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## **DEVELOPMENT OF ELECTRONIC COMMERCE USING DIGITAL ECONOMY TECHNOLOGIES**

**Abstract:** This article highlights the issues of the development of e-commerce in the digital economy, the work being done in this area in our republic, and the ways of its development. Conclusions and recommendations are presented on the role of local companies in the development of e-commerce and the improvement of their work in Uzbekistan.

**Keywords.** Digital economy, economy, information technology, digital business, e-commerce, internet technology, global economy, GDP, market economy, digital transformation.

**Enter.** In the conditions of globalization, the rapid growth of the national economy of each country occurs primarily as a result of factors such as digitization of the national economy, international trade, foreign investments, and the improvement of financial services. As the President of the Republic of Uzbekistan noted on the digitalization of the economy, "We need to develop a national concept of the Digital Economy, which provides for updating all areas of the economy based on digital technologies. On this basis, we need to implement the "Digital Uzbekistan - 2030" program. As Uzbekistan is considered an integral part of the international community today, it is necessary to increase its competitiveness based on the Strategy of Actions for the development of our country in 2017-2021. within the framework of the mentioned ideas, a wide introduction of innovations and effective use of

available resources is required. In particular, the following comments of the President in this regard are worthy of attention: "To achieve development, it is necessary and necessary to acquire digital knowledge and modern information technologies. This allows us to take the shortest path to ascension. After all, information technologies are deeply penetrating all areas of the world today.

"Digital technologies not only increase the quality of products and services but also reduce excess costs." In addition, Decree No. PF-5349 of the President of the Republic of Uzbekistan dated February 19, 2018 "On measures to further develop the field of information technologies and communications", Resolution PQ-3832 dated July 3, 2018 "On measures to develop the digital economy in the Republic of Uzbekistan" and the adoption of Decision No. PQ-4699 dated April 28, 2020 "On measures for the widespread introduction of the digital economy and electronic government" means that special attention is being paid to the digitalization process in our country. It can be seen that the formation of a digital economy in achieving the above-mentioned goals is considered one of the urgent issues of today. The use of the digital economy, especially in the provision of financial services, will lead to the development of business entities (enterprises).

In Uzbekistan, the main focus is on studying ways to develop e-commerce and developing directions for its further improvement in the digital economy.

To achieve the set goal, the following tasks were defined:

- explaining the basics and theoretical aspects of the digital economy;
- researching the technological aspects of the digital economy and the processes of its transformation;
- researching the development processes of electronic commerce in the conditions of the digital economy;
- highlighting the advantages and prospects of using electronic commerce systems and technologies in the context of the digital economy, and trends in its development;

- Analysis of ways to develop the digital economy and electronic commerce in Uzbekistan;
- Research ways to develop e-commerce systems in the Republic of Uzbekistan;

In general, the digital economy is not a different economy that is being created from scratch, but it means moving the existing economy to the Internet by creating new technologies, platforms, and business models, and applying them to everyday life.<sup>1</sup> The term "digital economy" refers to a system in which the existing economic, social, and cultural relations are implemented in a new way based on the use of new digital technologies and the Internet system.

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The term "Digital Economy" was first used during the development of information technologies on a global scale in 1995 by the American scientist Don Tap Scott in "Digital Economy: Promise and Peril in the Age of Networked Intelligence" (source: The Digital Economy: Promise and Peril in the Age of Networked Intelligence)<sup>2</sup> it is listed as a separate concept in the publication. This publication highlights fundamental innovations (semiconductors, processors), core technologies (computers), and connecting infrastructures (internet and telecommunications networks) as key components of the digital economy. According to the scientist, the main factor in the digital transformation of market entities is the development of digital culture. For the first time in 1995, American scientist Nicholas Negroponte put the term "digital

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<sup>1</sup> <https://elibrary.ru/item.asp?id=32878163> investment in electronic commerce and formation of new markets and transformation of traditional business models

<sup>2</sup> Bowman Joel P. The digital economy: promise and peril in the age of networked intelligence. (1996).

