



The COVID-19 Pandemic and Crisis as a Source of Global Risks to Sustainable Development

Irina S. Zinovyeva , Elena A. Barmina , Larisa V. Shabaltina , and Svetlana Yu. Soboleva

Abstract

Modern society was not ready for the negative impact and consequences of the COVID-19 pandemic. Apart from a high level of incidence and dissemination of the coronavirus infection and its negative effect on the health and life of people, the pandemic created threats to almost all spheres of life activities and sectors of the economy. It became a serious challenge for companies, sectors and entire countries, which were not able to deal with its consequences for a long time. Logistics supply chains were destroyed, many companies closed and entire spheres, e.g., tourism, faced a threat of disappearance. The influence of the COVID-19 pandemic and crisis has a global character. Analysis of the causes, consequences and measures of the fight against the pandemic requires the efforts of various specialists. The scientific novelty of this research lies in the systematisation of the specifics and characteristics of the global risks of the COVID-19 pandemic and crisis to sustainable development at the global level.

Keywords

Global risks · Sustainable development · COVID-19 pandemic and crisis · GDP · International coordination

JEL Codes

D81 · E03 · E41 · F02 · F29 · O19

1 Introduction

The coronavirus epidemic, which suddenly appeared at the end of 2019 and instantly spread to most countries, provoked a global and the largest economic crisis in human history and had an extremely negative impact on socio-economic processes in the world. Due to the pandemic measures and bans imposed, global production fell by an unprecedented 4.3% in 2020 (World Bank, 2021), and established national lockdowns inspired the collapse of the consumer market and transformed the consciousness of a large part of the population. The deep emotional shock caused by coronavirus infection has forced the population and the authorities to reconsider development priorities and radically change the assessment of risks and challenges facing society in the current environment, bringing to the fore the task of reducing morbidity and saving lives. And if in the “pre-COVID-19” period the main life risks were considered manageable, the COVID-19 crisis clearly showed that, despite the relatively high level of spiritual and technical development of mankind, the world community has so far turned out to be neither technologically nor psychologically ready to adequately and effectively resist the threat of such scale, and the measures taken to combat COVID-19 have caused much greater damage to the socio-economic sphere than the potential direct damage from morbidity and mortality of the population infected with the coronavirus.

Sustainability of development at the global scale is reflected in the stable growth of world GDP, increase in social standards and reduction of environmental pollution. Global crises do not start from separate socioeconomic precedents of the national scale. They consist of the problematic aspects in each sphere, which are manifested most negatively during the emergence of circumstances and factors that

I. S. Zinovyeva (✉)

Voronezh State University of Forestry and Technologies named after G.F. Morozov, Voronezh, Russia

E. A. Barmina

Vyatka State University, Kirov, Russia
e-mail: ea_barmina@vyatsu.ru

L. V. Shabaltina

Plekhanov Russian University of Economics, Moscow, Russia

S. Y. Soboleva

Volgograd State Medical University, Volgograd, Russia

lead to the impossibility of their further restraining. During the COVID-19 pandemic, price collapse in commodity markets led to the reduction of the GDP of countries that export oil, natural gas, metal and agricultural products (World Bank, 2022b). These countries face the problems of resource price fluctuations regardless of crisis; but global crisis phenomena are a catastrophe for their economies. Countries' unpreparedness to deal with global crises leads to a quick growth of unemployment, which, in its turn, leads to an increase in social tension. The lack of human resources' adaptability to the change of labour activities makes people who are least mobile and not oriented toward the acquisition of new skills and knowledge very vulnerable in the case of new socioeconomic challenges. The entrepreneurial sector, which traditionally functions with the use of external financing, faces the risks of growth of credit interest rates and, accordingly, the absence of prospects for development. Accumulated environmental problems during the mass growth of unemployment and closure of companies due to bankruptcy might seem less important – which is also a threat.

On the other hand, the experience of dealing with global crises allows forming new practices in the sphere of state management and entrepreneurial activity, to implement the Sustainable Development Goals. These practices may be adaptable under the conditions of global crisis phenomena in the world.

2 Methods/Literature Review

The issues of the impact of the COVID-19 pandemic and crisis on global challenges to sustainable development began to be researched right after the appearance of this global threat.

