

## PROSPECTS FOR THE DEVELOPMENT OF THE DIGITAL ECONOMY IN UZBEKISTAN

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### ABSTRACT

The article deals with topical issues of the development of the digital economy in Uzbekistan. The normative acts that serve as the basic platform for launching this process in the republic are analyzed. The problematic aspects of the digitalization of the economy have been identified, international comparisons have been made, and priorities for the conceptual construction of the digital economy in Uzbekistan have been proposed.

**Keywords:** digital economy, modernization, innovation, economic growth.

Developed countries have long been focused on the evolutionary transition to a new economic order – the digital economy, although so far they have not quite adequately resolved the issues of previous economies: the information economy and the knowledge economy. This shows that the shift of the focus to the replacement of traditional economic resources (ER) with information resources (IR) and the transformation of IR into strategic resources is not always correctly understood by both economists and representatives of the IT community.

Despite the fact that the introduction of digital technologies in recent years in many countries, including Uzbekistan, has earned the status of a “traditional and promising” direction of state and corporate development, the current stage in the formation of the digital economy gives rise to fundamentally new scientific, technological, organizational and managerial challenges. At the same time, the terminological basis of digitalization has not yet been formed, not to mention a full-fledged regulatory framework and mechanisms for regulating this process, which, of course, hinders the development of the digital economy and the possibility of using the competitive advantages associated with it.

The concept of digitalization appeared as a result of the emergence, rapid development and widespread distribution of electronic computers, information technologies and the Internet. For the first time in the world, the concept of “Digitalization” was introduced by Canadian scientist Don Tapscott in his book “Electronic-Digital Society: Pros and Cons of the Age of Network Intelligence” in 1995.

Currently, many developed countries are implementing digitalization in all industries, developing and approving targeted legislative acts and programs that will become a springboard for the development of the digital economy. With the help of the digital economy, opportunities will open up for creating new innovative models of production, trade, healthcare, education, the economy and the whole society. And although the economy has always dealt with numbers, the implementation of economic processes using digital telecommunications, based on integrated IR (supported by smart sensors and the Internet of things) radically changes the situation:

- data, information, knowledge and information technologies become a strategic resource, and this resource can be used repeatedly;
- IR can replace or supplement ER;

- small and medium business, as well as mobile business, get big advantages (shopping and production areas on the Internet are not limited);
- competitiveness can be modelled;
- the same IR can be used repeatedly to provide different services;
- the scale of operations is limited only by the size of the Internet;
- interaction with customers customer needs are put at the forefront.

Under such conditions, intangible assets begin to play an important role, and firms with a large but insufficiently efficient infrastructure begin to give way to new companies that are not burdened with excess tangible assets. Entering into competition, new market participants promote innovative products and technologies, dynamically mobilize their resources, and ensure minimal information inertia when making and implementing management decisions. Information is the main resource, and data volumes increase dramatically every month. At the center of the development strategy is IR as the main resource, and the client with its rapidly changing needs.

The starting step towards the formation, implementation and development of digitalization as a new innovative component of the economy was the adoption of the Decree of the President of the Republic of Uzbekistan “On the State Program for the Implementation of the Action Strategy in five priority areas of development of the Republic of Uzbekistan in 2017–2021”, the main focus of which is the formation of an innovative model development of the economy of Uzbekistan [1]. Further, a resolution was adopted by the President of the Republic of Uzbekistan Sh.M. Mirziyoyev dated July 3, 2018 No. 11113832 “On measures to develop the digital economy in the Republic of Uzbekistan”. In fact, this document is a comprehensive strategy for the development of information technologies in the country for the next decade.

At the suggestion of the President of Uzbekistan Sh. Mirziyoyev, at the nineteenth meeting of the Council of Heads of State of the Shanghai Cooperation Organization in Bishkek, the Concept on Cooperation of the SCO Member States in the field of digitalization and ICT was adopted [1]. The Government of Uzbekistan has included a digital economy program in the strategic development plan of the state, the purpose of which is to form a full-fledged digital environment and digital field in the republic.

According to the government, it is the “Digitalization” of the economy that will allow the country to resolve the issue of global competitiveness and national security as soon as possible. First of all, it is necessary to fully digitize the areas of construction, energy, agriculture and water management, transport, geology, healthcare, education, cadastral and archiving.

