Scientific Session of the General Meeting of the RAS Members

“The Role of Science in Overcoming Pandemics and Postcrisis Development of Society”

The Russian Economy under the Impact of the Pandemic Crisis

A. A. Shirov

Institute of Economic Forecasting, Russian Academy of Sciences, Moscow, Russia

E-mail: schir@ecfor.ru

Received February 21, 2022; revised February 26, 2022; accepted March 28, 2022

Abstract—The main channels of influence of the new coronavirus infection pandemic on the economy are analyzed. The key features of the economic crisis caused by the pandemic are emphasized, the scale and depth of the economic decline largely depending on the actions of the authorities to restrict economic activity. It has been stated that as the pandemic crisis developed, the governments of the largest countries of the world adapted to its negative consequences for the economy, which was reflected in a decrease in the dependence of economic activity on the incidence of COVID-19. The effectiveness of economic support measures implemented in Russia and key countries of the world during the crisis is assessed. The failures of market self-regulation during the crisis, which led to a significant imbalance of supply and demand in world markets, are considered. Along with the success of the Russian government in reducing the negative impact of the pandemic on the economy, attention is drawn to the serious social and demographic damage that our country has suffered as a result of the pandemic. The main trends for compensating for losses are formed, and the medium- and long-term potential for the development of the Russian economy after the pandemic crisis is assessed. This article is an amended and updated version of the author’s report at the Scientific Session of the RAS General Meeting on December 15, 2021.

Keywords: pandemic crisis, anticrisis policy, demography, mortality, economic dynamics, medium-term economic potential

DOI: 10.1134/S1019331622040232

The situation faced by humanity in 2020—2021 brought significant changes to our lives, including a strong impact on the level of economic activity and on the economic policies pursued by governments around the world.

In the first place, I would like to draw attention to the fact that the economy is experiencing a crisis of a new formation, which is significantly different from the economic shocks that occurred throughout the entire postwar period. The key features of the pandemic economic crisis include the following. First, the depth of the crisis in this case is determined not by the nature of the economic cycle but by government decisions on the configuration of restrictive measures, as well as the dependence of an economy on the situation in foreign markets. Second, the end of the acute phase of the crisis is associated not with the balancing of supply and demand at new levels, as in a normal cyclical crisis [1], but with a slowdown in the growth of morbidity and the abolition of the most severe restrictions on economic activity. At the same time, it is important to take into account that the duration of the period of severe restrictions depends directly on the economic capabilities of the state and the stability of its financial system. Third, as the economy transitions to the post-crisis recovery stage, pent-up demand is quickly actualized against the backdrop of expanding fiscal stimuli. All these features clearly manifested themselves in the global and Russian economies in 2020–2021 and had a decisive impact on economic dynamics.

Regarding the development of the economic situation in the largest economies of the world in 2020–2021, the most significant issue is the relationship between the depth of the economic recession and the severity of the antipandemic actions of the authorities [2]. Analysis of data on the limitations and the parameters of the dynamics of the economy and industrial production shows that they are interconnected rather closely. At the same time, we can say that, during the pandemic, a steady trend has emerged towards a gradual decrease in the elasticity of economic dynamics from restrictive measures (Fig. 1). This may indicate that by understanding the nature of the crisis and modifying economic policies, the governments of the majority of large countries have been able to adapt to...
its features. This makes it possible to fight the pandemic with less stress on the economy. Typical examples are the economies of China and Germany, where the index of severity of restrictive measures\(^1\) was in general even higher in 2021 than in 2020, while the economic dynamics was significantly better (see Fig. 1). Such a change in the dependence of economic dynamics on the introduction of restrictive measures allows us to expect that further waves in the incidence of the new coronavirus will no longer be accompanied by significant crisis phenomena in the economy.

**THE RUSSIAN ECONOMY DURING THE PANDEMIC CRISIS**

When analyzing how a particular economy reacted to the pandemic crisis, it is important to consider the structural features of the economic system. In particular, the Russian economy is characterized by a lower share of nonproductive services in the structure of GDP compared to developed countries (their share in Russia is about 40%, while that in developed countries is about 10 pp higher). Another factor of the lower damage to the economy from the pandemic crisis is the relatively low share of small businesses in the structure of GDP [3, 4]. The relatively weak development of the financial market in Russia is characterized by a low dependence of the bulk of enterprises on loan lending [5]. Finally, the share of final products in the structure of Russian exports is small.

