

Genesis for Development of The Digital Economy in The World

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Abstract. This article describes the stages of formation and development of the digital economy.

Keywords: Digital economy, "Big Data", "Cloud Computing", "Artificial intelligence", "Blockchain technology", internet.

1. INTRODUCTION

World economists are faced with the problem of creating a single integrated indicator for evaluating the value and efficiency of the digital economy in today's increasingly digitized global world. The lack of empirical and statistical data, the rapidly changing processes of technological development, and the rapid implementation of institutional changes are the reasons for eliminating these situations. In the future perspective of modern development, the prospects of using "Big Data", "Cloud Computing", "Artificial intelligence" (artificial intelligence) and crowdsourcing, implementation of "Blockchain technology" Scientific research is being carried out related to researching the methodological aspects of this technology and the impact of these technologies on socio-economic development.

2. LITERATURE REVIEW

S.S. Gulyamov [1], K.Kh. Abdurahmonov [2], R.H. Ayupov [3], O. It was conducted by M.Abdullaev, G.R.Baltabaeva, O.Umarov [4] and many other leading economists of our country. Their research includes research on digital environments that have a set of functions that meet the needs of consumers and producers, as well as enable direct interaction between them. In today's conditions of intensifying transformation processes, studies related to the study of the impact of the digital economy as a single system on the economic development of the country, and the assessment of the impact on the integrated and integrated development of the regions and the growth of per capita income have not been carried out sufficiently. These aspects served as the basis for choosing the topic of this dissertation, defining its goals and tasks.

3. RESEARCH METHODOLOGY

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4. ANALYSIS AND RESULTS

Canadian scientist Don Tapscott's "Digital Economy" model, published in 1994, changed our lives dramatically. The fundamental essence of the development of digital innovations, including "Cloud computing", "Mobile marketing" and "Artificial intelligence" digital technologies, is to improve the well-being of the population.[5]

In the process of globalization, the role of the digital economy in determining the competitiveness of countries is of great importance. No matter which sector or sector of the economy we look at, we see the place of digital technologies in all of them. We can observe that the share of innovative digital technologies is increasing, starting from the service in the country's banking system and at the level of public services.

The digital economy is an economy based on the traditional economy. The digital economy, unlike the traditional economy, covers areas and work processes based on the widespread introduction of information and communication

technologies and digital technologies through the Internet, aimed at rapid information of society.(Figure 1).

