

THE PRICE OF LOCKDOWN IN RUSSIA

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ABSTRACT

In 2020, Russia's economy, like the economies of the rest of the world, faces an unprecedented challenge from the coronavirus epidemic. With the lockdown, the global economic recession, falling oil prices and related disruptions, the economy is likely to face a prolonged period of slowing growth. Whether the spring and summer lockdown was justified remains to be seen. Equally, the severity of the economic consequences remains to be assessed. In any case, the shock situation could not but affect the economic indicators, as well as the quality of life of the majority of Russians.

Keywords: Lockdown in Russia, Economy during the Pandemic, Social Consequences of the Lockdown, Assessment of Economic losses from the lockdown, Forced Downtime of the Economy

INTRODUCTION

In 2020, Russia's economy was affected by two negative factors simultaneously - the decline in world oil prices and the need to contain the spread of coronavirus infection. Strict measures in connection with the unfavorable epidemiological situation were taken in March - a lockdown was declared in Russia. And from the beginning of June, enterprises and organizations began to gradually resume their activities. However, due to the fact that the number of people affected by the disease continued to grow in Russia and worldwide, we cannot speak about recovery even in January 2021 - many countries still impose restrictive measures (activities of many economic entities have been stopped, trade borders are closed and the movement of people between countries is prohibited). The economic consequences of these measures for most countries are not yet known, but are expected to be severe in the medium and long term. As of December 2020, it is not clear how soon we should expect improvements, or if we should expect them at all. The International Monetary Fund's (hereafter, the IMF) latest economic forecast reports that the global economy is projected to contract by 4.4 percent in 2020. (International Monetary Fund, 2020), much worse than during the 2008-2009 financial crisis, when global gross domestic product (hereafter, GDP) contracted by 2.5 percent. The decline in real world trade in 2020 is projected at 10.4 percent (International Monetary Fund, 2020). In 2008-2009, this figure declined by 12 percent.

According to the IMF forecast in October 2020, with a 4.4 percent drop in world GDP, Russian GDP will fall by 4.1 percent (International Monetary Fund, 2020). Although it is too early to assess the losses of Russia due to the lockdown at present, an idea of the losses incurred will make it possible to make balanced decisions to close the country in the case of the third or subsequent waves of the epidemic.

So far, there is no clear understanding of who to listen to, epidemiologists or economists, since quarantine leads to a decline in the economy, and the absence of quarantine and strict measures leads to the uncontrolled spread of the virus. The effect of vaccines is not yet evident, nor is the virus' ability to further mutate and re-infect those already infected. At the same time, there is hope for a normalization of the situation in the future.

Chronicle of Events

March 30, 2020 can be considered the official start date of the lockdown in Russia. On March 25, 2020 the President of the Russia declared the period from March 30 to April 3 inclusive as a non-working day in his televised address to the citizens in order to control the spread of the epidemic. Exceptions were provided only for a very limited category of persons. Since March 30, Russia completely closed its borders to both Russians and foreign nationals. Fitness clubs, swimming pools, water parks and other sports facilities were temporarily closed in Moscow on March 21, all public events of over 50 people were cancelled, and concert halls, museums and other cultural institutions were closed. Also, classes at schools and colleges in Moscow were canceled until April 12, 2020. On March 30, Prime Minister Mikhail Mishustin asked the authorities of the subjects of the Russian Federation to consider the measures introduced in Moscow and Moscow region in order to study the possibility of introducing a similar regime. As a result, the self-isolation regime has been in effect in 26 regions since March 31. As in Moscow, it was allowed to leave the house in case of a medical emergency; in case of an immediate threat to life and health; for trips to work (for those who are required to be present); for shopping in the nearest store or pharmacy; for carrying out garbage; for walking pets near the house - no further than 100 meters from the place of residence.

Speaking on April 2, President Putin allowed regional authorities to choose their own measures to combat the coronavirus. As a result, as of the evening of April 4, restrictions had not been introduced in only three regions: Nenets Autonomous District, Tver and Yaroslavl Regions. Significant regime toughening occurred in Moscow since April 13, when they gradually began to introduce passes. In addition, since April 13, in the capital temporarily stopped the work of almost all businesses and organizations with a few exceptions (public utilities, pharmacies and convenience stores).

