The COVID-19 and Macroeconomic Variables in the Russian Economy: Evidence from Statistical Analysis

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Abstract

The Russian Federation, as an energy-oriented and developing country, has suffered a great large-scale damage under the influence of COVID-19. In the economic and political spheres, the Russian government has adopted various strategies to reduce the negative effects exerted by the pandemic. On the other hand, Russia is known as the first country to unveil and offer the first Coronavirus vaccine. At the same time, however, the policies pursued by the Russian government have been criticized. This study tries to measure the impact of the pandemic as an exogenous shock on important Russian economic variables. The main question in this study is what effect has the Corona epidemic had on the Russian economy? To answer to this research question, correlation analysis was used to evaluate the relationship between different variables and the number of deaths because of Coronavirus. According to the results of this study, the Coronavirus has affected the process of all Russian economic variables except for economic growth. This highlights the necessity of the implementation of exact plans and policies to maintain a stable economic recovery in the post-COVID era in this country.

1. Introduction

The worldwide outbreak of COVID-19, so much like the global financial crisis of 2007-2012, the European debt crisis, the Middle East challenges, the US-China trade war, and the threat of global populism, has become a global challenge. Before COVID-19, the most significant medical shock of the twentieth century was the Spanish flu of 1918-1920, which killed an estimated 50 million people, even more than the casualties of World War I (Vylkova & Ermakova, 2020, p. 24). After the incident, scientists warned that similar epidemics could recur in the future. In fact, after this prediction, in 2020, the world faced the outbreak of the Coronavirus, which has destroyed health and economic activities on a large scale. Governments have a responsibility to take action to reduce the spread of the disease until a vaccine or treatment is available to the public. That said, the measures taken to implement quarantine practices at the community level also come at a high cost. Their design also poses a significant political challenge.

According to Bourghelle, Jawadi and Rozin (2021), the complications in the oil industry have been exacerbated by the double shock in the oil market under the influence of COVID-19. In the first stage, this crisis led to a supply shock in the oil market. In fact, Saudi Arabia significantly increased its oil production, following the failure of Saudi Arabia and Russia to reach an agreement in March 2020 to reduce oil production. Saudi Arabia, in particular, announced wide discounts and began trading its production below official selling prices, which led to a nearly 30 percent drop in oil prices in March 2020. This, in turn, has led to the largest drop in oil prices of any of the world's three major oil producers (Saudi Arabia, Russia, and the United States) since January 17, 1991. Consequently, the former US president, Donald

Trump, pressured Saudi Arabia and Russia to reduce their oil production. The two countries reached an agreement of sorts on April 11, 2020. As a result, oil prices fluctuated by 20%.

Chart 1. World Oil Price Per Barrel over the Last 3 Years.
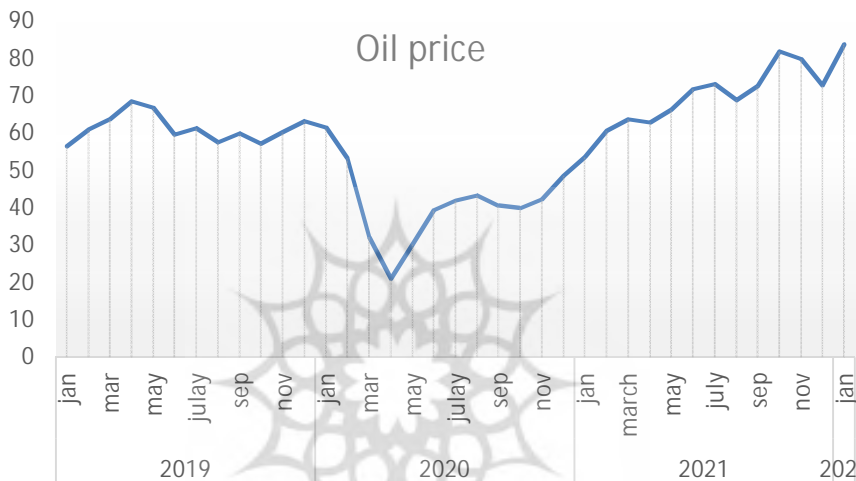
Source: Trading Economics. (n.d.).

Secondly, COVID-19 has created a demand shock in the oil industry, which has been affected by the practice of quarantine in various countries. The COVID-19 crisis has affected a wide range of energy markets and has had a stronger impact on oil markets as it has reduced the flow of people and goods around the world. It has also drastically reduced demand for fuel. The uncertainty index has also increased due to the risk of spreading the virus worldwide. This situation exacerbated anxiety in all countries, and governments were urged to shut down large industries in the largest developed and developing countries that import oil. As a result, COVID-19 led to a sharp decline in global oil demand, especially

in the United States, Japan, and the European Union (Bourghelle et al., 2021, p.1). In fact, it can be said that the global oil market became very unstable, and every event, even a small one, in the case of COVID-19 vaccines caused fluctuations in world oil prices. As can be seen in Chart (1), oil prices in April 2020 experienced the largest decline following the decline in global oil demand.