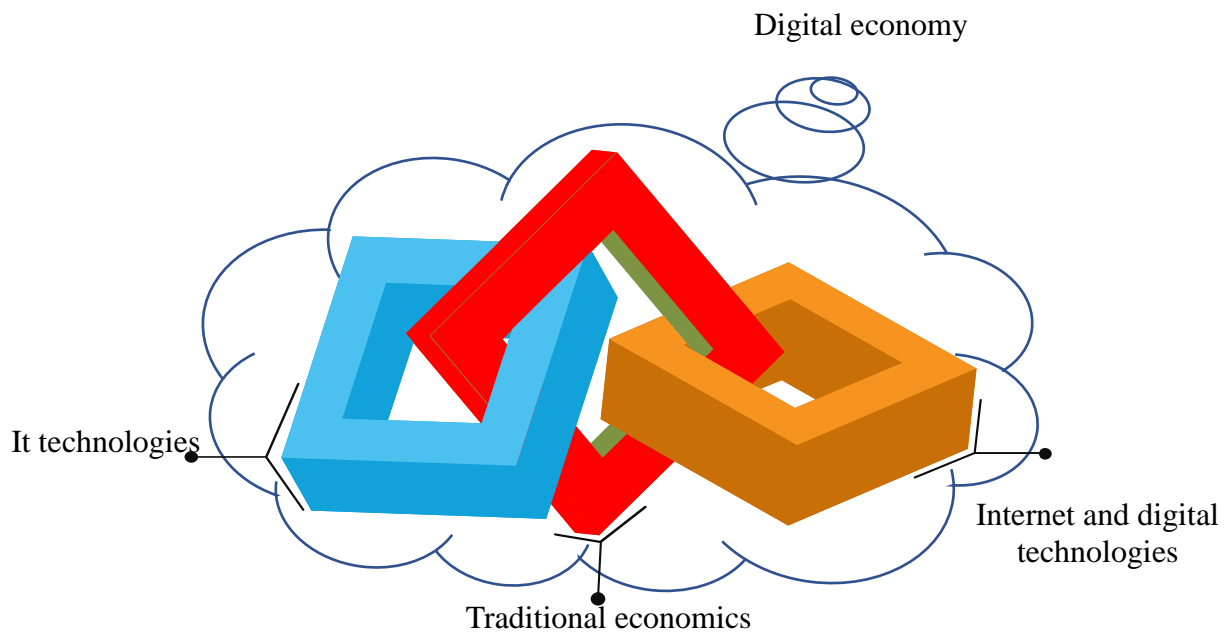


Figure 1. Traditional economy and the dependence of the digital economy

In fact, the first appearance of the digital economy goes back to the first appearance of telecommunications created by D. Bell. After that, in the 50s of the last century, the creation of the SABER program into practice by the IBM company and its use by American Airlines in the process of booking and purchasing air tickets started a new turn in the creation of digital systems. As a result of using the Internet as a global network since the 90s of the 20th century, the level of digitization of economic sectors and sectors gradually increased.

The ideas of the digital economy as an integrated phenomenon have gradually entered the political agenda of governments that have begun to develop and implement national digital strategies, and international organizations that coordinate digitization efforts.

For example, in Antalya in 2015, the G20 leaders adopted the final document entitled "G20 Digital Economy Development and Cooperation Initiative Program", in 2016, at the ministerial meeting in Cancun, the countries of the "Organization for the Development of Economic Cooperation" agreed on common goals in the field of digital economy and In Hamburg in 2017, he discussed general approaches to the regulation of the digital economy. As a result, the digital economy sector has become the world's driving force for innovation, and today, research and patent spending by businesses is a large part of total spending.

Despite the various challenges that have occurred in the last few years, Facebook remains the number one social platform. User trends recorded by the company show that the platform has a total of more than 2.6 billion historical users, and the number of users has continued to grow steadily in most countries throughout 2019 (Figure 2).

Step 4. (after 2017). In industry, services, the replacement of the human factor by the digital system and the sharp reduction of jobs. It is characterized by the introduction of new directions in the industry and service sector.

