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# Russia and Central Asia: new challenges and growth points

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The global reformatting of the world order and economic models has determined the beginning of a new stage in cooperation between Russia and Central Asia. This stage requires an analysis of long-term trends, common challenges and limitations to growth in the new environment. We are facing serious challenges, which can only be overcome by coordinating joint efforts. Infrastructural limitations, the quality of human capital, climate change, difficulties in maintaining social stability, the need to transform economic models, sanctions pressure — all this forces our countries to act together. Therefore, it is important to formulate common responses to the questions facing Russia and the countries of Central Asia, thus ensuring the sustainable development of northern Eurasia. A special role in this process belongs to the regions which develop local cooperation taking into account the needs of ordinary people, local businesses, universities and non-profit organizations.

What are the key challenges facing modern Central Asia? What limits the possibilities for its development? Which long-term trends are shaping the political, social and economic landscape of Central Asia?

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**The first tendency is population growth.** Despite the overall decline in the birth rate, Central Asia is the only region in the post-Soviet space where the population continues to grow. The predominance of young people, a large number of children in the family and increasing life expectancy give a stable population growth of 1-2% per year (see Table 1). Even under the conditions of the powerful migration outflow, the population of the region since the collapse of the USSR has grown by 60%, or almost 30 million people. Currently, about 80 million people live in the region, and by 2030 there will be 85 million people. This figure is comparable to the population of Turkey or the Maghreb countries; in fact, Central Asia has become a new demographic center of the post-Soviet space (see Table 2).

***Table 1. Total birth rate in Central Asia, 1991 and 2022, children per woman***

| Country | 1991 | 2022 |
|---|---|---|
| Tajikistan | 5,0 | 3,4 |
| Kyrgyzstan | 3,6 | 2,8 |
| Kazakhstan | 2,7 | 2,6 |
| Turkmenistan | 4,1 | 2,6 |
| Uzbekistan | 4,2 | 2,3 |

Source: 15 Newly Independent States. Total birth rate // Demoscope Weekly. Demographic electronic journal of Vishnevsky Institute of Demography of NRU HSE. URL: http://www.demoscope.ru/weekly/ssp/sng_tfr.php

***Table 2. Population at the beginning of the year, 1991 and 2022, million people***

| Country | 1991 | 2023 |
|---|---|---|
| Uzbekistan | 20,7 | 35,9 |
| Kazakhstan | 16,8 | 19,8 |
| Tajikistan | 5,3 | 10,0 |
| Kyrgyzstan | 4,4 | 7,0 |
| Turkmenistan | 3,7 | 6,3 |
| **Total:** | **50,9** | **79,0** |

Source: 15 Newly Independent States. Total birth rate // Demoscope Weekly. Demographic electronic journal of Vishnevsky Institute of Demography of NRU HSE. URL: http://www.demoscope.ru/weekly/ssp/sng_pop.php

**The second tendency is the raw material nature of economic models.** After the collapse of the Soviet Union, Central Asia integrated into the world economy as a supplier of mineral raw materials (oil, natural gas, coal, ferrous and non-ferrous metals, etc.). On the one hand, this has allowed the region to receive significant dividends over the past 25 years from rising world prices for raw materials; on the other hand, this has made the economies of the region's countries dependent on volatility in world markets. In the near future, not a single country in the region will be able to radically reduce its dependence on the export of raw materials to the world market.

***Table 3. Share of raw materials in exports of Central Asian countries, 2021, %***

| Country | 2021 | Main positions |
|---|---|---|
| Tajikistan | 54,8 | Gold, primary aluminum |
| Kyrgyzstan | 59,1 | Gold, precious metals |
| Kazakhstan | 67,8 | Oil, gold, copper |
| Turkmenistan | 79,0 | Natural gas, petrochemical products |
| Uzbekistan | 44,7 | Gold, copper, natural gas |

Source: Multidimensional Economic Complexity Rankings // The Observatory of Economic Complexity. Country Rankings. URL: https://oec.world/en/profile/country/

The raw material nature of production at this stage is a serious limitation for the development of the economies in Central Asia (see Table 3). Industrial production is relatively developed only in Uzbekistan and Kazakhstan.

