# *On the Issue of the State Administration of the Higher Education System in Russia*

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***Abstract*—The relevance of research in the field of improving the education in Russia and its most important component – the higher education is predetermined by the need to implement the ambitious presidential decree on the strategic objectives of the development of the Russian Federation until 2024.**

**Theoretical concepts, conceptual foundations and practical recommendations for improving the organizational and economic regulation of the higher education system in the information society should have a holistic system base and tools for ensuring breakthrough development in the field of training specialists capable of solving the economic problems facing the state. The state policy in the field of higher education, as an important component of social policy, should be formed in the light of new challenges and be conducted in such a way as to maximally facilitate the achievement of national goals and the implementation of the strategic objectives set out in the May decree by President V. Putin. The article attempts not only to show the shortcomings and focus attention on the existing problems in the higher education system of our country, but also to substantiate the main directions of increasing the efficiency of public administration in this area, to offer some forms and methods of regulating the training of specialists for the knowledge economy.**

***Keywords—higher education; public administration; knowledge economy; priorities***

## I. INTRODUCTION

The possibilities of the evolutionary development of the world community and individual states in the 21st century are inextricably linked with the flexibility and adaptability of higher education to global trends, due to the orientation of the education system to the needs of the information society. In modern conditions, the qualitative aspects of personal development related to the formation of its educational potential in the field of higher education are being actualized. This is due to the transformation of knowledge into a strategic resource for the development of all spheres of society. The economy of developed countries increasingly relies on knowledge and on the human capital as a factor in the growth of labor productivity and economic growth. In this connection, the requirements for general education and professional training of the labor force are increasing, and transformation processes in the educational sphere are intensifying.

In Russia, in contrast to the developed countries of the world, the trend of steady growth in the quantitative volumes of training specialists in higher education did not become a decisive factor in the innovative development of the national economy. In this regard, the relevance of the research topic is determined by the need to develop a conceptual framework for the development of educational potential in the field of higher education, as well as the organizational and economic mechanism for regulating this area in the information society.

Currently, a significant part of university graduates, including those who have received higher education at the expense of government subsidies on a so-called budget basis, except for military and law-enforcement educational organizations, do not work according to their received specialty stated in their education and qualification documents. So, according to A.A. Fursenko, after graduating from pedagogical universities, only 5-7% of graduates go to work in school, and the rest are looking for work in more prestigious or well-paid industries. As a result, graduates are forced to retrain for other professions and work in other fields.

This trend did not arise yesterday, but in the early 1990s, continued in the 2000s and is developing, without stopping, in our days. One of the authors of this article can give a notable example with his daughter. She graduated with honors from

the Faculty of Mathematics and Physics of the Tula State Pedagogical University named after L.N. Tolstoy, got a job at school, successfully passed exams in correspondence graduate school. However, at the public school, her salary in 2008 did not even reach the subsistence minimum, which could not satisfy a young capable specialist with a university degree. Having worked as a teacher for only three months, she quit and, in search of a better life, moved to Moscow, where she was hired not in her specialty, but with an official salary 10 times higher than the salary of a school teacher. And this is not an isolated case. According to her, only 3 out of 100 graduates went to work in school, and the remaining 97% of specialists with higher pedagogical education found jobs not related to the Russian education system.

Every year the question of why university graduates do not work in their specialty becomes more and more tangible, the problem has grown so much that many applicants and students perceive the university only as a way to get a diploma. According to O.Yu.Golodets, the Deputy Prime Minister of the Russian Federation, more than one and a half million well-educated Russians are currently working abroad, contributing to the economies of potential competitors.

These and other facts convincingly testify that the state administration of the Russian higher education system is in need of modernization.

## II. Problem Statement

It is extremely important to resolve the contradictions of the development of the educational potential of society in higher education and to justify the conceptual foundations of its formation, aimed at introducing the qualitatively new in structure and satisfying methods of state regulation of the higher education. The importance of such conceptual foundations for the reform of higher education is due to the need to overcome the inconsistency of the state educational policy and public education requirements. In this regard, the determination of the goals, principles and priority directions of the state educational policy, aimed at overcoming the negative trends in the development of the educational potential of the society, and creating conditions for its advanced development, acquires particular relevance.

This study includes an analysis of the current state of the public policy in the field of higher education, determining the degree of its compliance with new challenges and breakthrough socio-economic development of the country in the context of the growing anti-Russian sanctions: the formation of scientifically based recommendations on the modernization of state policy in the field of higher education for the successful implementation of the national project "Education". It sets the following ambitious goals for higher education: at least 30 leading Russian universities that receive state support should at least be in top 1000 international ratings and in top 200 in at least one subject, or in industry international rating for at least two years in a row, and 60 universities should implement by 2024 at least five educational programs that have passed international accreditation [1].