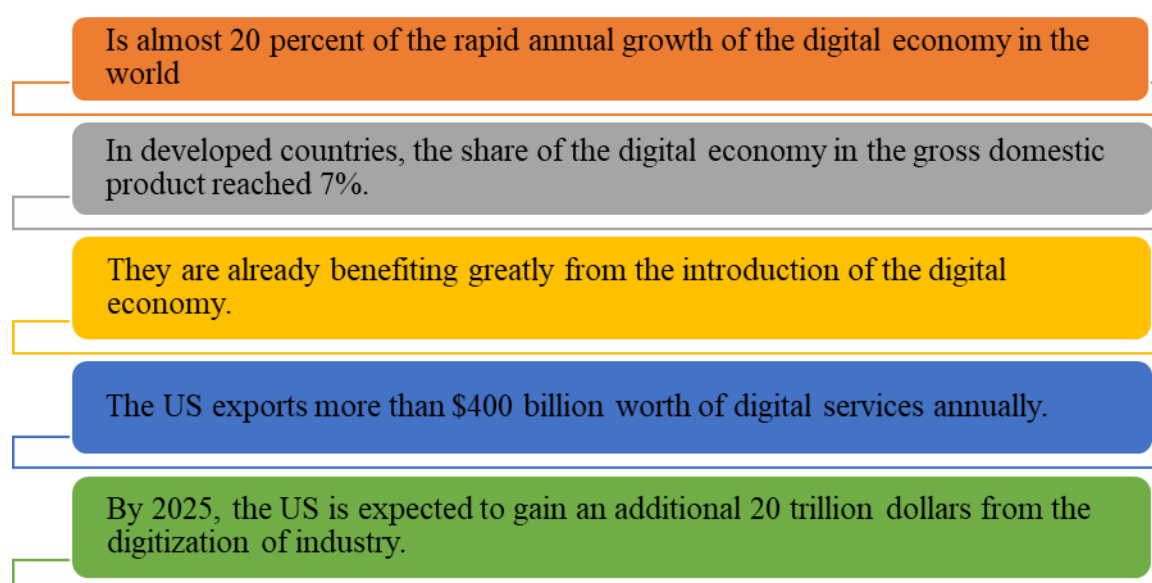
economy" into practice. Today, this term is widely used worldwide. In 2016, the management of the World Bank presented a report on the development of the digital economy in the world for the first time. In scientific practice, the term "digital economy" was widely promoted for the first time by the sociologist Manuel Castells. In this regard, he published his three-volume monograph "Information Age: Economy, Society, and Culture". In it, the scientist said that the term digital economy is used to express two different types of concepts. First, the digital economy is considered a modern stage of the development of society, and it is characterized by the priority of creative work and information benefits. In the second, he clarified that the digital economy is a unique theory and the object of its study is the information society. The scientist said that the theory of digital economy is currently at the initial stage of its development, because the transition of human development to the digital information stage began only a few decades ago, and it will continue.

In various scientific literature, it is referred to by terms such as "the era of the new digital economy". For example, scientist D. Bell called it a "post-industrial economy" or "informed economy" scientist O. Toffler, Russian scientist V. Kivalina called it a "mega economy", and scientist I. Niiniluto called it an "economy based on information and communication", "techno-economy" or digital economy" defined by scientist B. Gates and "knowledge-based economy" by scientist D. Tap Scott<sup>3</sup>. The factor connecting these different approaches is information technology and the Internet. Several foreign and local economists have given different definitions to the digital economy, for example, according to the Uzbek scientist, academician S.S. Gulomov, "Digital business is the emergence of new business models that combine the physical and digital worlds." According to another Uzbek scientist, Shakhnoza Soatova, "Digital economy is a system of implementing economic, social and cultural relations based on the use of digital technologies. It is sometimes referred to as the

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<sup>3</sup> [http://el.tfi.uz/images/Digital\\_iqtisod--2019-\\_.pdf](http://el.tfi.uz/images/Digital_iqtisod--2019-_.pdf)

Internet economy, the new economy, or the Web economy<sup>4</sup>. The digital economy is not a separate type of activity but means business, industrial facilities, and services. The term "digital economy" refers to the extensive use of information technology and the Internet in all of these different sectors. If material goods are considered the main resource in the normal economy, then in the digital economy the main resource is information, information is the main resource. Analysis shows that the role of the digital economy is increasing day by day on a global scale (Figure 1).



