

Sustainable Development of Higher Education in Russia in Conditions of Territorial Inequality

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The research is devoted to the current problems of developing the territorial structure of the higher school of the Russian. We also paid attention to its historical retrospection, considering that the territorial organization of higher education is an essential factor in the spatial organization of society in post-industrial development. It is necessary to consider the regional inequalities that have developed in current Russia. We suggested that the territorial differentiation in higher education is exacerbated by regional economic disparities. There were also historical prerequisites for the established territorial differentiation of higher education, laid down almost 300 years ago. Given the current situation and its comparison with the economic situation at the regional level, it was right to suggest that such a system could not be sustainable. For Russia, with its high spatial natural and socio-economic differentiation, the policy of supporting a small number of universities located in capital cities is wrong.

Keywords: education system in Russia, higher education, regional inequality, sustainable development of regions, territorial organization of higher education the process of historical development

INTRODUCTION

The 2030 Agenda for Sustainable Development, adopted by the United Nations (UN) General Assembly at the end of 2015, is the global plan for sustainable development. Among the major global challenges is ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (United Nations, n. d. a). Of the ten declared tasks, two directly relate to higher education and are aimed at creating conditions for obtaining an inexpensive and high-quality education (United Nations, n.d. b).

In the last decade, the issue of “education for sustainable development” has received an increasing response. However, the criteria and parameters for evaluating the situation and methods of implementation have not been developed not only at the national but also at the international level (Shrufer, Vrenger & Lindemann, 2020).

The concept of “Sustainable Development” was proposed by the UN World Commission on Environment and Development in 1983 in the progressive de-industrialization of highly developed countries. It is a development that preserves resources for the present and future generations. Sustainable development requires a constant flow of matter and energy to maintain soil fertility, restore vegetation

cover, carry out anti-erosion measures, clean up from pollution, waste disposal, etc. However, the high price of resources excludes the possibility of their rational use. This, along with sudden economic crises, casts doubt on the possibility of sustainable development (Shuper, 2013).

The solution to the problem of creating a society of sustainable development, as an alternative to a consumer society, is within the power of highly developed countries. Therefore, we can say that this is possible only under the conditions of global post-industrialism. By analogy with this, it is quite possible to conclude that within one country, sustainable development can be achieved only in conditions of such equality in all regions. Without considering the regional inequality developed in current Russia, it is impossible to solve this problem.

This paper discusses the territorial organization of higher education in the Russian Federation. The key problem of the research is the disproportions in the territorial organization of higher education, which have historical prerequisites and are aggravated by the economic situation in the regions of the Russian Federation. In the history of the formation of the Russian state in the 18–19 centuries, there was an uneven distribution of the population and production. These trends were also observed throughout the 20th century. In recent decades, inequality has become even more pronounced because of the increasing economic differentiation at the regional level. The current conditions indicate the insufficient validity of the idea of the sustainable development of education in general and higher education in particular.

The issues of the spatial organization of higher education and the influence of universities on the development of territories are the subject of numerous studies. The most common approach is the quantitative approach.

Thus, V. P. Krasnoslobodtsev (2007) analyzes the hierarchy levels of university centers based on the population size of Russian cities. A. A. Tomskikh (2013), using only quantitative indicators, examines the territorial elements of models of educational spaces at the global level. Ample opportunities for spatial analysis of various parameters of higher education are opened by the cartographic method: to (1) evaluate the reasons for choosing a university by students (Hillman, 2016, 2017), (2) study the level of income and accessibility of higher education (Doyle & Skinner, 2016), (3) organize a network of private universities (Hunt & Boliver, 2019), and (4) evaluate the accessibility of higher education (Chavez, 2016; Miller, 2012). The greatest depth and validity of approaches to studying the spatial organization and differentiation of higher education are distinguished by the works of A. P. Katrovsky (1984, 2003, 2016).

MATERIALS AND METHODS

The research is based on the historical approach, the concept of “center-periphery,” comparative geographical and statistical methods, and the method of rating assessment.

To evaluate the qualitative parameters of universities in our research, preference was given to the QS rating (QS World University Rankings, 2021), which is explained both by the system of indicators and the breadth of coverage of universities in different countries.

We also used the integral index RIA-rating based on official statistical data to reflect the economic situation of the constituent entities of the Russian Federation.

