International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

DIGITAL ECONOMY DEVELOPMENT TRENDS AND ICT DEVELOPMENT IN UZBEKISTAN

https://doi.org/10.5281/zenodo.8114890

Sh.Rajabov
Assistant of the Department of Digital Economy and Information Technologies of Tashkent State University of Economics
Email:she.rajabov@tsue.uz

Abstract

In the article, the experience of developed countries in economic growth, technological changes characteristic of the digital economy, the index of knowledge, the index of innovation, the index of education and the index of ICT, the development of the digital economy, the share of the field of information and communication technologies in the gross national product, communication and the analysis of some indicators of informatization, the analysis of the number of special software tools used in sectors and industries in our country are highlighted.

Keywords

Digital economy, information and communication technologies, Blockchain technologies, artificial intelligence, supercomputers, crypto-assets.

Introduction

Currently, the field of information and communication technologies is one of the main directions of ensuring economic growth of many countries based on the wide introduction of global innovations. This sector of the national economy is just being formed in many countries, but in developed countries it serves as a locomotive of economic growth. ICT is the main factor in increasing labor productivity and optimal use of all other resources, becoming important resources in the modern economy.

Industrialized countries such as Malaysia, Singapore, the Republic of Korea, and China are engaged in mass production of ICT products, while their consumers are developing countries. Sweden, Singapore, Finland, Switzerland, the USA, Denmark and Canada are leading the ICT efficiency index. World experience shows that the ICT efficiency index is represented by the market environment, its regulatory environment, infrastructure, population readiness, business readiness, levels of use of ICT by the population, business and the state.

Literature analysis and methodology

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

Today, the digital economy is becoming important in the socio-economic development of the countries of the world. There is serious competition for leadership in the field of digital economy in the world economy, and at the same time, it should be said that lagging behind such development for individual countries can have negative consequences for the country's economy. In the development of the digital economy, first of all, it will be necessary to create its specific characteristics and regulatory legal framework. Based on the strategy of the digital economy, the main production factor of the digital economy is information in digital form, the formation of an information space taking into account the needs of citizens and society to obtain quality and reliable information, the development of the information infrastructure of the Republic of Uzbekistan, represents the creation and application of national information and telecommunication technologies, as well as economic activities that serve to form new digital technologies for social and economic spheres.

The state of normative regulation of the digital economy in Uzbekistan is critically evaluated by the scientific community . Legal regulation is clearly lagging behind the needs of practice, and the time lag is increasing. Therefore, with the decision of the President of the Republic of Uzbekistan " **On measures to develop the digital economy in the Republic of Uzbekistan" dated July 3, 2018** No. RP-3832 -3832 [97]-measures are being taken, electronic document circulation systems are being introduced, electronic payments are being developed, and the regulatory legal framework in the field of electronic commerce is being improved. The digital economy operating on information technology platforms is rapidly developing, which necessitates the creation of new models of such platforms. "Blockchain" technologies (distributed data registry technologies), "artificial intelligence", using the capabilities of supercomputers, as well as activities on crypto-assets are considered to be one of the directions of development of the digital economy in many countries of the world. "Blockchain" technologies are gradually introduced not only to many sectors of the economy, but also to the public administration system and other public relations.

New legal documents on regulation of digital economy. In recent years, the idea of comprehensive and rapid (according to the general criteria of introducing new legislation) regulation of the digital economy has prevailed. In this regard, the President of the Republic of Uzbekistan " **On additional measures to introduce digital economy, electronic government and information systems to the public administration of the Republic of Uzbekistan " NO. UP -5598 of December 13,**

[97]https://lex.uz/docs/-3806053

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

2018 decree [[98]] in order to ensure digitization and to solve a number of unresolved problems and shortcomings that prevent the transition to a digital economy, to develop uniform principles for the development of state information systems, to properly develop the infrastructure of the "Electronic Government" system, to improve the state services shows its influence on the widespread use of modern information and communication technologies in the field of presentation and interdepartmental electronic cooperation.

Investments in ICT are considered to be one of the main factors for further improvement of the economy of developed and developing countries. The level of competitiveness is also high in countries with a developed ICT network, which in the future increases efficiency in the economy. Practice shows that investments in ICT have a positive effect on the macroeconomic indicators of the country. Figure 1 shows that when ICT investment increases by 10%, GDP increases by 0.6% in Great Britain, 0.8% in Australia, 0.9% in New Zealand, and 0.14% in Malaysia. This indicator was an average of 0.7% for the countries of the world.

The ICT sector is represented by the increase in labor productivity, the growth of foreign direct investments in countries with high ICT potential, the formation of innovative clusters, and the increase in the export of information services. The degree of impact of the ICT factor on economic growth also depends on the scale of ICT market, mobile communication, broadband Internet and personal computer usage and the intensity of their implementation at the state level.

