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Prospects For the Development of The Digital Economy in The Republic of Uzbekistan

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Abstract. The issues of transformation of the development of information and communication technologies and its impact on economic growth in the context of digitalization are considered.
Key words: ICT, digital economy, Internet, competitiveness, information society, patterns, trends.

Перспективы Развития Цифровой Экономики В Республике Узбекистан

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Development of the information and communication technology (ICT) sector It can increase the competitiveness of the economy in the global market, and will

also contribute to bringing the country to a new level of development, which is characterized by intensive structural shifts in favor of the high-tech information sector.

World experience shows that the competitiveness of the national economy as a whole is associated with the development of information technology. According to the World Economic Forum, the competitiveness index of the economies of states has a high level of correlation with the index of development of their information and communication technologies. The information technology industry is one of the most dynamically developing industries in the world.

In January 2020, Gartner shared the preliminary results of the development of the global ICT market in 2019 and gave a forecast for 2020-2021. According to analysts, in 2019 its volume amounted to $3.74 trillion, which is 0.5% more than a year earlier. The company noted that the world is in anticipation of a recession, but it has not yet begun, so ICT spending will grow and in 2020 it will increase by 3.4% to $3.87 trillion, and in 2021 it may grow by another 3.7% and exceed $4 trillion.

The corporate software market has developed and will continue to develop the fastest - in 2019 it increased by 8.5% to $456 billion, and in subsequent years its growth rate will reach 10.5%. The main reason is the popularity of software services, which are becoming more and more accessible thanks to the clouds.

We studied the theoretical foundations and patterns of formation of the information society development. The following foreign and domestic authors, who devoted their scientific works, in particular, P.F.Drucker, B.Twiss, J.Schumpeter, I.Perlaki, N.Monchev, V.D.Hartman, R. Foster, K.Oppenlander, B.Santo, A.M.Kadyrov, assessed the impact on economic growth and increasing the competitiveness of the national economy, B.B.Abdullaev, I.Abduraimov, S.S.Gulomov, A.N.Aripov, T.K.Iminov, A.A.Pavlov, A.K.Kazantsev, A.A.Akaev, T.N.Belyatskaya, M.S.Maslova, B.N.Panshini, etc.

A number of special studies were conducted within the framework of the ISTRPROON project: "Analysis of the state and prospects of Internet development in Uzbekistan", "Guide to intellectual property law on software in

Uzbekistan", "Analysis of the state of the information society in Uzbekistan", "State and prospects of development of the software export industry in Uzbekistan" and others.

The expansion of the use of information technology in the public sector, the development of electronic services and investments in infrastructure contribute to the wider use of information technology in the private sector and will become a catalyst for their spread in the corporate sector. The large-scale implementation of the open data concept will provide a basis for the development of new information services and increase the efficiency and convenience of public access to information systems.

In recent years, various aspects of the creation of e-government have been developed in Uzbekistan. Further informatization of the most important sectors of the economy and the implementation of government projects to transfer them to the field of modern information technology applications stimulate the creation of new and development of existing business lines, which can lead to the formation of breakthrough technologies within the framework of industry solutions.

In order to further develop the e-Government system, a State order has been approved for the implementation of projects on the introduction and development of information and communication technologies, according to which work is underway to implement priority projects in the field of e-government, in particular to create a complex of information systems "Entrepreneur", the formation of a database of individuals and legal entities, the creation of a National geographical information system , etc .

The experience of developed countries shows that the development of new information and telecommunication technologies directly affects not only the growth of competitiveness of national economies, but also plays a crucial role in the formation of an effective research and education sector.

In recent years, many countries and international organizations have highlighted the implementation of concepts and programs for the transition to the information society as a priority. Similar concepts have been developed and are

being implemented in the USA, Great Britain, Canada, Finland, France, Japan, Italy, India, etc. These documents take a variety of forms, but pursue one goal - to become one of the leaders of the global information community. The transition to the information society brings with it fundamentally new interrelated changes in the socio-economic structure of society, which in turn are conditioned by the development and objective influence of new, more advanced and more productive means of production.

