

## **DEVELOPMENT OF THE DIGITAL ECONOMY IN UZBEKISTAN: A SHORT PATH TO DEVELOPMENT**

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Humanity is experiencing an important period associated with the transformation of economic sectors, digitization, mobilization of this process, and the introduction of artificial intelligence into the field. The need to develop a new economy becomes even more clear in a situation where by 2022 almost a quarter of the world's GDP will be accounted for by the digital sector. In developed countries, the implementation of the digital economy has already begun. In the conditions of the globalization of the world economy and the development of technologies, the economic development of Uzbekistan cannot be achieved without the development of the digital economy [1-4].

Today's rapid digitization process has created a "new economy". This market segment, which is underexplored and growing day by day, provides manufacturers with optimal methods of organizing effective marketing campaigns in business, obtaining maximum profit at minimum cost, and successfully selling goods and services. Quality service and convenience are provided to consumers, buyers and clients. It is more than just ordering lunch on the Internet, calling a taxi through a mobile application, and sending money to a distant relative, and includes cross-border business cooperation, e-commerce space, remote office, etc.

The digital economy is an economic activity based on digital technologies, connected to e-business, e-commerce, producing and providing digital goods and services. In this case, payments for economic services and goods are made through electronic money. The concept of the digital economy is based on the transition from atom to bit, that is, from the smallest chemical particle to an electronic unit.

Olimjon Umarov, First Deputy Minister of Information Technologies and Communications Development of the Republic of Uzbekistan, said that the digital economy is not a separate type of activity, but the active use of information technologies in business, industrial facilities, and services. If in the ordinary economy, material goods are considered the main resource, in the digital economy it will be information and data that can be processed and transmitted. The digital economy allows large industrial facilities to increase their work efficiency, increase production, ensure transparency of activity, and reduce product costs.

According to the results of the analyses conducted by authoritative international organizations, the digital economy will increase the gross domestic product by at least 30%, therefore, it will end the secret economy. Turning to international practice, today the digital economy is not limited to the field of e-commerce and services, but to every aspect of life, in particular, health,

science and education, construction, energy, agriculture and water management, transport, geology, cadastre, archive, Internet banking and other areas are rapidly entering and giving high results in each of them. The government's provision of electronic services and electronic products for its citizens is a key part of the digital economy. Extensive development of this sector in our country will end the scourge of corruption [5-9].

According to the information provided by the information service of the Ministry of Information Technologies and Communications Development of the Republic of Uzbekistan, several works are being carried out in the direction of the development of the telecommunications infrastructure. The total bandwidth of the Internet connection is 1,200 Gbit/s, it is possible to access the Internet at a speed of 750 Gbit/s through the switching centre, and the load level of the network is 76.6 per cent. From January 1, 2020, the tariff for Internet services for operators and providers was reduced by 34% compared to the same period last year and amounted to 56,000 soums per 1 Mbit/s. The number of Internet service users increased from 22 million, of which the number of mobile Internet users was 19 million. In 237 objects across the republic, trunk telecommunication networks were expanded, telecommunication equipment was modernized, and the transmission capacity of trunk telecommunication networks was increased to 200 Gbit/s at the inter-provincial level, and 40 Gbit/s at the inter-district level. There are positive results, but it is not enough. After all, the digital economy continues to accumulate an incredible amount of digital data. Global IP traffic is expected to reach 150,700 Gbit/s in 2022 (45,000 Gbit/s in 2017).

Inadequate digital skills among the entire population has been another obstacle to the development of the digital economy. Digital turnover was also considered low. In this regard, it is worth recalling the opinion of Bill Gates, the founder of Microsoft Corporation, known to many in the world of technology: "Soon there will be only two types of companies in the world. The first is the companies that do business on the Internet and the second is the companies that have gone out of business." Taking this aspect into account, entrepreneurs should organize their activities based on the world-famous principles of business for consumers, business for businesses, and consumers for consumers.

Despite the presence of Click, Payme, M-bank, Upay, Oson and other payment systems that allow online payments, the rate of online payments for mobile payments, internet, and utility payments is not high. In 2017, 34 per cent of account holders made a digital payment. By comparison, this figure is 96% in the UK. It is noteworthy that the number of payments through the terminal is increasing. For example, in 2018, payments through the terminal amounted to 53 trillion soums.

Also, the lack of high salaries for IT specialists, who are technical staff in budget organizations, was a problem in the implementation of the digital economy. The reason is that qualified programmers do not stay in this position for long. They prefer to work for international

organizations, joint ventures, and foreign customers. Now a mechanism for giving them a bonus has been introduced [10-14].

Along with the achievements, there are problems, and there is a lot of work to be done, as President Sh. Mirziyov noted, "Of course, we know very well that the formation of the digital economy requires the necessary infrastructure, a lot of money and labour resources. However, no matter how hard it is, if we don't start today, when will we?! Tomorrow will be too late. Therefore, active transition to the digital economy will be one of our top priorities in the next 5 years."

**Cybersecurity is an essential condition of the digital economy.** All systems are being digitized in Uzbekistan. The demand for online goods and services has increased, especially in the quarantine regime introduced due to the coronavirus, and the range of digital functions has expanded in all areas. Today, it is possible to make payments without leaving home, get distance education without any problems, use the world's largest libraries and even work. Digital services have several advantages over the traditional type, such as lack of paperwork, formalities, and time savings. For example, if you receive government services digitally, you will receive a discount of 10 per cent of the fixed fee.

