



RAQAMLI IQTISODIYOTNI SHAKLLANTIRISHDA INNOVATSION DIGITAL  
TEKNOLOGIYALAR: PERSPEKTIV YOKI RIVOJLANISH TAHDIDI

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**Annotatsiya.** Maqolada zamonaviy innovatsion texnologiyalar va raqamli transformatsiyalardan foydalanish fonida aniqlangan raqamli iqtisodiyotni rivojlantirishning istiqbolli yo'nalishlari muhokama qilinadi. "Raqamli iqtisodiyot" atamasining joriy ta'riflarini tahlil qilish asosida muallif uning mohiyati va ahamiyati haqidagi o'z qarashlarini shakllantirdi.

**Kalit so'zlar:** raqamli texnologiyalar, raqamlashtirish, tahdid, xavfsizlik, istiqbol, sun'iy intellekt.

ИННОВАЦИОННЫЕ ЦИФРОВЫЕ ТЕХНОЛОГИИ В ФОРМИРОВАНИИ ЦИФРОВОЙ  
ЭКОНОМИКИ: ПЕРСПЕКТИВА ИЛИ УГРОЗА РАЗВИТИЯ

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**Аннотация.** В статье рассматриваются перспективные направления развития цифровой экономики, раскрывающиеся на фоне применения современных инновационных технологий и цифровой трансформации. На основе анализа существующих на сегодняшний день определений термину «цифровая экономика», автор сформулировал свое видение её сущности и значимости.

**Ключевые слова:** цифровые технологии, цифровизация, угроза, безопасность, перспектива, искусственный интеллект.

INNOVATIVE DIGITAL TECHNOLOGIES IN FORMING THE DIGITAL ECONOMY:  
PERSPECTIVE OR DEVELOPMENT THREAT

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**Annotation.** The article discusses promising areas for the development of the digital economy, which are revealed against the background of the use of modern innovative technologies and digital transformation. Based on the analysis of the current definitions of the term "digital economy", the author formulated his vision of its essence and significance.

**Keywords:** digital technologies, digitalization, threat, security, perspective, artificial intelligence.

**Introduction.** The first developments of digital technologies appeared at the end of the 19th century. However, their widespread use in everyday life and activity began during the COVID-2019 pandemic. Forced actions to transition to remote, online work, assessed the reach and alleged modern digital technologies in all areas of activity. Oleg Pekor, First Deputy Minister for the Development of Information Technologies and Communications, noted that "... it was today, at such a difficult stage for the whole world and humanity, that an increase in the spread of digital technologies in the field of public administration, public services, and trade was revealed." [2]

The use of modern digital technologies in activities allows you to work remotely, maintaining efficient work, as well as discovering new promising opportunities for: expanding business partnerships, promoting goods, improving the quality of service, increasing competitiveness and productivity, reducing costs, creating innovative business models. On

the whole, this fundamentally influenced a radical change in tactics and strategies in all spheres. Today it is impossible to imagine any sector of the economy without digital technologies. Their effectiveness of application was appreciated by both consumers, entrepreneurs, and the state. Evidence of this is the improvement of the activities of state and economic administration bodies of Uzbekistan through the widespread introduction of digital technologies, the creation of a legal framework for the transition to a digital economy, the Presidential Decree "On measures for the widespread introduction of the digital economy and e-government" dated April 28, 2020, the Decree "On approval of the Strategy "Digital Uzbekistan-2030" and measures for its effective implementation" dated October 5 of the same year and a number of other decisions. The document includes such priority areas as the development of digital infrastructure, e-government, the national digital technology market, education and

advanced training in the field of information technology.

**literature analysis.** The history of the formation of the concept of "digital economy", according to many researchers, goes back to the American scientist from the Massachusetts Institute of Technology Nicholas Negroponte, who in 1995 used a metaphor about the transition from the processing of atoms, which make up the matter of physical substances, to the processing of bits, which make up the matter of program codes [2].

Other experts note that the "father of the digital economy" is the Canadian scientist Don Tapscott[14], who first voiced the term "digital economy" in 1994 in the book "Electronic-Digital Society: Pros and Cons of the Age of Networked Intelligence". In it, Tapscott, describing the features of developed countries, notes the digital form of representing objects, the impact of information technology on business, the public administration system, and gives the digital economy the following definition - it is an economy based on the use of information computer technology.