The practice of Moscow soon spread to the regions. A similar algorithm was implemented in the process of lifting restrictions. On May 11, 2020, while addressing the Russians, Vladimir Putin said that the period of "non-working days" in Russia will end on May 12, but the exit from the regime will be gradual - all mass events are still prohibited, restrictions remain for citizens over 65 and those suffering from chronic diseases. It will be up to each region to decide how the restrictions will be lifted. Regional leaders have the right to suspend local businesses if sanitary measures cannot be ensured there.

On June 4 the government of Moscow announced that most restrictions in Moscow will be removed by July 1. Since June 9, self-isolation, the walking schedule for citizens and the permit regime were completely abolished in the capital. Cafes, restaurants, fitness centers, hotels, museums, industrial enterprises, non-food stores and service organizations resumed their work a little later, but under conditions of increased sanitary requirements. Around the same period, the regions also lifted restrictions, despite the fact that the threat of the spread of the epidemic remained high. Sergei Sobyenin (mayor of Moscow) explained the actions of the mayor's office and the Russian Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor) by the creation of a sufficient number of hospital beds and the high preparedness of hospitals and polyclinics to cope with the growing number of infected citizens.

Thus, the lockdown lasted only 9 weeks. However, many of the restrictions were extended for several more weeks - at least until July 1.

Vladimir Putin, in his address to citizens on March 25, 2020, voiced a number of measures aimed at supporting the economy in the face of the epidemic:

- Credit vacations on mortgages and consumer loans for citizens if their incomes fall by 30 percent or more;
- Financial support for families with children (lump sum payments of 5 thousand rubles for each child under 3 years old and 10 thousand rubles for each child from 3 to 15 years old)
- Payments for sick leave to citizens in the amount of not less than one minimum wage per month (minimum labor wage=12,130 rubles or \$164 a month).

In order to support small and medium-sized businesses, the president proposed granting companies a deferral of taxes, except VAT, reducing the amount of insurance premiums for small and medium-sized businesses on a long-term basis, as well as introducing a moratorium for six months on filing for bankruptcy.

Furthermore, the government approved a list of support measures for organizations and individual entrepreneurs engaged in the areas most affected by the spread of coronavirus. The list of affected industries included a total of nine sectors, including catering, hospitality, air transportation, enterprises of additional education, culture and sports, businesses, consumer services. Later, the list of affected industries expanded to eleven. The list of measures included:

- An extension of the deadline for paying taxes, fees and insurance premiums from three to six months for small and medium-sized businesses;
- A deferral of tax audits until May 31, 2020;
- Deferment of payment of rent payments in case of use of the state or municipal property;
- Receipt of gratuitous subsidies for the payment of salaries to employees (at the rate of 12,130 rubles for each employee);
- Granting soft loans for six months for the purpose of paying salaries to employees.

Most of the measures of the Central Bank of Russia in connection with the pandemic were taken in the period from March 1 to September 30, 2020. They mainly concerned the relaxations in terms of compliance with the terms of credit contracts - the possibility to defer payments and restructure debts for citizens and organizations. Small and medium-sized businesses were given the opportunity to obtain credit at a low rate for Russia - 8.5 percent per annum for up to three years for any purpose under the program of the Bank of Russia to stimulate lending to small and medium businesses. Immediately after the start of the pandemic, the government set aside 1.4 trillion rubles to support the economy and citizens; by June it had increased to 5 trillion rubles, and by fall the cost of the anti-crisis plan had risen to 6.4 trillion rubles.