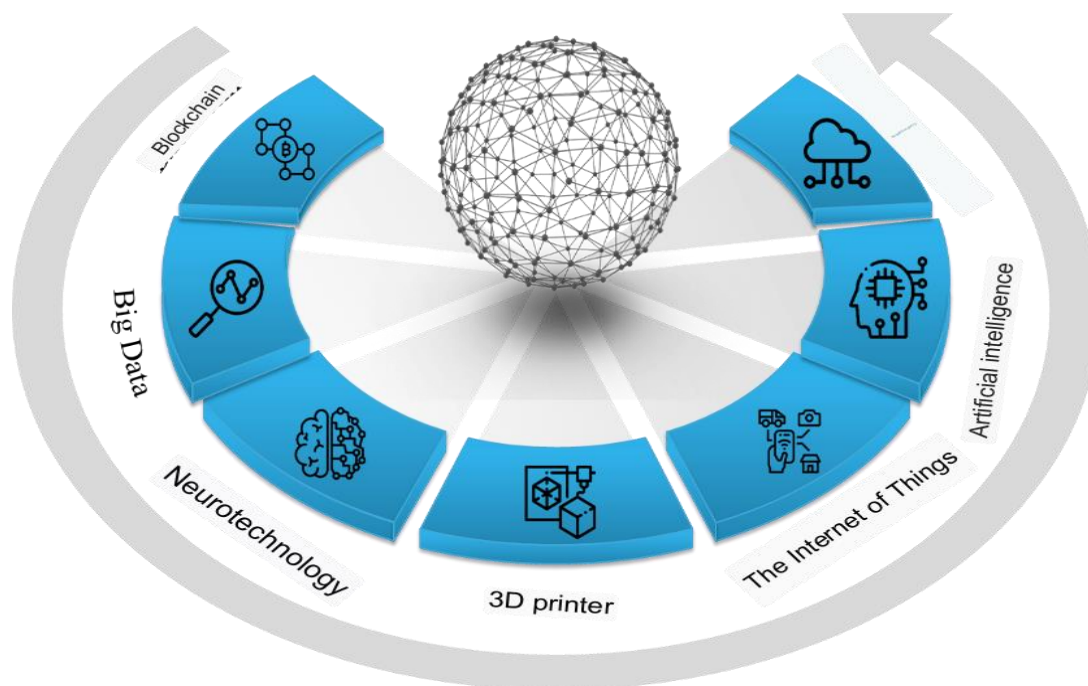
*Figure 1. Global development of the digital economy<sup>5</sup>*

Today, the digital economy is emerging as a new stage of economic and technological development, and it is rapidly changing human life while creating wide opportunities, it is starting a period of further tightening of the international competition field.<sup>6</sup> If we look at the founders of the digital economy, they are becoming known for their widespread use in various sectors of the economy (Figure 2).

<sup>4</sup> ("Economics and innovative technologies" scientific electronic magazine. N1 6, November-December, 2019 186/2019 (N1 00044) <http://iqtisodiyot.tsue.uz>)

<sup>5</sup> [http://economyjournal.uz/article/Articles\\_2021\\_2\\_son.pdf](http://economyjournal.uz/article/Articles_2021_2_son.pdf)

