

Development Tendencies of the Digital Economy in Uzbekistan

Aripov Oibek Abdullayevich

DSc., Professor, Department of Economics, Namangan Institute of Engineering and Construction

Pazilidinov Muxiddin Maxammadin o'g'li

M.D., Doctoral student, Department of Economics, Namangan State University

Gmail: m.muhammadin1995@gmail.com

Article Information

Received: March 23, 2023

Accepted: April 29, 2023

Published: May 23, 2023

Keywords

digital economy, Digital Uzbekistan, information and communication, gross value added, ICT industry, Telecommunication Infrastructure Index, international rating, information and communication.

ABSTRACT

Today, digital technologies are widely used in every branch of the economy. The economies of countries around the world are being built on digital technologies. Therefore, it is necessary for our country to move to digitization conditions and to introduce digital technologies in every sector of the economy today, and to find its place in the integration of the countries of the world. This article discusses digital reforms in Uzbekistan in recent years and their analysis.

Introduction

With the on set of the global pandemic, the role of digital technologies has grown significantly, which has shown the importance of digital transformation, especially for developing countries, including Uzbekistan.

Digital transformation has the potential to further modernize society and increase the competitiveness of the national economy. In this regard, the ongoing reforms, as well as within

the Development Strategy of New Uzbekistan for the next five years, special attention is being paid to the digitalization of all key sectors and the establishment of a real information society in the country.

Since the beginning of the 2000s, Uzbekistan began to give priority to the development and digitization of information and communication technologies (ICT). In particular, "Comprehensive Program for the Development of the National Information and Communication System of the Republic of Uzbekistan in 2013-2020", "Strategy of Actions on Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021" and "Digital Uzbekistan - 2030" and "Development Strategy of New Uzbekistan for 2022-2026" envisages a number of measures aimed at implementing digital transformation in the national economy, industry and society as a whole.

In the digital economy, economic, social and cultural relations are carried out on the basis of the use of digital technologies. As the President of the Republic of Uzbekistan Sh. Mirziyoyev noted, "Network and regional leaders must understand that there will be no results or development without digitization. Leaders at all levels should set this as a daily task and study the field of digitization in depth, starting with the alphabet" [1]. The importance of the digital economy in the global world is increasing. Digitization processes are affecting all sectors and sectors of the economy. Especially in networks and industries is gaining importance in reducing and increasing labor productivity.

Economists and experts on digital economy and problems in the processes of digitization of the economy have expressed their opinions and opinions in their research and at international conferences. They showed the processes of introduction of the digital economy, its role in the country's economy and its economic and social impact according to the existing situation in their time.

Materials

The concept of the digital economy was first introduced in 1994 by Tapscott in his book "The Digital Economy: Promise and Peril in the Age of Networked Intelligence", according to Tapscott, the digital economy is based on the theory of the company, a business transition to new media. formed a number of hypotheses. The digital economy has such characteristics as knowledge management, digital communication, virtualization, integration through the Internet, avoidance of intermediaries, convergence of industries, innovation, individual customer service, rapid response, globalization, digital divide [2].

N. Lane's definition of "Digital economy" is as follows. The convergence of computing and communication technologies on the Internet, and the resulting flow of information and technology that is driving e-commerce and broad organizational change [3].

In 1995, N.Negroponte explained the concept of "digital economy". According to him, the digital economy is a change from the movement of atoms to the movement of bits [4].

S. Baller, S. Datta, B. Lanvin evaluated the impact of the digital economy in their scientific article. According to it, the development based on the digital economy requires specific features in the economic, social and legal processes, national innovative systems and the obstacles and prospects of the development of digital technologies in the world are determined [5].

According to the definition given by T.L.Mezenburg, the digital economy is enabled by the use of existing digital technologies, the growth of the importance of software networks, the increase of added value, the different level of the workforce in the software and digital economy,

internet commerce, and the implementation of e-business structure [6].

In their scientific research, Bukht and Heeks emphasized the following point based on empirical analysis: Digitization of the economy or the process of digitization transformation, covering almost all industries and sectors, can dramatically increase productivity and labor efficiency, improve the quality of services provided, and reduce their cost. provides an opportunity to dramatically reduce and cover the world market on a large scale [7].

According to Asanov, the digital economy is based on the production of electronic products and services and their distribution through e-commerce: "businesses specializing in electronic products carry out production processes, money transfers, and work with and manage customers using Internet technologies [8].