In August 2020, the KPMG surveyed representatives of large businesses to find out exactly what tax support measures Russian taxpayers were able to take advantage of during the pandemic, how effective they were, and what tools can be used in the future. The results of the study showed that almost two-thirds (62%) of the surveyed companies could not use the measures of state support in the tax sphere provided for by the Resolution of the Government of the Russian Federation № 409 (Resolution of the Government of the Russian Federation of April 2, 2020), except for postponement of reporting, because they did not meet the criteria for their receipt. Eight percent of the companies took advantage of the automatic postponement of tax payments, and 18 percent took advantage of the reduced tariffs of insurance contributions. Respondents also stated the lack of availability of tax instruments of state support compared to non-fiscal measures and the orientation of support measures towards the segment of small and medium businesses, the affected industries and systemically important enterprises. The anti-crisis tax measures of the Government did not help a significant part of large businesses at all, most of which do not belong either to the backbone companies, or to the affected industries. It should also be noted that inclusion into the list of backbone companies has not become a guarantee of access to tax preferences. Many companies did not apply for measures of fiscal support due to the complexity of the application procedure and additional criteria stipulated by the Resolution of the Government of the Russian Federation № 651 (Anti-crisis measures, 2020).

A similar study, but in relation to small businesses was published by Boris Titov, the Presidential Commissioner for the Protection of Entrepreneurs' Rights. In the research the following assessment is presented:

- 45.34 percent of small business respondents were unable to take advantage of any support measures;
 - 23.55 percent of those surveyed used a deferral of all taxes (excluding VAT);
 - 20.7 percent of those surveyed used a loan at 2 percent to restart operations;
 - 19.3 percent of those surveyed took advantage of an insurance premium deferral.
- 38.6 percent of the entrepreneurs who took advantage of some measure of support should repay their obligations in the near future. However, almost half of them (49.5 percent) need a new restructuring because they will not be able to repay the debt when it becomes due.

Another 9.3 percent believe that they will not be able to repay their debt and will have to close their business.

Social Consequences of the Lockdown in Russia

In October 2020, the Federal State Statistics Service (hereafter, Rosstat) reported a significant increase in unemployment. The unemployment rate was 4.6 percent at the beginning of the year, 4.7 percent in April, 6.2 percent in July, and 6.3 percent in October. This is the highest level in the last eight years. In 2008, due to the recession caused by the global financial crisis, the unemployment rate was 6.3 percent, in 2009 - 8.4, in 2010 - 7.5 percent. The number of unemployed in Russia is estimated by Rosstat through surveys of the population according to a special methodology. The number of unemployed registered in employment centers in 2019 was about 700 thousand people, in January 2020 - 691 thousand, in April 2020 - 727 thousand, in July - 3 311 thousand, in October 3 470 thousand people. The low level of registered unemployment can be explained by the fact that employment centers automatically remove from the register all the unemployed who twice in a row refused to work offered to them. The maximum period of unemployment benefit payment is 1 year from the date of dismissal from the last job. Apparently, this tendency to register as unemployed was related to the President's promise to pay increased unemployment benefits in 2020 - 12,130 rubles. До 2019 года максимальное пособие по безработице в России много лет составляло 4 900 рублей, however, it was increased to 8,000 rubles in 2019. In addition to benefits, registered unemployed people in April-June 2020 were entitled to payments for children at the rate of 3,000 rubles for each child.

A total of 144.7 billion rubles was allocated for unemployment benefits in 2020. Most of these funds were budgeted, while 35.3 billion rubles were received in the Reserve Fund. In the fall of 2020, the Ministry of Labor and Social Protection of the Russian Federation announced the need for a total of 185.3 billion rubles for unemployment benefits. However, the relevant orders for the allocation of additional funds until mid-January 2021 have not been signed.

Families with children twice received a lump sum payment of 10 thousand rubles for each child. According to the Minister of Labor and Social Protection of the Russian Federation, Anton Kotyakov, during the meeting of the Presidential Council for the Implementation of the State Policy in the Field of Family and Child Protection on November 30, 2020, over 1.5 trillion rubles was allocated from the federal budget to support families with children in 2020, of which almost 600 billion were additional support measures for families with children in the face of the pandemic. In total, in 2020, expenditures on social support accounted for 11 percent of all expenditures on social policy (6.99 trillion rubles)).

