

## **GCPMED 2020**

### **Global Challenges and Prospects of the Modern Economic Development**

#### **DIGITAL ECONOMY IN RUSSIA: THREATS AND PROSPECTS**

I. F. Mezhman (a), A. V. Levchenko (b), Yu. Yu. Kareva (c)\*  
\*Corresponding author

(a) Povolzhskiy State University of Telecommunications and Informatics, L. Tolstoy Str., 23, Samara, Russia,  
mezhman@psati.ru

(b) Samara State University of Social Sciences and Education, Maxim Gorky Str., 65/67, Samara, Russia,  
lavsport\_67@mail.ru

(c) Samara State University of Economics, Soviet Army Str., 141, Samara, Russia, Kareva-19911987@mail.ru

#### **Abstract**

In the modern world, information technologies play an important role in all spheres of human life. With their development and distribution, the economies of many countries have changed significantly: a large number of economic and financial processes began to be carried out in electronic format. And with the advent of the Internet, the process of integrating the virtual world and the real has intensified. These innovations affect the Russian economy, which led to a number of threats that have arisen with the development of information technologies, without the elimination of which the country's economy could incur heavy losses and thereby lose competitiveness in the world market, which will also have a negative impact on the welfare of the country's population. However, the use of these technologies in the economy has not only disadvantages, but also advantages. So, thanks to the constantly modernizing information resources, a number of prospects are also opening up for the digital economy of Russia, which can help to normalize the situation in the country's economy and will contribute to its further improvement. That is why this article examines the threats and prospects for the development of the digital economy, as well as their impact on the welfare of the country.

2357-1330 © 2021 Published by European Publisher.

*Keywords:* Digital economy, digitalization, prospects, threats



## **1. Introduction**

At the end of the 20th century, mankind has embraced the process of globalization associated with the introduction of information technology. Since then, IT technologies have become the main resources in all general business processes. Every day they were introduced into various spheres of human life. And the economy is no exception. The use of contactless payments, the development of artificial intelligence, and production optimization are just a few examples of the digital economy. The use of information technologies in this area has contributed to the improvement of the quality of life of the population, as well as the increase in the efficiency of economic processes, which aroused considerable interest in the study and further use of the digital economy. That is why this topic is one of the most relevant today.

## **2. Problem Statement**

During the study of such a phenomenon as the digital economy, the following tasks were put forward:

1. Consider the threats that have arisen in the process of digitalization of the economy.
2. Analyze the impact of threats on the country's economy and living standards of the population.
3. Consider the prospects for the development of the digital economy.
4. Analyze the effectiveness of the applied perspectives.
5. Compare the impact of threats and prospects on the development of the digital economy.
6. Draw conclusions based on the research conducted.

## **3. Research Questions**

The article covers the following issues:

1. What threats arise in the process of digitalization of the economy?
2. How strongly do they affect the efficiency of economic processes?
3. What are the prospects for the development of the digital economy?
4. What impact do they have on the country's economy and the standard of living of the population?
5. What is the dominant position: threats or prospects?
6. Are the emerging prospects capable of neutralizing emerging threats and promoting the development of the digital economy?

## **4. Purpose of the Study**

This work is built on the principle of studying the impact of certain characteristics on the digital economy of Russia. One of these characteristics are threats that must be identified during the disclosure of the topic. This, in turn, contributes to the identification of problem areas of the country's digital economy. Another characteristic is the prospects for the development of the digital economy. They are conditioned by the possibilities of effective use of certain information resources in the future. This leads to the development of the digital economy, improving the way it operates and eliminating emerging threats.

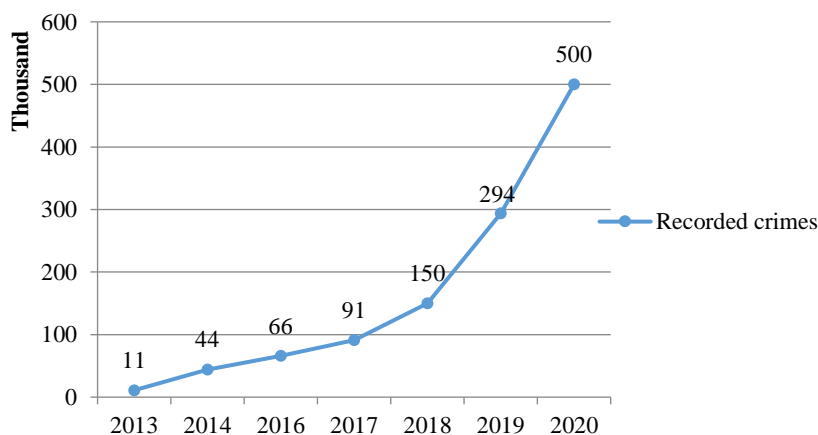
Therefore, the purpose of this work is to study the impact of threats and prospects on the country's digital economy, as well as to study their interaction with each other.