Russia's economic structure has always relied on the energy industry, especially oil, due to its abundant energy resources. The energy-driven model of the Russian economy is an important factor in being most vulnerable to global crises, such as the COVID-19 pandemic. On the other hand, the existence of economic sanctions as an uninvited guest of Russia has retained its shadow in the economic policies of this country. Nevertheless, one of the positive effects of this uninvited guest on the Russian economy is that, under the pressure of sanctions, the country noticed the inefficient model of its economic structure and made efforts to improve its economic policies to reduce its reliance on energy resources as much as possible. In this regard, other stimulating sectors of the economy such as agriculture, industry, and finance have played a more important role in creating economic mobilization. Another important issue that has arisen in the wake of economic sanctions in Russia is the resistance economy or the anti-sanctions economy. In other words, Russia attempted to create an economy that, while less vulnerable to sanctions, would have the power to strike at the economies of the embargoed countries.

One of the most important consequences of the COVID-19 as an external shock and a global crisis is to affect global oil prices and subsequently affect oil economies such as the Russian Federation. Caused by the outbreak of the virus, this crisis has disrupted economic activities worldwide as well as the economic growth of

many countries. Undoubtedly, the dual oil shock of 2020, which has simultaneously affected oil supply and demand, has dealt a stronger blow to the policies and economic growth of developing countries, through which a large portion of that government's revenue is generated. The COVID-19 shock, which pervades all political, economic, and social dimensions of Russia, has affected most of Russia's economic and political sectors, including government management, advocacy measures, and economic infrastructure. In this regard, this study examines the developments that have taken place in the Russian political economy in the last two years. The main question in this study is whether the Russian government has been able to demonstrate effective management in the Russian economy under the influence of the COVID-19 pandemic. To answer this question, in addition to examining the actions taken by the Russian government towards the protectionist approach, this article seeks to examine the impact of the COVID-19 pandemic on some macroeconomic variables such as economic growth, inflation, unemployment, oil exports, and foreign direct investment. The structure of the research is as follows: first, by reviewing the research literature and theoretical framework in this field, the effect of selected variables on one other is evaluated using the Pearson correlation coefficient test. At the end, the results of the research will be discussed and suggestions for future research will be put forth.

2. Literature Review

Infectious diseases have burdened humans since the very beginning of their existence. After the transition to agrarian communities, the scale and speed of the spread of such diseases increased. As societies developed, throughout the emergence and growth of

cities, this process took on the character of epidemics. Widespread trade has created new opportunities for increased human contact, which has served as a new catalyst for the spread of infections. In this regard, we can say the discussion of the political economy of health has remained for years a vital and important but at the same time a largely unexplored issue by economists. In general, each government takes its own approach when fighting infectious diseases. In this section, to understand whether there is a common political economy among countries in relation to infectious diseases and whether it is possible to learn an important point from the history of these diseases, two important infectious diseases with high mortality rates are examined.

The plague, which was caused by an infection with the bacterium Yersinia pestis, first spread to Europe between 1347 and 1351. The disease, also known as the Black Death, spread from northwestern Europe to Italy and reached France, Spain, Portugal, and England by 1348, then spread east and north through Germany, Scotland, and Scandinavia from 1348 to 1350. As a result of the plague, people tried to maintain higher living standards in many parts of Europe, at least for the future, by having fewer children. The Black Death fundamentally changed the demographic, political, and economic structure of Britain during the years 1341-1351 and killed almost forty percent of its population. As a result, peasants who lived in poor conditions before the plague were raised in wages and relocated to the city. As a result, they enjoyed better living conditions and for the first time found the courage to rebel against their overlords. In addition, one of the political consequences of the Black Death was that it influenced future working-class movements and paved the way for the Social Democratic tradition in Britain (Vylkova & Ermakova, 2020, p. 22).

The 1918 Spanish flu outbreak was not only the worst pandemic of the 20th century, but also the deadliest in history, killing an estimated 50 million people worldwide. The Spanish flu pandemic in the first decades of the twentieth century was the first true global pandemic and the first to emerge as modern medicine was in the initial stages of development. It was also a pandemic with devastating global consequences for the society. The Spanish flu epidemic that swept the world in 1918 killed 675,000 people in the United States. Periodic outbreaks of infectious diseases have had a profound and lasting impact on societies throughout history. These events greatly influenced the social, economic, and political aspects of human civilization, and their effects often lingered for centuries. An epidemic for modern society is a source of tension, the overcoming of which eliminates shortcomings in the organization of public health and transforms social, economic, cultural, and legal norms (Barry, 2004).

Regarding the research that has been done on the outbreak of the Coronavirus and the developments in political economy, it can be said that due to the recent occurrence of this shock around the world, the research literature in this field remains incomplete and is worth building on. Especially since some of these works are long-term and need time to be examined further. The discussion of COVID-19 and the developments that have taken place in the political economy of the world can be seen in the works of several scholars, some of whom are mentioned below. However, an article or work of research that was written specifically on COVID-19 and the developments in the Russian political economy was not obtained over course the author's research. This issue can confirm the importance and necessity of the present study.

