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The review “Russian Economy. Trends and Outlooks” has been published by the Gaidar Institute since 1991. This is the 44th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 5 big sections that highlight different aspects of Russia’s economic development, which allow to monitor all angles of ongoing events over a prolonged period: the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

Reviewer:

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Education system in Russia in 2022¹

In 2022, all pandemic restrictions were lifted from the Russian education system as it switched to full-time mode. At the same time, the outcomes that emerged during the periods of prolonged lockdowns remained, especially distance learning. In the new environment, they are used partially but allow to work remotely, for example, university lecturers (to give lectures remotely, being on business trip, etc.) or researchers can remotely participate in scientific conferences and seminars. As a result, the audiences outreach for various seminars and webinars has increased dramatically.

Simultaneously, in 2022, the Russian education system faced new challenges associated with the special military operation (SMO) in Ukraine and the sanctions pressure on Russia caused by the SMO. This led to substantive, structural, organizational and economic changes in the functioning of different levels of the education system.

4.5.1. Preschool education

In pre-school education, the main organizational and economic task has been to reach children between the ages of 1.5 and 3 by pre-school institutions (nurseries). This is due to the need to ensure that mothers return to work quickly after the birth of their children. There is a growing shortage of staff on Russian labor market due to demographic reasons — a decrease in the number of young people and an aging population. Raising retirement age is not a solution to the growing shortage of workers and so there is a need to get mothers back to work more quickly. SMO can both strengthen this trend (replacement by women of men mobilized in RF Armed Forces) and weaken it on the back of the decline of economic activity in many sectors and growth of unemployment.

Executive Order of the RF President No. 809 dated November 9, 2022 “On Approval of the Basic State Policy to Preserve and Strengthen Traditional Russian Spiritual and Moral Values” sets new educational tasks for the system of pre-school

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education. Accordingly, in 2023, content of educational work with children aged 3—6 (7) will change in the first instance, which will require mass advanced training for teachers in pre-school educational institutions.

4.5.2. General (school) education

In 2022, the exclusion of Russian students from international comparative study of the quality of education PISA (the ability to apply acquired knowledge) regularly conducted by the OECD can be highlighted as a rather serious issue for school education. Russia is also excluded from other studies of the quality of education, which are conducted by the OECD: TIMSS (quality of mathematics and science education in elementary and secondary schools), PIRLS (quality of reading and reading comprehension in elementary schools), ICILS (quality of computer and information literacy, including information security).

In 2022, Russia's participation in the PISA Process was crucial in revealing the effects of COVID-19 pandemic on Russian general education system. However, this did not happen. Meanwhile, from October 10 to 28, 2022, Rosobrnadzor conducted a study of the quality of education without participation of the OECD. It used entirely Russian assessment materials and research technology was also local although it was noted that assessment was conducted according to the PISA Process. It is quite clear that the findings of this study will not be recognized by the international educational community, and any positive progression of Russian students will be called in question. Meanwhile, Russian results of PISA, TIMSS and PIRLS are the basis of our country getting into the leaders (top 10) by quality of general education. This is one of the main indicators of the national project "Education". In 2018, the World Bank in its Human Capital Development Project ranked Russia 9th among the top countries regarding general education.¹ However, pandemic could have seriously affected PISA scores of students in all countries with PISA results also revealing shortages in knowledge and ability to apply it by students due to lockdowns and the emergency transition to distance learning.

In 2021, the only study of above mentioned deficits was conducted in Krasnoyarsk Krai.² It showed that the most affected by the transition to distance learning were natural science knowledge of the 8th grade students in Krasnoyarsk Krai schools, however, when reading literacy tests were conducted in the 4th grade the students' knowledge was unaffected at all and the 6th grade students' knowledge suffered insignificantly. Meanwhile, this study cannot provide an ideal picture of what happened in other Russian regions because they vary greatly in their socio-economic status. It should also be noted that so far little attention has been paid to the causes of above-mentioned deficits, methods and techniques