Official Estimates of Losses from Lockdown

The article "Scenarios for Russia's Economic Situation in 2020-2021 and Economic Policy Challenges" points out, in particular: "It is difficult to find analogues to such a shock in modern Russian or foreign history; nevertheless, we dare to suggest that by its nature it is rather close to the situation of the early 1990s and the transition from a planned to a market economy, when the established economic and logistical links are broken due to the loss of certain subjects of economic activity from the economy" (Vedev et al., 2020). And further in the same article with reference to the work of Blanchard Olivier and Michael Kremer [38] presents the following conclusion: "the depth and duration of the decline in industries in this case critically depends on the complexity of the production chain (the number of suppliers of materials and components), and since under quarantine the maximum restrictions refer to the service sector, where production chains are mostly simple and short, even with a possible great depth of recession its period is determined solely by the time of preservation of regulatory restrictions and Therefore, we will consider this shock in all scenarios (see below) as fully realized in 2020, with no transition to 2021."

Indeed, by the end of 2021, despite the ongoing epidemic, many economic indicators had improved and the price of oil had returned to the \$50 per barrel level thanks to the OPEC+ pro-

duction limitation agreement and the advent of vaccines. The recovery of China, which continues to be one of the main importers of Russian hydrocarbons, also played an important role.

The index of industrial production (as a percentage of the corresponding month last year) in April was less than 100 percent, in May fell to a minimum value of 92%, was equal to 93% in June, and then, due to the removal of restrictions, began to increase. It is most likely that in 2021 the world economy, and hence the Russian economy, will grow. Specialists at the Institute of Economic Forecasting (INP) of the Russian Academy of Sciences predict that the economy will recover to its previous values by 2022. The same is reported in the IMF forecast (International Monetary Fund, 2020): in 2021 the growth of the world economy - 5.5 percent, the growth of the Russian economy - 2.8 percent. The World Bank forecasts the growth of the Russian economy in 2021 equal to 1.6% (World Bank Group, 2020). These forecasts are based on the assumption that there will be no further mutations of the virus, that vaccines will be effective and that the epidemiological situation will improve significantly.

The second quarter of 2020 is most affected by the lockdown. However, some restrictions continued in the third and fourth quarters, both in Russia and in other countries. So, the economic losses from the "shutdown" occurred mostly in the second quarter, but had a continuation in the third and to a lesser extent in the fourth quarter. According to Rosstat estimates made by the production method, GDP for the II quarter of 2020 in current prices was 23,288.2 billion rubles. This is 8.5 percent less than in the same period of 2019. The index of physical volume of GDP relative to the second quarter of 2019 was 92.0 percent, relative to the first quarter of 2020 - 98.1 percent. In the second quarter of 2019, GDP was 26,188 billion rubles. Thus, in the second quarter of 2020 the minimum losses (assuming no GDP growth in 2020) can be estimated at 2,900 billion rubles.

In 2020, even before it became known about the impending epidemic, annual GDP growth was projected at 1 - 1.5 percent. This estimate was given by Alexey Zubets, Doctor of Economics, Director of the Institute of Social and Economic Research of the Financial University under the Government of the Russian Federation, as a result of a study of consumer sentiment in 2019, as well as forecast modeling of Russia's economic development (Zubets, 2019). An estimate of GDP growth at a level not exceeding 2 percent per year was given by Boris Porfiriev, an academician of the Russian Academy of Sciences and director of the Institute of Economic Forecasting of the Russian Academy of Sciences (Porfiriev, 2020). (Porfiriev, 2020) The World Bank forecast Russia's GDP growth of 1.6 percent (Global Economic Prospects, 2020). The international rating agency Fitch estimated the growth of the Russian economy in 2020 at 1.5 percent. A little later, in December 2019, they changed their forecast, stating that Russia's GDP growth in 2020 was 2 percent due to an improvement in forecasts due to expectations of continued government spending related to the implementation of national projects, as well as the easing of the monetary policy of the Bank of Russia. According to estimates of the Ministry of Economic Development of the Russian Federation, GDP growth in 2020 was expected to be between 1.7 and 2 percent, depending on the speed and efficiency of implementation of structural measures of state policy, as well as depending on foreign economic conditions (Ministry of Economic Development of the Russian Federation, 2019). Thus, if we assume that GDP will grow by 1.5 percent in 2020, then we can get a rough estimate of losses in the second quarter of 2020 - 3,293 billion rubles, or approximately 3 percent of annual GDP.

