Achievements And Problems in Further Development of The Digital Economy in Uzbekistan Scientific Considerations

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Abstract
In the 21st century, digital technologies and innovative business models cover all spheres of society's life and improve structural changes in the quality of economic activity. As a result, the digital economy, characterized by the active use of digital technologies and the circulation of unique digital information, is passing its judgment as a separate mechanism of the traditional economy. Today, when science and information-communication and digital technologies are developing rapidly, digital technologies are used in the developed countries of the world in public and social management, economy, industry, social protection, education, medicine, employment, agriculture, defense, security, tourism and other fields. and the widespread use of artificial intelligence capabilities is being taken as a model. The level of development of the digital economy is directly related to the competitiveness of each country, requiring countries to pay special attention to its development. Digitization is applied to social processes, and the advanced achievements of the information society depend on it. Uzbekistan does not take the leading place in the world in terms of the level of development of the digital economy, but it is increasing its position in this field year by year.

INTRODUCTION

Currently, in order to achieve the goals in the field of rapid introduction of digital technologies into the economy and social sphere of our republic, it is necessary to carry out the following tasks without deviation, and they are:
- regulating the digital environment;
- personnel for the digital economy;
- information infrastructure;
- information security;
- digital technologies;
- economy of knowledge;
- digital public administration;
- is manifested in building an informed society.

When talking about our republic at the international level, the phrase "New Uzbekistan" is often mentioned. This is a recognition of the unprecedented progress we are making in the next
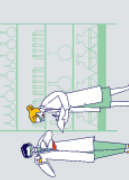
6-7 years. By 2030, Uzbekistan has set a priority to become one of the leading countries with innovative development through the development of the digital economy.

Since 2018, a number of regulatory and legal documents on the development of the digital economy have been developed in Uzbekistan, in which a number of tasks to be performed for the development of the system have been defined. As a clear proof of this, PQ-3832 of the President of the Republic of Uzbekistan dated July 3, 2018 "On measures to develop the digital economy in the Republic of Uzbekistan", dated October 5, 2020 "On approval of the strategy "Digital Uzbekistan-2030" and measures for its effective implementation" No. PQ-6079, Decree and Resolution No. PF-60 dated January 28, 2022 "On the Development Strategy of Uzbekistan for 2022-2026" and "Increasing the coverage and quality of digital services and digital transformation of sectors, networks and regions" adopted this year In accordance with the decisions of PQ-162 of May 24, 2023 "On Measures for the Development of Digital Economy, it is planned to implement complex measures for the active development of the digital economy in the republic and the wide introduction of modern information and communication and digital technologies in all branches and sectors in the near future." possible

There are a number of scientific works of our country and foreign economists on digitalization and the criteria for evaluating the activity. The modern concept of the term "digital economy" was coined in 1995 by the American scientist N. Entered into scientific circulation by Negroponte, it was primarily associated with the development of information and communication technologies (ICT). Theoretical foundations and social significance of digital economy activity A. Smith, J.B. Say, D. M. Keynes, Y. Schumpeter, A.V. Chayanov, K.A. Raitsky, I.A. Zhuravleva, A.P. It was studied by economists such as Kiselev. They contributed to the development of the theory of digital economy. In the years after independence, a number of scientific researches were carried out on this topic by the scientists of our country. In particular, S.S. Gulomov, A.T. Kenjabaev, M.S. Kasimova, B. Khodiev, Yo. Abdullaev, D. Suyunov, M.Q. Pardaev, S.K. Salaev, B.A. Abdukarimov, G. It is necessary to highlight the research conducted by S. Sevlikyants and E. N. Khadjaev in this regard.

The basis of the formation of the digital society is connected with the development of the "information society". The first ideas about this society E. Toffler, D. It is cited in the works of Bell and M. Castells. This process E. It corresponds to Toffler's scheme of "three waves of civilization": agriculture, industry and information. Digital society emerges and develops within the framework of the gradual development of information.

