



PROBLEMS AND PROSPECTS OF DIGITAL ECONOMY DEVELOPMENT

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Article history:	Abstract:
Received: 11 th April 2025	<i>The article examines the world experience of digital economy development. The problems of converting information from product to product and the socio-economic consequences of this process require separate analysis and discussion. The development of digital technologies will be essential for achieving almost all economic and social goals and will affect all countries, industries and stakeholders. The digital economy requires a wide range of new knowledge and skills, significantly new social protection measures.</i>
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At present, humanity is entering one of the most important periods of its history. The industrial era relied on expanded reproduction and involvement in economic turnover of all available resources. But this stage of the development of the world economy is coming to an end. Until recently, industry required the creation of giant enterprises and social structures in order to fully exploit the economies of scale. Mass character, standardization, interchangeability became distinctive features of the second half of the 20th century. In this situation, the importance of technology increases. The possession of high technologies, especially leadership in them, means a strategic advantage in the modern world. New advanced production technologies, for example, robotics, 3D printing, significantly reduce the share of labor costs in total costs, making it expedient to return some foreign productions of multinational companies to the parent jurisdiction or to neighboring states.

The process of digital transformation of the world economy is uneven and different countries of the world are exposed to it to varying degrees. As the world becomes more and more decentralized politically and economically, consumers, services, technological processes and businesses continue to digitally integrate. The simultaneous growth of digital integration and economic nationalism are transforming the economic, political and business environment, creating a completely new model of the development of the world economy, which, in particular, is characterized by a slowdown in the dynamics of international trade in traditional goods and services as opposed to information and IT services.

Among the economists who note new trends in the manifestation of information technology should be named R. Baldwin [1]. In his book "Big Convergence: Information Technologies and the New Globalization", he analyzes the process of maturation of the "new" globalization, which is based on innovative information and communication technologies, which significantly reduced the costs of cross-border flow of technologies and ideas, their application and adaptation abroad, which allowed to divide production into separate stages and led to the creation on this basis international production and technological systems - global value chains [1]. According to R. Despite the growing problems of the international trading system, the emergence of the trend of deglobalization and many other negative trends, the process of globalization is not fading, but is acquiring new features and forms. One of them is a sharp leap in the development of new technologies, including "disruptive" ones, largely transforming the established industrial and trade paradigm[2]. The key role here is played by technologies that make it possible to step over almost the last obstacle to entering a new stage of globalization, thanks to a significant reduction in the cost of people performing their work functions in geographically remote places (face-to-face costs). Technologies of cloud computing, mobile Internet, telepresence, remotely controlled robotics, virtual and augmented reality, already today provide an opportunity to perform many work tasks remotely, abroad, without physical presence in the office[3].

V.B. Kondratiev identifies the following three elements on which each of the stages of globalization is based:

- modern technologies applied and adapted by one or several countries to increase productivity and, accordingly, production volumes;
- one or more countries acting as an economic "pole";
- a convenient mechanism of global governance that stimulated international flows of trade and capital, an increase in GDP due to stable and understandable institutional rules [4]



Researcher T. N. Yudina believes that the digital economy is directly related to the intensive development of information and communication technologies (ICT), the beginning of the process of informatization of the second generation, which is the basis of the emerging VI technological order [5].

D. V. Evtyanova, M. V. Tiranova mean by the digital economy "automated management of the economy based on advanced information technologies; based on effective information management of the production system" [6].

The main basic components of the digital economy from the point of view are the following:

- infrastructure;
- electronic business transactions;
- e-commerce [7].

E-commerce is the process of delivering goods via the Internet. Currently, e-commerce represents the largest segment of the market [8]. Digitalization leads to the growth of the global economy, for example, according to the estimates of the authoritative consulting company McKinsey Global Institute, the use of the latest digital technologies by 2025 will lead to an increase in global gross domestic product (GDP) by 3-6 trillion US dollars [9]. According to the company's estimates, this growth will depend on 12 types of high technologies (mobile Internet, advanced robotics, cloud technologies, renewable energy sources, Internet of Things (IoT) - wireless data, mobility and artificial intelligence, etc. The research methodology is based on the methodological approaches of foreign and domestic scientists to the problems of development and the impact of digital technologies on global economic growth,

As world experience shows, the development of the digital economy is an objective process. The digital economy is usually understood as any economic activity related to the production, sale and consumption of goods and services using digital technologies, as well as using e-commerce, the Internet and the Internet economy.

But in addition to the undoubtedly advantages in the formation and development of the digital economy, this also causes a number of problems. First of all, the creation of more efficient technologies and the availability of information for its processing and implementation should reduce transaction costs (costs associated with the search and processing of the information found) and increase the flexibility and efficiency of the economy. But it is also important if the old technologies of working with information do not die, but the protection of information, the assessment of its reliability, etc. This may not happen if the share of transaction costs does not increase due to increased costs. In addition, the transfer of business operations to online mode sometimes significantly reduces or even eliminates the need for agents. It is also necessary that the economics of mass production lead to the creation of individuals that customers order through online mode. Another problem is that, like technological innovations, digital technologies need specialists in new professions and new competencies, and numerous groups engaged in traditional activities do not work, which causes resistance and protests. The shortage of professionals, such as programmers, marketers, analysts and others, does not compensate for the elimination of many other jobs and leads to an increase in income differentiation and new poverty.