1 HumanCapitalDevelopmentProject.2018.InternationalBankforReconstructionandDevelopment. World Bank. URL: <https://documents1.worldbank.org/curated/en/772591566979744762/pdf/The-Human-Capital-Project.pdf>

2 Chaban, Tatyana, Roza Rameeva, Ilya Denisov, Yuliya Kersha, and Roman Zvyagintsev. 2022. "Russian schools during the COVID-19 pandemic: Impact of the first two waves on the quality of education". *Voprosy Obrazovaniya / Educational Studies*, No. 1 (March), 160-88. <https://doi.org/10.17323/1814-9545-2022-1-160-188>.

that are needed to overcome them. In particular, in the Krasnoyarsk study it was recorded that children from families where at least one parent has higher education generally passed the pandemic better in terms of educational results and what influenced this was the help by parents; higher family income and, accordingly, the possibility to hire tutors; higher family income and availability of a good computer or tablet, high-speed internet and necessary software; a combination of all the above factors; a child attending a better school and teachers' higher skill of distance teaching methods, etc., — unfortunately, not specified or not identified.

Based on the 2021-2022 BSE and USE results, the Federal Service for Supervision of Education and Science (Rosobrnadzor) noted no decrease in passing exams, but the average score of those entering higher educational institutions in 2022, nevertheless, declined noticeably.¹

In the meantime, the survey conducted by the CECE IAES RANEPА in the fall of 2022² showed that, according to teachers, changes in teaching formats that took place during the pandemic had a serious impact on the quality of education in schools. Rural schools were hit the hardest (*Fig. 22*).

In terms of parents' opinion, more than one-third of them felt that their children had some gaps in their knowledge, with 2.6% noting significant gaps (*Fig. 23*).

In addition, 5.6% of parents of ninth-graders indicated that distance learning during the pandemic led to academic problems for their children and determined family's choice to continue education in secondary vocational education system.

Thus, we can conclude that the pandemic and 2020 urgent transition to distance learning led to emergence of gaps in knowledge in a rather significant number of students and this factor determined, including in 2022, these students' choice of their future educational trajectory.

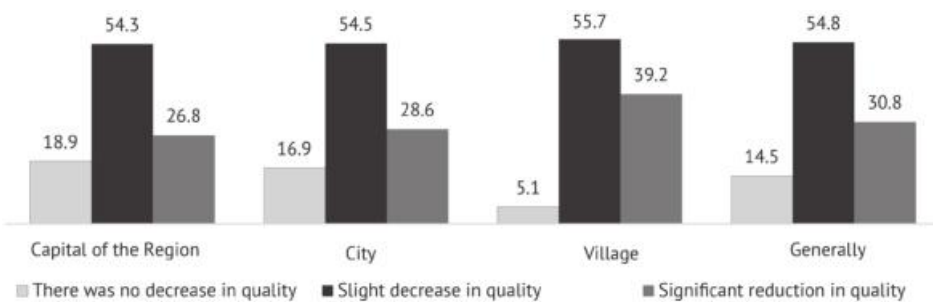


Fig. 22. Distribution of answers of teachers to the question: “In your opinion, has there been a decrease in the quality of education during the last two years (during the pandemic, since spring 2020)?”, %

Source: Monitoring of CECE IAES RANEPА 2022.

1 URL: <https://4ege.ru/ege-gia/65396-srednie-bally-ege-2022.html> and <https://4ege.ru/ege-gia/62402-srednie-bally-ege-2021.html>

2 The study was conducted in October 2022, 2,057 teachers and 2008 parents were interviewed in 3 regions with different levels of socio-economic development.

