



DEVELOPMENT PROSPECTS FOR DIGITAL ECONOMY DEVELOPMENT IN UZBEKISTAN

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ABSTRACT

The article examines the processes related to the role of the digital economy in ensuring the socio-economic development of the country. The analysis of the share of information and communication technologies in the sectors and industries of the economy of Uzbekistan, some indicators of communication and informatization was carried out. In accordance with the existing opportunities and conditions, scientific proposals and practical recommendations for the development of the digital economy in Uzbekistan have been formed. Assessed the results of the urgency of scientific research aimed at increasing the efficiency of production through the development of digital technologies in industries and sectors of the economy, reducing production costs, expanding employment through the emergence of new modern professions. The conceptual and applied aspects of digital economy, their development paths and strategy selection in the Uzbek economy, statistical analyses through methods of observation, collection of statistical information, classification, collation; and also diagrams and graphs regularly used in presenting data, lively changes, including methods of enhancing this sector in the formation of economic system as well as the perspectives of development are all mentioned in this article.

CCS CONCEPTS

• digital economy; • digital transformation; • digital economy scale; • block chain technology; • digital dividend; • digital infrastructure; • vertical market segment; • digital literacy; • business; • business process.;

ACM Reference Format:

Eshov Mansur Pulatovich and Nasirkhodjaeva Dilafruz Sabitxanovna. 2021. DEVELOPMENT PROSPECTS FOR DIGITAL ECONOMY DEVELOPMENT IN UZBEKISTAN. In *The 5th International Conference on Future Networks and Distributed Systems (ICFNDS 2021)*, December 15, 16, 2021, Dubai, United Arab Emirates. ACM, New York, NY, USA, 5 pages. <https://doi.org/10.1145/3508072.3508216>

1 INTRODUCTION

The word "digitalisation" is now described as a system based on the digital transformation of market participants in the global economy. The aspect of this approach is due to advances in information and communication techniques, which are the most valuable time for

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ICFNDS 2021, December 15, 16, 2021, Dubai, United Arab Emirates

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ACM ISBN 978-1-4503-8734-7/21/12...\$15.00

<https://doi.org/10.1145/3508072.3508216>

a person, as well as the process of saving money wherever it gets from. In the digital economy, corruption and the shadow economy have a powerful ally. Because numbers can encode data, store it in memory, and deliver it quickly when needed. It is impossible to keep any information hidden, perform secret transactions, or provide complete information about any activity in such circumstances; the computer will reveal everything. The amount and structure of the data prevent lies and deception because it is impossible to deceive the system. As a result, it's difficult to launder "bad investments," including such money stolen, spent inefficiently and aimlessly, overstated, or concealed. This will enhance the flow of legal cash into the economy; taxes will be paid on time and correctly; budget allocations will be transparent; funds allocated to the social sphere will not be stolen and so on. In particular, the theoretical aspects of digital economy development were studied by foreign scientists (Drogendijk, 2014; David et al., 2017; Tursunov, 2017; Nabamita Dutta et al., 2018; Mustafakulov et al., 2019; Eshov M, 2020; Zarova and Tursunov, 2019; Saidova M, 2020).

2 RELATED WORK

The evolutionary formation of the digital economy can be seen in the research conducted by foreign economists and leading experts in the field of information technology on its content and benefits. In particular, V.D. Orlykovsky, K.S. Yakono focused on the theoretical aspects of the digital economy, in which the database paid special attention to its importance [1]. The social and economic significance of the digital transformation in the economy was revealed by R.L. Katz [2]. It can be seen that T.Mezenburg conducted research on the assessment of the scale of the digital economy [3]. The directions of economic growth in the last 50 years and the development in the next 10 years, in which the research on the replacement of the digital economy is given in detail in the scientific works of R.Colow [4]. S.Yu. Glazev analyzed the directions of digital economy as a new paradigm in economics [5], and N.A.Kuznetsov's research covered the issues of digital economy in developing countries [6]. S.S. Gulyamov studied the issues of effective introduction of digital economy and e-commerce in Uzbekistan [7]. B.Yu.Khodiyev analyzed the transition to digital economy in Uzbekistan [8]. N.M.Mahmudov explained the importance of the digital economy in shaping the investment climate [9]. The above research studies the leading role of the digital economy in the information society, the advantages of the digital economy in human life, the changing trends of the digital economy in the context of globalization, but to date, the theory of digital economy is not fully formed and widely studied by many economists.