In a study by Kaplan, Lefler and Zilberman (2021) on the political economy of COVID-19, the economic and health costs of COVID-19 and its policy responses were assessed. According to the researchers, some developing countries initially took drastic and costly measures that may have stemmed from their political economies. According to the authors of this article, there has been insufficient investment in the prevention and reduction of the disease in some countries.

In another study by Boettke and Powell (2021), the authors point out that the policy response to the COVID-19 pandemic by governments around the world is inconsistent with standard welfare economics recommendations. In the opinion of these researchers, it is important to ask why such policies have been adopted. Finally, they point out that over the past 80 years, many questions from researchers and scientists about how each government controls the crisis remain unanswered.

In a study of the crisis caused by COVID-19 and its impact on the European Union in the context of political economy, Landesmann (2020) noted that in both the financial crisis of 2008 and the crisis caused by the outbreak of Coronavirus, important political actors, including countries, sectors, and social spheres, are influential in addressing and deciding on systemic issues. Thus, the COVID-19 crisis can be considered as an example that has mobilized the centrist forces faster and more powerfully than the 2008 financial crisis.

Coccia (2021) has studied the relationship between the duration of quarantine, the number of infected people and deaths due to COVID-19, and the economic growth of countries. He believes that there is a relationship between the number of quarantine days and GDP growth in the countries studied. According to the results of

this study, long-term quarantine has had negative effects on the growth of GDP.

As some economists such as Baldwin and Mauro (2020) have pointed out, the outbreak of COVID-19 has generally spread economic suffering in parallel with human suffering around the world, and is as economically contagious as it is medically contagious. The effects of the Coronavirus epidemic (both economic and non-economic) have not completely disappeared. Therefore, the mortality and morbidity statistics, after more than 1.5 years from the onset of the disease, in December 2019, are still reported and daily updated. According to the World Health Organization (2021) worldwide, as of the end of August 2021, more than 201 million confirmed cases of the disease, 4.5 million deaths, and about 4 billion vaccine injections have been reported.

The number of deaths due to COVID-19 in the Russian Federation has been increasing since the beginning of December 2020. As can be seen in Chart (2), the number of deaths has increased from about 3728 thousand people in December 2020 to 8523 thousand people in November 2021. First, large urban centers were severely affected, and then the North Caucasus was affected by the widespread outbreak of the virus. The federal government's political response to this lasted for several weeks (Oxenstierna, 2021, p. 10). By order of the President of the Russian Federation on March 14, 2019, the Russian government formed a commission to coordinate the fight against the Coronavirus (Official Internet Portal of Legal Information, 2020). Also on March 15, the Russian president convened a working group to complete the commission. The Coordinating Commission and Working Group included representatives from all ministries and organizations and regional authorities involved in the fight against Coronavirus. The cost of

anti-crisis packages in the spring of 2020, which included financial facilities, social and unemployment benefits, credit facilities for individuals, corporate subsidies, and tax breaks for small and medium-sized enterprises, reached 2.6 percent of GDP, which was much lower than the 2008-2009 anti-crisis program. In total, the Russian government's anti-crisis spending for 2020 is estimated at about 4% of GDP (Aslund, 2020, p. 540).

Chart 2. The Number of Deaths due to COVID-19 in Russia (2020-2022).
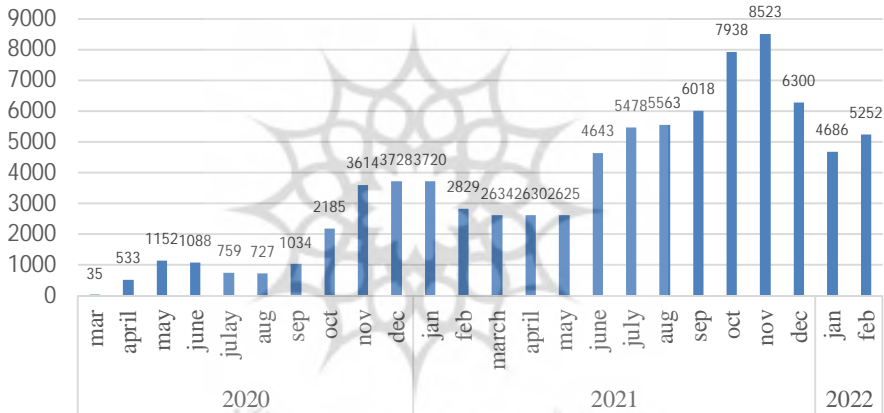
Source: World Health Organization (n.d.)

According to Burki (2020), Russia was the first country to register a vaccine against acute Coronavirus disease on August 11, 2020. The vaccine was named Sputnik after the launch of the Soviet spacecraft. It was developed by the Gamaleya National Center of Epidemiology and Microbiology in Moscow. Russian President Vladimir Putin has approved the unveiling of the vaccine, but there have been widespread international concerns about Russia's early launch of the vaccine. Vaccination in Russia began

on December 7, 2020, and doctors, teachers, and social workers were among the first to be vaccinated. The vaccine has been sold to several countries. In addition, Russia has registered a second vaccine called "VECTOR or Epivaccorona" (World Bank, 2020, p. 6, in Oxenstierna, 2021, pp. 13-14). The third vaccine, COVI-VAC, was registered in February 2021.