Currently, there are two different approaches to building a digitized society by developed countries, these are the concept of "Industry 4.0" ("Industry 4.0" - the fourth industrial revolution) promoted by European countries and "Society 5.0" (Society 5.0 - super) adopted by the Japanese government. smart society) strategy serves to build a digitized society. According to German scientists, there have been 4 industrial revolutions to date. The first industrial revolution lasted from about the 1760s to the 1840s. During this period, the construction of the railway and the invention of the steam engine were the impetus. The second industrial revolution, which began in the late 19th and early 20th centuries, made mass production possible with the creation of electricity and the assembly line. The Third Industrial
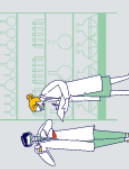
Revolution began in the 1960s and was characterized by the development of semiconductors, the mainframe computer (1960s), personal computers (1970s-1980s), and the Internet (1990s). In his "Fourth Industrial Revolution", K. Schwab argued that the situation at the beginning of the 21st century, i.e., the development of fast Internet, smaller, cheaper and stronger sensors, artificial intelligence and machine learning will be the foundation for the next industrial revolution.

Massachusetts Institute of Technology scientists Eric Brynolfsson and Andrew McAfee defined the technological changes taking place in 2014 as the second period of the third industrial revolution rather than the fourth industrial revolution. According to K. Schwab, it is possible to build a digital society thanks to the fourth industrial revolution. It also found that digital transformation affects development in the economy, employment, nature of work, business, innovation, governments, regions, international security and other areas. According to the authors of the concept of the fourth industrial revolution, the scale and speed of changes in technologies in the future can change history. The essence of the concept is to demonstrate the opportunities and risks associated with the development of new computing technologies, blockchain technology and distributed ledger, the Internet of Things, artificial intelligence and robotics, the use of new materials, additive manufacturing and multidimensional technologies. In 2016, the Japanese government adopted the "Society 5.0" strategy, which is seen as the next step in the development of society. The main goal of the strategy is to improve the quality of human life by maximally integrating the digital environment with physical space. Japanese scientists tried to divide the development of society into 5 stages. It shows that the concept of Society 5.0 is based on the study of the history of Japanese world culture and the identification of changes in the development and socio-cultural reality in the long term. This is one of the well-known analytical generalizations related to the identification of three waves of innovation, which divide human history into four periods: primitive, agricultural, industrial and informational. This concept was developed by Bell and Toffler. An important feature of both studies is the evolutionary approach to culture and society. Japan's concept of "Society 5.0" is the era that comes after the information society. The leading countries of the world in this field can be seen in Figure 1 below.

It is emphasized that new technologies in the digital society create conditions for the integration of physical space and cyberspace, which allows to optimize the use of resources not only at the level of each individual, but also at the level of society as a whole. Studies show that the concept of "Society 5.0" of the Japanese state is two separate concepts that are almost identical to the concept of the fourth industrial revolution proposed by European experts.

As for the economy of Uzbekistan, it must be admitted that we are currently at the stage of transition from the "Industry 2.0" level to the "Industry 3.0" level. Of course, this situation is one of the main obstacles to the complete modernization of the economy of Uzbekistan. Obviously, we need to recognize and understand this problem. Fundamentally changing the economy and industry of Uzbekistan, the principles of "Industry 4.0" should be widely applied, and of course, the problems facing us cannot be solved by introducing new terms and announcing new initiatives. We believe that it is appropriate to take the following
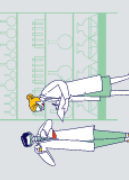
organizational and practical measures to achieve specific goals. Attracting leading foreign experts in the field and together with them studying the experience of Germany, USA, Canada, Japan, China, South Korea and preparing legal frameworks and regulatory documents to support the introduction of new technologies. The main emphasis should be placed on ensuring the systematic establishment of mutual scientific research cooperation between the state, higher education institutions and representatives of the business world. We can express the importance of the digital economy in the management of our Republic through this 2nd picture.