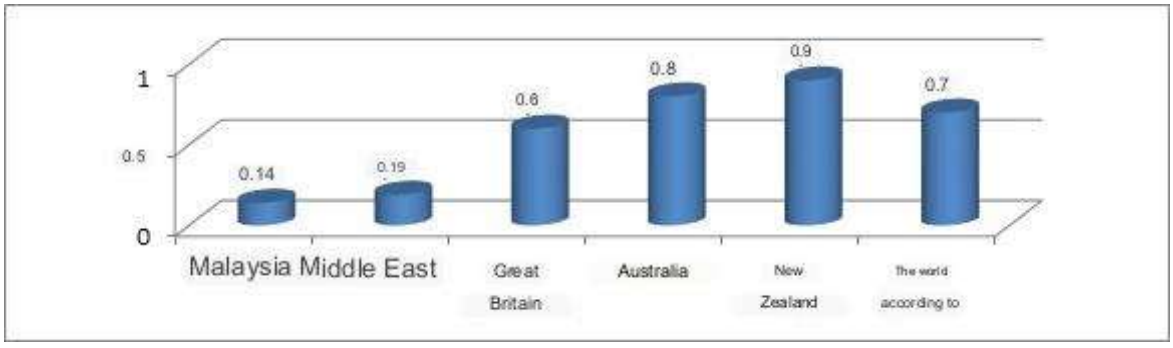

Figure 1. When increasing ICT investment by 10% , the state of GDP growth [[99]]

The high speed of ICT development also depends on the fact that the costs of their implementation and use are very low. This is why the cost-effectiveness that

[98]https://lex.uz/docs/-4103415
[99]. www.itu.int – International Electronic prepared on the basis of information from the official website of the communication union and McKinsey & Company analysis.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

can be derived from ICT compared to traditional technologies can be rapid and large.

The following are the main directions of economic growth and social development of society based on information and communication technologies:

- Rapid growth of the ICT sector;
- The positive effect of the act on the effectiveness of the management of the market and entities;
- Increase in the quality of education and increase in popularity;
- The serious impact of the act on social institutions that ensure the improvement of the efficiency of public administration and the development of civil society;
- Stimulation and acceleration of the processes of integration into the world economy;
- Wide contribution to the development of the banking system. Nowadays, computerization covers all areas of human activity and helps to expand the information field. Now modern society cannot be imagined without the influence of ICT. According to the indicators of the level of use of ICT by regions of the world , North American countries are much higher in terms of their use in administrative and economic entities and households (Table 1). In them, 85% of households are provided with broadband Internet, 72% of the population with mobile communication, and 93% of households are provided with personal computers.

Spread of ICT in different regions of the world, %

Table 1

Regions	**Providing households with broadband Internet**	**Providing the population with mobile communication**	**Household cleaning provision of a personal computer**
North America	85	72	93
Western Europe	62	83	64
Eastern Europe	32	66	25
Latin America	29	66	21
Pacific Ocean Basin	17	48	14
Africa	11	37	8

According to the analysis, the Western European countries also have much higher rates of ICT usage. Eastern European and Latin American countries have reached almost the same level in this regard. Economically underdeveloped African countries are several times behind developed countries in this area.

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

The role of households in the informatization of the national economy is also important. 64 out of 100 households in the Russian Federation, 28 in Ukraine, 29 in Armenia, 25 in Uzbekistan, 9 in Azerbaijan, 5 in Kyrgyzstan are provided with personal computers.

The development of ICT and its widespread use is considered one of the global trends of world development in recent years. In today's dynamically developing world, ICT plays the role of the locomotive of the national economy, helping the country to make investments, create new jobs , introduce promising technologies into production and management, and finally, to achieve continuous economic growth and raise the standard of living. . Therefore, the level of introduction and use of ICT in various aspects of society's life is a decisive factor in the social and economic development of the state .

The following directions have been defined as the main factors of future economic growth in our republic:

- Active structural restructuring of the national economy;
- Gradual transition from export of raw materials to export of products with high added value;
- Continuing economic liberalization and reducing the share of the state in the economy;
- Further development of the financial sector;
- Providing wide information to the society;
- Organization of innovative institutions;
- Complex development of territories.

Which can be seen from the above, the formation of the " knowledge economy " and the implementation of information processes on a large scale are considered to be the main factors of our economic growth.

Enterprises which operating in the field of ICT in our republic are production of computing equipment (75 enterprises), production of information carriers (2 enterprises), design and development of software tools (371 enterprises), information and computing services (910 enterprises), Internet and are engaged in providing services through computer networks (2426).

According to a large-scale research on digitalization conducted in 246 countries of the world, according to the data of 2019, the trend of the development indicators of the digital economy in different countries is different (Table 2).