We usually view these factors as disadvantages of the Russian economy. However, during major economic shocks of a global nature, the qualitative lag of the Russian economy behind the leading countries acts as a kind of damper that reduces the negative impact of crises. In this regard, attention should be paid to the domestic raw material complex. Despite the traditional criticism of the high dependence of the Russian economy on the exports of raw materials, the events of 2020–2021 showed that, during the pandemic crisis, the demand for finished products was declining more quickly than the demand for energy and other raw materials. It is this circumstance that, even in the face of falling prices on world commodity markets, contributed to the maintenance of the Russian economy.

The level of economic decline under the nationwide lockdown was also determined by the policy regarding certain types of activities, as well as the reaction of business to the crisis [6]. Compared to other countries, in Russia agriculture, construction, and raw materials and defense industries were subjected to less severe restrictions.

Another, perhaps more important, conclusion about the response of the economy to the pandemic crisis is that the capabilities of modern management methods make it possible to mitigate significantly the economic consequences of the most serious crises, even of a noneconomic nature. One of the regulatory mechanisms is the digitalization of public and financial services, making it possible to bring funds quickly to those in need. Within a short period, large anticrisis packages were formed in most countries, which significantly reduced the negative impact of the pandemic on their economies (Fig. 2).

Note that with relatively low support parameters, the decline in Russia’s economy amounted to less than 3%. As noted above, this result is due not only to the effectiveness of support measures but also to the structural features of the Russian economic system. However, the crisis has also shown that our country can mobilize resources to support the economy quite quickly, and modern channels of budget financing make it possible to bring them quickly to those in need. In general, considering the direct and indirect reserves at the disposal of the Russian government, as well as the mechanisms of anticrisis policy, one can

---

\(^1\) [https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker](https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker)
state that, over the past decade, the resistance of the Russian economy to shocks of various nature has increased. There are ready solutions and resources for any economic shock, which ensures the stability of the economy. The next step should be the formation of a set of actions aimed at sustainable socioeconomic development, based on the accumulated reserves and the achieved stability of the financial system.

PROBLEMS OF MARKET REGULATION

The modern economy, especially of large countries, is a complex system of interactions between economic agents, in which not only direct but also reverse, indirect links are important. Hence, far from everything here depends on the state; it is also business that plays a major role in shaping economic dynamics.

In the context of the novel coronavirus infection pandemic, the key factors that affected the economic dynamics at the end of the acute phase of the crisis were mistakes in market self-regulation. We often hear that, in asset management, private entrepreneurs are more efficient than the state. Generally speaking, this may be true, but only sometimes [7, 8]. For example, in 2020–2021, we saw how big business, primarily transnational companies, misjudged the trajectory of the global economic recovery, which led to rather serious consequences. The features of the current crisis were not considered, and a rather slow recovery in demand was expected. This position was supported by leading international analytical groups, such as the International Monetary Fund and the World Bank [9, 10].

Under such conditions, a situation arose in most world markets, including the Russian one, characterized by outpacing growth in demand, which was not kept up with supply. Examples are the car market and the housing market in Russia: in 2021, the demand for cars in relation to precrisis 2019 increased by 28%, while the supply decreased by 2% (Fig. 3). In the housing market, demand increased by 42% over the same period, while supply increased by only 30%.

Only two examples are given here, but in fact there are many more of them both in the world and in individual Russian commodity markets. Under these conditions, significant risks have emerged in the economy that directly affect the parameters of macrofinancial stability in the global economy. There were local shortages of products, and the rise in prices accelerated, turning inflation into a global macroeconomic problem.

The rapid recovery in demand was caused by a number of specific factors typical of a pandemic crisis. First, the lockdown period was characterized by a sharp slowdown in demand for all types of products, except, perhaps, foods and medicines. When severe restrictions were lifted, the volume of unsatisfied demand, typical of two or three months, was almost instantly actualized. Second, high demand growth rates were stimulated by government support measures. Third, the closure of borders, in turn, led to an increase in domestic demand since significant amounts of money on traveling abroad remained unspent. Fourth, some growth in domestic demand was facilitated by the decrease in the scale of external labor migration and transfers abroad.

The situation that has arisen in the world economy as a result of the gap between supply and demand requires special economic policy measures to curb inflation, which are being undertaken by governments

---

2 For the car market, the indicator of demand is the physical volume of retail sales, and the indicator of supply is the volume of production and imports. For the housing market, the indicators are the volume of concluded mortgage contracts and the commissioning of housing, respectively.
and central banks. At the same time, the following serious problem arises: since the total money supply in the world economy has increased by almost 10% over two years, it will take two to three years to finally balance supply and demand. During this period, we will have to act in conditions of increased inflationary pressure. At the same time, it can be assumed that, in the future, in the context of crises of a similar nature, such mistakes on the part of both business and government will be avoided, which will prevent such significant bursts of inflation as in 2021.