All this is a sign of the active transition to the digital economy in our country. Another factor in the development of the digital economy is the provision of cyber security. In quarantine conditions, there have been cases of distribution of viruses that crash software systems on the global network under the label of instructions for avoiding the coronavirus. Financial fraudsters have used fake online stores, websites, social media accounts, and email addresses to trick unsuspecting people by promising online sales and delivery of drugs overseas and asking for advance bank transfers. This once again confirms the need to ensure information security.

The concepts of digitization and cyber security always go hand in hand. Along with the digitization of all systems and processes, it is important to ensure their technically perfect and error-free operation and safety. The more attention is paid to the development of the digital economy in our country, the more urgent it is to ensure cyber security. Uzbekistan is strengthening its position in the global cyber security index. In 2017, our country took 93rd place in this rating, and in 2018, it rose to 52nd place.

Cybersecurity, being a form of information security, is a different concept than high spirituality which serves to sort out information. It refers to more technical processes, and for the average user, it means setting up reliable and strong passwords in the mail, social networks, and payment systems, and protecting their personal computer and smartphone from viruses. In a broader sense, cyber security is a set of measures aimed at protecting networks, mobile applications and devices. This means maintaining the confidentiality of data, protecting their integrity, and the full operation of this or that site, application, or program.

According to the analysis of the "Cybersecurity Center" SUK, in 2019, 268 cyber security incidents were detected on the websites of the national segment of the Internet. This means that the number of crimes in the digital world has decreased by 44% compared to the previous year. Of these, 222 were related to unauthorized uploading of content, 45 to deface (a hacking attack that means a website page is replaced with another, such as an ad-supported page), and one to stealth mining (hidden activity on a cryptocurrency platform).

69 per cent of the incidents were detected on websites hosted by hosting providers in Uzbekistan, and the remaining 31 per cent were related to sites hosted by hosting providers in foreign countries. In relation to 80 cases, verification work was carried out and practical recommendations were given to eliminate the identified vulnerabilities, and the remaining 188 cases were independently eliminated by the website owners. Security issues in cyberspace include managing content with security flaws in the code, working with outdated versions, easy access passwords, templates downloaded from insecure sources, and managing websites on virus-infected computers.

As a result of monitoring the national segment of the Internet, more than 130,000 threats to cyber security have been identified. Of these, 106,508 cases relate to hosts that became participants in botnet networks. 13,882 cases are related to blocking IP addresses blacklisted by various services due to spam e-mail or password cracking. 8,457 cases are related to the use of the TFTP (Trivial File Transfer Protocol) protocol and related ports, which can lead to the download of extraneous content due to the lack of authentication mechanisms. 2,114 cases are related to the use of a vulnerable RDP (Remote Desktop Protocol) protocol. 1,042 cases of lack of authentication mechanism in software and database management systems,

These analyses once again confirm the relevance of the issue of cyber security, because software vulnerabilities can cause an attacker to remotely access an information system or website, as well as files and data, and leak the personal data of citizens. Cybersecurity measures prevent such situations.

According to the state program on the implementation of the action strategy on the five priority areas of development of the Republic of Uzbekistan in 2017-2021 in the "Year of Development of Science, enlightenment and Digital Economy", a national strategy on cyber security for 2020-2023 and a draft law "On Cyber Security" will be developed.

Legal enforcement of cyber security standards is an extremely necessary and timely measure. The digital world has yet to define its legal status. In this regard, new types and forms of threats are emerging every day, and it is necessary to reflect them in the legislation. The development of a national strategy on cyber security regulates activities in the field of combating crime in the national cyberspace. After all, the harm and danger of crime in the virtual world is no less than in the real world.

Also, according to the national cyber security strategy for 2020-2023, a unified system of cyber security and a legal framework for the protection of critical infrastructure from cyber attacks will be formed.

The law "On cyber security" is expected to reflect the protection of the information communication and technology system from modern cyber threats, the introduction of modern cyber security mechanisms for different levels of systems, the determination of the rights and obligations of state bodies, enterprises and organizations in this field, and the coordination of their activities. The need to unify normative legal documents in this field was felt.

At the heart of all the reforms being carried out in our country is the goal of creating comfort for our people. A special focus on cyber security is the basis for using digital opportunities reliably and securely.

In our country, special attention is paid to the training of personnel who have mastered modern programming technologies. In particular, the "One million programmers" project is being implemented for this purpose.

The importance of this project is explained by the fact that digitization is a criterion of economic development, integration into the world community, and the main condition for comprehensive development of all areas. Today in the world there is a high demand for programmers who can implement digitization, mobilization, and artificial intelligence. Because of the infrastructure that supports the digital economy, the large amount of investment in the field of ICT will not pay off without programmers who can effectively use electronic opportunities.

The interest of young people in acquiring modern professions is also high. They are allowed to participate in several courses at the same time. The training schedule is flexible. It only takes two weeks to master the first step. But although there is little time to prepare the lessons, it can be completed in 3 months. The second stage begins after the completion of the first stage, i.e. after passing the tests evaluating practical knowledge. If the participant cannot finish it in 10-12 weeks, he can master it in 3 months.

## Summary

Thus, a total period of 6 months is given from the first day of registration on the site to complete the full content of the course. Participants will receive two types of participant and graduate certificates. "Digital inequality is the midwife of inequalities" Digitalization of all sectors of the economy is the main condition for integration into the world community, gaining a place in the world market, economic development, and creating conveniences for the population. Fortunately, this issue is on the main agenda in our country. Uzbekistan is leading the way in digitization with bold steps. Implementation of e-government elements and support for the digital economy have a strong place in Uzbekistan's near-term development plan. First of all, this concerns the task of further increasing the share of electronic document exchange

and gradually transferring a certain part of state services to electronic form through State Service Centers. Telecommunications infrastructure plays an important role in this process.

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