Population growth while maintaining the raw material nature of economic models in Central Asia gives rise to a number of challenges that impede stable development. Among them, four are particularly worth highlighting: food security, infrastructure degradation, environmental problems against the backdrop of climate change, and low quality human capital.

**Food security.** Ensuring food security remains a pressing issue for the region in the context of a growing population. Over the past 20 years, the countries of the region have achieved certain successes in the development of agriculture, its diversification, they managed not only to increase food production, but also to expand the export of agricultural products to the world market. The number of people suffering from malnutrition has radically decreased (see Table 4).

***Table 4. Proportion of Central Asian residents who suffer from malnutrition 2000, 2010 and 2020, %***

| | 2000 | 2010 | 2020 |
|---|---|---|---|
| Central Asia | 12,0 (6,6 million people) | 4,4 (2,7 million people) | 3,4 (2,6 million people) |

Source: Europe and Central Asia – Regional Food Security and Nutrition Outlook 2021: Statistics and Trends // Food and Agriculture Organization of the United Nations (FAO), Budapest. P. 4. URL: https://www.fao.org/3/cb7493ru/cb7493ru.pdf

Statistics show that foreign trade in food has grown significantly over the past 20 years (see Table 5). However, it is worth noting that imports are expanding faster than food exports, which indicates the continued dependence of the countries of the region on external supplies. The share of imports is critically high in the provision of poultry meat, flour, vegetable oil, seed material, etc.

The problems related to food quality (lack of nutritious food and malnutrition) continue to be as important as food security (which is usually determined by the availability of food).

***Table 5. Foreign trade in food in the countries of Central Asia, 2000, 2010 and 2021, billion US dollars***

| Countries | 2000 | 2010 | 2021 |
|---|---|---|---|
| **Uzbekistan: Foreign trade in food, including** | 0,54 | 2,22 | 4,40 |
| **Export** | 0,18 | 1,26 | 1,47 |
| **Import** | 0,36 | 0,96 | 2,93 |
| **Kazakhstan: Foreign trade in food, including** | 0,37* | 1,44 | 5,55 |
| **Export** | 0,04* | 0,19 | 1,52 |
| **Import** | 0,33* | 1,25 | 4,03 |
| **Kyrgyzstan: Foreign trade in food, including** | 0,13 | 0,73 | 1,14 |
| **Export** | 0,05 | 0,19 | 0,29 |
| **Import** | 0,08 | 0,54 | 0,85 |

Note: *data for 2001.

Source: Calculated by the author on the basis of data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (https://stat.gov.kz/ru/), Statistics Agency under the President of the Republic of Uzbekistan (https://stat.uz/ru/) and the National Statistical Committee of the Kyrgyz Republic (http://www.stat.kg/ru/).

Poverty in the countries of Central Asia is undoubtedly one of the main reasons for the poor food situation. The share of family spending on food remains very high: 80% in Uzbekistan and Tajikistan, 60% in Kyrgyzstan and more than 40% in Kazakhstan. Food security problems in Central Asia are constant and closely related to the environment and the state of infrastructure. The volume of water in the Syr Darya and Amu Darya river basins, a vital source of irrigation water for 10 million hectares of land in Central Asia, is expected to decrease by 15% in the coming years[1]. Melting glaciers as a result of climate change will further worsen the situation with the timing of sowing and watering crops, since peak river flow will occur earlier in the year.

The region still needs not only a stable supply of food, but also the development of its own agricultural sector. What are the main needs of Central Asia in this area? First, the region needs to share best practices in agriculture. Wheat, rice and corn make up the majority of the region's agricultural output, but their yields are low considering the fact that many farms in the region are small in size and have low levels of mechanization. The small size of land plots limits farmers' ability to obtain financing for technologies that could increase production. One of the most important ways to share

[1] Bui Min Giap, Y. Sidikki These three steps can improve food security in Central Asia // Asian Development Blog. URL: https://blogs.adb.org/ru/blog/these-three-steps-can-improve-food-security-central-asia

knowledge is education and scientific researches. The development of vocational training and higher education programs in modern farming techniques will help prepare the next generation of farmers and agricultural professionals, especially if these programs target girls and young men in rural areas. Joint researches on the development of high-yielding varieties of crops that are resistant to pests, epidemics and changes in water regime are the main areas of cooperation that can help increase productivity. The region will require significant investment and financing to develop more productive, resilient and sustainable agriculture.