<sup>6</sup> <https://elibrary.ru/item.asp?id=42326999>



**Figure 2. Founders of the digital economy<sup>7</sup>**

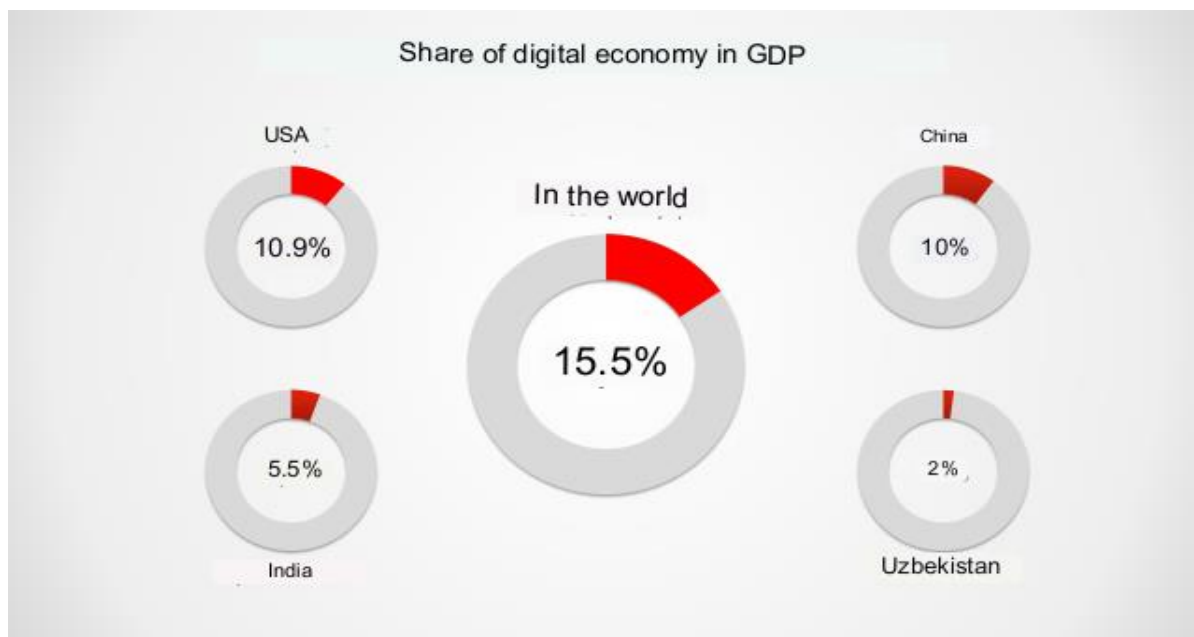
The annual growth rate of the digital economy in the world is almost 20 percent per year, and in developed countries, its share in the gross domestic product is 7-9 percent. For example, the share of ICT in the gross domestic product is 10.9% in the USA, 10.0% in China, and 5.5% in India. The United States spends 400 billion a year<sup>8</sup>. It is exporting more digital services than the US dollar. More than 5% of the US gross domestic product is directly related to the Internet and information and communication technologies<sup>9</sup>. In this area, increasing efficiency through the use of blockchain, artificial intelligence, cloud computing, and other modern technologies is becoming an urgent issue.

The analysis of the development of the digital economy on a global scale and its role in countries shows that in some developed countries its share in GDP is 10-12% (Figure 3).

<sup>7</sup> <https://elibrary.ru/item.asp?id=42326999>

<sup>8</sup> <https://review.uz/post/uzbekistan-otsifroviyvaetsya>

<sup>9</sup> <https://hbr.org/2020/12/which-economies-showed-the-most-digital-progress-in-2020>