Although Russia is the first country to produce the COVID-19 vaccine, its poor performance in epidemic management has made the country vulnerable. Only about a third of Russians are fully vaccinated against the Coronavirus. Public skepticism and mistrust about the efficacy and safety of Russian-made vaccines have exacerbated the problem. According to the Guardian (2020, in Oxenstierna, 2021, p. 16), in December 2020, Deputy Prime Minister Tatyana Golikova abruptly admitted that 81% of the deaths recorded in Russia from January to November 2020, namely 227,700 cases, were due to deaths from COVID-19. That is 186,000 deaths, three times the official figure reported to the World Health Organization for 2020. This figure means that Russia has the third highest number of Corona-related deaths among all countries. There was no explanation for this and no change was made in the official information.

3. Theoretical Framework

Due to the recent outbreak of Coronavirus worldwide in the last two years, as well as the lack of specific theories on the subject, most studies have completed their research by comparing the literature on the impact of an epidemic or crisis on the economy. In this research, the structure of the theoretical foundations is divided into two parts. In the first part, the effect of an epidemic in the form

of an economic crisis is examined and in the second part, an appropriate theoretical framework is provided to continue the discussion using existing definitions.

3.1. The Impact of the Epidemic on the Economy

Many researchers, including Pritchett and Summers (1996), Bloom and Sachs (1998), Bhargava, Jamison, Lau and Murray (2001), Cuddington, Hancock, and Rogers (1994), Robalino, Jenkins and El Maroufi (2002), have shown in their studies that the population health index, which measures life expectancy, infant and child mortality, and maternal mortality, has a positive relationship with well-being and economic growth.

The prevalence of an infectious disease that is also highly contagious affects the economy through different channels. The direct and indirect economic costs of a disease are often the subject of health economics studies on infectious diseases. To these costs are added other items such as loss of time and income and direct costs of medical care and support services to estimate the economic costs associated with the disease. The conventional approach to the real economic costs of infectious diseases in the form of epidemics that are highly contagious, and for which there is no vaccine (such as AIDS, SARS, and influenza), is often underestimated. Experiences from previous epidemics provide valuable information on how to think about the consequences of COVID-19 (McKibbin & Roshen, 2020, p. 3).

Haacker (2004) noted in his study that the HIV/AIDS virus through policy decisions about labor supply, labor productivity, and household income; increasing business costs and lost investment in employee training by companies; the increase in public spending

on health care and support for the disabled and orphaned children by AIDS by the public sector has greatly affected families, businesses, and governments. The effects of AIDS are long-term, but there are good preventative measures that minimize the risk of HIV infection, and there are successful documented measures in prevention and education programs, both in developed and developing countries. Treatment is also available. Modern therapies increase the life expectancy of HIV patients and improve their quality of life for several years.

The flu virus is much more contagious than HIV, and the onset of an epidemic can be quite sudden and unexpected. The COVID-19 virus also appears to be highly contagious. Some researchers have also pointed to the fear factor of infectious diseases. The fear of the Spanish flu of 1918-1919, "the deadliest plague in history", with severe clinical symptoms, still exists in research and the general public and has not completely disappeared. The fear factor was also influential in the world's response to SARS—a virus not previously identified in humans (Shannon & Willoughby, 2004; Peiris, Guan & Yuen, 2004). The fear factor of infectious diseases is also reflected in the reaction to COVID-19. All cities in China were quarantined and travel restrictions were imposed by countries on people entering from infected countries. According to the research conducted by Hyams, Murphy, and Wessely (2002), fear of an unknown lethal virus is similar in response to biological threats and other terrorist threats in terms of psychological effects and causes high levels of stress, often with long-term consequences. Usually, a large number of people feel threatened at the onset of an epidemic due to lack of knowledge, even if the actual risk of death from the disease is small.

Studies by Lee and McKibbin (2004) on the macroeconomic

impact of the SARS epidemic in 2004 indicate that increasing business operating costs and reassessing the country's risks by reducing commodity consumption have significant effects on economies. Shocks based on the extent to which countries are exposed to the disease are transmitted to other economies. Despite the relatively small number of cases and deaths, the global costs of infectious diseases are significant and are not limited to countries that are directly affected.

Another study by Frist and Gregg (2006) examined two outbreak scenarios for the United States mild scenario with an attack rate of 20% and a mortality rate of 0.1% and a more severe scenario with an attack rate of 30% and a mortality rate of 2.5%. According to the studies conducted by this congress, in a mild scenario, a decrease in GDP of 1.5 percent for the United States and in a severe scenario, a decrease of 5% in GDP can be observed.

Many recent studies have examined the impact of COVID-19 on global economic activity. For example, using daily data on deaths from the global Coronavirus disease in 2019, Yilmazkuday (2021) has shown that the impact of deaths from COVID-19 is negligible and that the fall in oil prices in March 2020 explains the differences of opinion that have arisen for OPEC members. In this regard, Maijama'a, Kabiru, Garba and Baba, (2020) examined the impact of the Coronavirus outbreak on the global energy demand using daily data from China's population, China's exchange rate, and global crude oil prices from January 23 to February 8, 2020. The results show that the price of crude oil has a negative and significant relationship with cases infected with the Coronavirus, and based on the findings, researchers recommend that oil-producing countries should reduce their supply of crude oil to the country affected by the virus to lower prices, raise the desired level

and the government of the affected country to maintain restrictions to combat the spread of Coronavirus.