**DEMOGRAPHIC LOSS AND ECONOMIC CONSTRAINTS**

Despite significant progress in combating the consequences of the pandemic crisis, we should recognize the significant social losses caused by the massive incidence of the new coronavirus infection. It has further exacerbated the restrictions on economic development associated with demographic trends [11].

In 2005–2019, Russia showed a steady upward trend in life expectancy. The overall increase in this indicator was almost 10 years. This was a significant achievement, related, among other things, to economic policy: the construction of regional perinatal and cardiac centers, the modernization of roads, and the fight against counterfeit alcoholic products. An important contribution to the growth of life expectancy was due to the growth of the income level of the population.

Demographic statistics show that the cumulative excess mortality in 2020–2021 amounted to about one million people, and the average life expectancy for the two years of the pandemic decreased by almost four years. Note that excess mortality is observed both directly from coronavirus infection and from other causes, which makes us take a broader look at the demographic processes in a pandemic, including from the standpoint of the organization of the healthcare system in our country [12].

The death of a person is always a tragedy, especially for his or her family and friends; even more tragic is a premature death. When such a phenomenon is large scale, it cannot but have a direct impact on the economy and society.

If we consider mortality in terms of the age composition of the dead in 2020–2021, we can note that almost 85% of excess mortality fell on people over the age of 60 (Fig. 4), the largest number of deaths being in the age group of 80–84 years old. The second highest number of deaths was in the 70–74 age group. This distribution of mortality during the pandemic predetermined a significant predominance of nonworking citizens of retirement age in the number of deaths. Our estimates show that, considering the level of employment in certain sex and age groups, approximately 80% of the dead were nonworking citizens, and 20% were employed.

It may seem that the relatively low number of excess deaths among employed citizens of our country means a correspondingly low negative impact of mortality during the pandemic on the economy, but this is not so. Nonworking citizens, as well as working ones, form consumer demand, which is a key element of economic dynamics. According to our estimates, the direct deduction from the economic dynamics due to excess mortality in 2020 alone was at least 0.1% of GDP, or more than ₽100 bln. It can be assumed that, in the medium term, the accumulated excess mortality, with account for direct and indirect effects, will reduce the average annual economic growth rate in 2022–2025 by about 0.2 percentage point. This is a rather serious decrease, which will require certain compensatory measures.
One of the ways to compensate for the demographic losses that our country suffered during the pandemic is migration, both permanent and temporary labor. However, the peculiarity of the pandemic crisis is that it has an extremely negative impact on the cross-border movement of labor. Suffice it to say that in 2020 the number of foreign citizens who arrived in Russia for the purpose of work, according to the FSB, decreased to 1.1 million people against 4.1 million in 2019. Given that the total employment in our country is 72 million people, the resulting labor shortage can be estimated at about 4%. Given that survey data inaccurately determine the share of migrants in the structure of employment, these figures may be even higher.

Against the background of the fact that, under the lockdown, restrictions on the activities of construction organizations were not as severe as in other sectors, difficulties in attracting external labor migrants already in 2020 began to hinder the implementation of a number of large-scale infrastructure projects, in particular, the modernization of the “Eastern Polygon” Russian railways.

In the context of the decline in the working-age population and the exhaustion of the potential for increasing labor migration from neighboring countries, there is a need to compensate for labor restrictions by increasing labor productivity based on increased investment in fixed capital.
DEVELOPMENT POTENTIAL OF THE RUSSIAN ECONOMY

The large-scale crisis of the new formation affects not only the current characteristics of the development of the economy but also its development potential in the medium and long term. Accordingly, a revision of the goals of development of the economy and society, as well as a set of economic policy measures that allow them to be achieved, is required. Over a fairly long time (until 2050), Russia’s economic potential allows maintaining average annual GDP growth rates above 3%. However, this requires the use of a number of economic growth factors.

If we consider the formation of potential economic dynamics, we can note that inertia (that is, the development of the economy without changing the parameters of economic policy and significant external shocks) ensures, in the long term until 2050, the average annual GDP growth rate at 1.6%. It is obvious that such rates not only fail to achieve the goals of improving the living standard and the quality of life in our country but also lead to a serious decrease in the competitiveness of the Russian economy.