Unfortunately, among the objectives of the project, the main task of higher education is not to be seen - to form the up-to-date human capital that can accelerate the socio-economic development of our country, pull it out of the lingering stagnation of the last decade, and finally move from raw materials to innovative development based on the knowledge economy.

The term knowledge economy, or a knowledge-based economy, refers to the type of economy in which knowledge plays a crucial role. This term was first described in detail by an American Austrian scientist Peter Ferdinand Drucker in 1968 in his book The Age of Discontinuity [2].

In the scientific economic literature and in the Internet, you can find many works on knowledge management and other aspects of managerial behavior in the new economy. All of them are united by the desire to use the accumulated knowledge to produce economic benefits that improve the life of a modern person. Among them there are works by such authors as Robert Backman, Bill Gates, James Brian Quinn, Richard Florida and many others.

So, Robert Backman in his work notes: “The era of knowledge-driven companies has come. And in this situation, the one who has managed to concentrate non-formalized intellectual experience in his organization and understand how to transfer it from one employee to another”[3].

James Brian Quinn, in his monograph “Intelligent Enterprise,” argues that they are a strategy for revolutionizing the economy. “Do you need to know how to use it? Rare will own plants, equipment plants, equipment, equipment, plants, equipment, plants, equipment, equipment, equipment, equipment, equipment, equipment, equipment, equipment, equipment. Such physical properties can be easily obtained from the knowledge and services based on leverage intellectual assets. They will not be able to reproduce”, Quinn analyzes the strategies and essential economic processes [4].

As a concept denoting the modern economy and, consequently, the life of society, the economy of knowledge is often found in the statements of political figures and in the programs of political parties and governments of different countries. Today, the most prosperous and even affluent countries are those that generate the largest amount of knowledge. These include, first of all, the USA, the countries of Western Europe, Japan, and South Korea.

The example of South Korea, whose economy is based on knowledge, is very indicative. Occupying a relatively small territory in the southern part of the Korean Peninsula (about 100 thousand sq. km), this country is among the top ten countries in terms of nominal GDP. At the end of 2015, the gross domestic product of South Korea was $ 300 billion more than of Russia. Note that the territory of the Russian Federation, including the Crimea, is 17,126 thousand square kilometers or 170 times the area of South Korea, and its population is almost 3 times the size of this small country [5, p. 12, 52]. Thus, the economy of a small state, based on knowledge, is superior to the economy of a huge state that has made an erroneous bet on the trade in raw materials.

The Russian Federation in economic development in 2018 was behind not only the USA, China, Germany, France, Japan, South Korea, but also the countries belonging to the group with developing economy: India, Brazil, and Canada. This is clearly seen in the following table.

TABLE I. RANKING IN THE WORLD BY THE NOMINAL GDP IN 2018 [6].

| **Country** | **GDP in billion $** | **Ranking in the world** |
|---|---|---|
| USA | 20513.32 | 1 |
| China | 13457.26 | 2 |
| Japan | 5070.62 | 3 |
| Germany | 4029.14 | 4 |
| U. Kingdom | 2808.89 | 5 |
| France | 2794.69 | 6 |
| India | 2689.94 | 7 |
| Italy | 2086.67 | 8 |
| Brazil | 1909.44 | 9 |
| Canada | 1733.70 | 10 |
| South Korea | 1655.32 | 11 |
| Russia | 1576.55 | 12 |

As follows from the table, the backlog of the Russian Federation from the leading countries of the world is enormous; against this backdrop, it can be seen that its economy is poorly developed and lags behind the leaders by 10-15 times.

Another table clearly demonstrates that the most resource-rich country in terms of economic development rates far behind those countries in which the economy is based on knowledge.

TABLE II. RUSSIA'S ECONOMIC GROWTH RATE IN COMPARISON WITH OTHER COUNTRIES [6].

| Country | 2014 | 2015 | 2016 | 2017 | 2018 | For 5 years |
|---|---|---|---|---|---|---|
| Russia | 0,6 | - 3,7 | - 0,2 | 1,5 | 1,8 | 0 |
| India | 7,4 | 8,2 | 7,1 | 6,7 | 7,2 | 36,6 |
| China | 7,3 | 6,9 | 6,7 | 6,9 | 6,6 | 27,5 |
| Average in the world | 3,4 | 3,4 | 3,6 | 3,6 | 3,6 | 17,6 |

As follows from the table, in terms of economic growth, Russia is not only catastrophically lagging behind the leaders of the world development, but does not even reach the world average. In the last five years, the sum of positive and negative values is zero, which means that Russia has been marking time in the same place for these 5 years, while other countries and the world economy as a whole are developing.

