

**SOME ASPECTS OF THE DEVELOPMENT OF THE DIGITAL  
ECONOMY IN UZBEKISTAN**

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**Abstract**

The article examines the role and importance of digitalization in the country's economy, as well as some aspects of the development of the digital economy in Uzbekistan. The experience and examples of success in the field of the digital economy in foreign countries are given; data on the results in Uzbekistan are given. Conclusions and proposals for the further development of the digital economy in Uzbekistan are presented.

**Keywords:** digital economy, digital revolution, digital industry, information technologies, and communications, IT specialists and programmers, e-government, business communities, information and communication technologies (ICT). ICT development index, digitalization of economic processes



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## **I. Introduction**

The digital economy is a worldwide network of economic activities, commercial transactions, and professional interactions that are supported by information and communication technologies (ICTs).

The digital economy reflects the transition from the third industrial revolution to the fourth industrial revolution. The third industrial revolution, sometimes called the digital revolution, refers to the changes that took place at the end of the 20th century with the transition from analog electronic and mechanical devices to digital technologies. The Fourth Industrial Revolution is based on the digital revolution.

Although some people today use technology to easily perform existing tasks on a computer, the digital economy is more developed. This is not just the use of a computer to perform tasks traditionally performed manually or on analog devices. The digital economy underscores the opportunity and the need for organizations and individuals to use technology to perform their tasks better, faster, and often differently than before.

In addition, the term reflects the ability to use technology to carry out tasks and participate in activities that have not been possible in the past. Such opportunities for existing organizations to do better, to do more, to do something different, and to do something new are included in the corresponding concept of digital transformation.

## **II. Main part**

Analysis of international experience shows that many countries in the United States and Europe have adopted a generalized strategy for the development of the information society, based mainly on the following development principles: economic freedom and deregulation of information technology providers in order to ensure the development of technical infrastructure as a basic platform for building an information society, including through the formation of infrastructures (funds, institutions) for the development and support of innovations, startups, reducing the cost of access to technology (simplified registration and online availability of patents, research results); improving the efficiency of the public sector, including e-government systems, interaction with citizens and society, based on improving legislation, training highly qualified personnel and the gradual introduction of modern information technologies; formation of a unified information space, increasing the resource base by digitizing the national and world cultural heritage, stimulating the development of Internet mass media, the formation of public databases of open access.

Of particular interest is the concept of industrial development that originated in Germany, known as "Industry 4.0." (or the fourth industrial revolution). "Industry 4.0" refers to an integral part of a broader trend of digitalization or the large-scale introduction of digital technologies in a wide variety of economic sectors. As a result, productivity is expected to increase in all production sectors of the industry from 90 to 150 billion euros, and the growth of marginal productivity, excluding the cost of materials, will be from 15 to 25%.

It should also be noted the experience of India – which has become one of the world's leading centers for some types of high-tech services, in particular, software and business outsourcing, engineering, etc. Especially the economic policy of the government of the country, in these areas, was reflected in the plans to expand the network of so-called "Technology parks" in India, which unite foreign and Indian manufacturers of software computer tools (Software Technology Parks-STPs).

In order to accelerate the development of the digital industry in the Republic, increase the competitiveness of the national economy, as well as ensure the implementation of the tasks defined in the State Program for the implementation of the Strategy of Action in five priority areas of development of the Republic of Uzbekistan in 2017-2021 in the "Year for the Development of Science, Education and the Digital Economy":

Approve the Digital Uzbekistan 2030 Strategy developed by the Ministry for the Development of Information Technologies and Communications with the participation of interested ministries and departments, representatives of the business community and academia, as well as foreign experts.

The share of the digital economy in GDP in Uzbekistan is 2.2%. At the same time, 7-8% is considered the average optimal indicator, for example, in the UK it is 12.4%, South Korea - 8%, China - 6.9%, India - 5.6%, while in Russia - 2.8%, Kazakhstan - 3.9%. In accordance with the draft Concept for the Development of the Electronic Government System of the Republic of Uzbekistan, by 2025 it is planned to increase the share of ICT services in GDP to 5.0%, and by 2030 to 10%.

In accordance with the Presidential Decree of January 8, 2019 "On additional measures to ensure the further development of the economy and increase the effectiveness of the economic policy," in particular, preparation by December 1, 2019, of the Strategy for the Development of the National Digital Economy "Digital Uzbekistan-2030," in which the main tasks will be formed to accelerate the development of the digital economy and the widespread introduction of digital technologies in the spheres of life of the country's population.