The security of data from external sources is of particular interest, since data has traditionally been considered reliable and trustworthy if it has been confirmed from three independent sources, the creation of many independent sources of information is already a technical problem today. In general, the problems of converting information from product to product and the socio-economic consequences of this process require separate analysis and discussion.

The digital economy is changing the economy as a whole. For example, there may be an increase in the number of robots trading on the stock market. Robots can react to market changes much faster than humans, because they include the most advanced algorithms for calculating profitability and risks. However, is there a real reduction in uncertainty and risks in the financial markets in the future? It is difficult to give an affirmative answer here, because since the methods of working with information technologies and decision-making technologies will be the same for many users, the question arises about the possibility and even inevitability of a "crowd effect" or, in other words, panic caused by the situation in the markets, especially an unexpected change in the financial situation.

Currently, large companies around the world understand the realities of digitization, focus on cloud technologies and modernize their network infrastructure. Digitalization and the formation of the digital economy create absolutely important opportunities for consumers, the state and society. Among the world's leading countries in maintaining the digital economy, we can single out Singapore, China, South Korea, New Zealand and Deca. These countries have taken important initiatives on digitalization and the formation of high technologies.

For example, in 2014, Singapore justified the concept of a "smart" nation and invited the business community to implement the aforementioned concept. The concept of a "smart nation" is an initiative of the state to improve the quality of life through the introduction of digital technologies into the daily life of the population. To implement this concept, not only large companies, but also small and medium-sized enterprises were involved in the process. Smart sensors are installed in city blocks - they monitor electricity, water and other measurements in real time. The data



obtained will help the government reduce water supply costs and reduce the city's dependence on Malaysia, from where it imports fresh water. The sensors also help citizens track resource spending and give instructions on how to reduce household spending. This is the first thing that the program participants strive for, first of all, to solve problems related to housing, healthcare (the patient receives help without leaving home, communicates with the doctor remotely) and the transport network (unmanned vehicles and buses). Together, all these systems form a single ecosystem called Virtual Singapore (residents can track traffic on the roads in real time, view data from security cameras, and so on). [7] The development of digital technologies will be essential for achieving almost all economic and social goals and will affect all countries, industries and stakeholders. Currently, there is a huge gap in the world between countries with weak development of Internet communications and countries with a fairly high level of digital communication. For example, in less developed countries, only one in five people use the Internet, while in developed countries four out of every five people have access to the Internet. This is just one example of the digital divide. In other industries, such as digital data applications and advanced technology opportunities, this gap is much larger.

For example, in Africa and Latin America, less than 5% of all leased data centers in the world are located together. Without taking the necessary measures, this gap will only exacerbate income inequality. Therefore, it is necessary to understand how this evolution can affect developing countries in terms of value creation and benefits, and what needs to be done to improve the current situation.

Digital platforms are playing an increasingly important role in the global economy. In 2017, the total value of companies based on the platform was more than \$ 100 million, and the total market capitalization in 2017 was more than \$ 100 million. The valuation in US dollars exceeded \$ 7 trillion. Since 2015, it has amounted to \$ 3 billion, which is 67 percent more. Some global digital platforms have gained very strong positions in certain segments. For example, about 90% of the Internet search engine market is won by Google. Facebook occupies two-thirds of the global social media market, and its platform is considered the most popular among social networks in more than 90% of countries. About 40% of the world's online retail sales are carried out through the Amazon network, and its subsidiary Amazon web services occupies about the same share of services in the cloud infrastructure [10]. At some point, advances in digital technology led to the creation of huge wealth concentrated only in a small group of people, companies and countries. Although current policies and regulations remain in place, this trend may continue and lead to a further increase in inequality. Without proper efforts, it would be impossible to bridge the digital divide, in which more than half of the world's population has only limited or no access to the Internet. For the digital economy to work for the benefit of society, it must be inclusive. New technologies, namely artificial intelligence, are inevitably associated with significant changes in the labor market, including job cuts in some sectors and the creation of new opportunities on a massive scale in other sectors. The digital economy requires a wide range of new knowledge and skills, significantly new social protection measures. At the same time, significant investments are needed to improve education and ensure universal access to lifelong learning services. [11].

CONCLUSIONS AND SUGGESTIONS

The process of digital transformation is a new stage in the development of the world economy, the main prerequisite of which is the active development and introduction of new digital technologies in all spheres of society. This process occurs unevenly, which leads to an increase in inequality: developing countries are becoming increasingly dependent on developed countries with sufficient resources for the digital transformation of their economies.

To activate the process of digital transformation of the economy, it is necessary to accelerate the transition of companies to digital business models; improve the legislative framework of the digital economy and regulatory practice, develop special programs to improve digital and financial literacy for various strata of the population.

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