

IN THE MODERN ERA DIGITAL ECONOMY IS THE BASIS FOR ECONOMIC DEVELOPMENT

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Annotation

The article explores the issues of introducing the digital economy and achieving an increase in the socio-economic potential of the country. The reasons for the accelerated informatization and computerization of all spheres of socio-economic activity are substantiated.

Keywords

digital economy, smart economy, economy, computerization, Internet

Introduction

By the beginning of the 21st century, the revolutionary impact of information and communication technologies manifested itself in a change in the way of life of people, in a new approach to education, work, in the interaction of government and civil society. Information equipment, the scale and efficiency of the use of technologies, their development and production are firmly among the most important indicators of the level of scientific and technological progress in any country.

Relevance of the research topic

The presence of an information gap between individual countries of the world became one of the most acute international problems at the beginning of this century. In fact, today it is a generalizing expression of all the previous shortcomings in the development of individual countries - in income, education, the state of the economy and different living standards of the population. Today, the

development of ICT largely determines not only the socio-economic situation of individual countries and regions, but also their future prospects.

As a result of the changes that have taken place in the world economy since the second half of the 20th century, scientists - economists, political scientists, futurologists of the West have developed a number of original and relevant concepts. In the scientific lexicon, such concepts as “information society”, “third wave society”, “technotronic society”, “knowledge-based economy”, “virtual economy”, “electronic society”, “network society”, “digital economy”. These concepts are characterized by some general ideas and provisions that allow them to be united under the name “information society”.

It is important to note that there is no single, generally valid and generally accepted concept of the information society. The study of the above concepts allows us to conclude that they are similar in content and essence. The main core of the information society is the transformation of science, knowledge, technology and information into a leading factor of production, where the organization of labor is based on high-tech ICT, information and knowledge.

Statement of a scientific problem

In the context of the active growth and spread of new information technologies, the development of social networks, the smartphone market, broadband Internet access, artificial intelligence technologies and the Internet of things, changes are taking place that transform the environment for the functioning of companies, cities, regions and countries that must adapt to the process of digitalization of the economy either conquering new niches or transforming existing ones.

Research methods

In the article, the main research methods are: collection of information and literature on the research topic from scientific articles and Internet sources; theoretical analysis and interpretation of the received information; determination of the causes and generalization of the revealed facts.

Review of the literature on the research topic

According to the definition presented in the Oxford Dictionary, “a digital economy is an economy that mainly functions through digital technologies, especially electronic transactions carried out using the Internet” [17].

According to V.M. Bondarenko, the digital economy is a holistic, systemic, complex problem of finding that model of relations between people that is compatible with the technologies of the fourth industrial revolution. R.K. Asanov points out that the digital economy is an economy based on the production of electronic goods and services by high-tech business structures and the distribution of these products using e-commerce [12].

According to A.A. Kryukova and Yu.A. Mikhaleiko, the digital economy is a segment of economic relations mediated by technological advances, the global network and information systems [13].

D.V. Evtyanova points out that the digital economy is an automated management of the economy based on advanced information technologies; a new economic structure based on effective information management of the production system within a city, region, country, economic community of several states [15].

According to the definition of A.V. Keshelav, V.G. Budanov, V.Yu. Rumyantsev, the “digital” (electronic) economy is an economy, a characteristic feature of which is the maximum satisfaction of the needs of all its participants through the use of information, including personal “[14].

R. Meshcheryakov believes that there are two approaches to the term “digital economy”: “classical” (an economy based on digital technologies, and at the same time it is more correct to characterize only the area of electronic goods and services) and “extended” (economic production using digital technologies) [16].

At the same time, in a number of studies of the following scientists, the problems of digitalization of the economy are studied: S.A. Dyatlov, V.P. Maryanenko, T.A. Selishcheva [7], G.V. Osipov [6], V.N. Yuriev [7], L.V. Lapidus [8], G.A. Titorenko [9], N.K. Mukhitdinova [10], etc.

Main results

The concept of "Digital Economy" was put into use in the 1990s and has been especially actively used by foreign scientists and international organizations in the last decade. The digital economy is based on digital technologies, where economic production is carried out using them. The fundamental pillar in its formation and development are information and communication technologies and information and communication infrastructure. The classification of the components of the digital economy sector can be presented as follows¹⁰: ICT as an industry sector; ICT as a service sector, including services that include ICT (all services that can be produced and delivered using ICT from anywhere in the world); e-initiatives (e-government, e-document management, e-commerce, e-payments, e-banking, blockchain technologies, etc.); Internet technologies (Internet content, Internet advertising, Internet games, social networks).