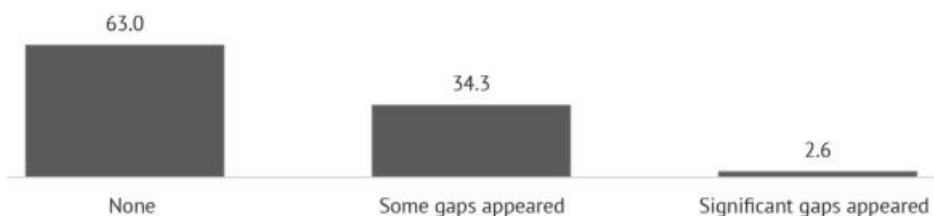


Fig. 23. Distribution of parents' answers to the question: "Have any gaps in knowledge appeared since the beginning of the pandemic?", %

Source: Monitoring of CECE IAES RANEPА 2022.

Non-participation of Russian students in the TIMSS study, i.e. the assessment of mathematical and natural science literacy of 4th and 8th graders will also negatively affect objective representation of Russian society concerning the mastering of mathematics and natural science subjects in Russian schools. Also, decrease in the number of school leavers choosing physics and profile mathematics for Unified State Exam indicates that there are certain issues with teaching of these subjects at school. This leads to difficulties in recruiting students to universities for engineering and technical training and specialties and even for state-funded places.

In addition to substantive issues, schools in 2022 faced the need to switch to domestic software and equipment due to sanctions, which, in principle, may complicate digitalization of this level of education. Again, this will affect the solution of the task set in the national project "Education" to create a developed digital educational environment in general education organizations. In addition, decrease in the supply and the rise in price of corresponding equipment will lead to the reduction of opportunities to connect rural schools, as well as schools in small and medium-sized cities to broadband internet, which will inevitably affect digitalization of their activities. Moreover, situation for small and medium-sized cities is even worse than for the countryside, as the CECE IAES RANEPА survey shows (Fig. 24).

If we take into account availability of internet in schools of not only poor (low), but also average quality, issues with digitalization of school education affect to a greater or lesser extent and significantly 49.6% of rural general educational institutions, 57.0% of urban schools and 41.5% of schools of regional capitals. And, apparently, resolution of this issue will become more complicated in the near future. It means that access to modern methods (techniques) of teaching and ultimately to quality education will be limited for almost 7 million children. It should be noted, however, that households are better equipped with broadband internet access than schools, which alleviates the issues to a certain extent (Fig. 25). Meanwhile in the near future, there may appear differences between software used by students' families and software that will be used in schools.

In 2022, another challenge for schools was education of children displaced from territories where SMO was underway, primarily from Donbass (refugees and



Fig. 24. Distribution of respondents' answers to the question: "Is there an internet connection available in your school, and if so, what is the quality of connection?" by type of settlement, %

Source: Monitoring of CECE IAES RANEPА 2022.

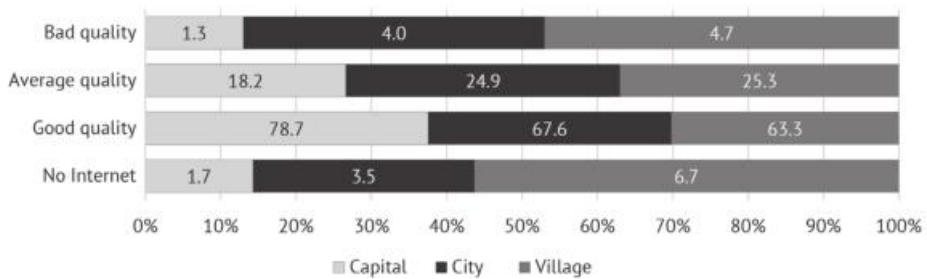


Fig. 25. Distribution of parents' answers to the question: "Do you have internet connection at home, and if so, what is the quality of the connection?" taking into account the type of settlement, %

Source: Monitoring of CECE IAES RANEPА 2022.

displaced persons). Number of this contingent is more than 330,000 school-age children. As a rule, such students need certain rehabilitation, since they have been torn out of their familiar environment including school environment and have found themselves in completely new conditions. In addition, most of them have witnessed combat operations. School psychologists work with these children in Russian general educational institutions and teachers must pay them more attention, which often causes dissatisfaction among those students who study in schools where the newcomers arrive. Overall, however, situation remains calm, and schools are coping with their new activities.