According to The Boston Consulting Group (BCG), the share of the digital economy (also called the web or Internet economy) in the GDP of developed countries has grown by 1.2 percentage points since 2010 and is 5.5%. In developing countries, this figure increased from 3.6% to 4.9% of GDP.

So, for example, Great Britain is the world leader in the share of the digital economy in GDP. The sector, which includes IT and telecommunications, online trading, government spending related to the Internet, ranks second in the country's economy after real estate and overtakes production and trade.

It should be noted that the development of the digital economy is directly related to the level of development of information and communication technologies (ICT), which is usually measured by the following indicators:

- Share of the digital economy of GDP;
- The size of investments in the ICT industry;
- the speed of the Internet, the degree of coverage of the territory of the country, and

accessibility for use by the population;

- Development of electronic commerce;
- Provision of ICT expertise to organizations.

Investment in the ICT industry, which stimulates innovative development, increases productivity, reduces costs and new economic activities, and, equally importantly, improves the quality of life of the population, is essential for developing the country's economic potential. But, it should be noted that today there is an investment deficit in the country. However, the dynamics of attracting investment in this area leave much to be desired, although there are some improvements. In the first half of 2019, investments in the field of "information and communications" increased by 2 times, compared to the same period in 2018. However, this figure in 2018 decreased by almost 2 times, compared with 2017 - from 1.9 to 0.9 trillion sums. The indicator of the share of investments in "information and communications" in the total investment in 2018 also decreased by more than 3 times, compared to 2017, and in the first half of 2019, and compared to the same period in 2018, it almost did not change and amounted to 1.3%.

In the period 2017-2019 on average, about \$200 million was invested annually in Uzbekistan. US investment for comparison: in 2018, \$1.3 trillion was invested in ICT development in the United States, \$499 million in China, and in Belarus, foreign direct investment in ICT alone amounted to \$1.5 billion. According to IDC analysts, ICT spending worldwide will grow by 3.8% annually and reach \$4.8 trillion by 2023.

The experience of foreign countries shows that the digital economy is developing simultaneously in a wide range of areas and cannot be built by a limited number of companies, even if they are given special powers and resources. Therefore, the main role in the digital economy should be played by private businesses with a strong entrepreneurial and innovative approach, and the state should create infrastructure and conditions for private initiatives.

The State can encourage the digitalization of economic processes by the following actions:

- to act as an organizer of common technological platforms, which unite different organizations, or as a regulator, that directive establishes requirements for the use of certain technological solutions since without synchronizing the implementation of standard technological solutions in entire segments of the economy, they cannot be widely distributed;
- constantly improve the existing regulatory framework governing the development of the digital economy and do so in the mode of dialogue and taking into account the views of users, developers, and service providers, who in practice will face new types of objects and subjects of information legal relations that require legal registration;
- to become a participant in the overall process of digitalization of relations, including developing the Electronic Government system and the list of public services provided in electronic format;
- encourage and encourage the introduction of information systems, electronic services in organizations and introduce tax incentives for the development of digital technologies, as well as cross-border online trade;
- to train in the necessary quantities the personnel of both IT specialists and programmers

and qualified users capable of using constantly updated digital technologies;

- to ensure security against cyber threats, as well as the confidence of all actors involved in the digital economy to some extent, that the data collected, stored, and used by them is protected from possible criminal actions;

- to expand international cooperation and create attractive conditions for the influx and introduction of advanced information technologies in all spheres of economic activity.

It should be noted here that in accordance with the draft Concept for the development of the E-Government system in 2019-2025, it is envisaged, in particular, to increase the share of public services provided in electronic format from the current 37% to 80% and to improve the position in the rating of the E-Government Development Index from 81st to 50th place by 2025.

An example of the digitalization of public services in Denmark, which invests heavily in this area. As a result, currently, every citizen and businessman has personal accounts, all citizens have a digital passport, and since 2015, they are required to communicate with government agencies only via the Internet, to which 95% of households have access. The system created in Denmark allows you to save 10-20% of the budget annually.

At the same time, the main thing is that the development of ICT in the country, including affordable high-speed Internet, should keep pace with the business's interest in introducing digital technologies into various production processes to increase labor productivity, reduce costs, as well as increase production and profit.

Let us consider the successes in the digital economy of Uzbekistan in comparative indices, as follows:

According to the ICT Development Index (IDI), Uzbekistan in 2017 took 95th place (index - 4.9) among 176 countries of the world (for comparison: Belarus - 32nd (7.55), Russia - 45th (7.07), Kazakhstan - 52nd (6.79). The first place was taken by Iceland (8.98), the second - South Korea (8.85).

