance
- Modernization of the drug provision to hospitals
- Increase in consumption of pharmaceuticals per capita

4.4. Russian vs. Foreign Production

Pharmaceutical production is one of the most stable segments of the Russian industry. Pharmaceutical industry is focused mainly on the domestic market and, hence, in contrast to the export-oriented industries, is less sensitive to currency fluctuations. Demand for pharmaceutical products depends weakly on the phase of economic cycle, which will positively affect the development of the industry as a whole. Today, the Russian manufacturers of drugs have to work in conditions of tough competition from foreign companies. Statistics show that the share of domestic production in the pharmaceutical market of the country is only slightly more than 20%. [10] Nevertheless, experts believe the market is one of the fastest growing in the world, primarily due to the presence of large pharmaceutical companies, dynamic, new directions. The current promotion system in the country encourages pharmaceutical manufacturers to invest more in marketing and sales, rather than the development of effective new drugs that significantly slows the development of the industry in innovation scenario. Adopted Pharma 2020 provides for the fundamental way to change the situation.

However, today according to the Ministry of Industry and Energy at the end of 2007, the Russian pharmaceutical industry was represented by 525 enterprises, which employed 65.1 thousand people. In 2007 these enterprises produced the commercial products for more than 63 billion rubles, which amounts to 107.1% compared to 2006,

the average profitability of the industry is 17%. Depreciation of fixed assets is 60% and capacity utilization - 78%. The Russian pharmaceutical industry loses in gross returns, however, an average of 68% provides national health care medicines in physical terms, and in the hospital sector this figure reaches 72%. The real potential of consumption of medicines produced by domestic industry is not more than 15-20% of the market in the sales value and no more than 50-60% in the real sales volume (see Chart 4 and Chart 5). [10] In general, in recent years ever-increasing volumes of imports and a reduction of domestic producers in the market share have formed growth in the Russian pharmaceutical market. Foreign companies tend to promote drugs with unique pharmacological properties, which domestic medications do not have. Specific share of imports in total sales in recent years increased, mainly due to import of expensive quality medicines. This situation could lead to further weakening the competitive position of the Russian pharmaceutical industry.



* Pharmexpert, own processing

When supplying medicines to Russia three years ago, more than half (56.2%) of foreign pharmaceutical companies preferred to make payments in U.S. dollars. But in 2008 the situation has changed: the dollar considerably shaken and the role of the main settlement currency moved to EUR. Today on average of 48.5% of all transactions are made in EUR. [22]

As a result, a large dependence on import of the Russian pharmaceutical market in the crisis condition showed that maintaining the status quo results in big problems.

Thus, during 1995-1998 the situation on the market was represented by significant decline in prices on imported drugs, bringing to an increase in demand for quality foreign medications, while the price of drugs domestically produced, at best, stagnated. Crisis of 1998, and the subsequent devaluation of the ruble radically changed the structure of demand for drugs. Demand for imported drugs was substantially reduced; while at the same time dropped the demand for advanced generics, the cost of which was determined by imported components. Therefore, the increase in commodity prices was proportional to the internal cost of imported components. Manufacturing is the classic range of generic drugs, based on the domestic substances or with minimal use of foreign components remained the same compared to pre-crisis levels and even increased.

The recent crisis has showed the same situation. In particular, the devaluation factor provoked a significant increase in drug prices, which required urgent action to stabilize the situation by the state. Nevertheless, it is obvious that a systemic problem can be solved only by the control measures and deterrence. Referring to it, the Ministry of Health Care and Social Development has officially announced its intention to reduce the purchase of imported drugs, and maximize the segment to reorient public procurement to domestic counterparts. Of course, such state initiatives have strategic importance. Because before the creation and emergence of market worthy Russian analogues or localization of drugs of foreign companies, which will held for at least 2-3 years, dispense on imports will be impossible. In the long term we can predict a decline in imports. In addition, it is already significantly changed the structural component of imports, in particular, distribution companies are gradually losing its influence in the area of product distribution.