On the whole, Russian schools passed 2022 without any major disruptions, and no new financial issues were identified but a climate of heightened anxiety persisted.

4.5.3. Additional education for children

In 2022, additional education for children saw a recovery from the pandemic (2020—2021) in the volume of provided services (Fig. 26).

The share of children who attended extracurricular activities in pre-pandemic year of 2019 was about the same (68.9%), but in 2021 it dropped to 54%. Simultaneously, recovery in 2022 of the coverage of children with supplementary education was accompanied by an increase in the share of paid services relative to 2019, despite introduction of the system of personalized budget certificates issued to families for their children to attend additional education institutions. However, it should be noted that the largest share of paid services in additional education of children was observed in 2021, i.e. during the pandemic (Fig. 27).

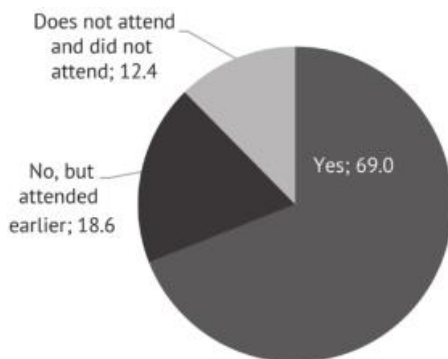


Fig. 26. Distribution of answers to the question: “Does your child attend additional classes?”, %

Source: Monitoring of CECE IAES RANEPА 2022.

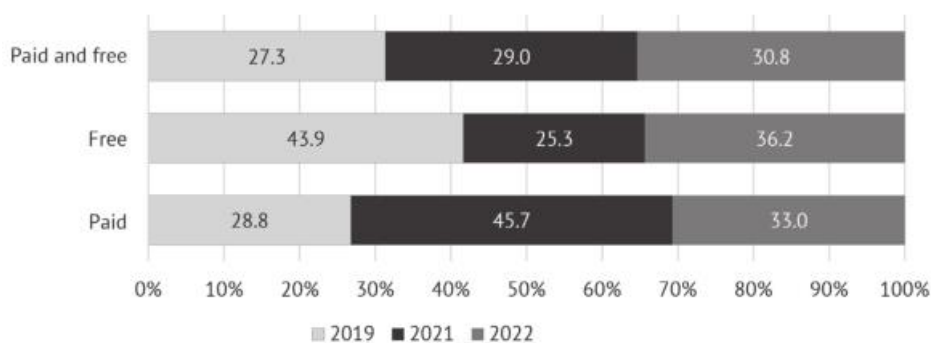


Fig. 27. Distribution of answers to the question: “What additional activities does your child attend?”, %

Source: Monitoring of CECE IAES RANEPА 2019, 2021 and 2022. In 2020, Monitoring was conducted in early March, which did not cover the impact of pandemic on children’s additional education.

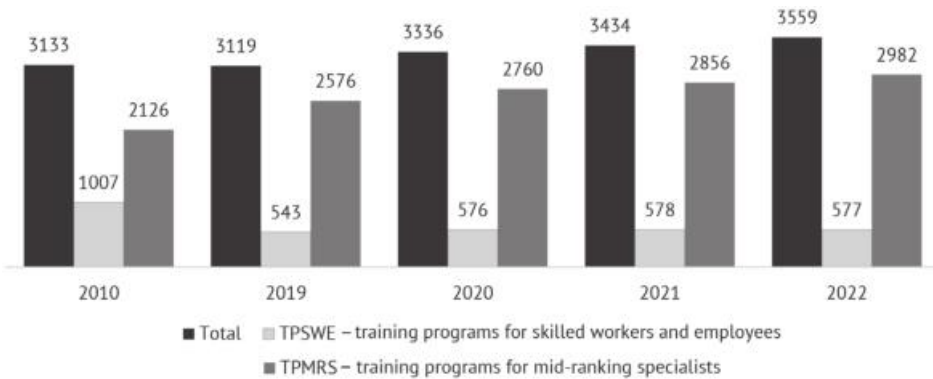
Generally, children’s additional education serves as a platform for tuning the national project “Education” target model, which assumes involvement of a significant number of private institutions in this sphere, but so far, no serious breakthroughs have been achieved (the Russian average participation of private institutions in the additional education is below 5%). Moreover, complicated financial situation in the regions can lead to an even greater reduction in additional education in the private sector and “simplification” of additional classes in state institutions.