In 1999, Neil Lane, Assistant to the President of the United States for Science and Technology, in the article "The Development of the Digital Economy in the 21st Century" was actually the first to define this term: "The digital economy is the convergence of computer and communication technologies on the Internet and the emerging flow of information and technologies that stimulate the development of electronic commerce and large-scale changes in the organizational structure[15].

An analysis of modern opinions about the essence of the digital economy revealed that the opinions of specialists are divided. The first authors give definitions to the term "Digital economy", seeing in it a development perspective. They believe that the widespread use of innovative and digital technologies is necessary in the transition to a digital economy.

Pekos O. believes that "Digital technologies are the main key to the consistent development of any state, which allows making a qualitative breakthrough in many aspects of society. And the comprehensive digital reforms being carried out today in Uzbekistan are aimed at achieving the main goal - to become one of the leading states with a prosperous economy and a strong civil society"[3].

Abdullaev M.K. believes that the application of digital technologies opens up huge business opportunities: "The digital economy is a new economic environment that creates new huge business opportunities. In the digital economy, under the influence of new technologies of the digital economy and e-commerce, both the structure and nature of competition and business models are completely changing. [4]

Wooldridge J.M. believes that the digital economy is unthinkable without the widespread use of digital tools and their capabilities in any activity: "The digital economy is a type of economy characterized by the active implementation and practical use of digital technologies for collecting, storing, processing, transforming and transmitting information in all spheres of human activity." [5]

Tsvetkov V.A. sees in the digital economy a transition to a completely new way of organizing the activities of all structures, which allows reaching a higher quality level: "The digital economy is a new way of organizing entrepreneurial activities, as well as the business of large corporate structures, based on the integration of the physical and virtual environment (through special technologies), which allows not only to structure the business space (including infrastructure) in a qualitatively new way, but also to create new electronic products (goods, works, services) that are potentially in demand by the market as independent intangible benefits. [6]

Bondarenko V.M. believes that the digital economy is: "a holistic, systemic, complex problem of finding a model of relations between people that is compatible with the technologies of the fourth industrial revolution (with digital and other high technologies of the 21st century) and, in its formation, development and implementation, ensures the achievement of an objectively specified goals"[7].

Savina T.N., for example, believes that the digital economy is "a completely new world, which will be dominated by other, different from today's value systems, management paradigms, social norms and economic laws" [8].

However, among the many definitions, one can single out those that see a "negative effect" from the use of modern innovative, digital technologies and the transition to a digital economy.

So Zaytseva, E. V. identifies the problem of destruction of the foundations of interaction between people, evaluates the negative phenomena: "The digital economy becomes an effective environment for the interaction of business entities with a common understanding of the direction of development, which is formed in the presence of a single ideal and corresponding values." [9]

Malinetsky G. G. in the article "Doesn't the digital economy exist?", speaks negatively about the legislative program of the digital economy and the very phenomenon of the "digital economy". In his opinion, "... computerization of the economic sphere does not bring any financial return. ... this trend also harms the economy by wasting the state budget on senseless reforms." [10]

Gorodnova N.V. and Samarskaya N.A. also see the use of digital technologies as a threat to the state economy. "One of the most significant problems of realizing competition in the digital techno-

logy market and developing the digital economy is the language barrier ... In this regard, there is an urgent need to find such a balance of opportunities and threats that would allow the economy to choose an individual, but acceptable path of development, which is not there would be impact and restrictions from the economically developed countries of the world. [11]

The analysis of opinions once again confirms that innovation and innovative technologies always face numerous disputes and divergences of opinion based on the uncertainty of the future. [12]

Whatever effect scientists see as a prospect or threat from the development of the digital economy, one cannot but agree that digitalization is an existing fact that has significantly changed over the past 10 years the implementation of activities, organization, storage, processing, commerce, provision of services, business culture. Not recognizing this fact today and refusing to use the tools of the digital economy means lagging behind the development of civilization. Today, digital technologies have proven their effectiveness, but they also contain hidden potential, which makes us think about tomorrow, about the information and national security of the country.