The world is undergoing such fundamental changes that there have never been such great opportunities and such great potential dangers in the history of the world. The narrow-mindedness and lack of "revolutionary" thinking of the leaders of some industries can stop the development strategies. Artificial intelligence, robotics, the popularization of additive technologies (that is, the production of even metal parts and spare parts in 3D printing), nanotechnologies, biotechnology and many other innovations are becoming an integral part of everyday life. If we want to be among the leaders of these changes, we should be able to understand the direction in which technological development will develop in the coming years and what global innovations are expected in the future, and we should actively participate in their creation.

In this regard, the decisions of the President of the Republic of Uzbekistan "On measures for the widespread introduction of digital economy and electronic government" and "On additional measures to automate the procedures for providing public social services and assistance to the population" and other regulatory legal documents in our country aimed at accelerating digitalization and introduction of modern technologies in social and economic spheres.

Currently, a number of positive actions have been taken to provide material support for social protection of the population and to introduce information, communication and digital technologies into the system. In particular, a new system for working with needy families, women and youth, such as "Iron Notebook", "Women's Notebook", and "Youth Notebook" was introduced. Also, 500,000 soums for each of the 845,000 children under the age of 16 of families receiving disability and survivor's pensions or allowances, totaling 422 billion soums. one-time assistance payments of soums were paid. The number of social benefit recipients has doubled to 1.2 million. is organizing people.

In recent years, as a result of the measures regarding informatization and the application of advanced technologies in various fields, special importance has been given to artificial intelligence, which is considered an important trend area of digital technologies in Uzbekistan. Also, in the direction of artificial intelligence and digital technologies, the "Smart School" program was introduced in the schools of Fergana city, "Monterra" online platform for evaluating the condition of cultivated fields was introduced in Andijan region, "Smart city" in Nurafshon city of Tashkent region, "Safe city" and "Safe city" in Tashkent city. The implementation of "Digital Tashkent" projects continues.

Artificial intelligence consists of algorithms and software systems designed to perform various actions, and performs a number of tasks that can be performed by the human mind on the basis of information entered into the information base. Also, artificial intelligence is a "smart"
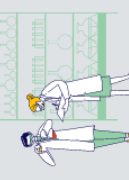
technology capable of making logically consistent judgments and recommendations, including sophisticated analytics and big data processing programs. Artificial intelligence is considered by experts as the basis of the fourth industrial revolution.

In developed countries, we are witnessing the widespread use of artificial intelligence in the social sphere, particularly in health care, education, employment, social protection and other areas.

The application of the program on professional-qualification compatibility based on artificial intelligence in the conditions of Uzbekistan will help to ensure the employment of job seekers employed in the informal sector, especially in the one-time job markets, and to cover them with social protection. At the initial stage, it is necessary to attract people in the informal sector to daily and seasonal jobs, and ensure their employment, by offering artificial intelligence technologies through applications that can be used on mobile devices.

The programmed artificial intelligence allows to assess the material conditions of the houses of poor families by analyzing the construction materials used. The images and navigation data collected by the satellite are included in the database of the social protection program, and they are used, first of all, to support the operation of artificial intelligence, and secondly, to define and determine the criteria for the need for social protection.

Artificial intelligence-based projects can be considered as a number of promising projects by integrating and expanding the database of existing programs and government agencies in the conditions of Uzbekistan.

For example, creating an "online application" system for receiving one-time or long-term financial assistance in existing social protection programs ("Social Register" - "Iron Daftar", "Women's Daftar" and "Youth Daftar"). In this case, the applicant can enter the relevant information into the system and quickly determine the compliance with the criteria. If at the first stage the evaluation of the criteria is carried out by the relevant employee-expert, with the development of the system, this process will be carried out automatically at the next stage, leaving no place for the human factor. A similar experience of "online application" is used in allocating state subsidies for preferential mortgage loans and payments.