However, the economy continued to suffer losses, even when enterprises and organizations began to resume their activities. In Q3 2020, the nominal volume of GDP amounted to 27,941.3 billion rubles, its physical volume index to the corresponding period of the previous year - 96.6 percent. In the third quarter of 2019, GDP was 28,875.4 billion rubles. Assuming an annual growth rate of 1.5 percent, we get a rough estimate of GDP losses of 1,367.23 billion rubles.

Similarly, let us estimate losses in the fourth quarter of 2020. The Bank of Russia makes an assumption of about zero GDP growth in Q4 2020 (Information and analytical collection of the Central Bank of the Russian Federation, 2020), which means that GDP will remain at 27,941 billion rubles, while in Q4 2019 it was 29,815.6 billion rubles. Accordingly, losses in Q4 may amount to 2,322 billion rubles. Taking into account the absence of losses in the first quarter, we

get an annual GDP loss of 6,982 billion rubles, which is 6.3 percent of the 2019 GDP level.

Bank of Russia Governor Elvira Nabiullina estimated at a press conference that a month of quarantine due to the coronavirus will cost the Russian economy a loss of about 1.5-2 percent of GDP in 2020. Natalia Osipova, chief economist at Alfa Bank, estimates that a quarantine could cost the economy 0.3 percent of annual GDP per week in March and 0.5 percent in April. A month of strict quarantine could cost the economy 2 percent of annual GDP. Accordingly, 9 weeks of lockdown would give a loss of 2.7 to 4 percent of annual GDP. Similar forecasts were given by Natalya Akindinova, director of the Institute of the Development Center of the National Research University Higher School of Economics: about 2 percent loss per month in a hard quarantine.

Indirect Estimates of Losses from the Lockdown in Russia

In 2020, Russia's economy was affected by two negative phenomena at once - a sharp decline in oil prices and restrictions due to the spread of the coronavirus. The epidemic affected all of Russia's trading partner countries. As other countries implemented nonproliferation measures, there were disruptions in global supply chains as well as slower economic growth. Below are estimates of the impact of each of these factors on GDP dynamics in 2020.

Impact of the Decline in Revenues from Oil, Petroleum Product and Gas Exports on GDP Dynamics

The export of hydrocarbons provides a significant share of foreign exchange earnings and revenues to the budget. According to the Federal Customs Service, in 2019 revenues from the export of crude oil and refined products (petroleum products, gasoline, diesel fuel, liquid fuel) together amounted to \$240.3 billion. Of these, revenues from the sale of crude oil to other countries amounted to \$121.4 billion. This equals 56.6 and 28.6 percent, respectively, of Russia's total export revenues (\$424.6 billion). Export revenues from natural gas in 2019 were \$49.5 billion, or 11.7 percent of Russia's total export revenues. In 2019, Russia's GDP at current prices was \$1,699.9 billion. Thus, in 2019, revenues from the sale of oil, petroleum products and gas amounted to 17.05 percent of GDP (oil and petroleum products - 14.14 percent, gas - 2.9 percent).

Data on Russia's exports of critical commodities for December 2020 have not been released at this time. Between January and November 2020, Russia's exports totaled \$302,020 million. With oil and petroleum products bringing in \$138,817 million (45.96 percent of exports), gas \$28,491 million (55.40 percent of exports).

To bring the 2020 data to annual values, we will assume that December export figures are equal to November's, *i.e.* we assume a conditional "zero" growth: revenues from exports of crude oil and petroleum products in November were \$11,253.8 million; revenues from gas exports were \$3,338.5 million. For clarity, let us present the data obtained in the table.

