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ECONOMICAL SCIENCES

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DIGITAL ECONOMY AND EMPLOYMENT

BUSTONOV MANSURZHON

Professor of Namangan Institute of Engineering and Technology
E-mail.: bustonov1975@mail.ru

Abstract:

Objective. The global trend of the twentieth century is the penetration of the Internet into all spheres of life. The transformation of economic activity under the influence of the rapid development of online technologies has led to the formation of the digital economy. Innovative technologies of the digital economy help open up new opportunities - optimization of business processes, costs, open up new directions for attracting capital and promoting business projects.

Results. Increasing the efficiency of the digital economy based on modern science and technology, increasing consumer demand for products and services, and providing quality goods through the introduction of new equipment and technologies into the production process has become the leading goal in the world. Today, "the share of the digital economy in the gross domestic product of developed countries is 5.5%, and in developing countries - 4.9%. This figure is 12.4% in the UK, 8% in South Korea, 6.9% in China, 5.6% in India, 2.8% in Russia, 3.9% in Kazakhstan"[1].

The "digital economy" has many advantages, the main ones being the prevention of the shadow economy and the eradication of corruption. As a result, BCG estimates that "Internet products generated between \$1.9 trillion and \$14.4 trillion in additional revenue in 2020 and will contribute approximately \$6 trillion to the global economy by 2025"[2].

Conclusion. Currently, the world's leading scientific centers and research institutions are conducting a lot of research aimed at solving the problems of transition to a digital economy. Conditions for the implementation and development of the digital economy, the main stages and sequence of the transition to the digital economy, ensuring the sustainability of economic growth in these conditions, characteristics of qualitative factors of economic growth, their impact on the overall balance and sustainability, problems in the methodology for assessing this impact and ways to solve them, among They include general and specific aspects of digitalization in developed and developing economies, optimizing the share of digital technologies in economic growth factors.

Keywords: economic growth, digital economy, infrastructure, e-business, e-commerce, information and digital technologies.

Introduction. The formation of the digital economy in the CIS countries began from the moment they gained independence and continues today.

Table 1

Stages of development of the digital economy in the CIS countries

Chronological period		Characteristic
First stage	1990-2000	Creation of infrastructure for the formation of an information environment
Second phase	2000-2010	Users have become the source of information creation, the emergence of e-business and e-commerce.
Third stage	2010-2020	Development of social networks, instant messengers and mobile applications.
Fourth stage	2030-2040	Development of social networks, instant messengers and mobile applications.

Research on computer, information and digital technologies is being popularized, which stimulates the strengthening of the position of the digital economy. To systematize its periods of development, the digital economy should

be divided into several chronological stages, which are given in Table. 1

The prospects for the development of the digital economy and its impact on strengthening the state of each national economy cannot be overestimated. Here are a few key facts. According to studies by the Boston Consulting Group and the World Bank, the digital economy in developed countries reaches from 10% to 35% of GDP, from 5% to 20% of GDP in developing countries. The gap between these indicators is explained by the number of accumulated digital assets, the formation of digital services, as well as the implementation and interaction with them of the corporate sector, which generally uses digital technologies [3].

The digital asset size of the ICT (information and communications technology) services sector is about 22%, financing services is 15%, and technology manufacturing is about 14%. It should also be taken into account that the traditional sector of the economy itself was able to acquire a fairly large supply of digital

assets, because they can be estimated at about 5% of the gross added value of the sector. The digital economy is projected to account for about 25% of total global GDP by 2025.

According to domestic experts, the total share of the digital economy in the CIS countries as of 2020 is 4–5%, and over the next five years it could double. Despite such forecasts, this indicator still remains unsatisfactory compared to the share of the digital economy in GDP with more developed countries of the world, which stimulates the adoption of more effective measures.

ICT is among the key innovative components of the modern world. They represent a new technological paradigm belonging to the type of General Purpose Technologies (GPT), which are widely used and adapted to different sectors of the economy. There are two main characteristics of GPT: generality of application and innovative complementarity.