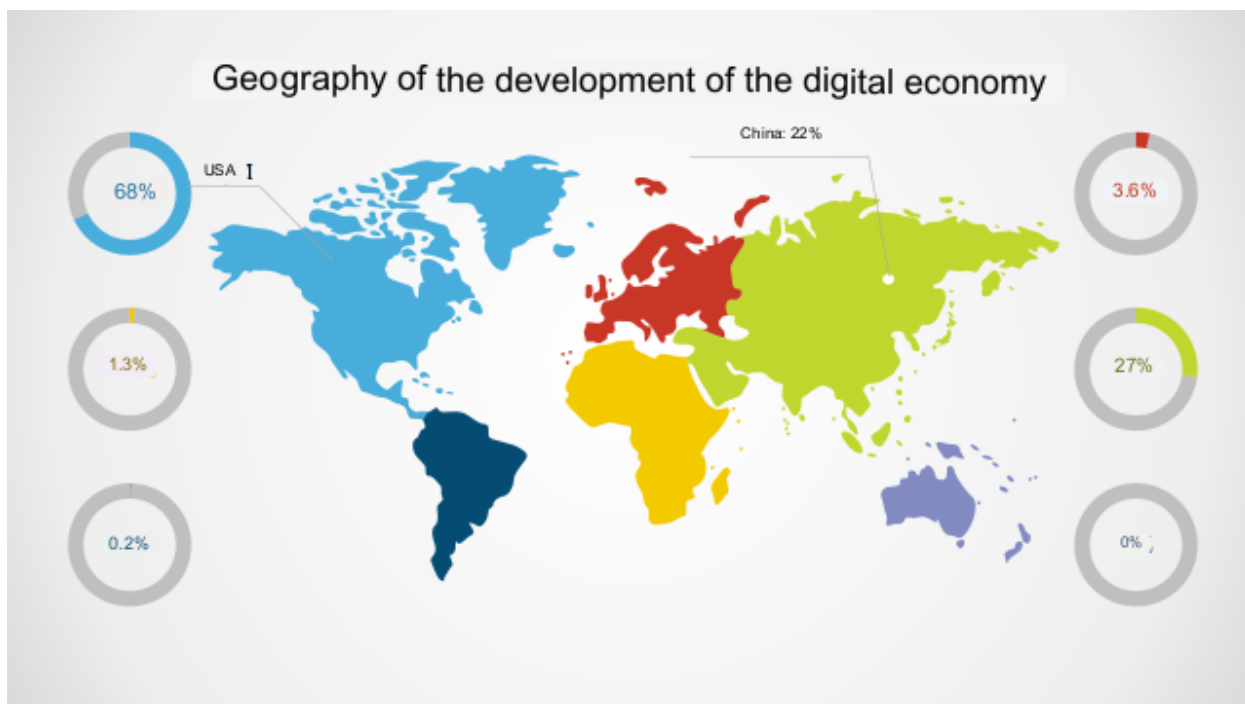


***Figure 3. Global share of the digital economy in GDP***

If we look at the development of the digital economy in the world economy, it becomes known that it is developing widely in the USA (60%) and China (22%). The development of the digital economy in the world economy has a very small share in the rest of the countries. Other countries should take necessary measures in this regard<sup>10</sup>. (Figure 4).

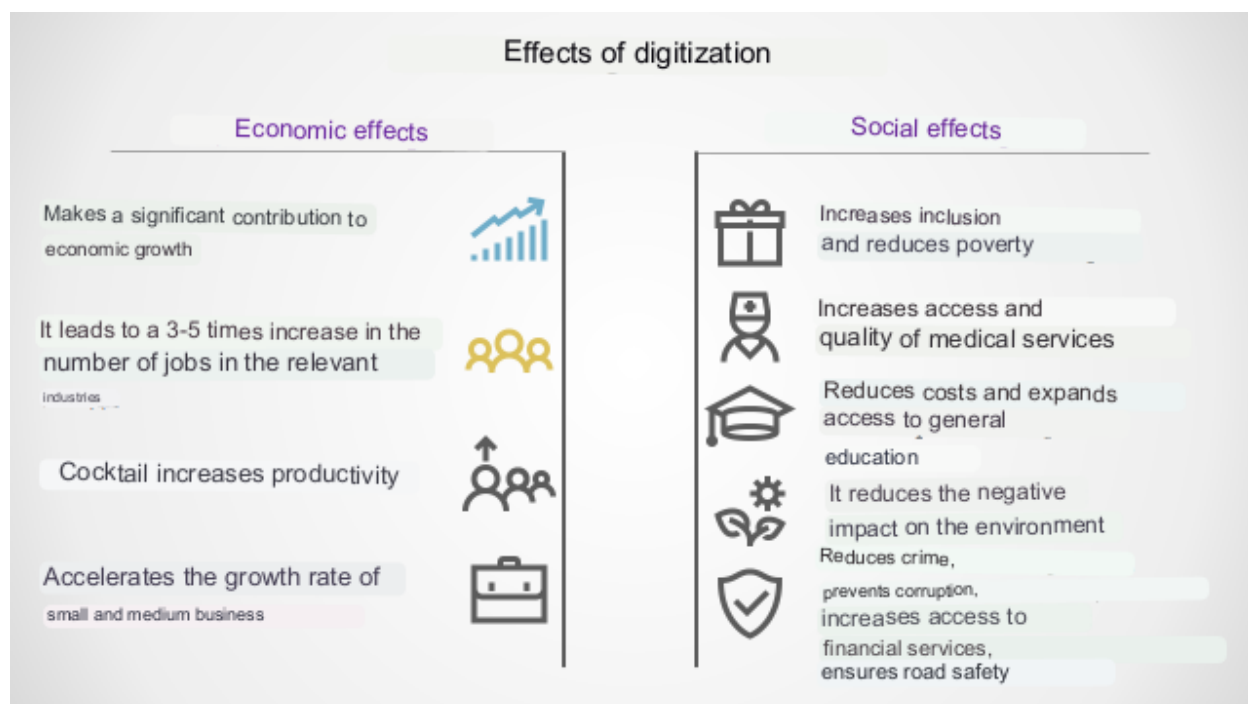
<sup>10</sup> <https://elibrary.ru/item.asp?id=42326999>





*Figure 4. The development of the digital economy in the world economy*

Well, if we consider the question of what digitization will bring, it is known that it will bring the following economic and social benefits (Figure 5).