Development indicators of the digital economy in a number of countries [4]

Table 2

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

Indicators	Mobile subscribers, % of total population		Internet users		Active users of social media		Mobile ijt. media users	
	Mln.	%	Mln.	%	Mln.	%	Mln.	%
The world	8842	115	4388	57	3484	45	3256	42
Afghanistan	28.82	78	9.7	26	3.8	10	3.6	9.8
China	1543	109	802	57	1007	71	1007	71
Germany	107.8	131	79.13	96	38	46	30	36
India	1190	87	560	41	310	23	290	21
Iran	123.7	150	72.94	89	47	57	41	50
Japan	186.3	147	118.9	94	78	61	78	61
Kazakhstan	25.69	139	14,14	69	7.3	39	3.6	19
Kyrgyzstan	9.38	152	2.49	40	1.8	29	0.96	16
Mongolia	4.19	133	2.2	70	2.2	70	2.1	67
Russia	248.2	172	109.6	76	70	49	57.75	40
Tajikistan	9.9	108	3.01	33	0.44	4.8	0.24	2.6
Turkmenistan	4.48	76	1.06	18	0.042	0.7	0.021	0.4
UAE	19,23	200	9.52	99	9.52	99	8.8	92
Great Britain	71.76	107	63.43	96	45	67	39	58
USA	347.4	106	312.3	95	230	70	200	61
Syria	13.61	74	6.03	33	6.8	37	6.49	35
Uzbekistan	24.84	76	15.45	47	2.0	6.1	1.0	3.1

The impact of ICT on state macroeconomic indicators is directly related to the level of their use by micro-level management and economic entities.

Results and discussion

If we analyze the informatization processes on the example of large commercial enterprises of our republic, the number of personal computers, which are the main components of ICT, was 380,929 in 2010, and 987,767 in 2019, that is, it has increased by 3.6 times. In 2019, the number of people employed by information and communication services in the Republic of Uzbekistan increased year by year. Out of 325,500 enterprises and organizations operating in the country, a total of 213,000 worked in the service sector, which was 65.8% (Table 3).

Dynamics of the number of people employed in "Information and communication" in the Republic of Uzbekistan

Table 3

Year	Dynamics of the number of people employed in	Number of

International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-6| 2023 Published: |22-06-2023|

	"Information and communication", thousand people	registered/operating enterprises, thousand
2010	53.1	There is no information
2011	54.7	There is no information
2012	56.3	There is no information
2013	58.0	There is no information
2014	59.8	There is no information
2015	61.7	There is no information
2016	63.6	There is no information
2017	64.3	6800
2018	66.1	7400
2019	68.9	8200

According to the analysis, commercial enterprises in the republic also widely use the Internet in their activities (Table 4).

Formation of digital economy and development indicators [[100]] (2018)

Table 4

Indicators	Uzb	CIS	the world	China
Landline telephone connection (per 100 people)	11.3	20.7	13.6	14.7
Mobile communication (per 100 people)	77.3	141.2	101.5	96.9
Active mobile network connection (per 100 people)	55.9	59.7	52.2	69.1
3 G range (proportion to total communication)	45.3	77.1	85	98
LTE/WiMAX coverage (proportion to total communication)	16.9	45.9	66.5	97
Mobile cost (GDP ratio)	2.3	1.7	5.2	0.6
Mobile network price 500MB (GDP ratio)	3.3	1.4	3.7	0.7
Mobile network price 1G (GDP ratio)	16.7	3.1	6.8	1.1
Number of households with a computer (per 100 households)	43.9	67.4	46.6	52.5
Percentage of households connected to the Internet, %	75.4	68	51.5	55.5
Internet users , %	46.8	65.1	45.9	53.2
Internet speed per user (kbit/s)	5.7	59	74.5	14.7

As can be seen from the table, the industry is developing rapidly due to the great attention paid to the development of information communication technologies and the Internet system in the republic. But it lags behind the world and the Commonwealth of Independent States in terms of internet speed, mobile communications and mobile network costs, mobile availability. Despite the fact that

[100]. htpp://www.itu.int/eng/ITU-D/

the majority of providers and operators are concentrated in Tashkent, their number is constantly increasing in the regions of the republic, especially in Samarkand and Bukhara regions. This indicates that the competition in this segment of the market is increasing. As the bandwidth of channels increases and the number of operators and providers increases, subscribers to the Internet network and broadband access system are growing rapidly.

Summary

Digital economy becomes a daily reality in modern society, due to its usage, the efficiency of all industries increases. The possibilities of using modern computer technologies increase in quality and quantity, it is possible to perform almost all operations through a computer: pay money, order a ticket, search for the necessary information, etc. In the era of digital economy, information plays the most important role, it becomes the main intangible asset with enormous value.

REFERENCES:

1. Resolution of the President of the Republic of Uzbekistan, 03.07.2018 г. № RP-3832 “On measures to develop the digital economy and the sphere of crypto-assets turnover in the Republic of Uzbekistan”

2. Decree of the President of the Republic of Uzbekistan, dated December 13, 2018 No. UP-5598v “On additional measures for the implementation of the digital economy, electronic government, as well as information systems in the state administration of the Republic of Uzbekistan”

3. www.itu.int - the official website of the International Electronic Communication Union and McKinsey & Company analysis.

4. https:// www.deloitte.com/content/dam/Deloitte/se/Documents/risk/DI.2019.

5. htpp://www.itu.int/eng/ITU-D/