COMPETITIVENESS OF RUSSIAN EDUCATION IN THE WORLD EDUCATIONAL ENVIRONMENT

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Abstract: *The article analyzes the state policy aimed at reforming Russian education and strengthening Russia's positions within the international educational community. After Russia joined the Bologna Process, it became possible to estimate the positions of the Russian higher education in the world educational process. International rankings on assessing the activities of higher education institutions are just the instrument for operational efficiency assessment of higher education institutions, allowing adjusting the development strategy of the universities in due time. At modern stage of technological development, the universities have ceased to be only transfers of knowledge, having assumed a role of business units facilitating the generation of innovations. One of the key criteria for assessing the competitiveness of universities was the commercialization of developments, export of educational services, etc. Using the global trends in development of criteria for competitiveness of the universities, the author comes to a conclusion that there is a need for synergy effect of the state policy aimed at developing the measures for reforming and supporting the Russian education, as well as integrating business and education in order to increase in competitiveness of the Russian higher education in the world educational space.*

Keywords: education, competitiveness, globalization, monitoring of efficiency of higher education institutions' activities, world ranking of universities.

Sustainable development of national economy of any country is not possible without strengthening of the state's positions in healthcare, industry and education on the international stage. According to the Concept of Long-Term Social and Economic Development of the Russian Federation for the period up to 2020, it is assumed that the Russian economy will not only remain the world leader in the energy sector, extraction and processing of raw materials, but will also create a competitive knowledge-based and high-tech economy. Conditions will be created for mass emergence of new innovative companies in all sectors of economy, and, first of all, in economy of knowledge.[1] Indeed, the innovative policy of countries becomes predominant as technological modes of life are changing. However, the implementation of this

[1] Order of the Government of the Russian Federation No. 1662-p., *Concept of long-term social and economic development of the Russian Federation for the period until* 2020, 2008, available at: www.base.garant.ru; Decree of the Russian President No. 599, *„On Measures to Implement State Policy in Education and Science"*, 2012, available at: www.base.garant.ru.

program is impossible without providing the industry with highly qualified personnel, whose training would meet the requirements of modern technologies.

While understanding the need in integration of business and education, the Russian government tries to develop effective forms of cooperation by means of various conferences, debates and forums. Thus, a session „Education. Personnel. Investments. Innovations" was held within the 8th St. Petersburg International Innovative Forum, which became a platform for business communication of key participants of innovative activities: from representatives of science and education to investors and representatives of federal institutions of innovative development. At the plenary session, the audience was asked: What is the priority for development of innovative activity in Russia? 42% of respondents answered that preparation of a highly qualified and demanded personnel is a priority for development of innovative activities.

Against the background of rapid development of technologies, generation of innovations, breakthrough methods of the manufacturing process organization, formation of economy of knowledge, processes of digitalization within the international environment, an issue arises related to the competitiveness of Russian education on the world market of educational services as the main condition for development of innovative activities in the country.

Materials and methods

The international cooperation is based on the bilateral and multilateral agreements in the fields of education, culture, science and technology. The analysis of international agreements made it possible to reveal that international organizations and associations such as UN organization on education, science and culture (UNESCO), European Community, Shanghai Cooperation Organization, BRICS, Asia-Pacific Economic Cooperation, CIS act as platforms for multilateral cooperation of Russia with other countries in science and education. After Russia joined the Bologna Process in 2003, the higher education became two-staged. The first level of higher education, namely bachelor's degree provides a wider level of education to satisfy the need of labor market in the total number of employees and is largely affordable to population. Master's degree, on the contrary, gives an opportunity to gain specialized

knowledge, trains specialists of expert level, satisfying the need of labor market for professionals of narrow orientation or scientific personnel.

After introducing of a single zone of the higher education and science, the competition among higher educational institutions has grown. Having realized this, the Russian government has started development of the program for reforming the Russian education system. The author has analyzed the program for reforming the Russian higher education. The Russian government launched the priority national project „Education", which realizes a system approach to reforming of the social area. The project is focused on search and support of participating leaders of educational process and on mass introduction of new educational management mechanisms. In addition to the national project, the following target programs have been and are being implemented: „Federal target program for development of education for 2011-2015", „Research and development in the Priority Development Fields of the scientific and technological complex of Russia for 2007-2013", „Scientific and academic personnel of innovative Russia" and „Research and development in the Priority Development Fields of the scientific and technological complex of Russia for years 2014-2020".