Among the main reasons there is the non-rational use of human capital for the development of the knowledge economy. Unlike China, the USA and Japan, Germany and France, and other highly developed countries, the modern Russian economy today is practically an outsider of technical and technological progress, due to the inefficiency of using highly educated specialists in the economy.

At this pace of development, Russia may not fulfill the May presidential decree and not enter the top 5 largest economies in the world by 2024. The government has begun to search for excuses for the inefficiency of their work. For example, M. Oreshkin, the Minister of Economic Development, during the Gaidar Forum, stated that, in his opinion, the main reason for the lag in economic growth rates was the external adverse factors: anti-Russian sanctions, trade wars, and a slowdown in the global economy [7].

The reasons for Russia's almost catastrophic lag in terms of nominal GDP, its growth rates and other major economic indicators lie, in our opinion, not so much in external, as in internal factors. These include: mistakes in the strategy of state regulation of economy, relying on raw materials, not on an innovative way of development, inefficient use of human capital, mistakes in the government management of the higher education system, etc. A lot of scientific works, including those by the authors of this article, have been written about the inefficiency of the state management of economy in Russia, which has turned the country into a raw materials appendage of the West and partly of the rapidly developing China [8].

Among the main reasons for the technological and scientific-technical backwardness of our country (except for the weapons and military equipment production) we should emphasize the non-rational use of human capital for the development of the knowledge economy. Unlike China, the USA and Japan, Germany and France and other highly developed countries, the modern Russian economy today is practically an outsider of technical and technological progress, due to the inefficiency of using highly educated specialists in the economy.

In recent years, Russia has been acting as a donor of human capital for the world science and for the economies of the potential competitors, and in the global ranking of attracting talent it is in the sixth dozens of countries. Such sad statistics is given in the official document - "On the Strategy of the Scientific and Technological Development of the Russian Federation", approved by the head of state.

The document notes that despite all the efforts of the ministers, the problem of immunity of the economy and society to innovations remains in our country, which hampers the practical application of research and development results. Suffice to say that the share of innovative products in the total output of marketable products in our country does not exceed 10%, and investments in intangible assets are 3–10 times lower than in leading countries. As a result, the share of exports of Russian high-tech products in global exports does not exceed 0.4 percent [9].

Moreover, owing to the lack of management skills and the ability to cooperate, many managers of both civil and military enterprises do not manifest themselves capable of innovations, of producing high-tech products based on domestic scientific and technological developments and patented intellectual property which can transform their production, equipped often with the machine park dating back to times of stagnation. There is virtually no transfer of knowledge and technology between the defense and civilian sectors of the economy, which hinders the development and use of technology. It is emphasized in the "Strategy of the Scientific and Technological Development of the Russian Federation", approved by President V. Putin on December 1, 2016

Due to the backwardness of the "universal managers" thinking, including those with the diploma of a journalist today, as the Roscosmos states, "there is an inconsistency in

priorities and tools to support the scientific and technological development of the Russian Federation at the national, regional, industry and corporate levels" [9]. This managerial flaw does not allow forming production chains for creating value added of the high-tech products and services, and ensuring the greatest multiplicative effect from the use of the technologies being created. As a result, the effectiveness of Russian research organizations and the introduction of scientific advances in production significantly (at times) lags behind the leading countries in this important area, which currently are the United States of America, Japan, the Republic of Korea and the People's Republic of China. And this is despite the fact that the state is increasing budget funding every year. Here are the facts: in terms of expenditure on research and development, Russia in 2014 (there are no more recent data, but these figures give an idea of the state of affairs) ranked 4th in the world in terms of budget allocations for civilian science. It is ranked 9$^{th}$ in terms of domestic expenditures on research and development, and in terms of the number of researchers, the Russian Federation is in the second group of leading countries, along with the countries of the European Union, Australia, Singapore and Chile [9].

With the still remaining potential and competitive advantages of the Russian science in some of its sectors, other negative factors and trends, which unfortunately exist in the public administration of the country's higher education system, create the risk of Russia lagging behind the world technological leaders and devaluing domestic investments in the sphere of science and technology, reducing the independence and competitiveness of Russia in the world, and endangering the national security of the country.