B.N.Panshin says that the digital economy is based on network services. At the same time, he refers to areas where the elements of the digital economy can be distinguished: The main reason for the expansion of the digital segment of the economy is the growth of the transaction sector, which in developed countries accounts for more than 70% of the country's GDP. This sector includes: public administration, consulting and information services, finance, wholesale and retail trade, as well as various utility, personal and social services [9].

According to M.T.Hakimova and AAllyosov, it is necessary to take into account that the number of types of economic activities with certain opportunities due to digital technologies is increasing and their economic importance is increasing [10,11].

According to S.S.Gulyamov, the digital economy consists of a chain of interrelated production and management processes, an integral element of which is information exchange between chains (inter-human, inter-machine, through clouds, inter-data centers) using digital technologies. In addition, it is appropriate to pay attention to knowledge and training of programmers in the development of the digital economy [12].

N.M.Makhmudov said that in the conditions of globalization, there are effective models of the digital economy in many ways for economic security of any country and increasing its competitiveness on the world stage. The digital economy is the conduct of economic activities, in which the main factor in production and service provision is information in the form of numbers, and with the help of processing a large amount of information and analyzing the result of this processing, various types of production, service provision, technologies, devices, storage, is to implement more efficient solutions than the previous system in the delivery of products. In other words, the digital economy is the provision of online services, electronic payments, online shopping,

K.Abdurakhmanov stated that the main opportunity for the formation of the digital economy for the economy of Uzbekistan is the development of human resources [14].

B.Y.Khodiyev said that the development of Uzbekistan's digital economy opens up unlimited opportunities. The main obstacle to the development of the digital economy is the ICT infrastructure [15].

While one category of economists in the countries of the world see the digital economy in a narrow framework and consider only the products and services created in the ICT sector, the second category considers the digital economy to be the ICT sector of the economy as well as the value added by digital technologies to the products and services created in the sectors and industries. they think they should get it.

Methods

The article discusses the work done on the development of the digital economy in Uzbekistan in recent years. The advantages of using digital technologies in the economic spheres were considered and the position of Uzbekistan in international rankings was analyzed. Approaches to the development of economic sectors using digital technologies were studied.

Results and Discussion

Over the past five years, Uzbekistan has taken a big step in the development of information technologies, which helped to expand digitization processes in many sectors of the economy and increase its so-called digital share.

The components of the digital economy include e-commerce, the "Electronic Government" system, the introduction of "smart" (smart) technologies in various sectors of the economy, service sectors, the creation of "Smart City", "Safe City", as well as the "Internet of Things" including wide usage and others.

The level of development of the digital economy is directly related to the level of development of information and communication technologies (ICT), and is usually evaluated by various indicators. These indicators will include: the share of the digital economy in GDP, the volume of investments in the ICT industry, the speed of the Internet, its coverage of the territory of the country and its ease of use for the population, the level of development of e-commerce, the share of public services in the "Electronic Government" system, ICT provision of organizations with specialists in the field, etc.

In addition, indicators of international ratings that evaluate the level of development of information technologies in the country are important.

Growth dynamics of the volume of services in the field of "information and communication" in gross added value in 2018-2022 (trillion soums)[16]

	2018	2019	2020	2021	2022
GDP	426.6	532.7	605.5	738.4	888.3
Gross value added of industry	116.2	163.6	187.6	232.5	276.2
"Information-communication" fields	7.0	7.4	8.8	11.8	13.7

Uzbekistan has made significant progress in most of these indicators since 2018. Thus, the gross added value created in the service sector in the "information and communication" sector has almost doubled since 2018, from 7.0 to 13.7 trillion. to soums, and the volume of services provided by the type of economic activity "information-communication" increased by 2 times, from 6.8 to 14.9 trillion. increased to soum.