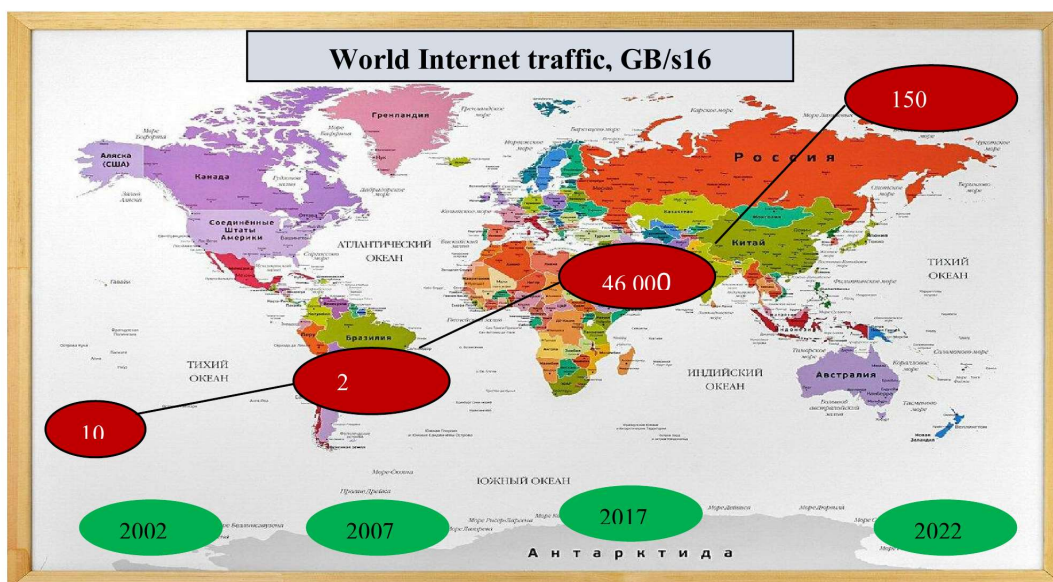


Fig. 1. Map of global Internet traffic, GB/s16 [4]

The size of the ICT market in developed countries, according to some estimates, ranges from 3% to 6% of GDP. In 2020, according to McKinsey forecasts, this figure should reach 9% [5].

Table 2

IT costs in the world [6]

YEARS	2017 y.		2018 y.		2019 y.	
	Expenses, \$ billion	Growth in %	Expenses, \$ billion	Growth in %	Expenses, \$ billion	Growth in %
Data processing systems	178	4,4	179	0,6	179	-0,2
Enterprise software	355	8,9	389	9,5	421	8,4
security	667	5,7	704	5,6	710	0,9
Devices	933	4,3	985	5,5	1 030	4,6
Communication services	1 393	1,3	1 427	2,4	1 443	1,1
In general IT	3 526	3,8	3 684	4,5	3 783	2,7

Industrial computer services is a unique subsector, growing in all regions and one of the main sources of employment in the ICT sector. Among developing countries, India accounts for the largest share.