In the context of Western sanctions that adversely affect the scientific, technical and technological development of the Russian Federation, these risks and threats become a significant barrier preventing the breakthrough socio-economic development of the country proclaimed by the president and the implementation of ambitious goals to improve the well-being of the society and strengthen the sovereignty of the Russian state.

New challenges and new priorities of the state policy in the field of scientific and technological development of the Russian Federation significantly increase the role of higher education, especially the high-quality higher education in the formation of the human capital, and an accelerated transition from a raw materials economy to a knowledge economy. The result of public administration reforms, increasing its efficiency and being a kind of response to the existing challenges and needs of society, should be the creation of technologies, products and services that would not only meet the national interests and be useful for improving the level and quality of life of the population, but also be in demand in the world.

The Russian Federation, the successor of the Soviet Union, must regain the former merits of our motherland in training the highly-skilled specialists: engineers, technicians, technologists, economists, and representatives of other professions, who used to be rightfully proud of the Soviet power, which in a short historical period turned the backward agrarian country ruined by many wars in the world industrial power, the first in the world to make a breakthrough in space, which gave the world a constellation of Nobel laureates.

In the light of the requirements of the May decree of the president, the priority areas for the breakthrough scientific and technological development of Russia until 2024 should be only those that are able to ensure the innovative development of the national economy and its rapid growth.

Moreover, we should reject the import of foreign technologies because it increases our country's dependence on the West and preserves its backwardness in both scientific and technical (technological) spheres.

Another important direction in the improvement of public administration of higher education in our country is to overcome the prevailing negative trends: the budget cuts, the unjustified reduction in the number of technological and technical universities. Probably, such initiatives come from the government, which consists of ministers and vice-premiers, who often do not have a basic higher education in the profile of their department, or have the weak professional training in the area they lead. For example, the Ministry of Industry and Commerce is managed by a sociologist by education; the agriculture was managed by a cardiologist for many years, a lawyer managed the Ministry of Economic Development, a journalist managed Roscosmos, etc. To manage, you need to know the sphere of activity, to be competent in it. Then management would be more professional. This also applies to the higher education system.

To be fair, it should be noted that, despite the mentioned deficiencies of the cabinet of ministers, in the last two or three years their work on the education management has noticeably intensified. An important step towards the implementation of new tasks in higher education was the development of the National Priority Project "Development of Education", in accordance with which one of the main tasks of higher education is to provide training for the highly-educated people and highly-qualified specialists, capable of the professional growth and professional mobility in conditions of society's informatization and the development of new high technologies.

The goals, objectives and amounts of funding for activities aimed at modernizing the higher education are defined in the State Program of the Russian Federation "Development of Education", approved by the Government Decree in December 26, 2017 No. 1642. The priority project of this program is the project "Universities as the centers of creative innovations space". The project provides for increasing the sustainable global competitiveness of the leading Russian universities by 11 times, creating in 2018 in the regions of the Russian Federation at least 55 university centers for innovations and technological and social development of the regions, and in 2025 - at least 100 of them. Such centers in their technoparks, engineering centers and business incubators should implement at least 10 technological and social projects by 2020 at the expense of enterprises and organizations of the regional and (or) regional and municipal economy [10].

On February 12, 2019, the Russian government adopted a special resolution on the distribution of subsidies for leading

universities in order to increase their international competitiveness. On its basis, the financial resources in the amount of 9.9 billion rubles ($ 152 million) are distributed to 21 Russian universities in order to increase their competitiveness among the world's leading scientific and educational centers [11]. For comparison: this amount is 230 times less than the annual budget of Harvard University alone [12].

However, despite the presence of all sorts of state programs and projects, including national and priority ones, aimed at the innovative development of higher education, the effectiveness of government in this area cannot be unambiguously positively assessed. This is due to the loss of the state's leading role as the main regulator of permanent processes in the public sector. It has become obvious that the centralized control system that had dominated over many decades begins to fail.

This was expressed, in particular, in the increasing imbalance and tension in the labor market of graduates of higher educational institutions: the proportion of graduates who were employed decreased from 47.3% in 2010 to 33.7% in 2016; the number of unemployed with higher education increased from 834 thousand people in 2010 to 868 thousand people in 2016 (by 4.1%).

The main reasons for the decline in the general education fund of high school graduates are:

- imperfection of formation and placement mechanism of the state order for training specialists with higher education;

- the excess of labor supply over demand due to inconsistencies in the work of universities in training personnel with the needs of the economy, etc.