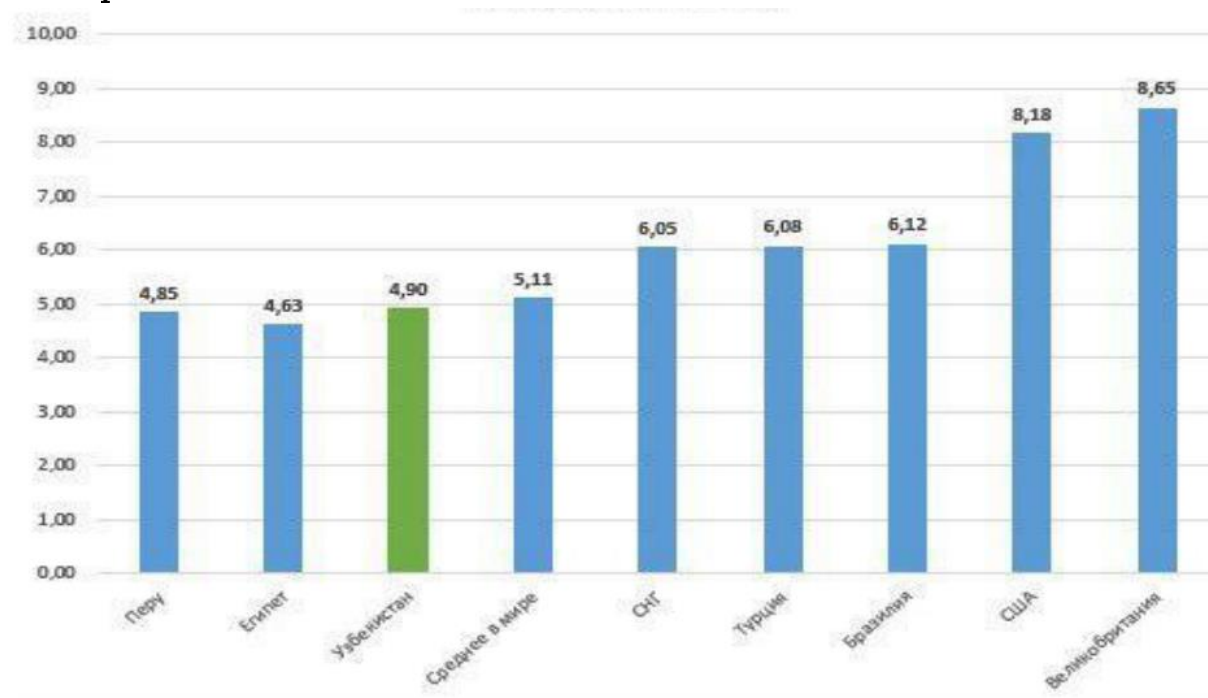
President of Uzbekistan Sh.M. Mirziyoyev declared 2020 the Year of the Development of Science, Education and the Digital Economy. Of course, such an opinion on the part of the leader of states creates a reliable and fertile basis for the accelerated development of digitalization in public administration and various sectors of the national economy.

In order to train highly qualified specialists in the field of information technology, together with our foreign partners, the project “1 million programmers” was launched. Modern information technologies must be introduced at all stages of the education system. Considering that work was completed last year to connect all cities and regional centers to high-speed Internet networks, all villages and mahallas should be provided with such an opportunity in the next 2 years. Today, more than 7,000 healthcare institutions, preschool and school education

institutions have high-speed Internet access, and in 2 years their number will increase by another 12,000

The economic development of Uzbekistan in the context of the globalization of the world economy and technological development is difficult to imagine without the rapid growth of the digital economy. For example, consulting firm Accenture predicts that up to a quarter of global GDP will come from the digital sector by 2022. Not surprisingly, 2019 unofficially marked the beginning of the era of tech giants, with 7 companies in the technology sector firmly entrenched in the list of the 10 most valuable companies. However, stimulating the digital economy will require removing barriers that hinder the development of digitalization and digital commerce. According to the ICT development index, Uzbekistan ranks 103 out of more than 170 countries, ahead of, for example, Egypt, but behind Turkey and Brazil (Figure 1).