According to the Index of Telecommunications Infrastructure, Uzbekistan from the CIS countries is ahead only of Turkmenistan and Tajikistan and with an indicator of 0.3307 is almost 2 times behind Russia, Belarus, and Kazakhstan, the best indicators in South Korea are 0.8496.

The Telecommunications Infrastructure Index (TII) is based on the following five indicators per 100 inhabitants: the number of users of the Internet (1) and fixed telephone lines (2), as well as subscribers: mobile communications (3), wireless broadband (4) and fixed broadband (5) networks.

According to the Internet speed indicators (data of the website Speedtest Global Index for September 2019) Uzbekistan in the ranking of 176 countries ranks 116th in broadband (stationary) and 129th in mobile Internet, behind Tajikistan (111th and 135th places), Kyrgyzstan (83rd and 101st), Kazakhstan (68th and 97th), Belarus (51st and 121st) and Russia (46th and 93rd).

Singapore ranks first in this indicator in terms of fixed Internet, and South Korea in terms of mobile. Moreover, if in this rating the broadband Internet speed in Singapore is indicated by 196.88 Mbps, then in Uzbekistan - 19.91 Mbps, mobile in South Korea - 95.11 Mbps, in Uzbekistan - 10.79 Mbps, that is, 10 times lower than the leaders of the rating.

According to the Electronic Government Development Index (EGDI), which is one of the indicators in the UN study "Electronic Government of 2018," Uzbekistan took 81st place in the ranking, ahead of Kyrgyzstan (91st), Tajikistan (131st), and Turkmenistan (147th), and lost to Kazakhstan (39th), Belarus (38th) and Russia (32th).

The "e-Government Development Index" is the weighted average of normalized indicators for the three main aspects of e-government: volume and quality of online services expressed as the "Online Service Index" (OSI); the state of development of telecommunications infrastructure, or "telecommunications infrastructure index" (TII) and domestic human capital, or "human capital index" (HCI).

According to the Global Cyber security Index of the International Telecommunication Union, Uzbekistan in 2018 took 52nd place out of 175 countries, losing to Kazakhstan (40th place) and Russia (26th) and ahead of Belarus (69th), Tajikistan (107th), Kyrgyzstan (111th), Turkmenistan (143rd). At the same time, it should be noted that more recently, in 2017, Uzbekistan ranked 93rd in the ranking on this index.

The Global Cyber Security Index assesses the level of state obligations in five areas: legal measures, technical measures, organizational measures, capacity development, and international cooperation. Given the processes of globalization of the information space, the index motivates states to take measures to strengthen cybersecurity in order to minimize the growing threats to the development of ICTs by cybercriminals. It is worth adding that almost 8 million information security incidents have been identified in Uzbekistan since the beginning of this year alone, some of which had a critical level.

Recently, public discussions and debates about the problems and future growth and development of the economy of Uzbekistan have intensified and significantly intensified. There is a need to implement structural changes that form import-free production in order to increase competitiveness, innovation and strategic activity, and sustainability. The transfer of the economy to a new qualitative level of development occupies one of the main places in the development of a non-raw material growth model, which emphasizes the demand for research into the prerequisites and stability of the formation of the digital economy and the development of innovative orientation of all economic entities.

### **Conclusion**

As a result, we can say that for high-quality economic growth it is necessary to have technologies that allow you to assess the current state of markets and industries as accurately as possible, as well as effectively predict their development and ensure a quick response to changes in the conditions of national and world markets. Digitalization affects all the main markets that exist at the moment, also contributes to the emergence of new markets, most of which will have a network nature. Uzbekistan, studying foreign experience and exploring positive results, focuses on those markets that make it possible to create industries of a new technological order that are significant from the point of view of ensuring national security and a high standard of living for citizens.

Thus, the creation of digital platforms for economic management is a strategically

important task, the solution of which can not only restore material production, lay the foundation for the introduction of future innovations, but also ensure the advanced development of Uzbekistan, which now only monitors the experience of advanced Western countries.

In our opinion, the development of a qualitatively different level of the economy in terms of composition and structure is important, therefore, it is necessary to recognize the creation and development of new enterprises, support startups, which will be world-market oriented and viable in the face of global digital competition, end-to-end automation of all main production and economic processes, development of the market of personalized production and consumption, increasing the combined efficiency of economic activity entities, mobilizing knowledge through the exchange, creating new jobs in high-tech industries.

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