Modern Uzbekistan is a part of the global economic community, therefore, the ongoing integration processes in the international market require industrial organizations not only to enter the information society at the national, but also at the global level.

By region, telecommunications services continue to dominate the vast majority of states on a complex scale, although with a downward trend. In terms of growth rates, the "five" are leading here: Brazil, China, India, Mexico, and Russia. The contribution of this group of countries to the growth of the global market at the level of 50% is mainly due to the progress of mobile communications [1]. At the same time, in the leading countries where the telecommunications market has reached the saturation threshold, there is an active search for new promising (profitable) areas of development. One of the reserves – broadband access (broadband) in a wired and mobile solution – opens up wide opportunities for the commercialization of new services.

In terms of the production of communications equipment, China, India and the Asia-Pacific countries occupy the largest positions in the ICT complex. Their sales range from 13 to 20% of total revenue. At the same time, China already controls 11% of the market, only 1% behind Japan [2]. In terms of network equipment, according to Gartner analysts, cloud and mobile solutions will be the main drivers of the market for enterprises. The demand for Ethernet switches for data centers will be stimulated by virtualization and cloud solutions, and the proliferation of mobile access points continues to stimulate an impressive demand for wireless LAN equipment. Software types such as CRM, DBMS, data

integration and data quality improvement tools (data quality tools) will be in demand.

With the development and implementation of modern information and communication technologies and the creation of infrastructure, there is a need to quickly involve the population in new technologies. Summing up, it can be noted that the development strategy of the National Information and Communication System of the Republic of Uzbekistan, implemented in all areas of information and communication technology development, shows a positive trend.

Special attention is paid to the development of the domestic software market. As part of the implementation of measures to further strengthen incentives for domestic software developers, a National Register of Software Developers has been created, which already includes 69 domestic companies in the domestic catalog of software developers software.uz information about 1,600 domestic software products has been posted.

One of the problems of the industry is the lack of qualified personnel. However, there are not enough qualified programmers. In most universities, programming is an applied discipline, as universities train programmers for a specific industry: transport, engineering, etc. At the same time, information on specialization is sometimes redundant, and training in programming skills is not enough.

Increased attention should be paid to increasing the number of graduates in information technology-related specialties, which are part of the initial base of specialists to work in the industry. According to the experience of a number of companies, when applying for positions in the field of software development and architecture, graduates of educational institutions of higher education in the field of information technology have practically no advantages over graduates of physics and mathematics or engineering specialties.

In the practical solution of the systemic problem of the development of the information and communication sphere of the national economy in the long term, it is important to follow two basic principles:

• concentration of resources to finance research and development work in key areas of ICT, which means: expanded reproduction of fundamental and applied knowledge; improvement of the quality level of "human capital", possibly one of the main competitive advantages of Uzbekistan in this area;

• creation of an information infrastructure that ensures the transformation of knowledge into a market product using the mechanism of public-private partnership. It is assumed that part of scientific research and the creation of information infrastructure should be carried out with the participation of the state, and market commercialization should be carried out mainly by the business itself.

At the same time, it is necessary to take into account the trends in the development of the global information and communication technology market, where the process of moving the production of ICT products from developed to developing countries is underway. They have become catalysts for the development of ICT production, where their significant investments are directed. This is explained by the fact that these products are produced, no less qualitatively, but with lower costs in most developing countries, which increases the competitiveness of their products on the world market. In general, the ICT market has become one of the most dynamic and capacious sectors of the global economy, which in turn has led to increased international competition in this area and prompted many countries to increase the cost of research and development, innovation and product promotion to ensure leadership in the global ICT industry.

The analysis of the peculiarities of demand formation in the global digital technology market allows, based on the specifics of the requirements for the specific characteristics of this product, to identify three main consumer groups that form the global demand for information technology.

One of the main reasons for the broad definition of ICT services is the convergence of technologies. In particular, it is currently extremely difficult to distinguish between computer, commercial, telecommunications and software services. In our opinion, a broad definition of ICT services is preferable, which

makes it possible to more accurately identify the contribution and role of these services in the global trade in services. Therefore, when considering the trade in ICT services, we take as a basis their broad definition.