In (Mou, 2020), the authors perform a comprehensive substantiation of the connection between globalisation and mass dissemination of the COVID-19 pandemic, with the evaluation of the processes of dissemination of infection, which many problems for the functioning of economic sectors in the usual regime. The authors of (Kolahchi et al., 2021) analyse sectoral changes connected with the negative influence of the dissemination of the COVID-19 pandemic, in particular in the mining industry, due to the reduction of demand for fossil resources, and in tourism (with the emphasis on the closure of borders and social distancing requirements), financial sphere and air transportation.

Shang et al. (Shang et al., 2021) presented a comparative analysis of the stability of the capitalistic system and the system that is based on comprehensive state regulation in the face of global crisis challenges. The advantages of the latter are proven, with the analysis of effective support for the social sector.

Priya et al. (Priya et al., 2021) is devoted to the study of the effects of the COVID-19 pandemic on the world economy, energy sector and climate protection. The authors presented results that showed that the pandemic had a destructive effect on mankind, industrialisation and sectors of the economy connected with resource production and export. Tian and Li (Tian & Li, 2022) described problems and drawbacks of globalisation processes that were manifested during the pandemic and focused on the necessity for international coordination in the resolution of a range of economic and social problems.

Comparing the current coronavirus pandemic with an outbreak of SARS, Zandi (Zandi, 2020) points to the higher prevalence of coronavirus but believes that China's costs in both cases will be approximately the same. This optimism is due to the significantly larger resources that the Chinese government intends to use to stabilize the economy. Beck (Beck, 2020) argues that the adverse effects of solvency in the financial system are unlikely to be detected immediately, so there will be time to prepare informed decisions.

The structure of our study consistently includes a review of estimates and empirical justifications for the negative impact of pandemics on the economy; analysis of the economic consequences of COVID-19, conducted in the world studies; identification of acute problems arising from the pandemic, and justification of further research aimed at developing measures to mitigate its negative economic effects.

3 Materials

Studies show a high degree of heterogeneity of infectious diseases that can become epidemics (in terms of transmission, prevention, treatment and short-term and long-term economic consequences), so each case of a pandemic is unique in terms of its paralyzing impact on economic systems.

Bloom and Canning (Bloom & Canning, 2006) point out that often the direct costs of pandemics are obvious, but the long-term are not. Prevention of pandemics requires overcoming some obstacles, as well as responding to the epidemic after its occurrence. From our point of view, on a global scale, long-term vulnerability to pandemics will decrease with increasing development standards, but increasing globalization may contribute to the emergence and wide-spread of pandemics.

Researchers at Harvard University point to the non-trivial economic risks of pandemics and the serious consequences for the economy, even in cases where morbidity and mortality are relatively low; for example, during the Ebola virus disease in Liberia in 2013–2014, GDP fell by 8% (Bloom et al., 2018). The economic consequences of pandemics are

delayed, which is partly due to the uneven distribution of resources. Thus, pharmaceutical companies benefit from vaccine production, while companies providing life insurance and health insurance, on the other hand, incur the highest losses in the short term.

We believe that as climate change and population density in the cities of least developed countries due to deteriorating demographics, epidemics will become more common, indicating the need to incorporate this factor into the model of economic growth and take it into account in conceptualizing and developing economic policy measures.

Given the high cost of research and development of vaccines with significant uncertainty about the payback of these costs (due to the low probability of demand for individual vaccines, the likelihood that the epidemic will occur and, more importantly, recur), pharmaceutical companies are in no hurry to invest in. In other words, “the interest in making a profit is inconsistent with the social interest in minimizing the risk of spreading these diseases” (Bloom et al., 2018). Therefore, it is necessary to develop a conceptual framework for international cooperation that will increase preparedness for the epidemic at least at the level of the formation of centralized stocks of vaccines. We believe that international cooperation has an advantage over national measures, as many countries (now developed) will be in particular need of measures to combat the epidemic, and the global public good called “living without fear of pandemics” should motivate both international cooperation and distribution of cost to combat pandemics between countries.

4 Results

Let us consider the dynamics of change in real GDP for 2019–2022 and the forecast for 2023–2024 (Table 1).