Indicator	January - December 2019	Percentage of exports by Russia as a whole	January - December 2020	Percentage of exports by Russia as a whole
Total exports	424 626,8	–	331 995,70	–
Crude oil and refined products	240 323,8	56,60	150 070,5	45,20
Gas	49 553,1	11,67	31 829,1	9,59
Crude oil, petroleum products and gas	289 876,9	68,27	181 899,6	54,79

The table shows that Russia under-received \$107,977.3 million, or 37.25 percent of the

2019 level, in revenue from the export of oil, petroleum products, and gas. Revenue from exports of oil, petroleum products, and gas in 2019 was 17.05 percent of GDP. Thus, the expected GDP in 2020 is \$1,591.9 billion:

$$1\,699,9 \times (1 - 0,1705 \times 0,3725) = 1\,591,9.$$

That is, the annual decline in GDP, due only to the loss of income from the export of oil, petroleum products and gas, is 6.4 percent:

$$(1\,699,9 - 1\,591,9) / 1\,699,9 = 0,064.$$

In order to calculate GDP losses for only the second, third, and fourth quarters of 2020, let's use data from the Federal Customs Service for January-March 2019 and January - March 2020 and subtract the necessary values from the annual values of exports. We get the April-December 2019 oil, petroleum products, and gas export income figures of \$213,484.5 million; total exports of \$319,766.0 million. Revenue figures for April through December 2020 will be \$118,578.4 million and \$242,522.9 million, respectively. The cumulative decrease in oil, petroleum products and gas export revenues for the second, third, fourth quarters of 2020 is \$94,906.1 million, or 44.46 percent. Taking the share of revenues from oil and gas exports at 17.05 percent, we get the expected decrease in Russia's GDP due to the loss of revenues from the export of oil, petroleum products and gas during this period at \$502,876.48 million, or 7.3 percent of the 2019 GDP level. This is the amount Russia lost during the lockdown period on oil, oil products and gas exports alone.

Impact of Restrictions Imposed for the Purpose of Non-Proliferation of Coronavirus on GDP Dynamics

At the end of March, when non-working days were declared in Russia, about 13 percent of Russian companies followed the call of the authorities to take measures to prevent the spread of the coronavirus and sent at least some of their employees to quarantine. This is evidenced by the results of an online survey conducted by the service "Работа.ру" among its users and registered employers. More than 4 thousand Russian residents and 1.5 thousand employers from all regions of the country took part in the survey. Quarantine was handled differently: sick leave, paid leave, or leave of absence. Paid leave was reported by employers in 25 percent of cases; employees responded that way in 22 percent of interviews. However, leave of absence was mentioned by 16 percent of employees, while only 7 percent of employers said it was an option.

In April, the situation changed - any movement of citizens without a valid reason was banned. As reported by the Government of the Russian Federation [58], "the index of closure of regional economies (the ratio of the number of employees of enterprises that suspended operations to the total number of workers) in April was on average 28 percent in Russia. That is, 28 percent of jobs were under some kind of restrictions. Some industries (consumer services, tourism, air travels, and several others) were shut down entirely. In addition, there were also indirect losses associated with the effect of inter-sectoral linkages, when changes in economic parameters in one industry affect the economic parameters of other industries. For example, a decrease in the rate of construction would necessarily affect the operation of companies producing cement, concrete and reinforced concrete structures, as well as companies specializing in the transportation of construction cargo. Accordingly, industries associated with industries that suspended their activities also faced economic losses. In May, the value of this index was already 19 percent, and, as noted by Russian Minister of Economic Development Maxim Reshetnikov, this index has continued to decline since May. In June, due to the abolition of the self-isolation regime, the closure index decreased to 10.4 percent.

Russia's labor force aged 15 and older in February 2020 was 74.5 million people, of whom 71.1 million were classified as economically active and 3.4 million as unemployed, meeting International Labor Organization criteria (that is, had no job or gainful employment, were looking for work, and were willing to start work in the week surveyed).