4.5.4. Secondary vocational education

The secondary vocational education shows an increase in enrolment growth over recent years (*Fig. 28*).

In 2022, the number of SVE students in general went up by 3.9%, while the number of students enrolled in blue-collar training programs remained virtually unchanged for the last 3 years, and growth is provided by an increase in the number of students in mid-level specialist training programs where the number of students grew by 4.4% in 2022. Moreover, enrolment in professional training programs is also stable with a slight upward trend in 2022, while in the TPMRS programs it dropped in 2021 (by 3.2%), and then surged in 2022 (by 8.2%) (*Fig. 29*).

It should be noted that admission to programs of mid-ranking specialists exceeds admission to universities for bachelor’s and specialist’s programs



Note. Total TPSWE — training programs for skilled workers and employees; TPMRS — training programs for mid-ranking specialists.

Fig. 28. The number of students of SVE institutions in 2010 and 2019—2022, thousand persons

Source: FSM SVE-1 form for 2019–2022.

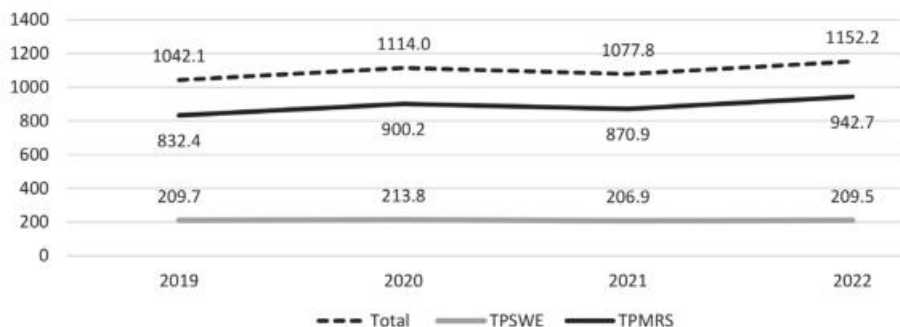


Fig. 29. Enrolment of students in SVE institutions in 2019—2022, thousand persons

Source: Calculations based on SVE-1 data (2019–2022).

since 2019. Increase in demand of young people for training in SVE system is due to several reasons:

- children from low-income families strive to enter labor market more quickly (almost two-thirds of students in secondary vocational education institutions are children from low-income families¹);
- schools’ tendency to “get rid” of ninth-grade graduates who poorly master the school curriculum;
- lack of money for tutors for families of 11th graders to pass the USE with high grades, and inability to pay tuition if they do not fall into budgetary places.

It should be noted that in recent years Russian society has formed a fairly stable belief that without tutors or, at most, without training at university courses, it is impossible to qualify for free tuition. Moreover, the choice in favor of SVE from 2020 is connected, as it was mentioned above, with gaps in acquiring of knowledge due to transition of schools to distance learning during the pandemic. A significant part of student fail to eliminate these gaps without the assistance of tutors, so they decide to terminate their education in in the 10th grade and enter SVE institutions. Furthermore, transition to SVE institutions attached to universities allows them to enter “their” institution of higher education without taking the Unified State Exam if the profiles of training in SVE and the university are the same.

Sanctions imposed on Russia led to curtailment of Worldkills Russia activities. Meanwhile, it was the development of this movement in Russia that boosted the prestige of modern trades among young people. Withdrawal of Worldkills from our country may have a negative impact on young people’s attitudes toward training in vocational education.