Today it becomes obvious that it is in the development of the digital economy that the greatest potential for the socio-economic development of the state lies. A summary of studies conducted by the World Bank, OECD, UNCTAD and other organizations¹¹ on this issue shows that there are three possible ways ICT can influence economic growth: through investment in ICT development; ICT production; use of ICT products. At the same time, ICTs have a positive impact on the economy only after reaching a certain minimum threshold for the development of this area, that is, their prevalence and use should reach a certain level. There is also a close relationship between development, the introduction of ICT and economic growth, labor productivity, increase in GDP per capita in developed countries. Research also shows that in most developing economies, the impact of ICT is achieved more slowly than in developed ones. Those countries that develop the ICT manufacturing sector achieve greater benefits and GDP growth [9].

According to the level of ICT development, countries can be classified into: those that produce knowledge, information and transfer them to other countries; provide material production on the basis of the knowledge and information transferred to them; information developing countries. The first group includes the USA, Japan, the countries of Western Europe, the Republic of Korea. In the second - innovatively catching up countries, for example, the states of Southeast Asia, China, India and others. At the same time, in terms of the development of some ICT goods and services, the formed scientific and technical potential and the availability of scientific and technical resources, China and India are between the second and first groups. The third group is based on the majority of developing economies, including the CIS countries.

One of the global trends in the development of the digital economy is the accelerated growth of informatization and computerization of all spheres of society, the implementation of electronic initiatives. Today, the information and communication infrastructure in developing countries is rapidly developing, which allows the population to have greater access to knowledge. This process is carried out through computer technology, the Internet, social networks, access to which is increasing every day [5].

We can all observe how the Internet technologies are actively developing. Global Internet Protocol-based traffic, which provides a rough idea of the scale of data flows, has grown from about 100 gigabytes per day in 1992 to 45,000 GB/s in 2017, and is expected to grow to 250,700 GB by 2025 /With. This, in turn, fuels e-commerce, which in 2017 was worth \$29 trillion, equivalent to 36 percent of global GDP.

Digital platforms are actively spreading, using data-driven business models and transforming existing sectors of the economy. Digital platforms act as mechanisms that allow different parties to interact online. In particular, technologies such as blockchain, data analytics, artificial intelligence, 3D printing, automation and robotics, cloud computing, which are used in the development of digital platforms, are actively developing. Today, the US and China account for 75 percent of all blockchain-related patents, more than 75 percent of the global open cloud computing market, and 90 percent of the market capitalization of the world's 70 largest digital platforms.

In the modern world, most scientific developments continue to be concentrated and the production of the most modern, technically complex and expensive industrial ICT products is being tested, mainly in developed countries. However, such states as China and India were able not only to

move from “catching up” to “leading” development in certain areas of ICT, but also to get a significant share of orders in the digital technology market.

While the average annual growth rate of ICT merchandise trade is increasing, their share of global merchandise trade is declining somewhat. This is due to a number of reasons, including the development of scientific and technological progress and increased competition in the world market, which helps to reduce the life cycle of the product and its cost; falling product costs due to increased participation of developing countries in the production cycle; rising prices for raw materials against the backdrop of cheaper ICT goods.

The export of ICT services is growing rapidly, with developed countries leading the way. However, unlike trade in ICT goods, the share of ICT services in world trade in services continues to show steady growth. The reasons for the growth are that, firstly, this sector of the economy, which supplies high-tech services and creates higher added value, is a key one in the digital economy. Secondly, in the conditions of the international division of labor, the importance of the information and communication infrastructure is increasing, thanks to which the quality is improved and the types of services offered are expanded. And yet, many services, thanks to the development of ICT, can now be performed outside of production, using such forms of cooperation as outsourcing and offshoring.

The provision of offshoring ICT services is becoming a new direction in the diversification of the economies of developing countries. The ICT offshoring market is expected to reach \$440 billion in 2020. Its further growth will apparently be driven by the rapid development of the Internet and information and communication infrastructure, the impact of the effects of the global financial and economic crisis, as a result of which transnational companies will be more willing to transfer part of their functions to developing countries in order to minimize production costs, as well as problems associated with the aging of labor resources. in most developed countries [8].