### ICT Development Index



It should be noted that the problems of developing the digital economy in Uzbekistan are similar to the general problems faced by developing countries. One of the main problems is the weak telecommunications infrastructure and communications. Due to low investment in ICT (2.8% of total investment in 2017), the density of communication base stations in the Republic remains very low (1 base station per 1,600 inhabitants). In contrast, in Kazakhstan, one such tower serves the ICT needs of 643 residents, while in Russia it serves 235. This results in poor internet and mobile services slowing down digital economic growth and widening the digital divide. Compared to the CIS average, average internet speeds (mobile and fixed broadband) in Uzbekistan were about half as fast in 2019. The lack of digital skills in Uzbekistan could be a major barrier to digital transformation. Uzbekistan, as one of the few developing countries, has absolute adult literacy rates (100% in 2019) compared to other countries with similar levels of GDP per capita (for example, in the Lao People's Democratic Republic 84.66% in 2017 year). On the other hand, in developing countries, despite the high level of adult literacy, digital literacy

remains at a lower level. Perhaps this can be explained by the low level of use and dissemination of ICT in schools.

Due to the weak digital infrastructure and the lack of digital skills in the country, digital trade is developing at a slower pace in Uzbekistan. For example, the Decree of the President of the Republic of Uzbekistan notes that there is an insufficient level of online trading and trading platforms in the republic. Despite the existing payment systems (Click, Payme, M-bank, Upay, Humo, Oson, etc.) that allow you to make online payments for mobile communications, the Internet, government services, taxes and fees, etc., only 34% of account holders made or received digital payments in 2017.

Currently, an "IT-park" with a modern infrastructure is being created in Tashkent. Such "IT-parks" will also be organized in Nukus, Bukhara, Namangan, Samarkand, Gulistan and Urgench.

In 2005, the Parliament approved the "Law on Electronic Digital Signature", which became the basis for legal Internet transactions, the lack of regulation is still the main barrier hindering the development of e-commerce in the Republic of Uzbekistan. At present, a draft law on amendments and additions to the Law "On Electronic Commerce" has been posted on the website developed for discussing draft legal acts ([regal.gov.uz](http://regal.gov.uz)), which introduces improved regulations in the field of electronic commerce.

In 2017, Uzbekistan began its journey towards an e-government system with the development of a web portal for public services. In 2018, 127 online services from various government agencies were offered, and the number of applications reached 3.2 million. However, out of 32 million, the number of users was only 57.7 thousand people. Starting in 2019, getting public services online is 10% cheaper.

The UN e-Government Index reflects how a country uses information technology to provide access and inclusion for its people. In 2018, indicators for Uzbekistan are almost equal to the average indicators for the CIS and exceed the global average. Among 193 countries in the ranking, Uzbekistan ranks 81st. At the same time, it is necessary to critically review the "Electronic Government" system, the programs and projects implemented within its framework, and to comprehensively resolve all organizational and institutional issues.

Finally, the inflated cost of the Internet, insufficient coverage and low international Internet bandwidth are a consequence of the monopolized telecommunications industry. The market form of the telecommunications industries in developing countries is often an oligopoly or even a monopoly. In Uzbekistan and the rest of the CIS countries, the telecommunications industry is mostly limited to one leading company with special powers and resources (eg Rostelecom, Ukrtelecom, Kazakhtelecom, Aztelecom, etc.). An important step towards the digital economy will be the abolition of the state monopoly on international gateways, which is planned for 2020. The liberalization of the telecommunications industry will allow Uzbekistan to provide its citizens with secure and affordable Internet services and benefit from the digital economy.

The accelerated introduction of digital technologies in the economy, social sphere and management is a very ambitious goal, which is quite successfully implemented only in a limited number of developed countries. It is only possible if a number of conditions are met.

- business and the social sphere should be prepared for digital transformation, both as part of a development strategy that plans a fundamental change in the status quo based on the intensive

introduction of digital technologies, and due to its competitive demand by organizations and interested investors:

– a sufficiently mature sector of regulatory and technological proposals should be formed in the state, which is capable of rapid transfer and adaptation of effective technological solutions and a rapid increase in the scale of its own activities;

– the demand of the population and businesses for digital technologies should steadily grow, since the actual needs and capabilities of consumers determine the resulting demand for digital technologies in all aspects (G2G, G2B, G2C, B2G, B2B, B2C, C2G, C2B, C2C).