In 2022, an experiment was launched to introduce a new level of professional education, which was called “Professionalism. National project “Education”

¹ Data from the Monitoring of Youth Employment CECE IAES RANEPА.

includes the federal project “Professionalism”. This level of education is designed to cut time required to acquire a profession by approximately two-fold and to ensure greater training capacity, first of all, of skilled workers and office workers. Moreover, it is supposed to actively involve employers in training of these personnel who should supply equipment to the organizations of SVE institutions while receiving an investment deduction. As Ministry of Education points out, “among the key initiatives of the project is creation of educational and production centers (clusters). They represent integration of colleges and institutions of real sector of the economy. In a cluster a college is singled out, which is being modernized on a turn-key basis. In this college a new management structure, new teaching staff, new content and structure of educational programs, training and production complexes are formed with the direct participation of the supporting employer. At the same time, the cluster can include colleges that have workshops in the cluster profile and employers who have chosen the appropriate level of participation”.¹ Furthermore, it seems that this program cannot be fully implemented since modern production with complex equipment requires socially mature and responsible employees. As it seems, first of all, “Professionalism” will work for training personnel for the service sector and to a much lesser extent for industrial and agricultural production enterprises.

The announced change of conscription age into Armed Forces of the Russian Federation and possible increase of term of conscription up to two years may cause changes in the employers’ positions: two years of army service, as a rule, leads to loss of some professional skills by young workers, as well as to their moving to other regions of Russia. Accordingly, employers stop investing in training of this personnel. In addition, sanction pressure on Russian economy may lead to liquidation of some businesses or reluctance of employers to financially support SVE institutions. This being said, regional budgets will also reduce funding for this sphere if their deficits grow. Therefore, it is fair to assume that implementation of the “Professionalism” program will either be sharply slowed down or will be of a “cellular” nature. Furthermore, delaying of the special military operation and doubling of the terms of conscription can lead to a decrease of families’ interest in secondary vocational education and increase in aiming to enroll their children in universities for full-time education.

4.5.5. Higher education

Sanctions imposed on Russia could not help but affect higher education creating new challenges for this sphere different from those posed by coronavirus pandemic in 2020—2021. Overall, it can be stated that it is the higher education system that is most likely to be affected by sanctions regime, although it was not directly targeted.

First of all, Russia was excluded from the Bologna System (Russia itself also announced its withdrawal from it). Due to rejection of Bologna System, Russia began developing a national system of higher education in 2022. Basically, it was a question of increasing the share of specialist training in higher education. Rector

1 URL: https://edu.gov.ru/activity/main_activities/additional_vocational_education/

of Moscow State University Viktor Sadovnichy insists that admission to specialist training program should make up 70—80% of admissions to Russian universities.¹ However, he does not specify: will it be admission on a state-subsidized education or is it a share of the total (state-subsidized and fee-based) admission? Currently, admission on a state-subsidized education to the specialty is up to 15% and is conducted primarily in “heavy”, i.e. stock-intensive specialties that require complex teaching and laboratory equipment. Transfer of a significant number of areas of training that do not involve large amounts of class time for laboratory work (psychologists, economists, managers, sociologists, culturologists, political scientists, etc.) is hardly justified and, more significantly, unlikely to be possible. The main limitation for admission to specialty will be financial: in the coming years the federal budget expenditures on higher education, most likely, will not grow in real terms (their reduction is also possible), so admission to engineering and technical (expensive) specialties will increasingly move to regional universities, where the standard costs per student are much lower than in Moscow, Saint Petersburg and other major cities of the country. Furthermore, of course, leading technical universities in Moscow and St. Petersburg will get admission quotas they need. Currently the share of budget financing of such universities as the Bauman Moscow State Technical University is 4.2% of the total budget financing of the state universities in Moscow, MAI National Research University — 2.7%, the MIPT — 2.7%, the MISIS University of Science and Technology — 2.2%, the MEPHI National Research Nuclear University — 2.0%. Share of other state technical universities in Moscow in the budget financing of their activities is much lower.²