3 RESEARCH METHODOLOGY

Dialectical, analysis and synthesis, induction and deduction, scientific abstraction, monographic observation, systematic, and comparative analytical methodologies were used to write the essay. The operations of the digital economy in Uzbekistan were investigated, and a database with economic statistics on the digital economy's development was created. Based on the acquired data, observation and comparison methods of economic analysis, systematic approach, and logical approach were used.

4 ANALYSIS AND RESULTS

Digital technology is changing the face and structure of the economy, posing new challenges to existing business models, increasing competition and competitiveness among businesses and the country as a whole, and generating new markets and opportunities. Some may be perplexed as to why the digital economy is necessary and what benefits it delivers. When we talk about the digital economy, we do not need to understand only Block chain technology and their use in international financial markets or cryptocurrencies. Of course, Block chain technology, cryptocurrencies are also part of the digital economy. But the Digital Economy means the economy in which digital communications are carried out using IT. It can also be seen as a means of eliminating the shadow economy. Because first, all transactions are recorded electronically, the second being transparent. In addition, the cost of products and services will be reduced due to the use of new IT technologies in production. The growth of the digital economy will have a massive effect on multinational business's internal and external environments. Major shifts in the realm of information and communication technologies affect a series of business activities. Businesses can now sell their items all over the world over the web. Major shifts in the realm of information and communication technologies influence a wide range of business activities. Businesses can now sell their items all over the world over the internet. Major shifts in the field of information and communication technologies affect a wide variety of business activity. Businesses can now sell their items all over the world over the world wide web. It is possible to decrease costs while improving labour productivity and efficiency in many sectors of the economy with the use of information systems in businesses. At the same time, in the digital economy, businesses' market situations are getting increasingly complex. In the strategic decision-making process, the level of risk and uncertainty rises. Due to dynamic changes in the levels of technology, the increase of competition, and the impact of the state on the economy, this position will not be dependent on a stable market situation.

Manufacturers and consumers could face new market regulations as a result of developments inherent in the digital economy. In such a climate, businesses must develop new competitive strategies and improve their competitive efficiency. Companies must strengthen their power in the field of digital information technology in order to survive and thrive in new conditions. Not all contemporary researcher or seasoned entrepreneur believes in the effectiveness of the digital economy. The public is concerned about the growing use of robots in goods and services, which is the most visible incarnation of the digital economy. Even international organizations have recently recognized the threat that economic robotization poses,

because robots are on the verge of annihilating life. Two-thirds of the world's population is expected to be unemployed in the coming decades. It's no surprise that the problem is focused in these countries, where material production is dominated by robotization. Non-cash digital money was also issued at the turn of the century. They were named deposit money and were issued by central banks. Now, a new money bundle known as personal digital money will be available. Many analysts claim that this will not make people's lives easier. At the same time, the importance of young people in the digital economy is greater than that of adults, because young people are more easily adaptable to new innovations. Without even a doubt, the digital economy is growing would have an impact on the workforce.

Personal brand manager, virtual lawyer, moderator of government communication platform, info stylist, digital linguist, term broker, interface designer are some of the vocations that may arise in the future.

As the digital economy develops, it will also be important to establish a national digital economic security system. The notion of "National Digital Economic Security System" is a complex political, legal, organizational, technical, and socio-cultural system that consists of a set of objects and entities that guarantee national digital economic security. This necessitates the establishment of a regulatory framework that governs public policy, national digital economic security, and informal social norms. The digital economy allows to overcome the limitations inherent in the classical economy due to the presence of some features of the unique function:

1. Several people cannot use tangible products because digital products do not have such barriers: they can be copied and distributed to an unlimited number of people.
2. The use of materials is prohibited. Digital products do not lose their original features, and these features can be improved during collaboration or sharing.
3. Information and communication platforms prevent restrictions on the size of the space available in ordinary commercial buildings, as well as the number and quantity of customers served at the same time.