Strategic objective of reforming of the Russian education system is to increase its competitiveness in the international space and modernize the economy. The main objectives of the reforms, according to the Concept of Long-Term Social and Economic Development of the Russian Federation for the period up to 2020 are: improvement of quality of scientific researches and developments (basic science and innovations), improvement of quality of education and export of educational services.

-Improvement of quality of scientific research and development (fundamental science and innovation). Indicators of the university science development are very important in the international rankings of higher education institutions.[2] This approach is explained by various models of the higher education in Russia and abroad. In Russia, the university is traditionally considered as educational and scientific center. The Law „On Education" concerning the status of the university prescribes that the main tasks include *„implementation of educational programs of the higher and postgraduate professional education in a wide range of areas of*

[2] V. F. Pugach, M. E. Zhukovskaya, „Rankings of Higher Education Institutions: International and Russian Approaches", in *Higher Education in Russia*, no. 8-9, 2012, pp. 15-26; F. E. Sheregi, A. L. Arefieva, *Measurement of University rankings: International and Russian Experience*, Moscow, Center for Sociological Researches, 2014.

training (specialties), retraining and advanced training of the highly trained employees, scientific and academic employees", and only after this there is a problem of *„carrying out of basic and applied scientific researches on a wide range of sciences"*. Foreign higher education institutions, first of all, in the USA, Great Britain, France, Germany, etc. are considered not as educational and scientific complexes, but as scientific and educational complexes.[3] The key directions of international cooperation for the scientific sector development should be the geographical and academic mobility of researches and experts, involvement of the leading scientists to carrying out researches and teaching in the Russian higher education institutions, support of young scientists. Search for interesting partners. The academic cooperation arises also on the basis of scientific cooperation. In the furtherance of this goal, „Higher Education Institutions as Centers for Creation of Innovation Space" Project was adopted aimed at providing at least 5 in 2018 and at least 10 in 2025 leading Russian universities with sustainable global competitiveness; creating at least 55 in 2018 and at least 100 in 2025 university centers of innovative, technological and social development of regions in constituent entities of the Russian Federation.[4]

-Development of export of educational services. Export of educational services is a highly profitable part of the budget of many developed countries. Training of foreign citizens in higher education institutions of the country is now bringing the ever-greater economic benefits in the form of tuition fees, accommodation, food, organization of leisure, etc. Applying for income from export of educational services, Russia has joined the Bologna Process, planning to turn this item into highly profitable in the general structure of export in the future.[5] According to the estimates of the World Trade Organization (WTO), the capacity of the world education market makes 50-60 billion USD, at the same time, specialists of the Organization for Economic Cooperation and Development (OECD) believe that its sizes is two times lower than WTO estimates and equal to 30 billion USD. Russia takes a very modest place in this market, since it takes only 3% of total number of the foreign

[3] A. I. Vladimirov, *On Personnel Training for the Oil and Gas Complex*, Moscow, Nedra Publishing House LLC, 2014.

[4] *Priority project „Universities as centers of innovation creation space"*, Ministry of Education and Science of the Russian Federation, available at: минобрнауки.рф/проекты/вузы-центры-инноваций.

[5] N. R. Kamynina, A. O. Grudzinsky, „Russia in the Bologna Process: Goal Is to Increase the Competitiveness of Higher Education", in *Higher Education in Russia*, no. 8/9 (215), 2017, pp. 22-31.

students in the world.[6] For example, in 2008, education was the third largest export item in Australia, the fifth item-in the USA and Great Britain.[7] Income from training of foreign citizens in Australia made 12.6 billion USD in 2008,[8] in the United States-20 billion USD,[9] in Great Britain-14.1 billion GBP.[10]

The situation has changed over the last 10 years. The analysis of the world rankings shows that the Great Britain remains the continuous leader which controls almost a third of the world financial educational turnover. It is confirmed by data of the international ranking according to The Times Higher Education, given in Table 1.

Table 1: The world's best universities according to the ranking of Times Higher Education, 2016-2017[11]

Ranking Position	University name	Number of students, ths persons	Share of international students, %
1	University of Oxford	20,409	38 %
2	University of Cambridge	18,389	35 %
3	California Institute of Technology	2,209	27 %
4	Stanford University	15,845	22 %
5	Massachusetts Institute of Technology	11,177	34 %

The second place on the volumes of educational sales is occupied by the USA. Education is the fifth most important export item of the American economy. The American higher school makes money off the foreign students 15 times more than the U.S. government spends for it. The total economic impact of study of one foreign student is from 15 to 65 thousand USD. This is followed by Germany, France, Australia, Canada and Spain.