Currently, the information of "Temir Daftar" is entered into the electronic database by the respective hokims. The introduction of artificial intelligence technology, which is one of the trend technologies of the digital economy, into this process, evaluates the applicants in need of social protection according to various criteria and requirements, sharply reduces the human factor, and allows periodically updating the information about the social status of a family or a citizen in need. With artificial intelligence controlling the entry and exit of needy families into the Iron Book, the efficiency and transparency of the program will be ensured.

The basis of artificial intelligence technology is a database, and their source can be different. Regular filling and expansion of the database increases the analytical capabilities and efficiency of artificial intelligence.

It is possible to form an artificial intelligence database from currently available data sources in Uzbekistan and use them effectively. They are:

- unified system of identification - (id.gov.uz);
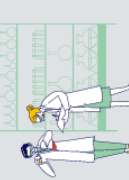
- Open data portal of the Republic of Uzbekistan - (data.gov.uz);
- electronic government system database - (my.gov.uz);
- the database of the state services agency - (davkhizmat.uz);
- databases of various ministries and agencies.

Also, in the world experience, in the formation of an artificial intelligence database in programs oriented to the social sphere, data from national ID systems, population census and tax payer database, medical, banking, insurance companies, buyers of stores and markets, mobile communication operators, as well as public utility payments and indebtedness, credit sources such as history, activity in social networks are provided within the framework of the law.

In the implementation of artificial intelligence in social and other fields, the privacy of personal data, their storage and management are important, and the ethical aspects of the use of artificial intelligence are considered the focus of attention, especially in the USA, Great Britain, EU member states and leading international organizations, and human rights and Personal data issues and the risk of using artificial intelligence for political and destructive purposes are among the pressing issues of today. In some countries, in particular, China and Russia, there are accusations that artificial intelligence and ICT are being used to limit the personal rights and freedoms of citizens and for political purposes. Therefore, it is appropriate to pay special attention to these issues when creating the legal basis for the use of artificial intelligence.

It is also important to balance the use of personal data and privacy rights in the implementation of artificial intelligence and their use to ensure national security.

It is worth noting that a superficial approach to the introduction of artificial intelligence or various software in the relevant fields, firstly, the projects will not produce the expected results, secondly, the spent budget funds will be ineffective, and thirdly, programs and systems that are not up-to-date will become targets of cybercriminals and undermine national security, and closed and may lead to leakage of private information. Therefore, such state programs are required to be implemented by leading local and foreign experts and companies in the field.

In addition to modern technologies, it is necessary to effectively use the capabilities of artificial intelligence in the information system of the "Unified Register of Social Protection" provided for in the decision of the President of the Republic of Uzbekistan "On additional measures to automate the procedures for providing public social services and assistance to the population."

It is known that now the procedures for consideration of applications for the appointment of social benefits and their appointment are carried out by means of the "single register". As a component of the "Electronic Government" system, the "Unified Register of Social Protection" functions as an inter-agency integration platform, and the database provided by the relevant agencies can be maintained through artificial intelligence technology.

Starting from 2021, the "Social Register" will be launched by our government, the possibility of electronic provision of more than 30 social services to needy families, and mutual integration with the new system "Iron Notebooks" will be implemented.

Wide introduction of new technologies in Uzbekistan, including artificial intelligence in social protection programs and other fields, encourages the use of modern information technologies
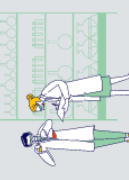
in the public and private sectors, increases the possibilities of developing the digital economy in the country and introducing innovations in every field.

In conclusion, it can be noted that in our country there are opportunities and the need to use artificial intelligence technologies in social protection programs, and it is appropriate to introduce and use artificial intelligence technologies by involving leading local experts and foreign companies in relevant programming areas.

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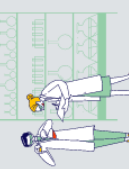
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