## 5. Research Methods

The main research method is the theoretical analysis of data presented in the specialized literature. It consists in finding and studying various sources of information. When disclosing the topic, about 50 literary sources of domestic and foreign authors were studied. The main ones are given in the list of used literature. Also, in the course of the study, quantitative methods were used, namely, the methods of mathematical statistics generally accepted in the practice of such studies. They are expressed in the form of statistical data, on the basis of which a research graph of the dynamics of cybercrime in Russia was built. All statistics were taken from official sources, which are listed in the bibliography. Thus, the integration of these methods made it possible to most fully reflect the problem under study.

## 6. Findings

Despite the great interest in digitalization in the economic sphere, a number of threats emerge from the start of the use of IT technologies. One such threat is the increase in cybercrime, the rise of which can be seen in Figure 1. Due to the digitalization of many processes, the risk of obtaining confidential information by fraudsters increases, that is, the data of bank cards, financial transactions, and corporate data are at risk. In addition, cases of extortion, espionage, and cryptojacking have become more frequent (Golovinov & Pogorelov, 2016).



**Figure 1.** Dynamics of cybercrimes in Russia for the period 2013-2020

Source: authors.

According to the graph above, you can see that the number of cybercrimes is growing every year. In addition, in the first quarter of 2020, their number increased by 83.9 % compared to 2019 over the same period. And if in 2019 the losses of the economy amounted to 2.5 trillion rubles, then in 2020 they will amount to 3.5 trillion rubles, it is also noted that if growth continues, then losses in 2021 could reach 7 trillion rubles (Rosbalt, 2020).

Another important threat is the vulnerability of the information system of the digital infrastructure, which is expressed in malfunctions associated with the operation of IT technologies. These include problems with contactless payments, various failures in electronic queue systems, and blackouts. In addition, there is a decrease in the country's economic and technological security, which is caused by an increase in technological dependence on foreign suppliers, which also makes Russia a catching-up country and deprives of prospects for innovative development, thereby reducing its competitiveness in the world market (Matthess & Kunkel, 2020).

In addition, environmental problems are aggravated. A large amount of "e-waste" is produced annually, as the technology quickly becomes obsolete, which leads to problems with its disposal. And with the development of the digital economy, this problem is only getting worse (Volkova et al., 2019).

I would also like to note such a threat as the eradication of certain types of professions that have become unclaimed as a result of the automation of their work processes, which also affected the country's unemployment rate (Grigoli et al., 2020). Thus, the threats arising against the background of the development of the digital economy can have a serious impact on the national security of the country and the standard of living of the population. However, despite all the threats, one should not forget about the opening prospects from the use of the digital economy. These prospects include strengthening information security. It is planned to develop solutions that will protect the basic elements of the IT infrastructure from various threats. For this, interaction will be established between national and research companies, as well as financial institutions.

In 2019, Russia took 12th place in the cybersecurity rating, however, with the introduction of promising solutions, it plans to reach a new level and take 10th place in 2020, and already in 2025 - 8th place (TASS, 2017). Digital health is also a promising area, the development of which can significantly improve the quality of medical services. It is assumed that in the near future most medical institutions will be equipped with elements of digital health care ecosystems, in addition, it is planned to develop intelligent systems for making medical decisions based on information received from patients, which will significantly speed up the process of providing medical services (Lowery, 2020).

Another promising area is the development of blockchain technologies, the Internet of things and big data. Thus, blockchain allows to reduce the number of online frauds and thereby contributes to an increase in transactions related to the lease and purchase and sale of real estate in an electronic format (Lohmer & Lasch, 2020). According to forecasts, by 2022, the share of these transactions should increase to 50 % of the total volume (TASS, 2017).