Thus, it can be stated that recently there has been a shift in global production and trade towards developing countries. All this leads to increased interest in the development of this sector not only in developed but also in developing countries.

The main task is to use the potential of the research and development sector in the republic for the effective implementation of national priorities of technological development, while simultaneously turning the information and communication sector into a productive branch of the "knowledge economy". Prospective studies require the study of the following main aspects of this problem:

-conceptual approaches to the strategy of integrating the information and communication sphere of the republic into the global world market;

-directions for improving the institutional framework in order to create favorable conditions for the development of an innovative information type of economy;

-social factors (youth participation, education, etc.) of the development of the information and communication sphere and the possibilities of their effective use;

-strategies to create incentives for the transition to the information society model in the post-crisis development of the national economy.

The theoretical results obtained in the course of these studies will expand scientific and methodological approaches to the formation of the information society, the creation of new conditions and sources of increasing the competitiveness of the country, as well as the mechanism of their adaptation to the challenges of globalization of the world economic system.

Currently, information technologies are rapidly developing, which opens up new opportunities in many fields of activity, including the labor market. For many entrepreneurs and ordinary employees, this trend can open up new

development opportunities. At the same time, digitalization can have a negative impact on doing business. That is why it is important to clearly identify the consequences of digitalization in Uzbekistan, as well as to study specific indicators reflecting the impact of the introduction of information technology in our country. When analyzing the impact of digitalization on the economy of Uzbekistan, it is important to take into account many factors, among which one can single out the level of technological development in comparison with other countries. In addition, it is important to identify the key sectors of the economy that are affected in order to make a more accurate forecast of the state of the economy after the increased introduction of information technology.

The purpose of analyzing the impact of digitalization on the economy of Uzbekistan is to identify and evaluate the results of the transformation of professional activities and the transformation of individual industries as a whole, as well as to make a forecast if this trend increases in the future.

The tasks related to the impact of digital technologies on the country's economy include determining specific indicators in dynamics, comparing them with foreign results, as well as determining the main trends in the development of digital technologies in Uzbekistan.

The object of the study is the activity of individual enterprises and industries in general during the period of application of information technology.

It is worth starting the study by considering such an important phenomenon as the introduction of the Internet into public access. Access to this technology in households has increased markedly over the past few years. It is the freedom to use the Internet that is one of the factors in the development of information technology in the country. Figure 1 shows the dynamics of Internet usage as a percentage of the total number of households.

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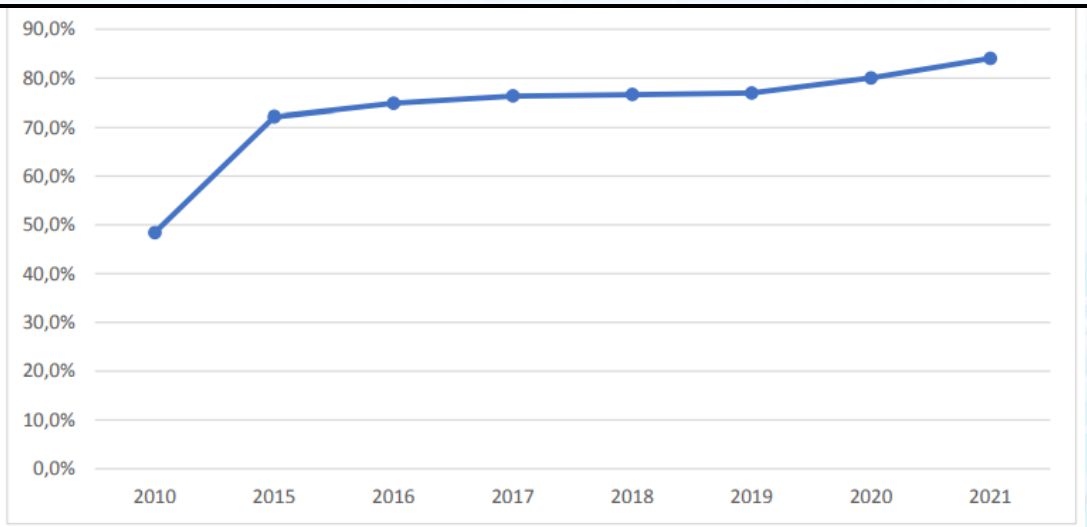

