DOI: 10.5281/zenodo.15148260
Link: https://zenodo.org/records/15148260

THE CONTRIBUTION OF DIGITAL TECHNOLOGIES TO ENSURING THE COUNTRY'S ECONOMIC GROWTH

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Abstract. *This scientific article is devoted to the analysis of the impact of digital technologies on the transformation of production processes in order to overcome the slowdown in economic growth and increase labor productivity. The types of digital technologies that affect various spheres of society and form the digital economy are considered. Two approaches to understanding the category of «digital economy» are identified, its content is considered and its place in the global economic model is determined. It is noted that the introduction of digital technologies leads to increased labor productivity, competitiveness and capitalization, improved quality of life, the formation of new markets, increased security and, ultimately, ensures economic growth.*
Key words: *digital technologies, digital economy, labor productivity, economic growth.*

Introduction. Economic growth is the main characteristic of social production in the national economic system; it helps solve problems of limited resources and improve the standard of living of the population. Over the past decade, economic growth in Uzbekistan has been achieved through activities in the global raw materials and energy markets, but now this is becoming almost impossible. Uzbekistan's lag can be traced by the pace and quality of economic growth. Developed countries are searching for alternative sources of economic growth based on scientific and technological potential. Discoveries made allow for technological breakthroughs, ensuring rapid rates of economic growth [1]. Therefore, for the successful development of a country, it is necessary to make a transition to new sources of growth based on scientific and technological potential, in particular, digital and industrial technologies.

Therefore, the purpose of this article was to substantiate the contribution of digital technologies to ensuring the economic growth of territories. To achieve this goal, a number of tasks were solved:

– an analysis of the dynamics of global labor productivity and sources of its growth was conducted;

– the essence of such categories as "digital technologies" and "digital economy" was considered;

– the impact of digital technology on economic growth was studied.

The degree of scientific development of the problem under study.

We are aware of a number of publications by foreign scientists, economists and experts who have been studying the digital economy and methodological aspects of digital transformation of business processes for many years. Of interest are the works of N. Hanna, M. Pratt, D. Sparapani, N. Fenwick, R. Kinzyabulatov and others. They

present the theoretical foundations and practical experience in the field of digital economy, as well as digital transformation of business processes of enterprises and organizations in Europe, Asia and Russia.

The issues concerning the digital transformation of business processes of enterprises and organizations are described in detail in the joint research work of S. Kraus, P. Jones, N. Kayler, A. Weinmann, N. Chaparro-Banega, N. RoigTierno.

Also, the research of domestic scientists is devoted to increasing the competitiveness of the national economy of the Republic of Uzbekistan in the context of the digital economy, improving theoretical and practical aspects of the digital economy, as well as the introduction of digital technologies in public administration. Research related to the use of information technologies in the economy of Uzbekistan was carried out by such scientists as S.S. Gulyamov, T.S. Kuchkarov, A.T. Kenzhabaev, A.T. Shermukhamedov, V.K. Kabulov, R.Kh. Ayupov, A.M. Abduvohidov, A.B. Bobojonov, N.M. Makhmudov, Sh.G. Odilov, D.M. Rasulev, R.A. Dadabaeva, I.E. Zhukovskaya, T.Sh. Shadiev and others. These studies of domestic scientists have made a huge contribution to the development of the digital economy

The theoretical and methodological basis of the research. The study is based on a general scientific methodology, which provides for the use of a systemic approach to solving problems. The basis of this work is the fundamental works of domestic and foreign scientists devoted to the study of the digital economy, its development in Uzbekistan.

Main part. The problem of ensuring economic growth is associated with increasing labor productivity in the national economy. Researchers note that the rate of growth of labor productivity began to decline in the 1970s, which is clearly visible in industrial countries, and since the 2010s, the value of this indicator has varied around 1% per year. Traditional technologies characteristic of the dominant technological structure (the use of oil and oil products, gas, etc. in industry, production based on conveyor technology) no longer ensure labor productivity growth in the world; this picture is observed in many sectors of the economy. [2] In 2020, 85% of economic growth is provided by technology development. In the next decade (2020–2030), economic growth will be provided by the introduction and application of digital technologies in production, since, on the one hand, they themselves are advanced technologies, and on the other hand, they contribute to the acceleration and integration of knowledge in other sectors of the economy.

The dynamics of average growth rates of labor productivity in some developed countries confirm the slowdown in the growth rates of labor productivity, which limits the development of the mass production market. The existing conditions have indicated the need to make a qualitative leap in the development of applied technologies, which will lead to an economic shift and a transition to a new development model.

Thus, in order to maintain competitiveness and ensure the growth rate of labor productivity in economically developed countries and some industrial countries, new advanced technologies are being developed and implemented that significantly increase labor indicators, in particular its productivity, compared to technologies used traditionally [3].