Rejection of the Bologna system is also not beneficial for Russia in terms of attracting foreign students to the Russian universities. In Russia, foreign nationals from unfriendly states — United States, United Kingdom, European Union, Australia and Canada — are less than 1% of total number of foreign students. Most foreign nationals come from CIS countries (51.6%), Asian countries (23.7%, especially from China and India), and Africa (8.6%). Most foreign students go to Russia to study at the undergraduate level. In addition, in recent years there has been a growing flow of foreigners enrolling in Russian master’s programs. CIS countries, China, India have long ago adjusted their higher education systems to the principles of the Bologna system, which allows them to effectively interact with universities of Western countries. Therefore, Russia’s transition to a 70—80% specialization instead of a balanced tiered system of the higher education would lead to the loss of most foreign students. This means that wishes of Rector of Moscow State University are likely to remain wishes. It seems that admission to specialty can at best be raised to 20—25%. And the main constraints here will be not only financial, but also a reduction in the number of high school graduates taking physics and other science subjects at the Unified State Exam.

Political and economic issues arising from sanctions may reduce the flow of students from abroad for other reasons. This may have a particularly strong impact

1 URL: https://voprosy.ru/articles/2023/1/24/quality_of_education/21894-viktor_sadovnichiy_traektoriyu_priema_v_vuzy_stoit_izmenit_chnoby_spetsialistov_bylo_7080

2 Monitoring the activities of universities. 2022.

on education of foreign students in medical, engineering, and IT specialties, since many graduates of Russian universities went either to continue their studies (for example, to residency at medical institutions) or to find employment in the EU, USA or Canada (especially IT specialists) with Russian diplomas. In the new environment, Russian diplomas may not be recognized by many countries, which will reduce foreigners' interest to study in Russian universities. Another obstacle will be the lack of opportunities to receive money from abroad in connection with withdrawal from Russia of Visa and MasterCard payment systems, which makes it difficult for foreign students' financial support from their families to pay for education and subsistence in Russia (86—90% of foreign students receive this help). Another factor reducing the interest of foreign students in Russian universities may be the difficulties with employment in the Russian Federation after graduation, which was a powerful incentive for students from CIS countries.

Retention of master's programs and possibility of exchanging master's students with CIS countries, primarily Kazakhstan as well as China and India, is important for Russia for another reason: Western countries have closed access to scientific databases to Russian universities (researchers). Consequently, the flow of undergraduates to universities in friendly countries can be used to obtain information from these databases and to exchange scientific information. Interaction at level of undergraduate and graduate (doctoral) programs with universities of friendly countries, in addition, will allow Russian researchers to publish (in co-authorship) in leading international journals indexed by Web of Science and Scopus which will contribute to maintaining current level of research and presence in world science.

Sanctions pressure on higher education also manifested itself in refusal of the world's leading university rankings to rank Russian institutions of higher education which largely devalued their work within the framework of the "Project 5-100". Thus, at the beginning of March 2022 QS agency refused Russian universities to participate in its rating. Due to the fact that academic staff of Russian universities can no longer publish except through cooperation with universities of friendly countries in leading foreign journals indexed in the international Web of Science and Scopus databases; it has also become problematic for universities to be included in other international ratings including subject-specific ones. Thus, Russian universities have actually ceased to be part of the pool of global universities since 2022. Moreover, there has been an outflow of foreign teachers and international laboratory staff from Russian universities which is also taken into account in these ratings.

Until the end of 2022, the made public Russia's national system of higher education had not been worked out. As for the publication activity of university professors and researchers, VAK began to rank Russian scientific journals approved by it, dividing them into quartiles. The publication in the 1st and 2nd quartiles of VAK journals will be considered necessary for the defense of candidate and doctoral dissertations and will be equated to publications in the 1st and 2nd quartiles of journals indexed in international bases Web of Science and Scopus. It is obvious that this process will quickly succumb to corruption risks as the

achievements of universities included in Priority 2030 Program, especially in its academic track, will be evaluated on the basis of these publications. In general, Russian universities lose an objective assessment of their position in the world higher education space, which can lead to a decrease in the quality of higher education.