Secondly, agricultural producers in Central Asia need close collaboration with foreign partners to develop food value chains. Key components of these chains, including food storage and processing services, are still underdeveloped in most Central Asian countries, where losses account for up to 25% of harvest[1]. Countries in the region can address these shortcomings by creating an enabling business environment that encourages the private sector to invest in facilities and services vital to maintaining food supplies. It is important governments to improve strategic planning and zoning of production, develop public infrastructure and ensure land ownership for primary farming and post-harvest processing. It is also important to provide transparent incentives for private sector enterprises and protect their assets after investment.

Third, Central Asian countries are interested in improving food safety systems, as they are outdated as well as sanitary and phytosanitary measures that do not meet international standards. One of the most important areas of work is the implementation of effective and transparent electronic sanitary and phytosanitary certification systems. Improving food safety systems and bringing them into line with international standards will help increase food trade. It can also attract foreign direct investments in the food industry, which will help increase supply, meet countries' food needs and expand markets for their products outside the region.

**The depressing state of the infrastructure.** One of the most serious limitations is the poor state of infrastructure, which limits opportunities for full economic development in Central Asia. This applies to all its types (energy, utilities, transport, water and irrigation, etc.). The housing and communal infrastructure of the Central Asian countries is also in a difficult situation. It is no secret that urban utility infrastructure in many parts of Central Asia (Tajikistan, southern regions of Uzbekistan and Kyrgyzstan) collapsed back in the 90s and early 2000s, but recently infrastructure crises have reached big cities. The accident at the thermal power plant in Bishkek in 2018, the blackout in Kazakhstan, Uzbekistan and Kyrgyzstan in January 2022, and interruptions in heating and power supply in Tashkent this winter show the scale of the problem. Neither the transport nor the water and irrigation infrastructure is ready to solve the problems that the countries of Central Asia face. There is no enough energy capacity for the full development of cities and industry. Only in the mid-2010s electricity production in Central Asia exceeded the one of the last years of Soviet rule (see

[1] Ibid.

Table 6), although the population during the post-Soviet period grew by 60%, and GDP almost tripled (see Table 7).

***Table 6. Electricity production in the Central Asian republics, 1960-2022, billion kW/h***

| | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| Uzbekistan | 33,9 | 47,9 | 56,3 | 47,5 | 46,9 | 47,6 | 51,9 | 57,7 | 66,5 | 74,3 |
| Kazakhstan | 61,5 | 81,3 | 87,4 | 66,7 | 51,6 | 67,9 | 82,6 | 91,6 | 109,2 | 112,8 |
| Tajikistan | 13,6 | 15,7 | 18,1 | 14,6 | 13,9 | 16,9 | 16,3 | 16,9 | 19,7 | 21,4 |
| Kyrgyzstan | 9,2 | 10,5 | 13,4 | 12,2 | 15,7 | 14,9 | 12,1 | 13,0 | 15,4 | 13,8 |
| Turkmenistan | 6,7 | 11,0 | 14,6 | 9,9 | 9,9 | 12,8 | 16,7 | 21,5 | 26,6 | 28,0 |
| Total: | 124,9 | 166,4 | 189,8 | 150,9 | 138,0 | 160,2 | 179,6 | 200,7 | 237,4 | 250,3 |

Source: Country profiles // CEIC information and analytical division of the Caixin agency. URL: https://www.ceicdata.com/en

***Table 7. GDP of Central Asian countries, 1991-2021, in billion US dollars 2015***

| | 1991 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|
| Kazakhstan | 84,8 | 58,5 | 66,2 | 108,4 | 146,6 | 184,4 | 205,8 | 214,7 |
| Uzbekistan | 31,9 | 26,0 | 31,5 | 40,8 | 60,9 | 86,2 | 108,2 | 116,2 |
| Turkmenistan | 12,5 | 8,3 | 10,3 | 13,3 | 21,7 | 35,8 | 47,0 | 48,5 |
| Tajikistan | 6,6 | 2,7 | 2,7 | 4,3 | 5,9 | 8,3 | 11,4 | 12,5 |
| Kyrgyzstan | 4,9 | 2,7 | 3,5 | 4,2 | 5,3 | 6,7 | 7,3 | 7,5 |
| Total: | 140,7 | 98,2 | 114,2 | 171 | 240,4 | 321,4 | 379,7 | 399,4 |