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[6] G. A. Krasnova, „Globalization and Higher Education", in *Open Education*, no. 6, 2002, pp. 51-57.

[7] G. Hall, K. Hooper, „Australia's Export of Education Services", in *Bulletin. Reserve Bank of Australia*, 2008, available at: www.rba.gov.au.

[8] *Ibidem.*

[9] F. Sánchez, „No Better Export: Higher Education", in *The Chronicle of Higher Education*, 2011, available at: www.chronicle.com.

[10] G. Conlon, A. Litchfield, G. Sadlier, *Estimating the Value to the UK of Education Exports*, GOV.UK, 2011, available at: www.gov.uk.

[11] *World University Rankings 2018*. Times Higher Education (THE), 2018, available at: www.timeshighereducation.com.

The analysis of statistical data allows to find out that the Russian higher education institutions become more popular that is expressed in increase in number of joint master's programs and the number of foreign students. In order to increase in the attractiveness of Russian higher education institutions to foreign students in Russia, the priority project „Development of the Export Potential of the Russian Education System" was launched in 2017, which assumes development of target model of higher education institution activities for education export, including creation of the international service for support of foreign students. This model will be first introduced in 20 higher education institutions, and in all higher education institutions of the country since 2021.[12]

-Improvement of quality of education. To improve the quality of education in Russia, a program was adopted, namely 5/100 project, ensuring that at least five Russian universities will take a place in the first hundred of the world's leading universities according to the world university rankings by 2020. Important conditions for granting a subsidy to the universities is the *„road maps"* action plan performance by them, including entering the world rankings of universities, as well as providing co-financing from extra-budgetary funds by universities. According to the ranking of 2017-2018, 18 Russian universities were among the best higher education institutions of the world according to the British edition of Times Higher Education (THE). In total, 1000 educational institutions from 77 countries of the world took part in the ranking.[13]

The best result among the national higher education institutions is shown by Moscow State University, which took the 194th place this year. Far Eastern Federal University, Perm State University and Volgograd State Technical University were for the first time in the ranking. Only universities receiving additional financing within 5-100 project showed a growth in the world ranking this year from all Russian universities. It is about Moscow Institute of Physics and Technology, which has risen by 50 positions and hit the 251-300 group, having taken the second place in ranking among the Russian higher education institutions.

Geographical concentration of the universities with the highest efficiency according to the ranking of THE is shown in Figure 1 Most

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[12] *Passport of the priority project „Development of the Export Potential of the Russian Education System"*, Government of the Russian Federation, 2017, available at: www.government.ru.

[13] *World University Rankings 2018*. Times Higher Education (THE), 2018, available: www.timeshighereducation.com.

efficient universities of the world are concentrated within developed economies.

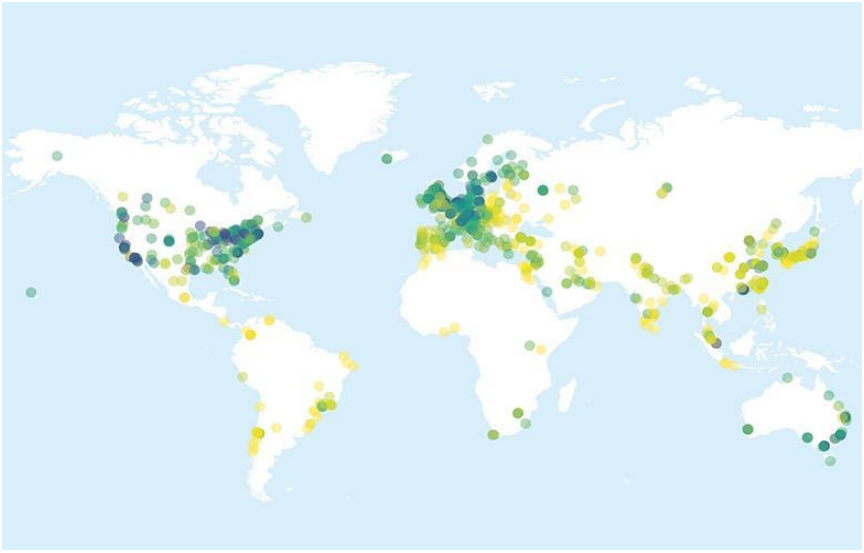

Figure 1: Distribution of the universities according to the general points within the ranking. Clusters in Europe, North America and Australia dominate on effectiveness level. The universities taking higher positions in the international ranking of The Times Higher Education are presented in a darker color[14]