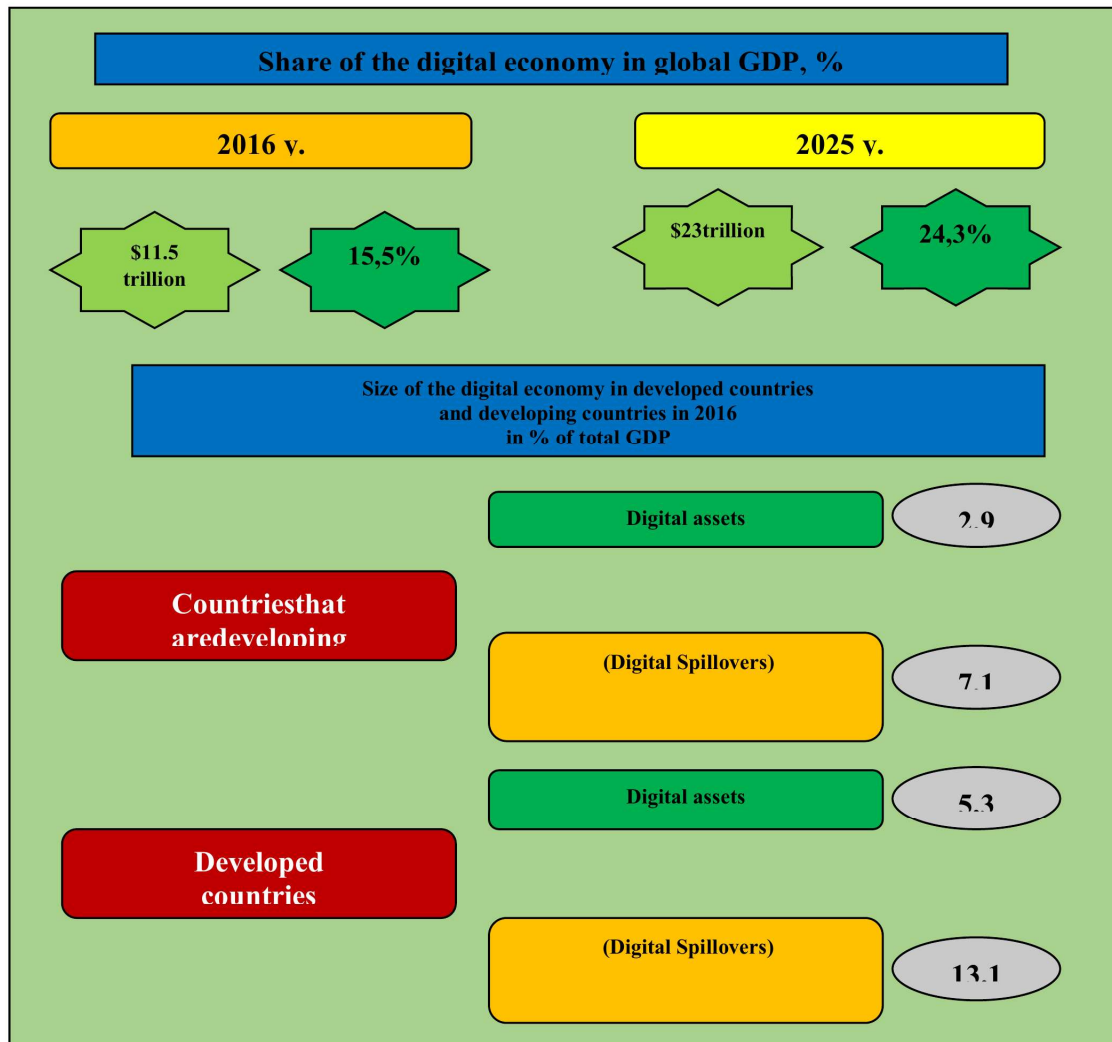


Fig.2. Some indicators of the digital economy [8]

The added value created in the production of products using ICT mainly comes from East Asia (primarily China) [7], and the capabilities of other developing countries are still quite limited. Over the past 10 years, global exports of ICT services and services carried out using digital technologies have been growing much faster than all export services as a whole, indicating the increased digitalization of the global economy.

Depending on the definition used, the size of the digital economy [9] is estimated to be between 4.5% and 15.5% of global GDP [9]. About 40% of the added value created in the global information and communications technology (ICT) sector comes from the United States and China.

Methods. The research used methods of systematic analysis, statistical observation, statistical aggregation and grouping, selection, correlation and regression analysis, econometric modeling and forecasting.

Results. The number of people employed in the ICT sector worldwide has grown from 34 million in 2010. to 39 million people in 2015, with the largest percentage (38%) of those employed working in the computer services sector. Over the same period, the share of the ICT sector in total employment increased from 1.8 to 2% [10]. According to the World Bank, the introduction of digital technologies leads to the blurring of geographical and physical boundaries and opens up new prospects for the economic, social and cultural development of countries, as well as to increased regional and global competitiveness.

In the digital economy, both the nature of work and the entire system of labor relations are changing. Digital technologies create a specific labor process and make significant changes to its elements: subject, means, technologies, organizations and results of labor. In the modern information economy, it is information that is the subject of labor. A

special feature of the digital labor market is its global nature.

Discussions. The digital labor market consists of the interaction of an employer with an employee on a digital platform in a remote work mode. An employee can be employed remotely beyond territorial and national borders if his competitiveness and working conditions allow this.

Segmentation of the global market on the basis of the mandatory use of information and computer technologies at all stages of labor activity allows us to talk about the emergence of a specific segment of the labor market: job search, receiving an order, its execution, transfer of work results and receipt of remuneration.

Work media are digital devices such as computers, tablets, cell phones, cameras, etc. The initial information necessary for carrying out work activities is recorded in digital form. The activity of a specialist is aimed at information, who, thanks to his knowledge, experience and ability to innovate, makes changes to it. So, in summary:

➤ the digital labor market is a specific segment of the global labor market, in which demand and supply for digital labor services are formed remotely, while the interaction of its subjects occurs exclusively using information - computer technologies;

➤ digital employment is a useful and expedient activity of the economically active population through the use of information and computer technologies, the result of which is an information product, and the activity itself It is aimed at satisfying public and personal needs and is economically beneficial for both workers and employers.

➤ supply and demand for labor are recorded on special online platforms, where the conditions for hiring, payment and evaluation of labor results are also formed. The main difference between the digital market is that the interaction of

digital labor market players occurs through various online platforms, which are a meeting place for workers and employers, as well as wage agreements. A product sold in the digital labor market is an employment service created with the help of information and information technology.