Source: GDP (constant 2015 US$) - Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, Kyrgyz Republic // World Bank Databank. URL: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?locations=KZ-UZ-TJ-TM-KG

This situation leads to serious infrastructure crises on an interstate scale. The most striking examples are the energy crises in Central Asia in the winter of 2022 and 2023. First, on January 25, 2022, unprecedented power outages occurred in Uzbekistan, Kyrgyzstan and southern Kazakhstan. They affected about 40 million people. In the largest cities – Tashkent, Almaty and Bishkek – power supply was restored within 24 hours, but in the regions, especially in rural areas, the restoration of power supply dragged on for a week. In Kazakhstan, several districts of Almaty and the city of Taldykorgan lost electricity; power supply was disrupted in Almaty, Zhambyl and Turkestan regions. There was no electricity in the capital of Uzbekistan, Tashkent, and most regions of the country. Because of this, metro trains stopped, traffic lights stopped working, and there were serious interruptions in mobile communications. Airports in Uzbekistan have stopped operating. In Kyrgyzstan there was no electricity throughout the country. In Bishkek, due to a power outage, pumping stations stopped working, and the city was left without water.

In January 2023, due to an emergency cessation of natural gas supplies from Turkmenistan, large-scale outages of gas supply, heating and electricity occurred in Uzbekistan, which even affected the capital of the republic, Tashkent, and then, in chain order, energy supply cuts in Tajikistan and Kyrgyzstan.

Things are not better in the transport sector. Transport connectivity within Central Asian countries is severely limited. In most parts of the region there is a lack of necessary transport infrastructure and high costs of transport services. This limits access to services, economic activity, employment, and also impedes the development of tourism. Over the past twenty years, Central Asian countries have spent significant resources on infrastructure development. However, the region still lags behind other countries in both infrastructure investments and efforts to maintain infrastructure. The main challenges to improving transport connectivity in Central Asia include low productivity of state-owned companies that dominate transport throughout the region, the need to harmonize transport and trade facilitation standards, to improve the quality of infrastructure at local, national and regional levels, and to improve systems managing processes and increasing their efficiency.

In the period of almost 30 years since the collapse of the USSR, several thousand kilometers of roads and railways have been built in Central Asia. However, serious problems remain. Turkmenistan completed the unification of its national railway network into a single system in 2006, Uzbekistan did so only in 2018, and Tajikistan and Kyrgyzstan still do not have a full-fledged national railway network. The transit capabilities of road transport in the region still remain in question.

The acute infrastructure problem for many parts of Central Asia is a combination of infrastructure degradation in its various forms – the poor development of the transport system, the destruction of the water and irrigation system, the lack of centralized water supply and sewerage, and the shortage of electricity and domestic gas. Systematic restrictions in the supply of electricity are the norm in many regions of Uzbekistan, Tajikistan and Kyrgyzstan, and difficulties associated with connecting to energy systems are one of the most important limitations for the development of large industrial production. The underdevelopment of the network infrastructure and insufficient generation, that is, electricity production, do not allow the launch of many promising industrial projects. It is obvious that the region needs large-scale infrastructure modernization programs, including ones in a multilateral format.

**Environmental problems against the backdrop of climate change.** The climate in Central Asia is changing faster than in the world as a whole, its transformations are becoming unpredictable. The load on the environment has increased, for example, the population has grown 6 times over the past 100 years. Climate change is causing serious consequences, such as frequent droughts, desertification, an increase in the number of landslides, mudflows, floods, dust and sand storms. This leads to agricultural degradation and environmental migration. Solving environmental problems is impossible without coordinating the efforts of all countries in the region and attracting external partners, one of which is Russia. Technological solutions in the field of sustainable development,

environmental and climate monitoring systems, water purification technologies, waste disposal and recycling are the most important areas of cooperation.