Indicator	April	May	June
Index of economic closure (according to the Ministry of Economic Development of Russia)	0,28	0,19	0,104
Number of people who "dropped out" of the economy, million people.	19,91	13,51	7,39
Working time fund, hours/month	175	135	167
Lost work time, million hours	3 484,25	1 823,85	1 234,13

Table 2 shows the number of people directly affected by the lockdown. These data are also supported by a study conducted by specialists from the Center for Macroeconomic Analysis and Short-Term Forecasting (CMASTF). The study concluded: "At least 15 million workers are directly affected (potentially unclaimed). Tax cuts are estimated at 4 trillion rubles" (The effect of "quarantine" for Russia, 2020). Calculation of the impact of the introduction of special treatment (self-isolation) is carried out using an inter-sectoral balance and takes into account not only direct, but also indirect effects.

A total of 6,542.2 million working hours were lost during the three months of lockdown. The annual time fund of all working people (71.1 million) is 127,126.8 million hours. Thus, the hours worked in 2020 are 120,584.6 million hours. On this basis, the expected decline in GDP due to the decline in the annual fund of working hours (excluding the impact of bankruptcies) is 6,642.2 million hours, which is 5.15 percent of the 2019 GDP level (110.046 trillion rubles), or 5.66 trillion rubles.

The decrease in the number of working hours is also evidenced by a decrease in revenues from personal income taxes to the budgets. According to the calculations of the rating agency National Credit Ratings (NCR), based on the data of the Treasury of Russia, at the end of the second quarter of 2020 there was a 9.5 percent decrease in personal income tax revenues to the budgets of the subjects of the Russian Federation, which indicates a corresponding reduction in the wage fund in the regions. The largest cumulative decrease in the labor payment fund, according to NKR estimates, occurred in April-May (802 billion rubles, or 16.5% of the level of the corresponding months of the previous year). In June, after the gradual cancellation of much of the quarantine measures, the decrease in the payroll amounted to only 32 billion rubles from June 2019 (The price of quarantine, 2020). The data presented show the loss of income of officially employed citizens. The decrease in income received was not due to direct dismissal, but to the introduction of part-time work, reduced week, or the registration of leave "on one's own account. These losses are not counted in the unemployment data.

Bankruptcy of legal entities and individual entrepreneurs should be considered separately. In 2020, 956.5 thousand individual entrepreneurs and 544.8 legal entities were liquidated. If at the beginning of 2020 there were 4.05 million individual entrepreneurs and 3.7 million legal entities on the tax rolls, then at the beginning of 2021 their number decreased to 3.7 and 3.4 million, respectively. That is, the total reduction in the number of individual entrepreneurs and legal entities was 8.3 percent of the 2019 level (the reduction in the total number of individual entrepreneurs is 336.1 thousand registrations, or 9 percent of the 2019 level, the reduction in the total number of legal entities is 311.8 thousand, or 8 percent of the 2019 level). The number of sole proprietorships and sole proprietorships on the register of small and medium-sized businesses decreased by 5 percent (from 5.9 to 5.6 million businesses) in the first nine months of 2020 (from April to December). A total of 295,000 companies dropped out of the register during this period.

At the same time, it is still too early to talk about the wave of bankruptcies due to the fact that in January 2021 the moratorium is still in effect (see Resolutions of the Government of the Russian Federation (Resolution of the Government of the Russian Federation, 2020; Resolution of the Government of the Russian Federation, 2020). About 1.3 million companies and individual entrepreneurs fall under the moratorium. Nevertheless, the threat of mass closures of enterprises still exists. Alexei Kudrin, head of the Accounts Chamber, stated this in November 2020 at the All-Russian Civil Forum: "I agree with the difficult situation of small and medium business. It is assumed that a third of it, taking into account the second wave may stop. It may even

be the minimum."

Rosstat estimates the share of small and medium-sized enterprises in Russia's GDP at 20.6 percent, or 22.7 trillion rubles. This value is understood as the ratio of the total volume of gross value added created by medium and small enterprises (including microenterprises) and individual entrepreneurs to gross value added in basic prices of all economic entities (The share of small and medium-sized businesses in the gross domestic product, 2020). The sources of information on these data are primarily data from the registry of small and medium-sized enterprises of the tax service, as well as the accounting records of enterprises. The elimination of 30 percent of small businesses could result in a loss of 6.2 percent of GDP, or 6.8 trillion rubles. Then the cumulative expected decrease in GDP due to the reduction in the working time fund and bankruptcies of legal entities and individuals due to the quarantine measures taken would be:

$(-5.15\%, \text{ reduced working hours factor}) + (-6.2\%, \text{ increased bankruptcy factor}) = -11.35\%$ of GDP, or 13.9 trillion rubles. (at an average annual ruble-dollar exchange rate of 72.1260).