5. Conclusion

5.1. General Tendencies of the Demand on Medical Services and Medication

Strategic management of the pharmaceutical development at the macro level requires taking into account the whole variety of factors shaping the future of the industry. Until recently, the emergence of innovative medications was carried out by experiments on animals where the effects on the exposure to huge amounts of various chemical compounds were studied. Creating powerful computer systems has allowed major innovative companies and research organizations to significantly accelerate the process of R&D of new drugs. However, the difficulties associated with chemical synthesis and achieving greater clinical efficacy have led to an ever-increasing volume of funds allocated for such research.

Among the most promising innovations for the future, according to many researchers, are the following:

- Pharmacogenomics, a comprehensive personalized medicine, will help minimize the toxicity of the medication at the cellular level and provide accurate and reasonable doses.

- Nanotechnology in the pharmaceutical industry will deliver active substances directly to target cells, as well as give advance warning of the occurrence of any irregularities in the body.

- Preventive medicine will decrease the chances of obtaining diseases, which the patient may be genetically predisposed to.

The above-mentioned innovations are at various levels of development, and there will most likely be many problems to be solved. Nevertheless, awareness of the prospects for product development is an integral part of any successful long-term business plan. [6]

The worldwide population projected to be 7.6 billion by 2020, compared with 6.5 billion in 2005. Such growth will increase the number of older people. In particular, it is expected that the number of people over 65 by 2020 will be 719.4 million (9.4%),

compared with 477.4 million in 2005 [20]. It is known that older people consume more medicines than younger. For example, 80% of people over 75 years old take at least one drug regularly, while 36% of people of the same age consume at least four drugs [24]. The average rate of aging also varies from country to country. Russia, by 2020, expects that the number of people age 65 or older will be 15.2%. Whereas in India, this number will be no more than 7% [25]. However, other factors, in particular, cultural differences and environmental factors, cannot be ignored.

The development of medicine and pharmaceuticals has resulted in many diseases that were previously considered fatal now being classified as chronic. This progress gives promises an increase in the demand for certain classes of drugs.

Global warming also carries the risk of increasing the demand for pharmaceutical products. The average global temperature increase during the decade 1995-2005 was 0.2 degrees Celsius. If the current level of greenhouse gas emissions remains unchanged, by 2025, the increase in temperature will amount to another 0.4 degrees Celsius [13]. Naturally, temperature increases will be more noticeable if the level of emissions of such gases also increases. Even a slight increase in temperature creates favorable conditions for the spread of many infectious diseases. For example, in Azerbaijan, Georgia and Corsica cases of malaria were discovered - a disease which had been previously eradicated from these countries after the end of World War II [4, p. 9].

Summing up, one could argue that demographic, scientific, technical and environmental factors contribute to an increase in demand for pharmaceutical products.

5.2. Prospects of the Russian Pharmaceutical Market

The high degree of consumption of imported drugs, the limited availability of quality medicines to the general population, a low level of R&D in pharmaceuticals, are key problems inherent in the Russian pharmaceutical market. High social importance, as well as taking care of national security, in particular an independent drug supply, requires the implementation of structural reforms to the pharmaceutical market in Russia, as well as reforming the existing institutions that form the basis of the

interactions on the market. The plan to solve these problems is outlined in the document Pharma 2020, developed by the Ministry of Industry and Trade. The concept is a high quality strategy designed in line with current issues related to the Russian pharmaceutical market, developed with the participation of a wide range of specialists. It provides a solution for a wide range of tasks in the economic, legal and academic spheres.

Returning to the questions of the development of the Russian pharmaceutical market, analysis of the key measures outlined in the strategy should be conducted in three areas: improving the quality of medicines consumed, increasing the availability of drugs to the general public and securing the independence of the drug supply. It is worth mentioning that although the ultimate aim of the strategy is to move the pharmaceutical industry in the Russian Federation toward the innovative model of development, the short-term goal should be to ensure the country's independent supply of drugs.

Analysis of prospects for the industry represented in the strategy boils down to two possible scenarios for the development of the pharmaceutical market - inertial and innovative, which depend on whether there is a passive or active strategy of state intervention in the market process.