Growth dynamics of the volume of services provided by the type of economic activity "information-communication" in 2018-2022 (trln. soum). [17]

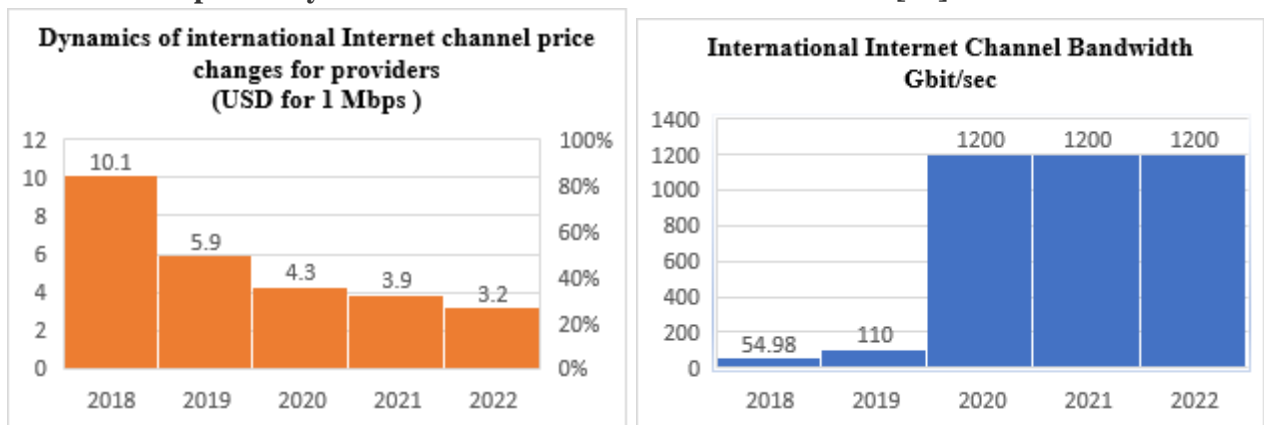
	2018	2019	2020	2021	2022
services-total,	151.5	192.9	223.0	272.1	343.3
growth rate (%)	129.5	127.3	115.6	122.0	126.1
"information and communication" field	6.8	7.2	9.0	11.6	14.9
growth rate (%)	121.1	105.8	125.0	128.8	128.4

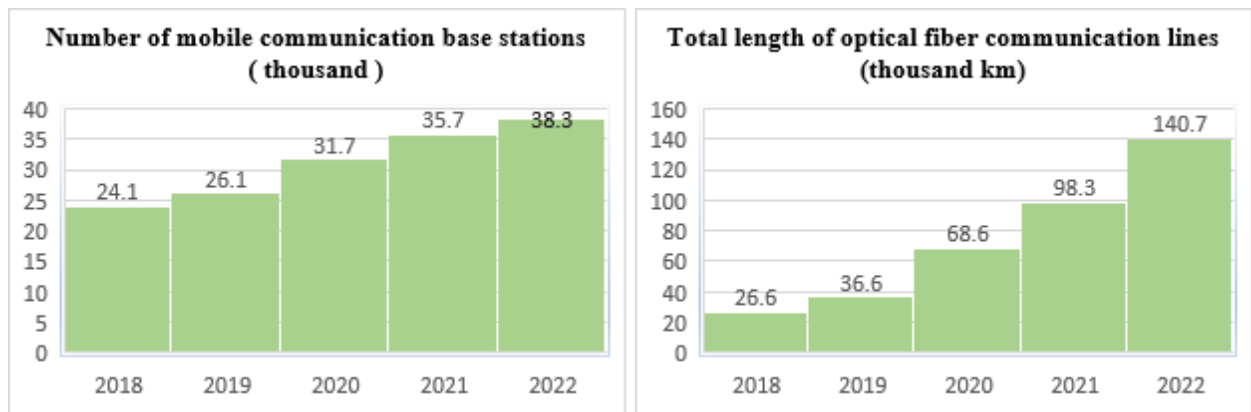
A 4-fold increase in the volume of investments in fixed capital in the "information-communication" activity type during 2018-2022 (from 1.2 trillion soums to 4.8 trillion soums), including foreign investments and loans the 2.5 times increase in size (from 0.8 trillion soums to 2.0 trillion soums) created great opportunities for the development of the ICT sector.

Uzbekistan in international rankings.

It is worth noting that the indicators of Uzbekistan have improved in the international ratings for evaluating the development of information technologies in the country. Along with the place occupied in these ratings, an index is shown that takes into account several parameters at the same time, reflecting the state of development of this industry.

Development dynamics of ICT infrastructures 2018-2022. [18]





One such index is the Telecommunication Infrastructure Index (TII), which is formed based on the following indicators per 100 inhabitants of the country: the number of Internet users and fixed telephone lines, as well as mobile subscribers, wireless broadband and fixed broadband networks. Since 2018, the price of the international Internet channel for Providers in Uzbekistan has dropped from \$10.1 to \$3.2. International Internet channel bandwidth increased from 54.98 to 1200. The number of mobile communication base stations increased from 24.1 thousand to 38.3 thousand. The total length of optical fiber communication lines has reached from 26.6 thousand km to 140.7 thousand km.