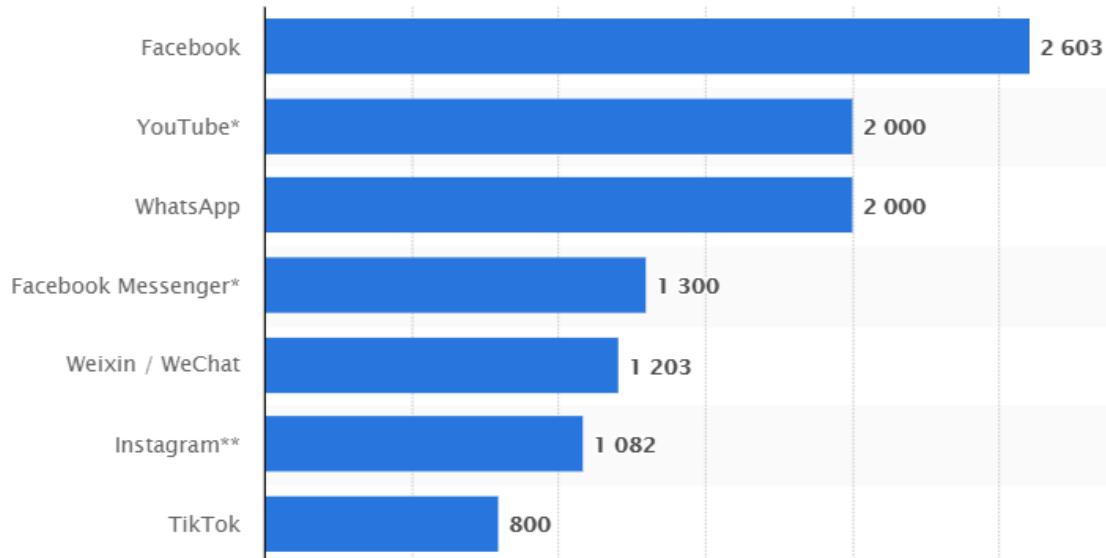


Figure 2. Ranking of the most popular and active social networks worldwide, as of July 2020 (in millions) [6]

The rate of spread of the digital economy is explained by the following figures: [7]
about 4 billion people use the Internet, 53 percent of them use "Mobile Internet" (mobile Internet);
Internet users in EU countries are: 97% of 16 to 24-year-olds and 63% of seniors (55 to 74-year-olds) use the Internet;
5.5% of employees operating in the world economy are ICT specialists. 1.4 percent of them are women;
90 percent of businessmen connect to the Internet, only 20 percent use digital technologies in production.
Google experts predicted that by the end of 2020, the number of Internet users in the world will exceed 5 billion.
(Figure 2).

Within the framework of the new economy (digital economy) of the 21st century, scientists and politicians understand a number of new economic phenomena and processes. Usually, everyone takes the process close to it and recognizes it as the basis of the new economy.

We adhere to a neutral point of view and present the new economy as the characteristic and processes of the modern economy, or the new reality that the Chinese are talking about.

1. Digital globalization, that is, new economic opportunities for the global network infrastructure provided by the Internet, mobile communication and Blockchain technology.
2. Changing the characteristics of production, distribution networks and trade combined with the term "network economy".

M. Kastells gave the following definitions: The network economy is an economy capable of working as a single system in real time on a planetary scale. [8]

The network economy has changed the structure of production processes: hierarchical structures within one enterprise have been replaced by a network spread around the world, components are produced at the lowest cost and sent to assembly sites, which made it possible to fulfill individual customer orders with minimal costs.

Globalization of production made it possible for small firms in different parts of the world to attract science and technology innovations to the production process based on external sources. The project process is organized in the same network as the design teams working on the same project in different parts of the world (virtual workers).

Technologies, new products and processes are moving as fast as investment from developed countries to developing economies. Today, the network economy has reduced transaction costs, increased competition, lowered barriers to entry, and strengthened the global nature of the economy. On the other hand, as a result of the digitization of the economy, it became possible to reduce office costs and increase work efficiency by 20-40%, and most importantly, to save natural primary fuel. In the 21st century, the factors of production and the high mobility of capital have led to the fact that the availability of own raw materials and accumulated funds is not important today. The economy allows competition to shift from comparative advantage (cheap labor and abundant natural resources)

to competition based on advantages based on unique products and processes (intellectual capital). Speaking about the information economy and innovative development in the world, its foundations were transferred to the real construction in the form of an innovative system of the national economy and a national innovative infrastructure that transformed the economy in the form of effective institutions for creating, storing and transferring knowledge to innovative technologies and products. In connection with the digital economy, innovative concepts in entrepreneurship have also begun to be widely used. In particular, the share of venture funds in the economy has increased.

Public investments in human capital and knowledge have become important factors for stability and long-term economic growth. If the main achievement of the 20th century depends on a 50-fold increase in the productivity of manual workers, then the main problem of the 21st century is the preoccupation of "knowledge holders" (the views of Peter Drucker) with a high level of intellectual work.

A sign of the growing importance of the digital economy is that within 100 years, the share of virtual products in GDP will grow 20 times more than the size of the gross domestic product and the weight of traditional products. N. Negroponte, one of the authors of the concept of "digital economy", says the following about this concept. Where there is Internet, the economy grows and industrial enterprises gravitate to cities with high Internet speeds. There is no unified concept of "Digital Economy", but there are many definitions.