As for the Internet of things, it can be used to predict the occurrence of various breakdowns in the industry, which will significantly reduce the cost of equipment repairs and maximize the profit of enterprises. And on the basis of the use of big data, large arrays of non-grouped data are processed, thereby providing the ability to build the opening hours of various institutions, as well as the movement of public transport. No less promising areas are also research and development of digital platforms that will allow educational institutions to train specialists in the field of digital technologies, as well as, due to their availability for all citizens and organizations, will contribute to the improvement of skills and retraining of workers, thereby reducing the possible increase in the unemployment rate.

Based on the threats that were considered, it can be seen that cybercrimes, which are growing every year, have the greatest impact on the country's digital economy. In the last three years alone, the growth rate of cybercrimes has been over 50 % annually. This trend negatively affects the country's budget, increasing its financial losses. In addition, due to this, the confidence of a part of the population in the implementation of economic transactions in electronic format is reduced, which calls into question the very existence of the digital economy in Russia and makes it a less competitive country in comparison with foreign countries where the level of use of information technologies in the economy is quite high. In addition, it is necessary to note the threat of an increase in the unemployment rate, which may increase significantly with the further digitalization process, replacing many production processes with automated systems.

However, attention should be paid to the considered prospects of the digital economy. Thus, one of the main prospects is to strengthen information security, the implementation of which will allow people to safely carry out economic transactions using IT technologies and will contribute to the advancement of Russia in the rating of the Global Cybersecurity Index. The prospects of the digital economy also open up new directions, such as blockchain, big data, the Internet of things, which ensure the processing of big data in a short time, make production processes more efficient and contribute to the improvement of economic and financial transactions, making the digital economy one of the most demanded directions for the development of digitalization. In addition, with the development of information processes, new types of professions are opening up, which help to reduce the unemployment rate in the country, providing the labor market with new jobs.

## **7. Conclusion**

In the course of this study, the main directions of research activities in the field of digitalization of the economic space of Russia were established. These include:

- directing significant efforts to reduce cybercrime;
- ensuring a level of competition in the digital economy comparable to foreign countries;
- limiting the growth of the unemployment rate;
- development of new directions in the digital economy;
- an increase in the number of digital educational platforms that facilitate the development of new professions.

Naturally, within the framework of this research work, it is impossible to give an accurate assessment of the use of the emerging prospects, because they are at the initial stage of formation. However, we examined a sufficient amount of data that allowed us to predict the effectiveness of the implementation of certain prospects and determine their possible impact on the country's digital economy. The further research process can be based on the search for ways to eliminate the emerging threats, as well as a detailed study of prospects and the development on their basis of a plan for the further implementation of the digital economy in people's livelihoods, which will embody the best features of the emerging prospects and will contribute to the elimination of problem areas that have arisen in the initial stage of introducing the digital economy. The study made it possible to summarize: the threats and risks that arise in the process of introducing the digital economy into various spheres of human life cannot but cause negative consequences.

However, with the development of IT technologies, the digital economy also opens up various prospects, which are aimed not only at the further process of modernizing economic processes, but also at eliminating the threats arising from digitalization, therefore, every year the digital economy is rapidly gaining momentum, increasing the competitiveness of the country's economy and the well-being of the population in general.

## References

- Golovinov, O. N., & Pogorelov, A. V. (2016). Cybercrime in the modern economy: State and development trends. *Innovation Economics Issues*, 6(1), 73-88.
- Grigoli, F., Koczan, Z., & Topalova, P. (2020). Automation and labor force participation in advanced economies: Macro and micro evidence. *European Economic Review*, 126, 103443.
- Lohmer, J., & Lasch, R. (2020). Blockchain in operations management and manufacturing: Potential and barriers. *Computers & Industrial Engineering*, 149, 106789.
- Lowery, C. (2020). What is digital health and what do I need to know about it? *Obstetrics and Gynecology Clinics of North America*, 47(2), 215-225.
- Matthess, M., & Kunkel, S. (2020). Structural change and digitalization in developing countries: Conceptually linking the two transformations. *Technology in Society*, 63, 101428.
- Rosbalt (2020). The losses of the Russian economy from cybercrime are estimated. <https://www.rosbalt.ru/business/2020/06/18/1849615.html>
- TASS (2017). Rostelecom provides cyber security for the seven largest Russian banks. <https://tass.ru/ekonomika/4277508>
- Volkova, A. A., Plotnikov, V. A., & Rukinov, M. V. (2019). Digital economy: Essence of the phenomenon, problems and risks of formation and development. *Management Consulting Journal*, 4(124), 38-49.