Uzbekistan's position in international rankings and indexes related to the ICT sector.

The ICT Development Index (ICT Development Index - IDI) was compiled by the International Telecommunication Organization among 176 countries of the world at the end of 2022. The IDI index consists of 11 statistical indicators reflecting the possibility of using ICT, the level of their use and the practical skills of using ICT by the population. Currently, a new methodology for compiling the IDI index is being developed. In the latest rating of the IDI index, Uzbekistan rose by 8 places compared to 2018 and took the 95th place among 176 countries of the world (index indicator - 4.9).

Global Cyber Security Index is also compiled by the International Telecommunication Organization and assesses the level of government commitment in five areas: legal measures, technical measures, organizational measures, capacity development and international cooperation. Since 2018, Uzbekistan has improved its index from 0.1471 to 0.666 in 2022, rising from 93rd to 52nd place among 175 countries. [19]

Mobile Communications Index established by the International Association of Mobile Communications Operators (or "GSMA Association").

International Association of Mobile Communications Operators of Uzbekistan (or "GSMA Association") ranking. [20]

	2018	2019	2020	2021	2022
Mobile Communications Index	29.2	36.9	40.7	44.5	46.8

Position in the ranking (among 170 countries)	139	134	132	127	124
---	-----	-----	-----	-----	-----

According to it, all mobile operators of Uzbekistan became members. The index shows the level of development and use of the mobile Internet. The index measures performance in more than 170 countries against the key factors driving mobile internet adoption: infrastructure, accessibility, consumer readiness, content and services.

Plans for the development of the digital economy

By the decree of the President of October 5, 2020 "Digital Uzbekistan-2030" The strategy has been approved, in which it is planned to implement more than 280 projects on the digitalization of management, production and logistics processes in the regions of our country and enterprises in the real sector of the economy in the next two years.

Target indicators of the "Digital Uzbekistan - 2030" Strategy. [21]

T/r	Indicator name	Unit of measure	Current status	Goals over the years		
				2022	2025	2030
1	The length of the fiber optic communication network built throughout the republic	thousand km	41	70	120	250
2	The level of coverage of the republic's territories with the high-speed Internet global information network	percentage	67	74	85	100
3	Level of provision of social objects with high-speed Internet global information network	percentage	45	100	100	100
4	Level of provision of households with broadband Internet global information network	percentage	67	74	85	100
5	Level of coverage of settlements with broadband mobile communication network	percentage	78	100	100	100
6	Performance indicator of the "E-Government Development Index" in the international ranking of e-government development	score (between 0-1)	0.66	0.70	0.75	0.86
7	The share of electronic public services provided through the Unified Interactive Public Services Portal compared to public services provided by public service centers	percentage	34	60	70	90

8	The share of e-government services that can be accessed using mobile devices compared to a single interactive government services portal	percentage	5	30	42	60
9	The share of transactional services provided through a single interactive public services portal	percentage	25	45	60	75
10	Percentage of large business entities that have implemented an enterprise resource management system (ERP).	percentage	20	40	65	100
11	Number of users of online banking services (legal entities and individuals)	million people	10	15	17	20
12	The number of start-up projects included in the incubation and acceleration programs of the technology park of software products and information technologies	piece	50	250	700	2 300
13	The number of admission quotas to higher education and secondary special education institutions for training personnel in the field of information technologies	a thousand	7	12	15	20

In the near future, a goal was set to double the share of the digital economy in the country's gross domestic product. In the next two years, it is planned to attract about 2.5 billion dollars of investment for the development of digital infrastructure. It is planned to launch three large data centers in the cities of Tashkent (expansion from 5 Pbytes to 10 Pbytes), Bukhara and Kokand (up to 50 Pbytes each), as well as further expansion of the established telecommunications network and modernization of the mobile communication network. As a result, households in each settlement will have access to the Internet at a speed of at least 10 Mbit/s.

Training of IT specialists

More than 120 higher educational institutions are operating in Uzbekistan, each of them is introducing a digital education module and opening incubation centers. The IT education development program aimed at creating a completely new system of vertical education was adopted. In 2020, the implementation of the project "one million programmers" began, which made it possible to teach programming skills for free, and within its framework, more than 130 thousand students are receiving training.