“At the current stage of development, there is a process of displacement of man by technology, and there is also a mutually reinforcing effect of the fusion of various technologies, such as: computer, information, nanotechnology and their interaction in the physical, digital and biological domains,” notes German economist Klaus Schwab [4].

The unfolding transformation of production models is caused by the emergence [5] of digital technologies, which are technologies that use computers or other modern equipment to record code pulses and signals in a certain sequence and with a certain frequency [6]. They are not an innovation in themselves, but their formation, development and integration lead to the transformation of both society and the economy. [3].

The strategy of the Republic of Uzbekistan “Digital Uzbekistan-2030” defined 13 target indicators for the development of digitalization of the Republic until 2030. These indicators are listed below: [7]

1. The length of the fiber-optic network built throughout the Republic by 2030 is 250 thousand km.

2. The level of coverage of the Republic by 2030 with high-speed Internet of the world information network by 100%

3. The level of connection of social facilities to high-speed Internet of the World Wide Web to be increased to 100% by 2030.

4. The degree of provision of households with broadband Internet of the world information network by 100% by 2030.

5. The level of coverage of settlements with broadband mobile communications by 100% by 2030.

6. Electronic government in the international ranking of e-government development according to the efficiency indicator "E-government Development Index" by 0.86 points (0-1 between points) by 2030.

7. The share of electronic government services provided through the Unified Interactive Portal of Government Services compared to government services provided by government service centers by 90% by 2030.

8. The only interactive portal of government services has the ability to use electronic government services using mobile devices by 60% by 2030.

9. The share of transactional services provided through the Unified Portal of Interactive Government Services by 75% by 2030.

10. The share of large economic entities that have implemented an enterprise resource planning (ERP) system by 100% by 2030.

11. The number of online banking users (legal entities and individuals) per 20 thousand people by 2030.

12. The number of startup projects included in the incubation and acceleration programs of the technological park of software products and information technologies by 2300 pieces by 2030.

13. The number of quotas for admission to higher and secondary specialized educational institutions for training personnel in the field of information technology for 20 thousand people by 2030.

Digital technologies also serve as an impetus for the creation of new technologies in various fields. They lead to a change in the model of global economic development and a fundamental change in the organization of production, which in turn contribute to the formation of a digital economy. It opens up new, unused or previously non-existent, areas of economic growth, allows for economic efficiency of production, improves quality while reducing the cost of goods and services, and also ensures increased productivity in expanding areas of activity [8,9].

An analysis of scientific publications conducted on the topic of the study allows us to state that the generally accepted definition of “digital economy” cannot be identified. This term was introduced in 1995 by Nicholas Negroponte, who proposed using it in the meaning of “the transition from atomic movement to bit movement” [10].

The digital economy can be viewed from two points of view: firstly, as a set of new industries that make up the overwhelming majority of the global economy [11], and secondly, as an economic production that uses digital technologies that transform some aspects of economic entities that have already established themselves in their activities [12].

The central link of the digital economy is the technology sector, represented by digital technologies (Fig. 1). Software and hardware manufacturers, as well as firms providing consulting and telecommunications services on the market, are responsible for its work and functioning. Beyond the central link, the digital economy becomes the basis for the development of new business models, digital platforms, and services that enable management. Due to the fact that digital technologies affect existing traditional industries, the ongoing restructuring on a global scale creates a digital economy that is part of the global economy [13].

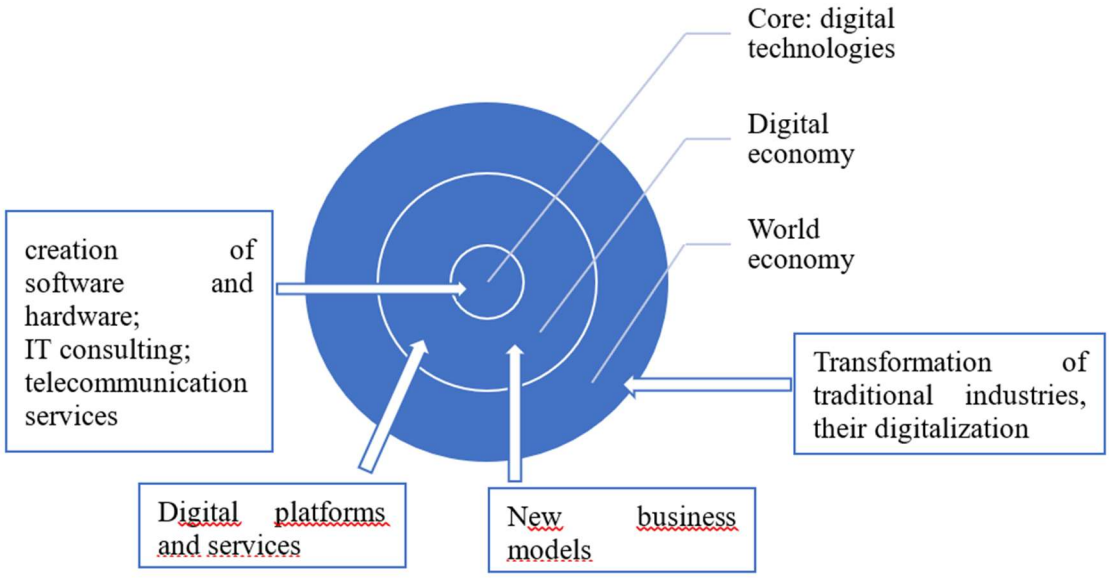

Fig. 1. The place of the digital economy in the global economic model

The specific features of the digital economy are:

– the prevalence of digital exchange over physical exchange in economic activity;

– the main economic resource is intellectual capital (i.e. knowledge), not financial;

– the leading means of communication is the Internet;

– the leading organizational structure is network;

– the main method of development is self-organization and evolution, which determine changes from simple to complex;

– the main level at which data is exchanged is global instead of regional [14].

The main indicator that demonstrates the degree of transformation of economic processes in the country is the share of the digital economy in the gross domestic product (GDP). Data from the international analytical agency BCG show an increase in the share of the digital economy in GDP in recent years in developed countries. According to expert estimates, the digital economy will significantly change the vast majority of industries. This is due to the significant impact of digital technologies on production in terms of increasing their efficiency, through optimization and reduction of intermediaries.

The digital economy is characterized by rapidly emerging opportunities for both the business sector and the self-employed [15]. In most cases, investing in digital technologies has allowed for dividends in the form of economic growth, new jobs, the creation of new types of services aimed at both production and citizens, and a reduction in public administration costs, including through e-government [15].

The expansion of its share in the structure of countries' GDP by almost 20% is a marker of the importance of the digital economy. In 2010, the Boston Consulting Group assessed the size of digitalization, and it amounted to about $2.3 trillion for a group of 20 countries, or about 4.1% of their GDP. If such growth rates are maintained, in 10-15 years the share of the digital economy in global GDP will reach 30 to 40%.

Analysis of theoretical and methodological approaches, as well as foreign experience, allows us to state that the use of digital technologies of any focus (production, management, financial, social, etc.), as well as the transformation of production processes, have a beneficial effect on the economic development of both the country and individual regions and enterprises, by increasing productivity, competitiveness and efficiency. Examples of such an impact are:

Increasing labor productivity. Human capital is one of the tools for increasing labor productivity in the digital economy. The use of digital technologies allows optimizing production by integrating such technologies into complex and precise production processes, which increases the number of highly productive jobs, as well as the share of highly qualified specialists in the total number of employees. In addition, it becomes possible to use human resources more efficiently, especially mental characteristics that contribute to increased labor productivity.

Increasing capitalization. The use of digital technologies in production helps optimize overall efficiency and increase the company's productivity, and allows creating new value chains. As a result, the profitability of the enterprise, its investment attractiveness and total value on the market increase.

Improving the quality of life. Digital technologies act as a tool for improving the quality indicators of citizens' well-being, forming a national space in which the central place belongs to the individual. The procedures for interaction between citizens and the state when receiving necessary services and going through standardized procedures (replacing a driver's license or passport) are simplified. First of all, this is expressed in a significant increase in the speed of functioning of state information systems. In addition, the quality of life is improved by increasing the satisfaction of people's needs with the help of new types of services or methods of their provision.

Formation of new markets. According to expert estimates, the digital economy is making significant changes in more than 50% of industries. This is explained by the ability of digital technologies to reduce transaction costs in the interaction of both management and production, as well as individuals, as well as the possibility of closer contact between economic entities and government agencies. All these processes create a digital economy based on network services [16].

Increasing competitiveness. The main goal of introducing digital technologies is the widespread automation of all ongoing production and economic processes, increasing the efficiency of all economic entities, activating the exchange of knowledge and information, increasing the share of jobs in high-tech industries. Companies that use digital technologies are leaders in global markets and contribute to the presence of competition for markets, since their main advantage is the possession of unique digital technologies or a platform, and not some basic aspect.

Improving security. The development of the digital economy largely depends on ensuring digital security. The safety of digital data is becoming one of the main areas of ensuring security, both at the state level and at the level of individual organizations and citizens. The implementation of such procedures can be carried out through organizational and technical measures to predict, detect, prevent threats and eliminate their consequences.

Conclusions and suggestions. It is clear that digital technologies, which are the basis of the digital economy, have a significant impact on the quality of life of citizens and ensure the economic growth of the country. The introduction of digital technologies in various sectors of the economy and production levels leads to significant economic benefits, expressed, among other things, in GDP growth.

In economically developed countries, the main motive for the transformation of production processes has become the need to overcome the slowdown in labor productivity growth. In the country, the prevailing technologies in industry have reached the limits of economic growth, which is accompanied by a decline in profits in traditional production. Further development of the country should be associated with the implementation of technological modernization of traditional sectors and the transition to a new organization of processes in industrial enterprises through the active implementation of digital technologies.

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