This method involved an open calculation method, which is an up-to-date update of information. However, the method has some limitations associated with the large heterogeneity within subjects with a large area (e.g., Krasnoyarsk Krai, the Republic of Sakha (Yakutia)). To map the integral index, threshold values were determined based on the quantile method.

The current situation in higher education is a subject of discussion both in society and on the pages of scientific publications. We did not touch upon the evident problem of underfunding higher education in the Russian Federation. Our aim was to show that the territorial differentiation of higher education is intensified by regional economic imbalances. Such aim required the analysis of the historical prerequisites for the existing territorial differentiation of higher education, tracing the current situation, and comparing it with the economic situation at the regional level. Considering the results obtained, we assume that such a system cannot be stable.

RESULTS

In recent years, the education system in Russia has undergone significant qualitative and quantitative changes, both substantive and institutional in nature.

It is a well-known fact that universities stimulate the development of regions. The unevenness of their distribution in Russia has been historically developed. Based on archival materials, A. E. Ivanov (1991) analyzed the situation in a higher education organization in Russia at the end of the 19th - beginning of the 20th centuries. A generalizing study by A. P. Katrovsky (2003) presents a historical analysis of the territorial development of Russian universities. The situation at the beginning of the 20th century shows that territorial inequality in the distribution of universities was inherent in our country.

In the USSR, there was a hypertrophied concentration of leading universities in capital cities. The exception was Tomsk. The refusal in the post-Soviet period from the distribution system of university graduates gave rise to the problem of providing regions with specialists in high technology. However, there is a more even distribution of universities in developed countries. A good example is Canada, which has a significant territory with harsh climatic conditions like the Russian Federation. In developing countries that rely on a breakthrough in socio-economic development, much attention is paid to the state of higher education. In 2020, federal budget expenditures will grow by 6.6%. At the same time, spending on education - by 5.7% and on higher education - by only 2.8%. The share of education expenditures from gross domestic product and federal budget expenditures will decline.

According to the World Bank, in terms of the share of spending on education from all sources, Russia ranked 98th in the world in 2012. There is reason to believe that this indicator has worsened and continues to deteriorate. The current situation in higher education in Russia is alarming.

Higher education is the most dynamically changing subsystem of Russian education. There has been a significant reduction in the university network by almost a third since 2000 (Fig. 1). (Gokhberg, Ozerova, Sautina & Shugal, 2020).

FIGURE 1
THE NUMBER OF UNIVERSITIES IN THE RUSSIAN FEDERATION

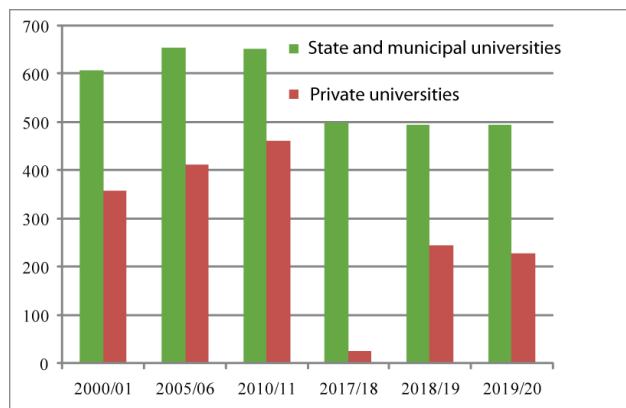


Fig. 3 shows the information on the distribution of universities at various levels: federal, national research, and flagship universities. In addition, it shows the universities included in the QS rating.

The data above reflects the territorial economic inequalities that give rise to volatility problems. Since 2008, a new architecture of the higher education system has been formed in Russia, which now consists of universities that are a national treasure, namely:

- Moscow State University and St. Petersburg State University;
- Federal universities (points of growth of higher education in federal districts);
- National research universities (ensuring the integration of higher education and science);

- Flagship universities (point of growth of higher education in the constituent entities of the Russian Federation).