3.2. Corona Shock

In this section, using the materials mentioned about the impact of the epidemic on the economy, a theoretical model is explained in relation to the impact of the outbreak of COVID-19 as an economic and political shock on the Russian Federation.

Figure 1. Theoretical Model of Corona Shock.
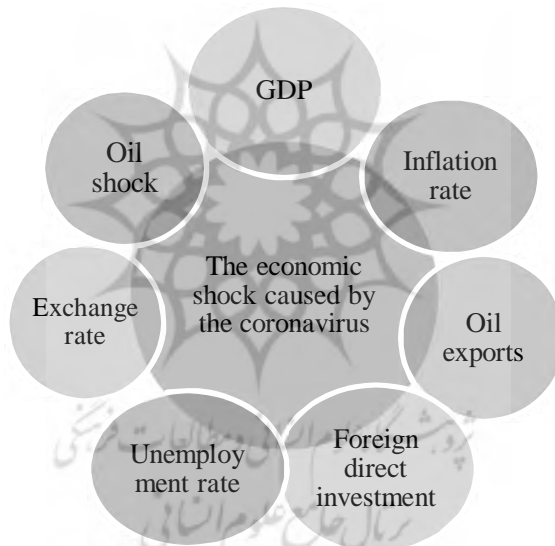
Source: Categorization by the author

The conceptual model of Figure 3, which is somewhat reminiscent of the geometric shape of the Coronavirus, deals with the shocks created by the outbreak of COVID-19 and turns it into a major economic shock and crisis. Coronavirus seems to be the first crisis to affect individuals from all over the world, creating a global

crisis in all political, economic, social, and even cultural fields. In economic and political terms, this virus can be described as a comprehensive shock. Because of its negative impact on key parts of each country, it has caused a change in all government and economic infrastructure and even disrupted the long-term and short-term plans of countries.

The Russian Federation is no exception to this rule and has gone through many ups and downs under the shock of the Coronavirus. In this regard, according to the conceptual model mentioned in the next section, the following will be examined: The impact of COVID-19 and the oil shock on Russia's macroeconomic variables such as economic growth, exchange rate, inflation rate, unemployment, oil exports, and foreign direct investment.

4. Methodology

In this study, in order to explain and investigate the relationships between the selected variables and the number of people who died due to COVID-19 in the Russian Federation, a quantitative method called Pearson correlation coefficient test of SPSS statistical software was used. In this test, the obtained values for Pearson correlation coefficient and significance level determine the relationship between the two variables. If the obtained number for the significance level is less than 0.05, the two variables are significantly related to each other and can affect each other. If the numerical correlation coefficient is negative, increasing one variable will cause the other to decrease, and if it is positive, increasing one variable will cause the other to increase. The intensity of the relationship will also be determined based on Table 1.

Table 1. Interpretation of Relationship Intensity in Pearson Correlation

Interpretation	Intensity of the relationship
Very strong relationship	1-0.8
Strong relationship	0.8-0.6
Medium relationship	0.6-0.4
Low (weak) relationship	0.4-0.2
Insignificant relationship	0.2-0

Source: Miller & Salkind, 2002, p. 388

The main variables in this study to measure the relationship with other macroeconomic variables in Russia are as follows:

1. The number of deaths due to COVID-19 in the Russian Federation, which is considered as an indicator of the impact of the Coronavirus on Russian economic variables.

2. The monthly price of a barrel of oil, which is considered as an indicator of the impact of the oil shock on Russia's economic variables.

The macroeconomic variables selected to examine the correlation are as follows: economic growth, exchange rate, inflation rate, unemployment rate, oil exports, and foreign direct investment.

5. Research Results

The role of energy in the economic and political evolution of developing countries, where a large part of government revenue depends on oil, is undeniable. Oil-exporting countries, due to poor economic structures and lack of development in other sectors of the economy, mainly rely on oil exports and earnings in this way, and

416

this has increased their dependence on oil revenues. This high dependence of countries on oil has caused their economic situation to be affected by oil shocks. Therefore, it can be said that the political economy of the Russian Federation has been affected by two different channels of oil shock and epidemic shock simultaneously. In the following, the effect of each of these shocks on Russia's macroeconomic variables is examined. Government management is also evaluated at the end.

In this section first the relationship between oil prices and COVID-19 mortality in Russia is examined. According to Table 2, there is a positive and strong correlation between these two variables. This means that both the Coronavirus shock and the oil shock occurred simultaneously in Russia. Accordingly, in order to investigate the impact of these two shocks on the Russian economy, first the relationship between Coronavirus mortality and Russian economic variables was examined (Table 3) and then the relationship between these variables and the oil shock was examined, the results of which are presented in Table 4.