In the case of inertial development, the state funding will be limited to the current volume of pharmaceutical research, as well as the volume of public procurement from domestic pharmaceutical companies. But this situation most likely will bring a disappointing result. Based on current trends in the Russian pharmaceutical market, taking into account the realities of the crisis, the share of imports will be 85%. As well, "local pharmaceutical manufacturing and related applied science will virtually cease to exist". [22]

In the case of innovative development, the strategy envisages the development of the pharmaceutical market in accordance with an innovative script that will be implemented in three successive stages:

- Localization of production and development of a modern production base in Russia
- Qualitative development of domestic production (in line with international standards), which will provide drug independence for Russia, as well as

the introduction of market mechanism for the process of import substitution

- Development of an innovation infrastructure and export of innovative Russian drugs to foreign markets

In the inertial scenario, the role of the government will be passive. This is reflected in the fact that a wide range of existing issues in the legal, fiscal and academic sectors will remain unresolved. In other words, the industry will maintain an environment in which domestic firms continue to be forced to deal with pharmaceutical activity under discriminatory conditions from foreign producers and importers. Essentially, the current preferences for foreign companies and imported medicines will reduce the share of consumption of pharmaceutical products and services of Russian origin in the near future. At the same time, the expected regulatory reform of the pharmaceutical market may create equal economic conditions for the activities of domestic and foreign companies that do not allow such a foregone conclusion of an imminent reduction in the percentage of domestic production, particularly given the recent crisis and the devaluation of the ruble. A relatively simple alignment of market conditions for all participants will create much-needed improvements to make the pharmaceutical business in Russia more attractive and will provide an opportunity for strategic planning at the micro level. That will lead to greater competition and, consequently, to an increase in the availability of medicines to the population.

The relatively low solvent demand of the population in Russia leads to the only possible way of increasing public health in the near future, while decreasing the percentage of imported goods consumed, namely through the development of domestic generic drug production. The prerequisites of the second and third stages of the innovative development strategy are based on the fact that by 2020 Russian consumers will catch up with Europe in terms of expenditures on pharmaceutical products and services.

The results of the research suggest the following conclusions and recommendations:

- The emergence of significant positive externalities in the consumption of pharmaceutical products and services are justifying state support for their production. High transaction costs involved in measuring socio-economic properties of

pharmaceutical products and services gives rise to traditional market failures: monopolies, the asymmetry of information, and externalities. Therefore, public policies aimed at reducing transaction costs, accompanying the interaction of economic agents in the pharmaceutical market, lead to a greater social benefit from consumption of pharmaceutical products and services.

- The comparison of drugs on such parameters as elasticity of demand, impact on public health, relative high cost compared with drugs from the same therapeutic group, and others, allowed us to segment the Russian pharmaceutical market's products and services. The generic drug segment is characterized by low elastic demand and the emergence of monopolistic competition. However, the market price of major generics is relatively small, since it does not include significant marketing expenses, as it does is in the drug clones segment, or amortization related to previous research, as it does in the "blockbusters" segment. Nevertheless, the integral features of the Russian pharmaceutical market lead to the emergence of oligopoly power from the distributors of medicines, which reduce the amount of goods and services.

- Analysis of Pharma 2020, in conjunction with the author's vision of the role of government regulation of the pharmaceutical market, led to the recommendations for improving the socio-economic efficiency of the market of pharmaceutical products and services. Revitalization of the anti-monopoly bodies would improve the social availability of drugs in the short term. High rates of growth of the market dictate the need for speedy development of a national statistical rating system of assessing the therapeutic efficacy of drugs for the purpose of a balanced pricing policy. This will significantly reduce transaction costs and improve the socio-economic efficiency of the pharmaceutical market in the long run. However, since in Russia the demand for essential medicines is not fully satisfied, especially among the poor, this justifies that domestic production of generics be the main priority when forming the list of vital and essential drugs, as well as a list of drugs under the additional drug supply programme.

6. List of Acronyms:

APM - Programme for Additional Provision of Medications

COMECON - Council for Mutual Economic Assistance

DLO - Beneficiary Drug Provision Programme

FPP - Finished Pharmaceutical Products

FRP - Federal Reimbursement Programme

GMP - Good Manufacturing Practices

OTC – Over-the-Counter Drugs

Pharma 2020 - Pharmaceutical and Medical Industry Development Strategy of the Russian Federation until 2020 and beyond

R&D – Research and Development

WHO – World Health Organization

WTO – World Trade Organization

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