In 2008, a new type of higher education institution appeared in Russia, the National Research University [NRU]. In May of 2010, the government approved the NRU list. The creation of national research universities aimed to overcome the technological gap in advanced and promising technologies. Most of the NRU's arose based on the best industrial Russian (Soviet) universities that provide training and research in high-tech activities (energy, electronics, aviation and rocketry, medicine, new materials, etc.). Currently, most NRU's have become cross-sectoral higher education institutions. The spatial organization of national research universities is also questionable. Until now, this type of higher education institution has not been opened in the North Caucasian, Southern, and Far Eastern Federal Districts. The declaration of the need for advanced development, including the development of high-tech industries in these regions, came into conflict with the regional policy of higher education.

The inequality in higher education is clearly visible on the map - Moscow, St. Petersburg, and Moscow regions stand out. In addition to inequality in developing a network of research universities, there is inequality in the spatial organization of high-profile universities. The list of the world's leading universities, according to the British consulting company Quacquarelli Symonds (known as the QS rating), in 2019 included both national universities in Russia, 15 NRU's, five federal universities out of ten, one regional reference (Altai State University), and five universities that do not have a special status (Voronezh and Novosibirsk Technical State Universities, Peoples' Friendship University of Russia (RUDN University), MGIMO University, and the Plekhanov Russian University of Economics (Fig. 2).

There is less than one university center with a world-class university per one million square kilometers of the territory of the Russian Federation. There were no QS world-class universities in the North Caucasus. There was only one center of higher education with the world's leading universities in the Far Eastern and Southern Federal Districts (QS World University Rankings, 2019).

In 2016, the first 11 regional reference universities appeared, and a year later, their number increased to 33. As in the case of the formation of national research universities, the Ministry of Education and Science did not have a spatial approach when deciding on the creation of flagship universities. Not a single university of this type has been created in the Far Eastern and North Caucasian Federal Districts. However, the process of developing regional flagship universities was suspended since these universities were not opened as research universities, and many of them will not be able to become centers of regional innovative development.

FIGURE 2
TERRITORIAL ORGANIZATION OF THE HIGHER EDUCATION SYSTEM IN RUSSIA AND THE ECONOMIC SITUATION OF THE REGIONS



Regions with a low level of economic development cannot develop their universities, and universities, in this case, cannot become centers of development - a vicious circle.

DISCUSSION

The research showed the validity of A. P. Katrovsky's (2003) conclusion that the principles of centralism and capitalism from the 18th century to the present time are leading in the territorial organization of higher education. It is also fair to say that the strengthening of territorial inequality in the educational space in the context of a decrease in the cohesion of the country's territory turns from a social problem into a political problem.

For the largest country in the world, the strengthening of territorial differentiation poses a threat to territorial integrity and involves the need to make adjustments to the ongoing regional policy in higher education. We also confirmed the conclusion of several authors that Russia's entry into the post-industrial development stage presupposes adjustments to the territorial structure of higher education. The economy of the post-industrial society is characterized by a higher level of decentralization, which, in turn, will contribute to the decentralized development of the territorial structure of higher education.

O. N. Smolin (2019) pointed out the imbalances in the territorial organization of higher education and the danger of this phenomenon in his speech to the State Duma (Federal Budget Draft for 2020–2022: a brief analysis in terms of education and science, 2019). He stated that the budget continues to concentrate the funds for financing the so-called leading universities in Moscow, St. Petersburg, and some other regions at the expense of most universities in the country. As noted in the official conclusion of the State Duma Committee on Education and Science, this leads to (1) an outflow of the best applicants to the capital, (2) their consolidation in a new place, and (3) a shortage of highly qualified personnel in the regions.

In addition, there remains a problem of the direct underfunding of industrial universities (agricultural, transport, medical, cultural universities, etc.), the financing of which is not provided even within the standards approved by the Ministry of Finance.

Meanwhile, it is necessary to understand that the more a country needs modernization, the higher the costs of education and science should be. For example, no country has successfully modernized when spending on education are less than 7% of the gross domestic product.

CONCLUSION

After the collapse of the USSR, Russia faced a large and growing problem of poverty and unequal income distribution. Social stratification was complemented by regional stratification.

A small number of successful territories have emerged in the country, in which economic activity is concentrated, and the population lives relatively well, while a significant part of the land is in a state of deep decline. Such an abnormal situation could threaten Russian political stability and integrity. Economic unevenness was complemented by imbalances in the territorial organization of higher education. For Russia, with its high spatial natural and socio-economic differentiation, the policy of supporting a small number of universities located in the capital cities is inappropriate.

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