- insufficient level of material and technical base of universities, which hinders and negatively affects the improvement of the quality of training by using the latest equipment and the introduction of innovative teaching aids (in 2016, there were only 23.8 computers and only 21.5 computers with access in Internet for 100 university students);

- unreasonable reduction in the number of faculty members of universities and the deterioration of its qualitative structure; only for 2010-2018 there was a reduction by 95 thousand people (or 26.6%), while the proportion of doctors of science in the total number of faculty members decreased over the same period from 44.0% to 40.3%, and of professors from 35.8% to 28.5%;

- unjustified reduction of the government's spending for the higher education from 3.7% to 3.6% in relation to GDP, and on education from 08% to 0.6% in 2010-2016 [13].

Thus, despite a number of measures aimed at improving the state policy in recent years, there are still many unsolved problems in the public administration of higher education. As a result of these and other problems, the Russian system of highest-qualification training still lags far behind the requirements of the times and does not ensure competitiveness on the world market.

## III. Purpose and Questions Research

The purpose of the study is analyzing the current state of the state policy in the field of higher education and determining the degree of its compliance with new challenges, and the role of higher education in the development of the knowledge economy and economic development of Russia.

1. To determine the role and place of the higher education system in the formation of human capital and the economy of knowledge.

2. To show trends in the development of higher education in Russia.

3. To analyze the reasons for its low competitiveness compared with the leading countries of the world.

4. To research the effectiveness of public administration of higher education in the country.

## IV. Research Methods

The following methods are used in this study.

1. Comparative method that allows comparing the system of higher education in Russia, its level and quality of training with the developed countries.

2. Historicism method in combination with the comparative method allows showing a significant difference in the state policy of higher education under socialism and under present-day Russian capitalism.

3. The system and structural-functional approaches allow forming a holistic view on the higher education system in our country, its achievements and shortcomings, mistakes and miscalculations made in 2000–2018.

4. Institutional approach allows analyzing the influence of various state institutions on the formation of policies in the field of higher education.

## V. Conclusion

As conclusions, the following should be noted.

1. Presidential decree of May 2018 on the socio-economic development of the country [10] for the next 6 years provides for the solution of social problems in the following areas: demography and life expectancy, health and education, housing, environment, growth in real incomes of the population and poverty reduction, etc. How these tasks would be solved, time will tell.

To achieve the strategic goals of the breakthrough scientific and technological development of the Russian Federation, it is necessary to solve the following main tasks:

1) Improve the efficiency of state management of the higher professional education system. The criterion of this effectiveness should not necessarily be numerous plans for the future, new projects and development programs and strategies until 2030 and 2050, in writing which the Russian officials are so successful, but the correspondence of the number of trained highly-qualified specialists with higher education to the number of those employed in the specialty obtained by them in higher education institutions; already in this case it will be possible to assert with full authority how much budget money

(hundreds of billions of rubles) was spent with benefits for the economy and society as a whole.

a) Create opportunities to identify talented youth and to make it possible for them to build a successful career in science, technology and innovation, thereby ensuring the development of intellectual capacity of the country;

b) Create conditions for research and development, corresponding to the modern principles of the organization of scientific and technical innovations and the best Russian and international practices;

c) Form an effective communication system in the field of science, technology and innovation, ensuring the increased susceptibility of economy and society to innovations and creating the conditions for the development of knowledge-intensive business;

d) Form an effective modern management system in the areas of science, technology and innovation, providing the increased investment attractiveness of research and development, as well as the efficiency of investments in this area, effectiveness and demand for research and development;

e) Contribute to the formation of international scientific and technical cooperation model and international integration areas of research and technological development thus allowing protecting the identity of the Russian science and government interests in the internationalization of science and increasing the effectiveness of the Russian science at the expense of mutually beneficial international engagement.

According to the effectiveness of the scientific potential (the amount of publications in high-rated journals, the number of issued international patents on research and development results, the amount of income from the export of technology and high-tech products), Russia is only in the third group of countries, along with countries of Eastern Europe and Latin America.

f) Weak interaction of the research and development sector with the real sector of the economy and the openness of the innovation cycle leads to the fact that public investment in human capital actually ensures the growth of competitiveness of other economies, resulting in the possibility of retaining the most efficient scientists, engineers, entrepreneurs who create breakthrough products, and the number of which significantly reduced in comparison with countries leading in the field of innovation.

But in order to have more chances for positive results, it is necessary to significantly increase funding for the higher education system, increase salaries of professors and associate professors, and for this, the authors propose to reduce the constantly growing defense spending - according to this indicator, the country ranks third in the world, and by the nominal GDP - only 12th in the world. In other words, military spending accounts for the lion's share of GDP and the state budget.

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