It should be noted that traditionally during booms there is a tendency to displace real economic activity. As a result, resources are distributed unevenly during crises, after which the economy must reorient to more productive sectors and companies, which is often hampered by credit crises and deflationary pressures. These cycles also widen the demand gap, increasing inequality, and austerity measures taken in

Table 1 Dynamics of change in real GDP (as a percentage compared to the previous year)

	2019	2020	2021	2022	2023	2024
World	2.6	−3.3	5.7	2.9	3	3
Advanced economies	1.7	−4.6	5.1	2.6	2.2	1.9
United States	2.3	−3.4	5.7	2.5	2.4	2
Euro area	1.6	−6.4	5.4	2.5	1.9	1.9
Japan	−0.2	−4.6	1.7	1.7	1.3	0.6

Source: Compiled by the authors based on (World Bank, 2022a)

response to the crisis, are making most households poorer, widening the gap with the super-rich.

The historical experience of major epidemics and natural disasters convincingly shows that short-term economic losses can be significant. As indicated by (Smith et al., 2019), there are already many cases of the so-called “multisectoral” impact of outbreaks of infectious diseases, which, in addition to the health care system, cover such segments as tourism and travel, trade and transport, and environmental services.

A direct sign of the pandemic’s impact on the economy is the loss of consumer and investor confidence. No less significant is deflation of assets, weak aggregate demand, rising debt burden and uneven distribution of household income.

The analysis of the specialized literature allows systematizing and allocating key channels of destructive economic consequences of a coronavirus:

On the Demand Side Decreased incomes combined with changes in consumer attitude against possible layoffs will negatively affect private enterprises, especially in the services sector (tourism, catering, entertainment industry). Risks and uncertainty as a result of the pandemic lead to a reduction in household consumption, as savings are postponed “on a rainy day”. Classic monetary policy can address the traditional (Keynesian) effects of the crisis, but in the current situation, as a result of the policy of “Quantitative Easing” and lower interest rates, the growth of aggregate demand is likely to be moderate, as countries are overloaded with debt and new incentives there is no growth in effective demand. In addition, in a pandemic, the demand (and costs) of households for basic necessities are formed, which is an additional factor of uncertainty with the demand and solvency of households in the short term.

From the Supply Side The sudden production halt in the most epidemically affected regions creates a narrow global value chain, and the duration and scale of COVID-19 suggest that stocks that could temporarily support supply have already been depleted. Mass closures of enterprises with disruption of global value chains due to a lack of intermediate resources are possible even in areas that are weakly prone to the spread of coronavirus.

Exports of raw materials and finished products will begin to decline sharply, affecting income and employment. As a result of the pandemic, large corporations may default (primarily tourism and airlines are likely to be affected by other industries), leading to a freeze on liquidity (as in 2008) and a devaluation of investment portfolios in the most sensitive sectors. According to experts, the liquidity crisis is causing losses primarily to peripheral countries that have their currency, the exchange rate of which will collapse, encouraging the jump into reserve currencies - the euro and the dollar.

From the Financial Stability The growing risks of COVID-19 and the jump to liquid assets in the context of this risk are already adjusting the stock, bond and currency markets, which has led to their sharp volatility. In terms of these risks for 2008–2019, the total amount of debt (debts of the private, public and financial sectors) increased from 152 to 255 trillion dollars, which is twice the world GDP (World Bank, 2021). The developing countries will be in the most critical situation: countries exporting raw materials with high levels of debt and human reserves, which tend to decline. However, after the crisis of 2008, the corporate sector in developed countries was actively increasing debt.

Thus, the shortage of demand in the global economy due to rising income inequality in the context of COVID-19 is complemented by supply shocks (as businesses face serious difficulties due to the disruption of global value chains) and financial instability, increased unresolved debt crises in developing countries due to global recession of 2008.