Table 2. Results of the Correlation Analysis Method between Oil Prices and COVID-19 Mortality in Russia

Variable	Pearson correlation value	Significance level	Intensity of the relationship
Oil price	0.869	0.000	A positive and strong correlation

Source: Author's calculations

Table 3. Results of the Correlation Analysis Method between the Number of
Deaths and Selected Economic Variables

Variable	Pearson correlation value	Significance level	Intensity of the relationship
Economic growth	0.514	0.238	Lack of relationship
Exchange rate	-0.354	0.106	Lack of relationship
Inflation rate	0.940	0.000	A positive and strong correlation
Unemployment rate	-0.757	0.000	A negative and strong correlation
Oil exports	0.721	0.044	A positive and strong correlation
Foreign direct investment	0.872	0.010	A positive and strong correlation

Source: Author's calculations

Table 4. Results of the Correlation Analysis Method between the Oil Price and
Selected Economic Variables

Variable	Pearson correlation value	Significance level	Intensity of the relationship
Economic growth	0.769	0.043	A positive and strong correlation
Exchange rate	-0.351	0.109	Lack of relationship
Inflation rate	0.954	0.000	A positive and strong correlation
Unemployment rate	-0.751	0.000	A negative and strong correlation
Oil exports	0.112	0.833	Lack of relationship
Foreign direct investment	0.674	0.142	Lack of relationship

Source: Author's calculations

Considering the results of the correlation calculations between Russia's macroeconomic variables and oil prices and COVID-19 mortality, the following conceptual model of how the Russian economy is affected through these two shocks is presented.

According to Tables 2, 3, and 4 and the conceptual model, the mortality rate of COVID-19 in the Russian Federation as a pandemic shock has a positive and strong correlation with the variables of inflation rate, oil exports, and foreign direct investment, and a strong negative correlation with the unemployment rate. Fluctuations in oil prices as an oil shock have a positive and strong correlation with the variables of economic growth and inflation rate and a negative and strong relationship with the unemployment rate. Russia's exchange rate has also been affected by oil exports.

A study by Salisu, Isah, Oyewol and Akanni (2017) shows that in single-product economies, oil shocks and a sharp rise in incomes improve the balance of payments while lowering the exchange rate and consequently inflation. Exchange rate fluctuations due to positive and negative oil shocks can also affect the unemployment rate of oil countries through various channels. For example, as a result of the appreciation of the national currency due to a positive oil shock, the price of exported goods increases for export purposes, and as a result, the production and demand of labor in firms that depend on the export market decrease. But both the COVID-19 shock and the oil shock have had a negative effect on the Russian economy.

Russia's GDP fell by 8% in the second quarter of 2020 due to massive supply and demand shocks. In the third quarter, the country's GDP fell by 3.4 percent. After that, the incidence decreased and the restrictions decreased. Meanwhile, the

government adjusted the monetary policies and expansionary fiscal policies became a stimulus for the resumption of economic activities. As a result, GDP for the whole of 2020 fell by 3.1 percent. In general, it can be said that the slowdown in Russia's economic growth was not only due to the shock caused by the Coronavirus, and there are other important reasons for the slowdown in the country's economic growth. For example, falling global oil prices play an important role in influencing Russia's economic growth (World Bank, 2020, p. 36).

On the other hand, given the significant drop in oil prices, a 3.1 percent drop in GDP does not seem very high. Becker (2021) points out that the standard method of calculating real GDP does not fully reflect how revenue and purchasing power of households, companies, and the Russian government will grow in 2020. Using an alternative method, with trade data that better reflects the sharp decline in oil prices in international markets, the decline in GDP is estimated at minus 9 percent. This observation is an interesting point that shows the dependence of the Russian economy on the price of oil and its effects on income, which can be considered in various debates.

Discussing the impact of the Coronavirus on Russia's employment rate, it can be said that between the second quarter of 2019 and the second quarter of 2020, 1.5 million jobs were eliminated. Nearly half a million jobs have been lost in each of the three sectors of services, industry, and agriculture. The sectors that have suffered the most are manufacturing, construction, retail, and hotel services. These losses have occurred due to quarantine practices and the difficulty of working remotely in these sectors. In other sectors, the employment rate has either decreased slightly or increased. No significant effect was observed in other sections. In

420

rural areas, for example, quarantine practices have had only a negligible effect on agricultural production (World Bank, 2020, p. 30).

Figure 2. The Conceptual Model of How the Russian Economy is Affected by the COVID-19 Shock and Oil Shock.
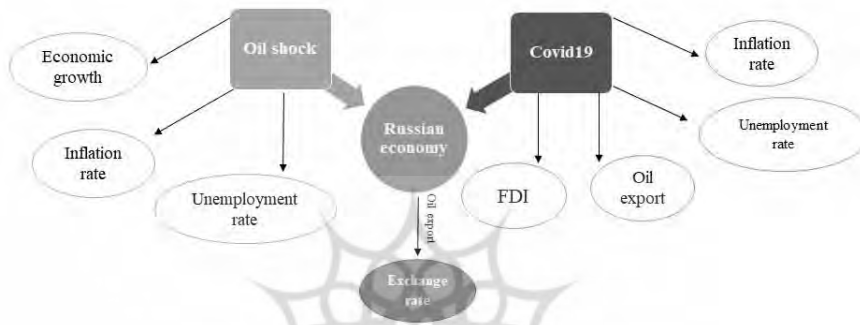