Constructive scenarios for its development (providing a reduction in the gap in living standards with developed countries) require a set of measures to save the population. The key ones should be related to the modernization of the healthcare system, the development of the social system, and the growth of the quality of life of the population. Our analysis shows that the most important direction of saving the population can be to reduce mortality from those causes where there are significant reserves. Note that this is not only a problem of health care as such, that is, the fight against major diseases, but also the reduction of mortality from external causes, including measures in the field of social policy, the development of transport infrastructure, and road safety improvement.

The solution of demographic problems is impossible without maintaining the birthrate. Here we see as the most important the measures of social policy to strengthen the family. At the same time, the birthrate dynamics directly responds to the parameters of the living standards and the quality of life; thus, the growth rate of the economy can become a decisive factor in ensuring the birthrate at an acceptable level. Obviously, in the coming decades, the demographic situation will limit the development of the domestic economy. At the same time, a set of measures in the field of social policy, health care, and infrastructure development can not only reduce these restrictions but also create conditions for growth in a number of important sectors of the Russian economy.

The potential for economic growth can be actualized only if a whole range of economic policy measures is implemented. Here it is important to understand the likely effectiveness of the use of certain measures available in the arsenal of the authorities. It is often argued that monetary easing can itself be an important element of economic momentum. Here I would like to draw attention to the fact that in 2020–2021 the Russian economy was already functioning at a near-zero or even negative key rate. However, there was no radical expansion of demand for debt financing. Apparently, the problem is that the rather difficult financial and economic situation of a significant part of enterprises does not allow them to use even cheap borrowed funds. Therefore, in addition to easing monetary policy parameters, a set of measures should be implemented to solve this problem. Here we can note the multichannel instruments of the financial system, including development institutions [15].

The limited impact of monetary policy on the economic dynamics naturally increases the demands on fiscal policy. The state, by directing funds to those sectors of the economy where, for various reasons, market mechanisms are not effective enough, can, on the one hand, correct the existing imbalances and, on the other hand, show businesses those areas of investment where an acceptable level of profitability can be achieved.

The uniqueness of the current situation lies in the fact that there are no severe financial restrictions in the Russian economy. All economic agents have significant amounts of financial resources. The only question is how to manage these funds effectively to modernize and develop the economy.

As for budget spending, one can rely on both accumulated reserves and low levels of public debt. According to our estimates, the use of these resources will make it possible to increase the average annual economic growth rate by 0.2–0.3 percentage point until 2030. Such an increase in growth rates seems rather insignificant, but it can create conditions for launching a new investment cycle in key sectors of the Russian economy. In addition, the efficiency and relevance of debt financing instruments for working capital and investment will be increased.

Certain growth opportunities remain as part of the development of interaction within the Eurasian Economic Union (EAEU). This potential is associated with the lengthening of the chains of extraction and processing of raw materials, the effective location of production facilities on the territory of the Union, and the creation of unified production platforms. For Russia, integration in the EAEU space can additionally provide up to 0.3–0.4 percentage point of additional growth in average annual GDP growth rates in the period up to 2050.

However, if we consider a longer time perspective, then technological shifts, which are impossible with-
out expanding the volume of basic and applied research and subsequent implementation of its results in the activities of enterprises, will be of critical importance for achieving acceptable rates of economic growth and maintaining the competitiveness of our country in the world economy. Key areas of technological shifts in the Russian economy are associated with digitalization and robotization, biotechnology and pharmaceuticals, the use of new structural materials, and new transport and energy technologies. In fact, any technology changes the existing cost structure, increases production efficiency, and, on this basis, leads to an increase in income. Comprehensive calculations of the impact of this set of technological shifts on economic dynamics, carried out at the RAS Institute of Economic Forecasting, make it possible to assess their contribution in 2022–2050 at about 1.6 percentage point; that is, due to this factor alone, the economic growth rates can be doubled compared to the inertial scenario.

Considering all the above factors, the Russian economy has the potential for economic growth in the long term until 2050, exceeding 3% per year. On such a long time horizon, this is a fairly high growth rate, which makes it possible to improve significantly the parameters of economic development and the quality of life in our country and fend off key restrictions on economic development, including those that have arisen as a result of the negative impact of the pandemic. The question of whether higher rates of economic growth are possible should be answered in the affirmative, but their justification requires additional economic shifts on economic dynamics, carried out at the RAS Institute of Economic Forecasting, make it possible to assess their contribution in 2022–2050 at about 1.6 percentage point; that is, due to this factor alone, the economic growth rates can be doubled compared to the inertial scenario.

The analysis of the impact of the novel coronavirus infection pandemic on the Russian economy allows us to formulate a number of key conclusions.