In order to further improve the system of public administration, create conditions for the introduction and development of the digital economy, improve the investment climate, as well as to implement the Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021. Resolution No. DP-3832 "On measures to develop the digital economy." According to the resolution, as an important task for the development of the digital economy - to diversify various forms of investment and entrepreneurial activity, including various activities in the field of cryptocurrency turnover, May (creation of new blocks and support of the distribution platform, which allows to receive rewards in the form of new units and commissions in different cryptocurrencies), smart contracts (electronic contract with rights and obligations to perform digital transactions automatically), consulting, issuance, exchange, storage, distribution, management, insurance, crowd-funding, as well as the introduction and development of block chain technologies; training of qualified personnel; cooperation with cryptocurrencies and foreign organizations; the creation of a legal framework in this regard, etc. [10]. smart contracts (electronic contract with the rights and obligations to perform digital

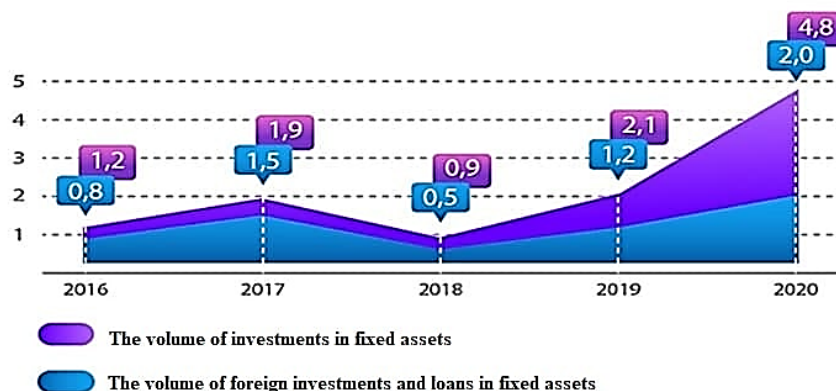


Figure 1: In 2016-2020, the dynamics of fixed asset investments by type of economic activity "Information and Communication." (Trillions of soums) [12]

transactions automatically), consulting, issuance, exchange, storage, distribution, management, insurance, crowdfunding (collective financing), as well as the introduction and development of block chain technology; training of qualified personnel; cooperation with cryptocurrencies and foreign organizations; the creation of a legal framework in this regard, etc. [10].

The choice of the state to develop the digital economy opens up new directions in the field of information technology and electronic document management in general. The shift to "digital technologies" was due to the development of the global Internet and quality communication. As a result, it has become possible to share and collect large amounts of data, which in turn allows us to process the collected information, see the future, make informed decisions, and benefit in a variety of ways. All of this will necessitate the development of appropriate infrastructure, or an ecosystem of global information platforms. Data loss, business loss, employment losses, security breaches, and the need for modernisation are all dangers (risks). These issues need to be addressed urgently as delays in this regard lead to serious risks. It is not whether the digital economy is a myth or a reality that plays an important role in the changes that are taking place, but how these changes serve society. Nowadays, we are witnessing how technology is radically changing the public service sector.

The results of the World Bank's study "Digital Dividends" show how relevant and important the digital economy is in the development of economies. In particular, a 10 percent increase in internet speed will lead to the country's GDP growth. In developed countries, the figure is 1 percent, while in developing countries it is 1.38 percent. This implies that tripling the Internet's speed will increase GDP by 13-14 percent. Modern scientific approaches and inventions will be vital and priority in the digital economy. Simultaneously, great analytical industries will emerge. According to analysts, the usage of block chain technology in Uzbekistan's activities would result in the formation of new types of services starting in 2020. Figure 1 shows the development of the digital economy in our country requires the widespread use of 3D technology and the involvement of its achievements in production. For example, the

widespread use of 3D technology in Japan has led to the emergence of a new class of entrepreneurs. The global market for 3D printing and services is projected to grow by 25.2% between 2017 and 2020. Such market growth is associated with increased demand in various vertical market segments such as healthcare, consumer industry, automotive, fashion and cosmetics, aerospace and defense industries, education and architecture.

The table 1 describes for the development of the ICT sector in Uzbekistan for 2016-2020 to increase the volume of investments in fixed assets by "information and communication" by 4 times, foreign investment and loans by 2.5 times (from 0.8 trillion soums to 2.0 trillion soums) created great opportunities. In our view, there is a correlation between these two factors, which is the basis we can investigate by forming a regression equation. The following information on this case is available.

In order to use analytical method we need right linear equation. Here its mathematical formula:

$$\begin{cases} na_0 + a_1 \sum x = \sum y \\ a_0 \sum x + a_1 \sum x^2 = \sum xy \end{cases} \quad (1)$$

The equation 1) is found by this formula $y = a_0 + a_1 * x$.