In the process of the formation of the digital economy, entrepreneurial activity is directly related to the competencies of the entrepreneur himself, his ability to process information, understand it and maximize profits. Undoubtedly, the success of a business will largely be determined by the quality of high-tech products produced using digital technologies. However, one should not forget that the development of digitalization gives rise to certain risks associated with the implementation of new investment instruments, such as public lending (crowdfunding), collective investment (crowdliding), etc.

In this situation, systemic business risks increase significantly, which will need to be leveled in order to maintain the stability of the business segment. Many factors influence the successful development of enterprises in the context of the formation of a digital economy model. The main negative constraints hindering the dynamic growth of entrepreneurship in the current period of time are, first of all, the lack of competence of the head of the organization, insufficient experience in managing production, supply of products, logistics schemes, etc.

Experts and specialists form an understanding that the main goals of the transition to a digital economy are [2]:

- creation of an appropriate infrastructure and ecosystem, where data in electronic digital form is a key factor in production, social support for citizens and public administration, ensuring rational information inertia of systems, effective interaction between government bodies, business and citizens;

– development of the necessary and sufficient conditions for the prompt solution of problem situations (PS), the elimination of restrictions and obstacles for the digitalization of traditional and the latest production and business technologies;

– management of competitiveness at the level of micro, meta, macro, mega economies;

– formation of a systematic approach to economies of various levels based on modern end-to-end information technologies (IT):

– situational-analytical centers (SAC);

– big data and IR management;

– blockchain;

– neurotechnologies and artificial intelligence;

– quantum and nanotechnologies;

– digital production technologies based on the life cycle of products;

– industrial and household Internet;

– wireless communications and digital logistics;

– technologies of virtual and augmented reality;

– mobile healthcare and education.

At the same time, it is necessary to use new management technologies that focus on complex methods of forming control actions (estimates by deviation, by disturbance and situational), analyze and coordinate foresights and forecasts for the development of the digital economy based on relevant strategic maps and balanced scorecards (indices), as well as monitoring and analysis of these indicators and indices.

The digitalization of the country's economy will lead to an increase in productivity, and, consequently, the competitiveness of the market. Therefore, the formation and development of the digital economy in the Republic of Uzbekistan will provide an opportunity for a big breakthrough in the growth of labor productivity.

One of the important tasks of digitalization is the creation of electronic offices and personal situational analysis centers (SAC) of citizens, as well as information and investment acceleration of small and medium-sized businesses. Based on this, a new hybrid living space will be formed, including elements of the real and virtual worlds (Figure 2).



Figure 2 - Integration of the real and virtual worlds

The digital economy also exists within the framework of this hybrid world, which is distinguished by the possibility of performing many “vital” processes of the real world through the virtual one on an initiative or automatically. Economic growth in the 19th century and the beginning of the 20th century. was based on advanced production technologies, then the improvement of managerial and financial technologies contributed to the development of the economy. Now the main factor of economic growth is information and communication and cognitive technologies. Thanks to these technologies, a systemic transformation is taking place in production and management processes, scientific research, healthcare and health savings, education and everyday life of citizens. In addition, the digital economy is an opportunity for systemic modeling of economic processes and training on management decision models, training and improving the competencies of managers, situational analysis and organizing networks of influence and trust. And here comes the essence that largely determines the problems of the 21st century - multidisciplinary, and, accordingly, excessive complexity and information overload. Three aspects are essential for the digital economy:

1. integration of IR, their effective use, reduction of their volume with an increase in information content in the process of preparing decisions;
2. formation of "end-to-end" technologies that provide a complete life cycle of products and services;
3. creation of "extended" organizations that implement complex backbone functions.

The development of digitalization implies the existence and effective functioning of institutions that create conditions and stimulate the introduction of information technologies in various segments of the economy. It is no secret that effectively functioning institutions form the conditions for economic growth, and a high-quality institutional environment is, in fact, an imperative for socio-economic development in general. Currently, the most pressing problem is related to the legal regulation of digitalization processes, with the legitimization of new financial instruments used in collective financing and investment.

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