The Times Higher Education World University Rankings is one of the few rankings in the world that estimates the intensity of research development of the universities through performance of their main missions: training, research activity, transfer of knowledge and international overview. 13 indicators providing the most objective comparison by students, the academic community, the management of the universities, business community and government have been developed for assessment of efficiency of the universities' activities. Independent audit of THE ranking is provided by Pricewaterhouse Coopers PwC Company. The main indicators, which THE analysts take into account, are the educational process, scientific work, citation, international activity, income from interaction with industry or commercialization of developments. There is no doubt that other

[14] *Ibidem.*

indicators are also very important, but their value is extremely small when calculating the general ranking of efficiency of the higher education institution activities. The calculation method of THE World University Rankings ranking is given below.

1) Education (30%) includes five indicators: reputation research on teaching-15%, a ratio of the number of students and teaching staff-4.5%, a ratio of the awarded degrees of Ph.D. and bachelor's degrees-2.25%, number of the awarded Ph.D. degrees per teaching staff-6%, a ratio of income of higher education institution and number of teaching staff-2.25%;

2) Research work (30%) includes three indicators: reputation research on the research activities of higher education institution-18%, a ratio of income from researches and number of teaching staff-6%, a ratio of number of items and number of teaching staff-6%;

3) Citation (30%) includes one indicator-impact factor of scientific citation (the normalized average value of citations per item);

4) Internationalization (7.5%) includes three indicators: ratio of the foreign academic staff and the academic staff-citizens of the country makes 2.5%, a share of publications of the teaching staff in the scientific periodicals published in co-authorship with at least one foreign author, in a total of number of the teaching staff publications of the university for five years is 2.5%, a ratio of foreign students and students-citizens of the country is 2.5%;

5) Involvement of financial resources from the industry (2.5%) are innovations, which is the one indicator estimating income from researches on the order of the industrial enterprises per one teaching staff.[15]

Figure 2 shows the comparison of efficiency indicators of Moscow State University that takes a leading place among the Russian higher education institutions, as well as University of Oxford, the world leader in education.

[15] *Ibidem.*

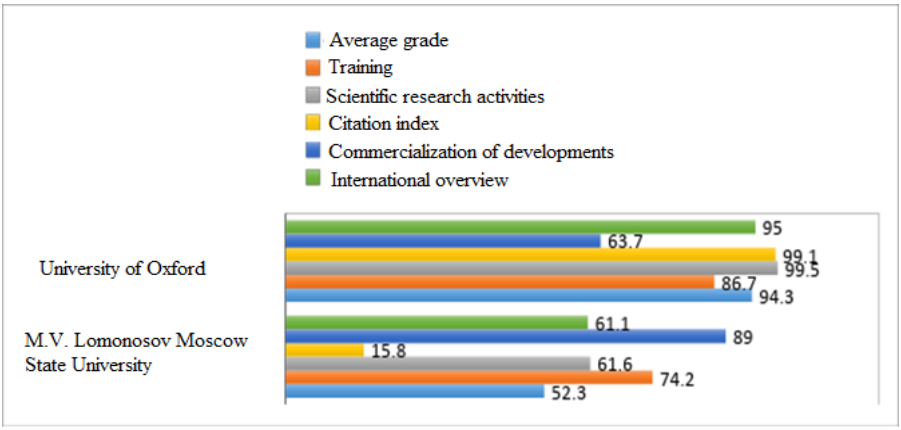

Figure 2: Comparative characteristics of M.V. Lomonosov Moscow State University and University of Oxford (Compiled by the author on the basis of the source Times Higher Education)[16]

Against the background of absolute advantage of all indicators of University of Oxford over indicators of Moscow State University, as well as over 999 other ranking participants, we would like to underline the obvious advance of Moscow State University by criterion of commercialization of developments that provides the higher education institution with opportunities in strategic development.

It was decided to monitor the activities of federal higher vocational education institutions in 2012 to develop the most effective strategic development program, considering weaknesses and strengths of activity of the Russian universities.

Monitoring of efficiency of higher education institutions is an action plan aimed at drafting the analytical materials on activities of the universities and their branches on the basis of performance indicators, and is carried out on the basis of the analysis of statistical information of higher education institutions and their branches.