**Low quality of human capital.** On the one hand, the problem of employment is acute in Central Asia. On the other hand, there is an extreme shortage of qualified personnel and low quality of human capital. Despite the powerful migration outflow, the population of the region over the past 30 years has grown by 60%, or almost 30 million people. Against the background of a young population structure (the average age, according to 2015 data, ranged from 22 years in Tajikistan to 29 years in Kazakhstan) and a large number of children in the family (for example, in Tajikistan there are an average of 3.4 children per woman), it is obvious that growth, although at a slower pace than before, will continue. At the same time, the problem of employment of the population, especially young people, remains extremely relevant for all countries in the region. A significant proportion of the unemployed are not registered and belong to the categories of seasonal workers or self-employed, and also go on labor migration abroad. At the same time, Central Asia is experiencing a critical shortage of qualified specialists in healthcare, education, industry, transport and housing and communal services. That is why, to implement new projects in the field of industry and construction, the countries of Central Asia annually attract several tens of thousands of foreign workers and specialists from China, Turkey, Russia, India and other countries.

One of the main reasons for this contradictory situation remains the low level of education and qualifications of the majority of the region's population. The share of the working-age population with higher and secondary vocational education in Central Asia is significantly lower than in Russia or European countries. Unfortunately, national vocational education systems cannot provide the economies of the countries of the region with the necessary number of high qualified specialists. The high level of corruption, low level of qualifications of teachers and weak material and technical base do not allow high quality training of students. Therefore, a significant part of youth from Central Asia receives education abroad – in Europe, North America, China and other countries of East Asia. Russia firmly holds the leadership in the field of personnel training for the region. At the moment, more than 160 thousand people from Central Asian countries are studying in Russia, they make up half of all foreign students in our country. Even taking into account that a significant part of Russian university graduates from Central Asia remain in Russia after graduation, specialists with Russian diplomas play a key role in the economic development of the region.

Why is Central Asia important for Russia, for its regions, primarily Western Siberia? ***Firstly, Central Asia is a major trading partner.*** Central Asia accounts for about 15% of Western Siberia's foreign trade turnover. For individual constituent territories of the Russian Federation, the importance of Central Asia is much greater, for example, in the Tomsk region – 36%, in the Altai Territory – 42%. Western Siberia sells fuel, ferrous and non-ferrous metallurgy, chemical industry products, and timber to Central Asia. The share of non-resource exports is large – food, plastics, machinery, equipment, etc. Ore, agricultural products, and consumer goods are brought to us from Central Asia. For Tomsk, the export of services – education, information technology, engineering solutions

– occupies a special place; all of them have long and successfully found their demand in Central Asia.

***Secondly, much more than goods and services, people are important in the modern world. For Western Siberia, Central Asia is the most important source of human capital.*** This significantly strengthens social and personal ties between our countries. For example, according to the results of the Russian Population Census, in 2021, only 70% of residents of the Tomsk region indicated that they were born in Russia. The rest are outside its borders, the vast majority of them are natives of Kazakhstan, Kyrgyzstan, and Uzbekistan. These are people of different nationalities – Russians, Germans, Koreans, Kazakhs, Uzbeks, Kyrgyz. Most of them moved after the collapse of the USSR, received their education here, have Russian citizenship, and remained to live and work in our region. If you look at Western Siberia – Tomsk, Novosibirsk, Omsk regions, Altai Territory – from 20 to 25% of the population here are natives of Central Asia. It was the influx of people from this region that allowed us to largely overcome the demographic difficulties of the post-Soviet period.

***The third important factor is logistics. Gradually, Central Asia is becoming an important transport hub for Western Siberia for transit to China, the countries of the Middle East, Iran, South Asia and back.*** This applies to both cargo and people. The process is difficult, there are a huge number of problems. However, it is often cheaper and more convenient.

Russia and the countries of Central Asia will be able to join forces to overcome social and economic challenges, successful interaction between our countries will continue, and the Russian neighboring regions of Central Asia – the North Caucasus, the Volga region and Western Siberia – will become points of growth within the framework of this cooperation.