(1) The pandemic has created a new form of economic crisis, the characteristics of which largely depend on the restrictive measures taken by governments.

(2) Throughout the pandemic, approaches to anticrisis policy changed; at present, the dependence of economic activity on restrictive measures has decreased significantly.

(3) The main problems of the postcrisis recovery are related to the emerging gap between demand and production.

(4) The anticrisis policy in Russia led to some success in supporting the economy but did not prevent significant sociodemographic losses.

(5) Reducing the demographic losses requires a partial revision of the health system development policy, social policy, and, in general, the medium-term strategy for economic development.

(6) The medium-term potential for economic growth in Russia’s GDP exceeds 3%, but its actualization requires a set of measures in the field of demographic, social, budgetary, integration, and, above all, scientific and technological policy.

**CONFLICT OF INTEREST**

The author declares that he has no conflicts of interest.

**REFERENCES**

1. V. A. Mau, Crises and Lessons: The Russian Economy in the Era of Turbulence (Izd. Inst. Gaidara, Moscow, 2016) [in Russian].
2. C. Elgin, G. Basbug, and A. Yalaman, “Economic policy responses to a pandemic: Developing the COVID-19 economic stimulus index,” Covid Economics, No. 3, 40–53 (2020).
3. E. M. Bukhval’d, “Will Russia’s small business survive the shock of 2020?,” J. Econ. Entrepreneurship Law, No. 5, 1319–1336 (2020).
4. N. A. Avksent’ev, M. L. Agranovich, N. V. Akkindinova, et al., Society and the Pandemic: Experiences and Lessons from Combating COVID-19 in Russia (Ross. Akad. Nar. Khoz-va i Gos. Sluzhby pri Prezidente Ross. Fed., Moscow, 2020) [in Russian].
5. O. D. Govtvan’, “Monetary constraints on economic growth in Russia,” Stud. Russ. Econ. Dev. 31 (6), 647–654 (2020).
6. Russian Business’s Response to the COVID-19 Pandemic (on the Example of Six Industry Cases), Ed. by T. G. Dolgopyatova, N. V. Akkindinova, Yu. V. Simachev, and A. A. Yakovlev (Izd. Dom Vyssh. Shkol. Ekon., Moscow, 2021) [in Russian].
7. A. Radygin, Yu. Simachev, and R. Entov, “State and denationalization: Risks and limitations of the ‘new privatization policy,’” Vopr. Ekon., No. 9, 4–26 (2011).
8. A. Radygin, Yu. Simachev, and R. Entov, “State-owned company: Scope for ‘government failure’ or ‘market failure,’” Vopr. Ekon. 1, 45–79 (2015).
9. World Economic Outlook: A Long and Difficult Ascent (International Monetary Fund, Washington, D.C., 2020). https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020
10. OECD: General assessment of the macroeconomic situation. https://read.oecd-ilibrary.org/economics/oecd-economic-outlook-volume-2020-issue-1_3b2af-abb-en#page1
11. A. G. Vishnevskii and E. M. Shcherbakova, “Demographic brakes on the economy,” Vopr. Ekon., No. 6, 48–70 (2018).
12. G. E. Ulumbekova and N. V. Al’vianskaya, “Financing of the health care system of the Russian Federation: Dynamics, forecasts, comparison with developed countries,” ORGZDRAV: Novosti, Mneniya, Obuchenie, Vestn. VShOUZ, No. 3, 36–47 (2021).

13. A. A. Shirov and A. A. Yantovskii, “Rim interindustry macroeconomic model: Development of instruments under current economic conditions,” Stud. Russ. Econ. Dev. 28 (3), 241–252 (2017).

14. A. A. Shirov, Multilevel Research and Long-Term Economic Development Strategy (MAKS Press, Moscow, 2015) [in Russian].

15. D. R. Belousov, V. V. Ivanter, A. A. Blokhin, et al., Structural Investment Policy to Ensure Economic Growth in Russia (Nauch. Konsul’tant, Moscow, 2017) [in Russian].

16. S. R. Milyakin, “Measuring the macroeconomic effects of new motorization processes using the input-output model,” in Economic Policy of Russia in the Intersectoral and Spatial Dimension: Materials of the Second Conference of the INF RAS and the Institute of Economic and Industrial Production Organization of the Siberian Branch of the Russian Academy of Sciences on Intersectoral and Regional Analysis and Forecasting, Novosibirsk, March 23–24, 2020 (Inst. Ekon. i Org. Prom. Proizvodstva SO RAN, Novosibirsk, 2020), pp. 107–113 [in Russian].

Translated by B. Alekseev