**Research methodology.** The study applied comparative analysis of existing opinions about the digital economy, economic comparison, logical thinking, synthesis and classification. Also, diagnostics and scientific search for information on the effectiveness of the use of modern digital technologies and their consequences in the future.

**Analysis and discussion of results (main part).** The importance of digital transformation for many countries is confirmed by the adopted strategies and programs for the development of the digital economy, including: 2000 - Denmark, 2005 - Singapore, 2008 - Australia, Hong Kong, Great Britain, New Zealand, 2009 - the EU as a whole, 2010 - Canada 2012 - Malaysia, 2013 - South Korea, 2015 - India, Kazakhstan, Uzbekistan - 2020. Leading countries, in order to achieve high levels of digitalization, rely on the development of the digital economy. Germany is effectively developing in the field of Industry 4.0, the UK is striving to become a digital power plant, South Korea is succeeding in the construction of smart factories, Thailand is actively pursuing international cooperation under the leadership of the Thailand 4.0 Strategy. Singapore launched the Smart Nation 2025 plan in 2014 in order to achieve the title of "smart country".

Uzbekistan is also among the countries that see the prospect of digital transformation. "Without the digital economy, the country's economy has no future," the president said. "The heads of regions and industries are obliged to realize that without digitalization there will be no result, there will be no development. Leaders at all levels should define

this issue as their daily task, deeply study the field of digitalization from the very beginning," said Shavkat Mirziyoyev.

Thus, by the Decree of the President of October 5, 2020, the Strategy "Digital Uzbekistan-2030" [1] was approved, which outlines long-term goals for the development of the digital economy. Large-scale policy documents include road maps for the digital transformation of priority economic sectors and regions. The task has been defined - to increase the share of the digital economy in the republic's GDP by at least 30 percent by 2030. The Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020-2030, as well as the Digital Agriculture project, are being intensively implemented.

Modern digital technologies also offer a wide range of services for small businesses, contributing to convenient access to strategic resources, expanding the client base, entering global markets, and scaling without increasing mass. The use of digital services in their activities contributes to direct access to potential partners and consumers, eliminating intermediaries, which in turn makes it a worthy competitor to large businesses. For the effective application and use of the potential of innovative digital technologies, it is necessary to evaluate the benefits of their implementation, ensure digital security of both the enterprise itself and consumers. For this, first of all, qualified specialists are needed, as well as a legislative basis. In order to train highly specialized digital technology specialists, the Decree of the President of the Republic of Uzbekistan dated October 6, 2020 No. PP-4851 "On measures to further improve the education system in the field of information technology, development and integration of scientific research with the IT industry" was adopted, in accordance with which in 2020, 14 specialized basic schools were created with in-depth study of computer science and information technology. [13]

In 2021-2023 it is planned to open 205 such schools throughout the republic. Currently, three domestic universities are training personnel for the ICT sector: the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, as well as branches of the Inha and Amiti universities in Tashkent. For many years, TUIT has been the leading university for the training of communication specialists in the region. Currently, over 15 thousand students study at TUIT and its regional branches. Today, qualitative changes are taking place in the university. So, in the 2020-2021 academic year. TUIT opened a new undergraduate area - "Digital Economy", as well as 8 new areas of the master's program. In May this year. the sixth branch of TUIT was opened in Nurafshan. Work is underway to organize the

Digital University together with the leading international educational organizations Coursera, EPAM and Open University Malaysia. One of the most significant projects in this direction is the One Million Uzbek Coders megaproject, implemented by the Ministry of ICT together with the Dubai Future Foundation (UAE). The main goal of the megaproject is a wide distance education of the population and youth in relevant IT specialties.

In order to ensure the legislative framework for the security of digital technologies and regulate relations in the field of cybersecurity, the Law of the Republic of Uzbekistan, dated April 15, 2022 No. ZRU-764 "On Cybersecurity", was adopted.

However, digitalization comes with its own set of challenges, such as increased disparities caused by the digital divide, and has also created a number of new challenges, such as digital security, privacy and consumer protection, and fair competition in online markets.