Source: Categorization by the author

In April 2020, 52 percent of public sector employees reported working in the private sector, compared to 40 percent in the past, according to the ANO Levada Center in Moscow (2020). This means that this epidemic has affected the private sector more than the public sector. In late April, 85% of business owners said their industry was affected by the crisis. The unemployment rate in October 2019 increased from 4.6% in 2019 to 6.4 in August 2020, which is the highest unemployment rate in the Russian Federation in the last eight years. Although the unemployment rate has since declined to 5.8 percent in January 2021, it still remains high. In the Russian Federation, a set of policies designed to reduce the impact of the epidemic on labor markets in the second quarter of 2020 was introduced, including measures to maximize the level of unemployment insurance benefits from 8000 rubles (US $ 103) to 12130 rubles per month (World Bank, 2020, p. 29).

Regarding the increase in inflation due to the spread of Coronavirus in Russia, it can be said that as shown in Chart 3, this figure increased from 2% in 2020 to 8% in 2021 since the beginning of the outbreak of the disease in Russia. Despite the fiscal policies adopted by the country's central bank, Russia is facing high inflation. The head of the Central Bank of Russia, Elvira Nabiullina, has noted that the steady rise in the general level of prices for goods and services in Russia will be a long-term phenomenon. The problem, she reflected, has previously occurred in the country in the late 1990s and 2000s.

**Chart 3.** Inflation Rate in Russia (2020 – 2021).
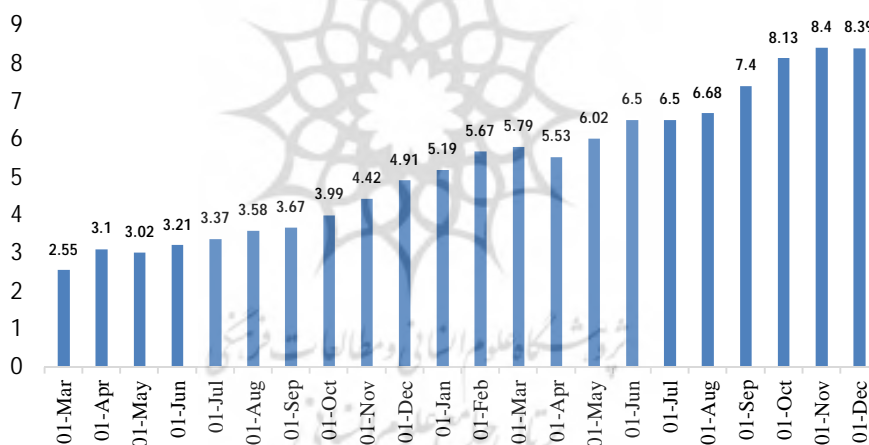
Source: Trading Economics. (n.d.).

According to UNCTAD (2020), foreign direct investment in the world has decreased by 49% due to the outbreak of COVID-19. The volume of foreign capital inflows has also experienced a sharp decline due to the fall in world oil prices and the shock caused by the Coronavirus in the Russian Federation. According to Figure 6,

at the beginning of 2020 which was simultaneous with the first wave of COVID-19, the volume of foreign capital inflows reached a negative figure of -3759 million dollars. But it did not take long for it to continue its trend in a positive way again. Coinciding with the next wave of deaths in Russia, which, according to the World Health Organization, rose from 533 in April 2020 to 2,185,000 in October 2020, foreign investment inflows fell sharply to $ 2,434 million. However, after a while, it maintained its upward trend.

Chart 4. Volume of Foreign Direct Investment in Russia (2020-2021).
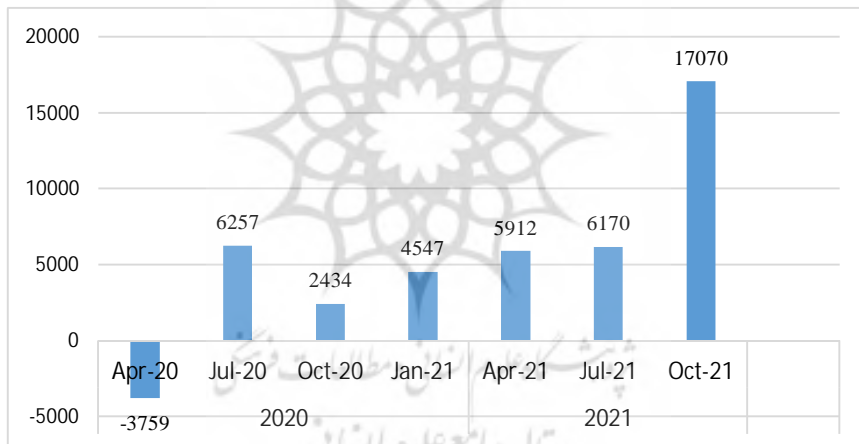
Source: Trading Economics. (n.d.).

One of the areas that has been influenced by COVID-19 is the concept of good governance or effective governance in countries. In this section, Russian government management from 2015 to 2020 is evaluated using the indicators of effective governance provided by the World Bank.