It should be noted that one of the basic principles of monitoring are: openness and publicity of actions and data during monitoring; continuity and comparability of indicators; consideration of activity specifics of higher education institutions when forming monitoring; a possibility of documentation of quality of the data provided by the educational organizations. The monitoring technique of activity of

[16] *Ibidem.*

domestic higher education institutions assumes assessment by the following criteria:[17]

1) Educational activity, points;
2) Scientific research activities, units;
3) International activities, %;
4) Financial and economic activities, ths. RUB;
5) Infrastructure, sq. m.;
6) Employment rate, %;
7) Regular personnel, %.

The values of the previous year on federal districts are accepted as threshold values. The published results of efficiency monitoring of the higher educational organizations are useful for labor market subjects, namely not only for employers, but also for entrants in choosing their specialization.

Results

The entry of Russia into the world educational environment has been the start of reforming of the education system with a focus on subsequent integration of the Russian higher school. However, during implementation of this policy, the reasons that slow down this process became obvious. Neither the state policy in reforming the education system, nor activities of the universities proved to be an absolute decision in search for the fast solution to integrate the system of Russian higher education into the world community. The author underlines 2 fundamental reasons therefor.

First, there are different models of the universities in Russia and abroad. Historically, the US universities (Harvard University, Stanford University, etc.) were formed primary as the research universities, and then as training centers. In Russia, with a planned economy, higher education institutions performed, first of all, a task of staffing the national economy sectors, that is function of personnel training, which is enshrined in the Law „On Education". The different fundamental purposes put forward different criteria for evaluation of effectiveness of the universities.

[17] *Calculation Method Indicators for Monitoring the Efficiency of the Higher Educational Establishments 2015*, Ministry of Education and Science of the Russian Federation data form N 1Monitoring for 2014 NAK-30/05vn from March 30, 2015, available at: www.stat.miccedu.ru.

Therefore, secondly, it is impossible to achieve fast effectiveness by the criteria not peculiar to this model. The analysis of evaluation methods has shown that evaluation criteria are different from each other, and similar evaluation criteria have different values in the overall effectiveness assessment of activities of the universities. The world rankings in assessment of activities of the universities show, first of all, a criterion of assessment of research work. The science and education system have been divided historically in Russia that was expressed in establishment of Russian Academy of Sciences and Universities. Certainly, there was a science in the university, but it was more of an applied nature and not the main activity of the faculty. Abroad, on the contrary, the real researchers worked at the universities and conducted research activity, who reached significant heights in the scientific world, gaining a strong academic reputation that was reflected on degree of impact and the importance of the university in the world educational space. Thus, 52 laureates of the Nobel Prize worked at one of faculties before or during the awarding in Cambridge University, 55 laureates-in Columbia University, 36 laureates-in Harvard University, 40 laureates-in University of Chicago. 11 Nobel laureates worked and conducted scientific activity in M. V. Lomonosov Moscow State University in Russia, the university, which takes the leading position among the Russian higher education institutions in the world ranking.

Discussion

The key strategy for integration into the international educational and scientific environment that Russia has chosen for itself is developing the internationalization of activities of its leading higher education institutions (including the research and federal universities).

The international practice shows that many countries use similar tactics of supporting the leading higher education institutions and scientific organizations for modernization and development of a national education system. For example, China, Japan, Australia, Germany, France etc. At the same time, researchers come to a conclusion that a focused support of other participants of the education system is necessary along with financing of institutes. D. Salmi and I. Frumin[18] in their analysis of strategies for achieving competitiveness of the universities in different countries emphasize that supporting not only the

[18] D. Salmi, I. Frumin, „How the States Obtain International Competitiveness of Universities: Lessons for Russia", in *Questions of Education*, no. 1, 2013, pp. 25-68.

leading educational and scientific organizations, but also the young scientists is necessary for successful reforms of educational systems.

Moreover, the lack of equal access to the means of support of scientists can facilitate the outflow of young professionals from the country. The government creates conditions for development of scientific potential to prevent a *„brain drain"* especially from those fields of science, where there are hopes for *„innovative breakthrough"* in the country's development, i. e. making part of the priority industries: space technologies, applied and theoretical physics, chemical technologies, biochemistry, microbiology, genetics, mathematics and programming.

Conclusion

Thus, the state policy on reforming of the education system aimed at increasing the competitiveness of Russian system of education and science on the international stage meets the main criteria for evaluation of universities' activities applied in the world. However, the very method of evaluation of higher education institutions' activities, in the author's opinion, requires further elaboration. It is necessary to bring closer the criteria of monitoring of activities of Russian higher education institutions to criteria for evaluation of activities of foreign universities as much as possible. The similarity of criteria will enable timely estimation of dynamics of achievement by Russian universities of leading positions within the world educational environment.