Here, y-real degree of lines; and n-the number of degree. $a_0 = \bar{y} - a_1 \bar{x}$ and $a_1 = \frac{\sum y}{n} - a_1 \frac{\sum x}{n} \dots a_0 = \frac{n \sum y - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$.

If $\sum x = 0$, then the equation above can be in that manner:

$$\begin{aligned} a_0 n &= \sum y. \\ a_1 \sum x^2 &= \sum yt. \end{aligned}$$

First of all, it is needed to be identified a_0 and a_1 ; for that purpose we have to calculate $\sum y$, $\sum x^2$, $\sum yt$. According to certain information these parameters are the following sequence:

$$48.5 = 6a_0 + 10.9a_1$$

$$117.1 = 10.9a_0 + 33.31a_1$$

From this equation the solution is found $a_0 = 4.42$ and $a_1 = 2.17$. $Y = 4.42 + 2.17x$ under the influence of n unit factor on the result by the straight line equation the result is multiplied by $2.17 * n$ units, $R=0,769989008$ the correlation coefficient is almost near to

Table 1: The development of the ICT sector in Uzbekistan.

	y(akt)	x(invest)	x^2	yx	y^2
	6,2	1,2	1,44	7,44	38,44
	8,2	1,9	3,61	15,58	67,24
	10,3	0,9	0,81	9,27	106,09
	10,9	2,1	4,41	22,89	118,81
	12,9	4,8	23,04	61,92	166,41
ALL	48,5	10,9	33,31	117,1	496,99
AVERAGE	8,083333	1,81666667	5,55166667	19,5166667	82,83167

1 which means there is a good correlation between the factor and the result.

Development of the digital economy has become an urgent task for our country. For the first time, President of the Republic of Uzbekistan Sh. Mirziyoyev officially proposed to implement the program "Digital Uzbekistan - 2030" until 2030 in his address to the Oliy Majlis on December 28, 2018. Issues directly related to the digital economy have also been raised in the country's innovative development strategy. It is also set a task to double the share of the digital economy in the country's GDP by 2023. In this regard, the study of foreign experience in the development of the digital economy, the possibility of its application in our country is of practical interest. According to UNCTAD, in 2012-2017 102 digital strategies have been developed in different countries of the world.

5 CONCLUSION AND SUGGESTIONS

In our opinion, special attention should be paid to the formation of the prospects for the development of the digital economy in Uzbekistan:

1. Sufficient conditions must be created for the full transition to a digital economy. Including:
creation of new information and communication technologies;
increase computer literacy in the country;
increase the number of qualified personnel working in this field;
Encouraging the use of the digital economy in all sectors and industries of the country;
increase internet speed and quality;
ensuring access to Internet services in remote areas of the country.
2. It is also important to explain to the public why the digital economy is becoming a modern requirement and its prospects, opportunities, and not just block chain technologies and cryptocurrencies.
3. It is necessary to develop and implement an incentive system to support competition among the participants of e-commerce (online trade), to further develop it.
4. Involvement of young professionals in this field, training and advanced training in the universities of "digital" countries can help to achieve good results. In conclusion, the qualitative development of the economy, social sphere and public administration in the current period and the near future of human development is directly related to the widespread introduction of digital technologies. The prospects for the development of Uzbekistan also depend on the development of the digital economy and the level of coverage of digital technologies. To achieve this, it is expedient to list the

following basic conditions and priorities for the development of the digital economy:

- creation of institutional environment and digital infrastructure, widespread introduction of digital technologies;
 - step-by-step provision of full coverage with the possibility of connecting to the global network of the Internet at the level of developed countries;
 - expanding the scope of training in the field of digital economy and training qualified programmers and engineers with in-depth knowledge;
 - support for research in the digital economy, promotion of "digital literacy" among the general population, support for innovative projects in the scientific community and the private sector, promotion of "startup" projects in the digital economy;
 - strengthening international cooperation in the field of digital economy.
 - increase the volume of products that require scientific knowledge and increase the income of the population, increase various budget revenues;
 - large-scale involvement of new types of manufacturing enterprises and modern technologies.
- New business models like Uber have emerged, which remove intermediaries and lead to direct customer-supplier relationships. Earlier, similar changes took place in the financial sector and telecommunications. There are also a number of fundamental changes in the industry, as the emergence of digital enterprise and the digital image of man - robots - can seriously change the functional model of the whole of humanity. This shows that information technology is gradually replacing people.

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