**Conclusions and offers.** Based on the analysis performed, the following conclusions can be drawn:

1. The digital economy is one of the stages in the development of civilization that corresponds to the 6th technological order or the 4th industrial revolution, creating innovative, promising methods, conditions and opportunities for carrying out activities in all areas, based on the effective use of IT,

the use of digital technologies (artificial intelligence, blockchain, e-commerce, virtual and augmented reality, machine learning, robotics), as well as broad digital transformation.

2. Not to perceive the reality that already exists today of the effectiveness of the transition to a digital economy, it means to lag behind the development of civilization, which will incur colossal detrimental consequences for economic growth.

3. The use of modern tools of the digital economy also contains a hidden threat to information, economic and national security.

In order for the use of digital technologies in the economy today to be effective and not contain a hidden threat to the whole society, it is first of all necessary to

- increase the digital literacy of all participants in the digital economy. This will contribute to the correct and efficient use of digital technologies, without prejudice to the activities carried out.

- today it is important not only to use modern innovations and digital technologies, that there is an invisible web of dependence and a security threat from their use, but it is also strategically expedient to create domestic innovative digital technologies and effectively apply them to solve the problems of the country's socio-economic development, provided for in the Development Strategy Uzbekistan "Digital Uzbekistan-2030".

#### Bibliography:

1. Decree of the President of the Republic of Uzbekistan "On approval of the strategy "Digital Uzbekistan - 2030" and measures for its effective implementation" dated October 5, 2020, No. UP-6079
2. Golovenchik, G. G. Digital economy [Electronic resource]: textbook-method. complex / G. G. Golovenchik. – Minsk : BGU, 2020
3. Pekos O. Digital Uzbekistan: goals, objectives, prospects. // Economic Bulletin of Uzbekistan. - 2021. - No. 3. - P.72.
4. Abdullaev M. K. [Trends in the development of the digital economy in the Republic of Uzbekistan. "Iktisodiyot va innovation texnologiyalar" scientific electronic journal. No. 1, 2021, pp. 269-300, p. 298
5. Wooldridge J. M. Introductory Econometrics: A Modern Approach. 4th ed. South Western Cengage Learning, 2009
6. Tsvetkov, V. A. Tsvetkov, A. A., Dudin, M. N., Lyashnikov, N. V. Digital economy and digital technologies as a vector of strategic development of the national agro-industrial sector // Vestnik Mosk. university - Ser. 6. Economy. - 2018. - No. 1. - P. 51.
7. Bondarenko, V. M. Worldview approach to the formation, development and implementation of the "digital economy" / V. M. Bondarenko // Modern IT and IT education. - T 13. No. 1. - 2017. - S. 237-251
8. Savina, T. N. Digital economy as a new development paradigm: challenges, opportunities and prospects / T. N. Savina. - Finance and credit. - 2018. - T. 24. - No. 3 (771). - S. 579-590.
9. Zaitseva, E. V. Dangers of the digital economy: factors of change in the foundations of human interaction / E. V. Zaitseva // Topical issues of economic sciences and modern management: collection of articles based on the materials of I-III international scientific and practical conferences. - Novosibirsk: SibAK, 2017. - No. 1-3(1). - pp. 41-46
10. Malinetsky G. G. Digital economy does not exist? / GG Malinetsky // Questions of cultural studies. - 2018. - No. 8. - S. 17-21
11. Gorodnova N.V., Samarskaya N.A. Problems of modern man and the quality of his life in the digital economy // Creative Economy. - 2019. - Volume 13. - No. 7. - P.1313-1328. doi:10.18334/ce.13.7.40842
12. Aliyeva E.A. Model of innovative activity // Economics and education. – 2021. – no. 5. - S. 149-155.
13. Alieva E.A. Essence of innovations: analysis of theoretical approaches. Bulletin of the Plekhanov Russian University of Economics. 2019;(6):p.21-31. <https://doi.org/10.21686/2413-2829-2019-6-21-31>
14. Trends in the development of the economy and industry in the context of digitalization / ed. Dr. Econ. sciences, prof. A.V. Babkin. - St. Petersburg: Publishing House of the Polytechnic. un-ta, 2017. - 658 p.
15. Bucht R., Hicks R. (2018) Definition, concept and measurement of the digital economy // Bulletin of International Organizations. Vol. 13, No. 2, pp. 143-172 (in Russian and English). DOI: 10.17323/1996-7845-2018-02-07.