5 Conclusions

It is also important to evaluate the impact of COVID-19 in the context of economic globalization, assuming that a growing pandemic may reinforce nationalism, and isolationism and promote a retreat from economic globalization. But in contrast, the pandemic could lead to a surge in international cooperation, similar to the post-World War II period. Anyway, COVID-19 can be described as a crisis of global governance and globalization, the perception and role of which will change significantly in the future. As a result of 50 years of interconnected growth, the world has been open to cross-border flows of goods/services, capital, citizens, and data, but as a result, the world economy has become vulnerable and fragile. Such a system is particularly vulnerable to epidemics, natural disasters and other disruptions, as the most important functional roles in this system are over-concentrated and the shocks experienced by centres (such as China or the US) can paralyze the world economy: this is why the 2008 recession was so destructive, and COVID-19 could have more serious economic consequences.

The COVID-19 pandemic has for some time overshadowed all the world's concerns and even existential challenges. The attitude to the issue of sustainable development has moved to the zone of "delayed demand". Analysis of the considered consequences of the pandemic on the global economy and sustainable development may allow for avoiding similar destructive effects in the future. This will require regional and global projects of cooperation in various spheres, which would involve quick territorial reactions to

certain challenges. International partnership in this direction has large perspectives in preventing new crises, due to the use of the leading tools of the digital economy (forecasting, Big Data analytics, robotization, etc.). Partner countries may participate in the creation of new methods of diagnostics and prevention of virus dissemination that would allow avoiding the closure of international borders. The focus on such measures would allow supporting economic growth even in the face of new challenges and risks caused by mutations of COVID-19 or new viruses.

References

- Beck, T. (2020). Finance in the times of coronavirus. *Economics in the Time of COVID-19*.
- Bloom, D. E., Cadarette, D., & Sevilla, J. P. (2018). Epidemics and economics. *Finance and Development*, 55(2), 46–49.
- Bloom, D. E., & Canning, D. (2006). Epidemics and economics. PGDA working paper, 9. Program of the Global Demography of Aging, p. 27.
- Kolahchi, Z., De Domenico, M., Uddin, L. Q., Cauda, V., Grossmann, I., Lacasa, L., Grancini, G., Mahmoudi, M., & Rezaei, N. (2021). COVID-19 and its global economic impact. *Advances in Experimental Medicine and Biology*, 1318, 825–837. https://doi.org/10.1007/978-3-030-63761-3_46
- Mou, J. (2020). Research on the impact of COVID19 on global economy. *IOP Conf. Series: Earth and Environmental Science*, 546, 032043. Accessed January 29, 2023, from <https://iopscience.iop.org/article/10.1088/1755-1315/546/3/032043/pdf>.
- Priya, S., Cuce, E., & Sudhakar, K. (2021). A perspective of COVID 19 impact on global economy, energy and environment. *International Journal of Sustainable Engineering*, 14(6), 1290–1305. <https://doi.org/10.1080/19397038.2021.1964634>
- Shang, Y., Li, H., & Zhang, R. (2021). Effects of pandemic outbreak on economies: Evidence from business history context. *Frontiers in Public Health*, 9, 632043. <https://doi.org/10.3389/fpubh.2021.632043>
- Smith, K. M., Machalaba, C. C., Seifman, R., Feferholtz, Y., & Karesh, W. B. (2019). Infectious disease and economics: The case for considering multi-sectoral impacts. *One Health*, 7, 100080. <https://doi.org/10.1016/j.onehlt.2018.100080>
- Tian, S., & Li, X. (2022). COVID-19's economic impact and countermeasures in China. *COVID-19's Economic Impact and Countermeasures in China*, 15, 291–305.
- World Bank. (2021). *World development report 2021: Data for better lives*. World Bank. <https://doi.org/10.1596/978-1-4648-1600-0>
- World Bank. (2022a, June). *Global economic prospects*. World Bank. <https://doi.org/10.1596/978-1-4648-1843-1>
- World Bank. (2022b). Impact of COVID-19 on Commodity Markets Heaviest on Energy Prices; Lower Oil Demand Likely to Persist Beyond 2021. Accessed January 29, 2023, from <https://www.worldbank.org/en/news/press-release/2020/10/22/impact-of-covid-19-on-commodity-markets-heaviest-on-energy-prices-lower-oil-demand-likely-to-persist-beyond-2021>.
- Zandi, M. (2020, February). *Coronavirus: The global economic threat, Moody's analytics*.