*Figure 5. Effects of digitization*



By 2030, Uzbekistan has set a goal to become one of the 50 most advanced countries in the world according to the Global Innovation Index rating, and consistent measures are being taken to develop the digital economy in this area. For example, 2020 was declared the "Year of Science, Enlightenment, and Digital Economy Development" in Uzbekistan, and the national program "Digital Uzbekistan-2030" was developed as part of the program. State authorities were assigned specific tasks for the digitization of all processes. These tasks, in turn, mean that the development of the digital economy in our country is very urgent and determines the need to conduct scientific research in this direction.

So, what is the digital economy and what does it give people? First of all, we need to recognize that the digital economy leads to a significant increase in people's standard of living, to the creation of convenience for them, and to the saving of their time, money, and resources. The introduction of digital technologies leads to a sharp change in the current business processes, the emergence of new business mechanisms and structures, and a radical change in the quality of the activities of people and companies<sup>11</sup>. In particular, the digital economy prevents the existing corruption and "black economy" in the state system and serves to make these systems "transparent". In the conditions of the digital economy, every transaction and transaction is "sealed", that is, information about who did it, when it was done, and other conditions are stored in centralized databases, which serve to quickly provide any information when necessary. In the conditions of the digital economy, ensuring the transparency of information will increase dramatically, and it will be impossible to hide information, not to provide information about this or that activity, all

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<sup>11</sup> <https://elibrary.ru/item.asp?id=32878163> investment in electronic commerce and formation of new markets and transformation of traditional business models

information will be reflected on the computer, as a result, it will be impossible to commit various illegal activities.

The transition to a digital economy means the transition of the existing economy to a new system through the creation and implementation of new information technologies, new platforms, and digital business models. The digital economy is a new opportunity, and its further development is based on the use of digital technologies in the development of economy, social and cultural relations<sup>12</sup>.

Currently, the introduction of digital economy technologies has a significant impact on the sharp increase in labor productivity, resource savings, and the improvement of people's working conditions, which, in turn, are considered future technologies that will lead to the economic growth of countries.

The emergence of digital technologies and their widespread introduction into the economy allow to achieve great positive effects and results for the economy<sup>13</sup>:

- A sharp increase in labor productivity on a global scale;
- increase in capitalization;
- to improve the quality of life;
- formation of new markets;
- increasing the efficiency of resources (assets, capital, powers);
- increase in competitiveness;
- increase in security;
- increase in the quality of public welfare.

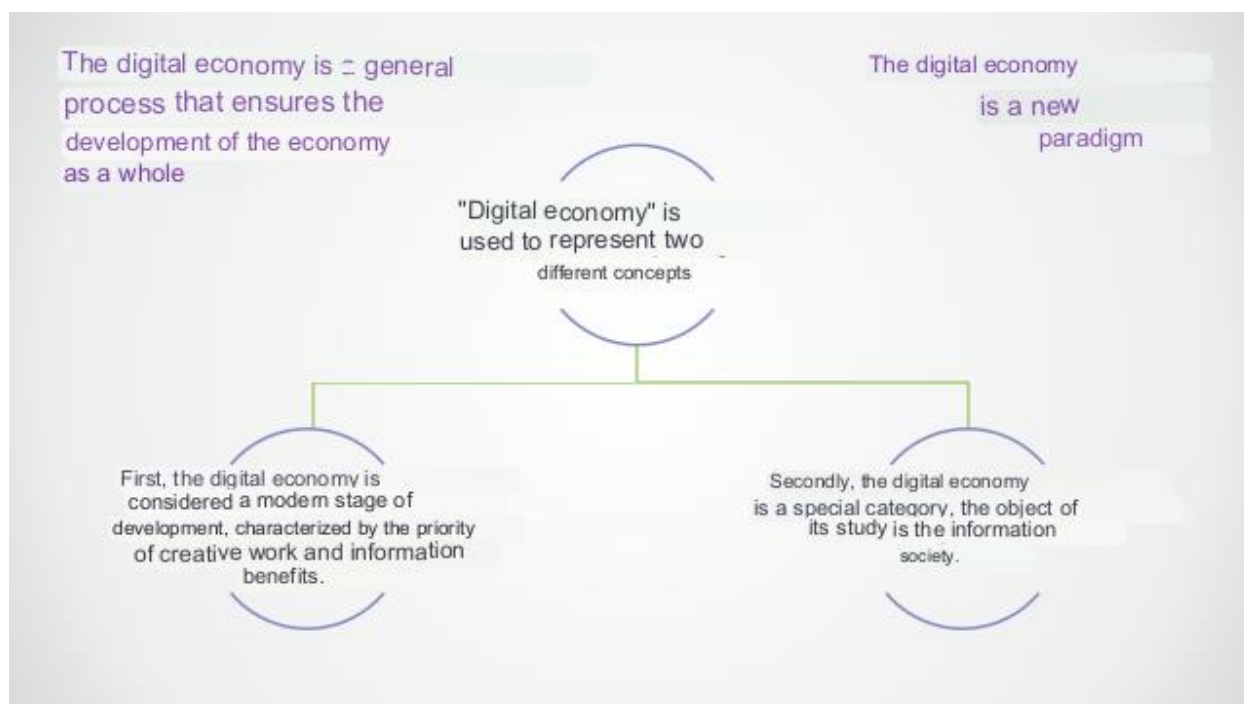
In the developed countries of the world, for example, in the USA and China, the number of Internet companies and Internet firms is increasing and their rapid development is having an impact on all sectors of the economy.