Educational centers providing large-scale educational programs for mastering IT skills are being established in the districts of the republic. Currently, more than 100 such centers have been opened, and more than 85,000 trainees are trained, and in 2021, it is planned to open about 200 such centers. After training, graduates of the center can reveal their potential as freelancers, start-ups and even founders of IT campaigns in the network of IT-Park branches opened in every region of the country.

Conclusions

Last year 2020 was declared as the "Year of Science and Digital Economy Development" and the active transition to the digital economy during the next 5 years was set as one of the main priorities.

Prospects and profitability of the introduction of digital technologies in the production processes of goods and services can be found in various examples of successful business development. Eight of the world's ten largest companies by capitalization are Apple, Microsoft, Alphabet, Amazon, Facebook, Alibaba Group, Tencent, Visa Inc. is digital.

The experience of foreign countries shows that the digital economy is developing simultaneously in wide areas and is not usually 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 occupied by private business with a strong entrepreneurial and innovative approach, and the state should deal with creating infrastructure and conditions for private initiative.

Most importantly, the development of ICT in the country, including affordable high-speed Internet, should be in line with the interest of private businesses in implementing digital technologies in various production processes to increase labor productivity, reduce costs, and increase production and income.

The state is successfully fulfilling its role in creating the necessary conditions for the development of the digital economy in Uzbekistan, which is evidenced by the achieved results and ambitious goals for the near future.

References

1. <https://mitc.uz/uz/news/1685>
2. D. Tapscott, "The digital economy: promise and peril in the age of networked intelligence." – New York: McGraw-Hill. - 1997.
3. N. Lane Advancing the Digital Economy into the 21st Century (Assistant to the US President for Science and Technology), 1999;
4. Negroponte N. (1995). Being Digital. London: Hodder&Stoughton
5. S. Baller, S. Dutta, and B. Lanvin, "The global information technology report 2016", Innovating in the Digital Economy. [Proc. World Economic Forum], Geneva, 2019, p. 307
6. Mesenbourg, T. Measuring the Digital Economy / US Bureau of the Census. - 2001
7. R. Bukht and R. Heeks, "Defining, conceptualizing and measuring the digital economy", Development Informatics Working Paper No. 68 (Centre for Development Informatics, University of Manchester, Manchester, 2017)
8. R.K. Asanov. Forming the concept of "digital economics" in modern science
9. Panshin, B. Sifrovaya ekonomika: osobennosti i tendentii razvitiya / B. Panshin // Nauka i innovatsii. -2016 -T. 3.— No. 157. -S. 17–20
10. MTHakimova Digital transformation of enterprises of various sectors involved in the real sector of the economy //Science and Education.-2022. - T. 3. – No. 6 – S. 1340-1349
11. AAllyosov Some problems in digital production and export of industrial products in the conditions of the digital economy Economy of information technologies // Scientific journal of Economics and Finance 2020-y 175-181
12. Gulyamov S.S., Ayupov R.H., Abdullaev O.M., Baltabaeva G.R. Blockchain

- technologies in the digital economy // Tashkent - 2019
13. NM Makhmudov, NRAvazov Digital economy - the basis of creating a favorable investment environment //Materialy XVII Mejdunarodnoy molodejnoj nauchno-prakticheskoy konferentsii g. Yekaterinburg, 2020. Tom 3 Yekaterinburg str 10-14
 14. Abdurahmonov K. Digital economy: South Korea's experience and prospects for its use in Uzbekistan. <http://www.biznes-daily.uz/uz/birjaexpert/58192-digital-economy-south-korean-experiment-and-prospects-of-usage-from-Uzbekistan>. 20.04.2019
 15. Khodiev BY Sifrovaya ekonomika v Uzbekistane. //Mirovaya economy, 2017, No. 12
 16. Data from the State Statistics Committee
 17. Data from the State Statistics Committee
 18. Information from the Center for Economic Research and Reforms under the Administration of the President of the Republic of Uzbekistan.
 19. Information from the Center for Economic Research and Reforms under the Administration of the President of the Republic of Uzbekistan.
 20. <https://www.mobileconnectivityindex.com/#year=2016&zoneIsocode=UZB>
 21. <https://lex.uz/ru/docs/-5030957>