Experts from EU countries: "Digital economy is the transformational effects of new general purpose technologies in the field of information and communication" [9]. If we accept the concept of the economy as a community of economic activity and relations that develop in the system of production, distribution, exchange and consumption. The use of ICT, the Internet, mobile phones can be considered as "consumption", in this case, the digital economy can be defined as part of the economic relations carried out by the Internet, mobile communication, ICT.

According to Thomas Mesenburg's research, there are three main components of the Digital Economy concept:

- 1) infrastructure support (hardware and software, telecommunications, networks, etc.);
- 2) electronic business (conducting business and other business processes through computer networks);
- 3) e-commerce (product distribution via the Internet). Digital transformation covers all aspects of human activity.

Digitization of documents and the emergence of electronic signatures led to the emergence of a digital state (e-government), which allows expanding the list and accelerating the provision of public services to citizens, providing new tools for mutual cooperation between citizens and authorities. Over the past 25 years, the level of services provided has become more complex, combining previously widespread technologies and creating completely new approaches to production processes and environmental management.

Bright examples of the implementation of integrated services are tools such as PLM-systems (Product lifecycle management (PLM)) - product/product life cycle management, BPM-systems (Business process management (BPM)) - business process management. Economist B. N. Panshin noted: "The main reason for the expansion of the digital segment of the economy is the growth of the transaction sector (service sector), which accounts for more than 70 percent of the gross domestic product in developed countries."

This sector includes: public administration, consulting and information services, finance, wholesale and retail trade, as well as various utilities, personal and social services. The greater the degree of diversification and dynamism of the economy, the greater the amount of unique information circulating within and outside the country, thus creating more information traffic within national economies.

Therefore, the digital economy operates effectively in markets with many participants and in markets with a high level of ICT services. First of all, it is related to Internet-related industries (transportation, trade, logistics, etc.), in which the share of the electronic segment is about 10% of the GDP, more than 4% of the employed, and this indicator has a tendency to grow.

The definition of authorship was formed by summarizing the analyzed articles and the concepts given by scientists to the essence of the digital economy. "The digital economy is a complex structure consisting of several layers, a system built on the basis of the traditional economy and closely connected with the Internet and information and communication technologies. Digital Economy:

use of digitized information and knowledge as an important factor of production;

as an important direction of activity - use of modern information networks;

is a wide range of economic activities that include the effective use of information and communication technologies (ICT) as an important factor of economic growth and optimization of economic content".

Based on the experience of rapidly developing "digital countries" (Denmark, Singapore, South Korea, Germany, USA) of digital economy (China, UAE, Saudi Arabia), four types (means) can be distinguished:

1. "Digital production" eliminates inefficient zones of the current economic system to renew resources and increase competitiveness. Tasks are solved with the help of economic entities-players who are able to achieve results.
2. "Digital step" consists of "Big Data", "Artificial intelligence", "Artificial neural network", "Blockchain" based on the creation of conditions for the development of new business and the rapid development of modern technologies.
3. "Self-digitalization" increases the efficiency and transparency of all processes of cooperation with the state, facilitates doing business in the country, which, in turn, creates a positive impact on the economy.

"Digital Reinvestment". As a result of the implementation of the first three tasks, additional value is created, transaction costs are reduced and inter-industry relations are formed.

5. CONCLUSIONS AND SUGGESTIONS

The introduction of elements of the digital economy has changed the operations of tourism, telecommunications, printing, passenger transport, including taxi services (Uber).

The digital economy operates effectively in markets with many participants and markets with a high level of service in the field of information and communication technologies. First of all, it depends on the Internet network: transport, trade, logistics, etc. The share of the electronic segment is about 10% of the gross domestic product, more than 4% of the employment, and these indicators have a growing trend. The digital economy will fundamentally change the structure of the global economic system - consumer opportunities, industrial structure, and the role of states.

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