Spending on ICT goods and services is rising rapidly in both developed and developing countries. The share of spending is about 6.5 percent of global GDP. The largest expenditures are on communications equipment and services, due to the rapid development of high-speed broadband technologies, Wi-Fi, voice-over-Internet and video technologies. Expenditures are expected to rise further, and developing countries will have a special role to play here. This is due to the fact that they lag far behind developed countries in access to technology and knowledge, and their public policy is aimed at supporting the widespread use of ICT.

The ICT sector today has become one of the most innovative areas of the global economy. Thus, according to the OECD, the costs of companies for research and development in developed countries are 2.5 times more than in the automotive industry, 3 times - in the pharmaceutical industry and 4 times - in the chemical industry.

The share of the digital economy in global GDP is steadily growing. Depending on the definition used, the size of the digital economy is estimated by international organizations to be between 4.5 (narrow definition) and 15.5 percent (broad definition) of global GDP. The narrow definition refers exclusively to the contribution of the ICT sector (ICT goods and services), while the broad definition includes the ICT sector and all services that can be produced and delivered through ICT.

The digital economy has become a new source of growth and diversification for the economies of many developing countries. To date, Uzbekistan has achieved notable achievements in the technical parameters of ICT development, including indicators of information and communication infrastructure [10]. The country is creating a legislative, institutional environment for the development of the digital economy. Over the past few years, more than ten Decrees and resolutions of the President of the Republic of Uzbekistan have been adopted, aimed at its development [1,2,3,4]. The project "One million uzbek coders" was launched, within the framework of which it is planned to train one million programmers.

Active informatization and computerization of all spheres of society is being carried out step by step, which provides access to knowledge and information, reduces time and financial costs, promotes transparency of the process, thereby reducing opportunities for corruption. The telecommunications and Internet segments are developing. In all ministries, departments and

organizations subordinate to them, various electronic initiatives are being introduced and implemented in a short time, the ultimate goal of which is the electronic unification of the entire document flow and increasing labor productivity.

Along with this, the socio-economic parameters of ICT development, including the costs of ICT goods and services, their development, production, export, are developing, taking into account the existing potential, at an insufficiently fast pace. To solve these problems, the country conducts training in the field of IT in two specialized universities (including their regional branches), as well as in 70 professional colleges. Since 2017, a number of free economic zones have been put into operation in the country, where the production of ICT products is encouraged, and start-up projects are fully supported. A number of programs for the development of the ICT sector have been adopted in the republic, and the Ministry of Innovative Development has been created. In general, a favorable ICT ecosystem is being created that will bring Uzbekistan to a new stage of technological development, the formation of a digital economy.

This is also confirmed by the opening of the technopark MirzoUlugbek Innovation Center in the capital, the purpose of which is to create favorable conditions for the formation and active development of ICT, strengthening the integration of education, science and production. A feature of the technopark is that its residents can be located in any region of Uzbekistan. To support the ICT sector, it is planned to create similar technology parks in other regions of the republic.

So far, no area has been granted such benefits as are provided for IT companies. In particular, they are exempt until January 1, 2028 from paying all types of taxes and mandatory contributions to state trust funds, as well as a single social payment, customs payments, and the mandatory sale of a part of foreign exchange earnings. The tax on income of IT professionals is determined at a flat rate of 7.5 percent, while in the country this figure ranges from 7.5 to 25 percent.

The announcement by the President of Uzbekistan of 2020 as the Year of the Development of Science, Education and the Digital Economy is a relevant and important step. In the development of the digital economy, it is necessary to pay due attention to the improvement of the sector that produces ICT goods and services, which will make it possible to achieve a greater effect from the ongoing reforms. In the conditions of fierce competition in world markets, the digital economy sector can act as a locomotive for further sustainable development and diversification of the national economy, increasing its competitiveness in world markets through the advanced development of modern industries and industries.

Conclusions and offers

When building platforms for the digital economy, it is necessary to focus efforts on key areas such as transport, telecommunications, energy, and data processing. The development of these areas will create an infrastructural and technological basis, replicating which to other areas, Uzbekistan will be able to develop a mature digital economy as quickly as possible. Purposeful construction of a number of industrial platforms of the digital economy with a common architecture and standards will allow in the future to build a single digital space that unites all industries and industries. Such an approach will contribute to a significant increase in the transparency, manageability and flexibility of the country's economy. It seems to be the most appropriate for Uzbekistan today, but it is also not without its shortcomings. To form the concept of the digital economy, on which the corresponding strategy should be based, it is necessary to take into account both the risks of the proposed path and the risks of the digital economy itself.

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