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<sup>12</sup> <https://elibrary.ru/item.asp?id=42326999> Sostioyanie i prospective razvitiya yifrovoy ekonomiki

<sup>13</sup> <https://elibrary.ru/item.asp?id=32878163> investment in electronic commerce and formation of new markets and transformation of traditional business models

Today, new markets for new technologies such as new Internet services, products, services, and provider services of digital economy technologies are forming<sup>14</sup>. Currently, the Internet-based digital economy is viewed as a set of relationships between companies and firms regarding the creation and use of digital technologies, products, and services (Figure 6).



*Figure 6. The main aspects of the digital economy<sup>15</sup>*

It has several distinguishing features compared to the "industrial" economy, which mainly corresponds to the new technological system, which is considered to be the economy of enterprises of any industries that operate in the conditions of a global electronic network using the digital format of technologies. The digital economy in its digital content as a system that connects companies and individuals around the world can be interconnected in various ways, and using digital technologies instantly, regardless of the geographic location of

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intermediaries, distance, markets, including innovative digital technologies, products, services, and service markets. based on the achievements of the fifth and sixth technological systems entering into relations, it is considered that society describes a deeper stage of economic development.

The rapid development of the digital economy, in turn, leads not only to revolutionary technological changes but also to the consideration of new principles of modern management and new rules of business conduct, determined by the laws of evolution of the new economy<sup>16</sup>. This, in turn, serves to increase the quality of products and labor productivity, helps to eliminate negative changes in economic growth, reduces inflation and unemployment, and ensures stable growth of the economy in the context of world globalization.

Globalization of economic processes in the conditions of the digital economy leads to the strengthening of the integration of various sectors of the economy related to the formation of the world electronic network. Due to this, the main trends and principles of the development of the digital economy are gaining strength. These possibilities of the digital economy create wide opportunities for global business, leading to a radical increase in the responsibility of firms and companies to consumers. In the digital economy, consumer dissatisfaction becomes immediately and widely known.

Globalization of the economy in the conditions of the digital economy leads to changes in time and space, their "disappearance" and changes in the value of many factors of production, first of all, the time factor. In this, the time factor is considered not as a category of social production, but as a factor that always determines the value of production. In the conditions of the current digital economy, the "price" of the time factor is increasing to an incomparable level. In the world of "instant" communication between producers and consumers, time (its savings and speed of transactions) is of great importance,

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<sup>16</sup> <https://elibrary.ru/item.asp?id=32878163> investment in electronic commerce and formation of new markets and transformation of traditional business models

providing a key strategic advantage, while playing a key role in any market. In the digital economy, the ability of various firms to study the situation in the digital market, evaluate deals and conditions, make decisions and execute deals online is considered the main factor that determines its success or failure in the business world. Among the companies that have achieved success in the conditions of the digital economy, in the production of products under these conditions, first of all, it is necessary to include those companies that introduce continuous and continuous changes to the improvement of product production due to the promotion of digital business technologies and products towards the consumer. In the context of the digital economy, such a policy allows to accelerate the "digitalization" of the economy and ensures a strategic advantage over traditional companies that are successful from the outside.