Table 5. Governance Indicators of Russia during 2015-2020.

Indicator	2015	2016	2017	2018	2019	2020
Voice and Accountability	-1.09	-1.13	-1.09	-1.07	-1.12	-1.08
Political Stability and Absence of Violence/Terrorism	-1.03	-0.95	-0.64	-0.54	-0.56	-0.73
Government Effectiveness	-0.20	-0.20	-0.08	0.00	0.15	0.03
Regulatory Quality	-0.52	-0.42	-0.47	-0.50	-0.43	-0.44
Rule of Law	-0.76	-0.79	-0.79	-0.78	-0.72	-0.76
Control of Corruption	-0.95	-0.82	-0.89	-0.85	-0.81	-0.91

Source: Worldwide Governance Indicators (n.d.)

The data presented for these 6 indicators, which examine the effective governance of a country in different dimensions, varies from -2.5 to +2.5. This means that if the number is close to -2.5, it indicates poor performance, and if it is close to +2.5, it indicates the strong performance of a country in that index. As can be seen in the table, all indicators of governance of the Russian Federation during the last 5 years, except for Government Effectiveness, have been negative. Russia's Government Effectiveness index rose above zero in 2019, but then fell to zero again in 2020 with the start of the COVID-19 pandemic.

The Russian government has taken various measures to support its country in three general areas of health, social, and economic spheres during the outbreak of Coronavirus. In this section, general measures taken in all three areas are presented in the form of a table. This information is based on the government website of the Russian Federation and various reports, including government

actions to support the Russian economic sector and a report entitled "Support of Every Russian Citizen in Russia During the Coronavirus Pandemic":

Table 6. Support Measures of the Russian Government in Different Sectors

Measures taken in the health sector[1]	New rules for hospitals and the possibility of issuing electronic sick leave with remote consultation with the doctor in question
	Ability to buy drugs online and impose fines to increase the price of drugs
	Upload Coronavirus test results to individuals' personal accounts
	Incentive payments for those involved in the fight against Coronavirus
Measures taken in the social sector[2]	Support for families with children and low-income families
	Payment of five thousand rubles to all Russian families with children under three years
	Cancellation of technical inspection of vehicles under 4 years old
	Reimbursement of canceled concerts
	Increasing the payment installments of pensioners – debtors
Measures taken in the economic sector[3]	Interest-free bank loans to cover wage payments
	Government grants to small and medium enterprises
	Unemployment programs
	Tax measures aimed at supporting small businesses

Source: [1]The State Duma, n.d.; [2]The State Duma, n.d; [3]Dmitrieva, 2020

Some Russian economists and politicians have criticized the government's delay in the early stages of the epidemic, calling the policies proposed to contain the epidemic and its consequences for the economy inadequate. Shevtsova (2020), the authoritative Russian political scientist, has been very critical of Putin's crisis management. She believes that the Coronavirus has exposed the

shortcomings of the Russian system from top to bottom and has rendered the system of state power inefficient. The Kremlin has avoided urgent measures such as declaring a state of emergency, and instead of implementing quarantine practices, has declared non-working weeks by state officials. According to Shevtsova, most of the support is intended for state-owned industries, including companies affiliated with interest groups with close ties to the Kremlin. Russian economist Sergei Guriev (2020) similarly highlights the late response to the epidemic, arguing that government support packages were too small. This package includes 0.3% of GDP. Small and medium-sized companies and households received a small portion of this assistance. The government's response to the crisis has been delayed and the political leadership has not used its vertical power as expected.

6. Conclusion

The crisis caused by COVID-19 has directly and indirectly affected all countries in the world, governments, and all human beings. The Russian Federation can be considered one of the countries that has suffered heavy losses. Russia has simultaneously experienced not one, but two crises: in addition to the outbreak of the virus, there has been a catastrophe in the global oil market and a political crisis. The political economy of the Coronavirus crisis in the Russian Federation is common to the whole world and has its own characteristics. First the level of production decreased and then income levels and consequently taxes also declined. From this place, problems related to economic growth and budget deficit have arisen.

This article examined the changing macroeconomic variables of the Russian Federation throughout the COVID-19 pandemic.

Russia's economy has been hit by two channels: the oil shock and the Coronavirus pandemic shock. Although the Russian government has taken measures in various areas of social, economic and health, due to the energy-oriented economy of the country, the Corona crisis has caused a lot of damage to this country.In a concluding remark, Russia needs to reduce the government's share of the economy and increase competition in order to regain sustainable economic growth and mitigate the effects of shocks from the Coronavirus in the long run. This requires creating equal opportunities and better management of state-owned companies. In other words, despite developments in areas such as the digital economy, the lack of coherence in Russia's vertical power makes the conditions for any change difficult. Despite the fact that this paper has significant contributions to the existing literature, it suffers from various research limitations such as lack of fresh data. Therefore, given the limitations of access to up-to-date reports on various indicators related to COVID-19, and the novelty of this epidemic, it is suggested that the future research considers fresh quarterly or monthly data of variables to explore the exact impacts of COVID-19.

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