Thus, the total losses of the Russian economy due to the pandemic are estimated at 13.6÷18.6 percent of GDP (2019 level), which is equivalent to 14.9÷20.47 trillion rubles, or \$231.18÷316.18 billion:

- Losses from oil and gas export sales - 7.3 percent;
- Losses caused by a reduction in the working time fund and bankruptcies of legal entities and individuals - 6.3÷11.3 percent;

It should be noted that this is not an estimate of the fall in GDP in 2020, but a rough estimate of Russia's losses due to reduced income from exports of oil and gas products, as well as from the "closure" of the economy.

The presented approach is by no means the only way to make an estimate of losses from the lockdown. Various methods and techniques of economic and mathematical modeling can be used for this purpose. For example, in the work of colleagues from China (Yumei et al., 2020), a multisectoral multifactor model was used, which allows to identify the losses of each of the 149 industries under study through the "input-output" tables. In Russia, a study to assess the losses of the economy due to the introduction of a day-off regime was made using an approach based on the decomposition of production indices series by individual types of economic activity (Belev, 2020). As a result, it was concluded that the "cost" of quarantine measures for the economy in 2020 was 0.37 percent of GDP in the first quarter and 7.79 percent of GDP in the second quarter. As the authors themselves report, "the estimate of the 'cost' of quarantine measures takes into account only the number of working days in the period in question, but not disruptions in supply chains, etc." Due to the fact that the study was already published in July 2020, it could not take into account the cost of "eliminating the consequences" of forced economic downtime.

It is also worth paying attention to the fact that the estimates of losses given by us, as well as those presented in the mentioned study (Belev, 2020), are an order of magnitude higher than the estimates of GDP losses voiced by Rosstat, the Accounts Chamber (-6%), the Bank of Russia (-4%÷6%), the World Bank (-1%), the IMF (-4.1%), and various international and Russian experts. In this regard, Academician Pavel Minakir wrote the following in the early summer of 2020 "... the budget losses may amount to more than 1.5 trillion rubles only due to falling oil and gas revenues by the end of the year. To this should be added at least Rb 5 trillion of shortfall in budget revenues due to the above-mentioned decrease in the nominal value of GDP. Given the above-mentioned cost of the "anticoronavirus" package, as well as the Rb 2.4 trillion paid by the Government to the Central Bank for a package of shares in Sberbank, the total financial costs can be estimated at Rb 11-12 trillion (Minakir, 2020).

An epidemic can happen unexpectedly, and in this case it is necessary to have reserves to support business and citizens. In 2020, Russia's economy was closed for only 3 months, but the losses are enormous - both economic and social. And here we can only quote the conclusions made in the work of Vladimir Obolensky: "The experience of the previous global crisis shows that state intervention in the economy is the only effective means of overcoming the emerging imbalances with the least losses, although it does not solve all the emerging problems...". (Obolensky, 2020). The Sovereign Wealth Fund now concentrates about 9 percent of GDP, that is, the money to support the economy and its recovery is clearly not enough - we will have to

increase domestic debt, launch the emission mechanism and take extraordinary, but effective management decisions.

CONCLUSION

The coronavirus pandemic has triggered a global economic crisis that has every chance of turning into a global financial crisis with an unpredictable development. The lockdown, which lasted in Russia for about nine weeks, led to losses, which we estimate at 13.6÷18.6 percent of GDP (2019 level), which is equivalent to 14.97÷20.47 trillion rubles, or 231.18÷316.18 billion US dollars. The economy of Russia, and the whole world, is waiting for a long period of recovery, regardless of whether this value of losses will be recognized or not.

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