Figure 1 - Dynamics of Internet availability in Uzbekistan from 2010 to 2024,

Based on the information received, we can see a clear trend of a steady increase in Internet users in Uzbekistan over the past 10 years. This cannot but indicate a smooth transition to digitalization in society, including this statistic is also a sign of the transition of the economy to a new form, which is based on the use of modern technologies. For comparison, an analysis of Internet usage in other large countries was carried out, a graphical interpretation of which can be seen in Figure 2. It can be noted that Uzbekistan still lags behind many developed countries in the use of this technology, but our country is still at a high level of its application. This fact is a prerequisite for considering digitalization as an actual development trend in Uzbekistan.

It is important to understand that an active policy of developing the digital economy in our country is currently being pursued. A large number of resources are being used for these purposes. Modern competition is based on the use of information technology, so the country's leadership is developing a strategy for the stable development of economic sectors, introducing such technologies there. More specifically, in 2021, the cost of digitalization of the Uzbek economy amounted to about 4.8 trillion rubles, which is 19.3% higher than in the previous year.

Let's turn to the consideration of digitalization directly in the sectors of the economy. The analysis revealed that already in 2020, Internet usage in

organizations reached 93%. That is, only 7% of firms did not have access to a network that provides staff and management with the necessary information. Based on statistics, we can assume what level Internet access has reached in the sectors of the economy now. To do this, a graph is presented that reflects the dynamics of network usage over 10 years. The information received can be observed.

Based on the forecast value obtained by displaying the trend line on the presented graph, it can be assumed that currently almost all firms in Uzbekistan use the Internet and other available modern technologies to carry out their activities.

It is worth paying attention to the fact that in modern realities, many opportunities have opened up for firms in each branch of the economy to use various programs and digital technologies that can facilitate the conduct of professional activities. For clarity, Tables 1 and 2 show statistics on the use of various innovations in the digital economy in various industries as a percentage of the total number of firms in the industry.

The information received confirms the use of modern technologies in absolutely every branch of the economy. It can be noted that currently, on average, about 20% of firms use certain information technologies in each industry, and their number is increasing every year. Having analyzed the specific values of the digitalization of the Uzbek economy, it is worth moving on to identify specific advantages and disadvantages that may arise due to the development of such processes.

Let's start with the main advantages that arise from digitalization. It is worth highlighting the increase in labor productivity due to the optimization of processes using various techniques and programs. Further, it is important to note that the quality of life of people is also improved because they spend less physical effort in production, while receiving the same amount of wages and public goods. And finally, the mass use of such technologies increases the overall level of digital literacy of the population, so that our country will develop at a

more intensive pace and will be able to compete with the field of application of modern technologies to other large countries.

Among the important disadvantages of digitalization, it is worth noting the reduction of jobs, since light types of labor have been replaced by machine labor, and enterprises no longer need to hire personnel carrying out routine and household operations. However, most workers should not worry ahead of time, because machine labor cannot yet adequately replace personnel performing complex operations in production, so a person who is constantly improving his knowledge in a certain industry is unlikely to be completely replaced soon. Well, it is also worth emphasizing that large financial resources are needed for the introduction and application of digital technologies in economic sectors, so the management of firms will have to spend a significant amount of money if they want to optimize their activities.

Summing up, we can say that the digitalization of our country's economy is an inevitable process and it should be regarded as an inevitable process of modernization of various fields of professional activity. Business owners and salaried workers who want to keep their jobs in production should increase their level of digital literacy for the correct transition to the use of modern technologies. In general, digitalization will optimize many processes in the economy, facilitate the work of literate workers, and increase competition both in economic sectors and with other countries in general.

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