➤ the digital labor market is characterized by a high level of flexibility, which is associated with an almost unlimited level of labor mobility. At the same time, the main characteristic of the mobility of this segment of the labor market is its virtuality. That is, the movement of labor occurs without its physical movement from one point in the world to another. Experts highlight the formation of a new type of mobility - digital, which occurs without the physical movement of labor, which significantly reduces the cost of its maintenance for the employer.

globalization and information technology are increasing the level of competition, from one level to another, they will have a competitive personality with a level of professionalism, armed, relaxed, with the balance of reboot and ready to work, and ready to have ready -for today.

In the digital labor market, knowledge work is becoming the most in demand, which is due to the specifics of the services provided. Holders of human capital received a new level of freedom and opportunities for self-realization, and employers gained access to the world's intellectual resources. The digital labor market contributes to the creation of innovative jobs.

The carriers of innovative human capital are individuals who constantly improve their knowledge and professional skills and use them to produce innovations in any field of activity using ICT. The digital space is being actively explored primarily by economically active youth. A report from the US Bureau of Labor Statistics shows that digital workforce demographics are dominated by employees between the

ages of 16 and 35, who make up 50% of all employees in this segment.

➤ The main customers of labor services in the virtual labor market are innovative global companies and young fast-growing companies. The digital labor market is characterized by a high level of dynamism. There are four models of labor market dynamics depending on the ratio of factors: the intensity of labor force restoration (high, low) and the intensity of job restoration (high, low): a model with a high labor turnover, when the labor market demonstrates the ability to quickly update the structure of jobs.

➤ The model also corresponds to their part, where innovative human capital is concentrated, engaged in the production of innovations, research and scientific development. Labor services in this market segment are characterized by a high level of intelligence, and the result depends on the individual's ability to innovate, work with dynamic information flows, and make non-standard decisions.

➤ To more effectively use human potential, employers are forced to invest in the acquisition and development of new technologies. The "arrow" model assumes that the labor market is capable of moving directly, without deviations, to a new employment structure, which is formed by shifts in demand, changing technological and institutional conditions. This model covers those employed with remote service.

At least 30% of functions within professions can be automated at the current level of technology development [11]. At \$9 trillion. in 2030 can grow global GDP thanks to automation of jobs using AI technologies[12]. 375 million workers (about 14% of the global workforce) will be forced to change occupations by 2030. 98% – probability of automation of such professions as bank teller, auditor, credit specialist [13]. The number of working hours in professions that by 2027 may decrease by 29%. will not disappear thanks

to the introduction of AI in the banking sector of China [14].

Conclusion. Thus, the modern global labor market is a complex, multicomponent and dynamic system, which is subject to the permanent influence of information technologies, which, in turn, entails changes in the content of the labor process, its organization, employment structure, social-labor relations, and also requires training employees in fundamentally new skills. Digital technologies have created a completely specific labor process and have made changes to all its elements: the subject of labor, means of labor, technology, organization and the result of labor.

At the same time, one can hardly agree that the impact of new technologies

on labor resources is predictable. This process is complex because it is not so much about innovative technologies, but about how people are going to use them. So, thinking about the future of the labor market and employment, questions arise that need to be answered: how will technology changes, automation and artificial intelligence affect work activity, where and how will we let us work, what will be the place of the worker in this “working” world.

Digitalization has a significant impact on employment and the labor market, in particular, it is a prerequisite for new opportunities for creating new jobs. Although it must be added that data on the impact of digitalization on the creation of new jobs is still very contradictory.

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ECONOMETRIC ANALYSIS OF THE ACTIVITIES OF MULTI-SECTORAL FARMS

BUSTONOV MANSURZHON

Professor of Namangan Institute of Engineering and Technology
E-mail.: bustonov1975@mail.ru

Abstract:

Objective. Studies show that the demand for food products is expected to increase by 60 percent by 2050. This poses a serious challenge to agriculture and food systems around the world in the face of climate change, limited natural resources and the emergence of new types of demand. In developing countries, it is observed that small producers play a leading role as producers of most of the food to meet the needs.

Results. Indeed, in Asian countries, small producers play a crucial role in meeting the demand for food. This is especially true during the Green Economy, when small farmers began to adopt new techniques, increase productivity, and produce enough food to lower and stabilize real consumer prices of staple foods. In rural areas, the demand for labor has increased, jobs have been created for the poor rural population, and their wages are increasing. A combination of these factors helped ensure food security for all.

The progress made in the last 20-40 years is based on the work of small producers [1]. During the same period, small farmers tended to be more efficient than large farms. In the future, small producers may be more efficient in producing labor-intensive products.

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