A rapid change in both form and content of the factors in the form of material goods in social production, that is, a change in their physical state and importance, is characteristic of the new, especially the digital economy. For example, product production and material capacity have significantly decreased in the economies of developed countries only in the last decade. If we evaluate the value of the unit of the physical weight of the gross domestic product during this period, it can be determined that the value of one pound of the product increased almost twice during this period due to the information and digital factors of production. As one of the leading trends of the digital economy, the calculation of the "disappearance" of material components of production and products, and their replacement by non-product components is accepted. This leads to the trend of the introduction of digital information technologies in production costs, the importance of its components: information itself, digital technologies, digital services, digital services, and software products, and the emergence and development of Internet service markets.

The process of informatization and digitization of the economy and social production in society is a general trend, which accelerates the development of

economic efficiency in society at a high level. In the conditions of the digital economy, the development of information acquisition, transmission, and processing products and services, as well as traditional payments, is increasing sharply. The valuation value of various companies and firms, and their competitiveness is increasingly determined by the formation of non-material property, but by the presence of factors that ensure the strategic advantage of firms over competitors, namely, the knowledge of employees, human capital, ideas, artificial intelligence, and the strategic combination of basic intellectual property.

Nowadays, the role of the digital economy as the main principle of accelerating economic growth is increasing. Due to the expansion and rapid development of the global electronic network, the adaptation of the distribution of products in the field of various transactions and consumption is accelerating. The world's electronic network and digital technologies are making network marketing more effective, they are achieving the spread of information about products and the market situation on the principle of a chain reaction. Such advantages and opportunities of the digital economy allow one to make the right decision and take the right action in business, to achieve great advantages and to ensure additional profits. In conditions of the digital economy, it allows good and quality goods to be distributed and sold around the world at a very high speed "online".

Modern digital marketing ensures the acceleration of the economic growth of any company. An example of this is the activity of Internet companies engaged in electronic commerce and Internet trade in different countries.

Modern concepts increasingly promote a popular product to secure market share and then develop sales of new related goods and services using the network. The dependence of the product value on the market share is based on the large-scale development of the electronic network. If earlier the value of the product was determined to a large extent by its scarcity, now thanks to the

Network it is quickly becoming the rule, and the price of goods is falling. The effect of sales on product types varies according to the level of function based on market share, which helps to define consumption "standards". In the conditions of the digital economy, almost anything can be found online - goods, services, and any information needed by the consumer. In addition, new users can conduct their economic policies and add information to further divide and conquer the market. The effectiveness of companies operating in the "online" mode is primarily ensured by the diligence, mobility, productivity of personnel, collective decision-making, and an individual approach to network users (potential customers) based on Big Data technology.

With the advent of the global electronic network, buyers have new, unprecedented opportunities to satisfy their needs, and sellers, in turn, have gained a new source of economic power (competence) for growth. In the conditions of the digital economy, there is no need to "physically" study sales conditions and prices in markets, to compare prices in analogs in different stores and companies. An alternative option is quickly identified at the same time as research, and a competitor can be eliminated with one movement of the computer "mouse".

### **Conclusions**

An important aspect of the digital economy, particularly, is the unique business technology. A distinctive feature is that the transaction is carried out based on "one-to-one" and without traditional intermediaries or taking into account information intermediaries. Therefore, the informational component of the value of goods and services is increasing. At the same time, sellers consider this process more profitable than carrying out the costs of traditional components of the product value. Consumers, in turn, tend to individualize their product requirements according to their preferences. Unprecedented conditions are created for the exchange of information between suppliers and consumers,



sellers and buyers. For them, and them, information becomes the main aspect of economic life.

The digital economy is used to represent two different concepts. First, the digital economy is considered a modern stage of development, and it is characterized by the priority of creative work and information benefits. Secondly, the digital economy is a unique concept, the object of its study is the information society. In the conditions of today's rapidly developing global economy, the digital economy is in the initial period of its development, and the transition to the digital information stage of our time is only a few decades.

In general, the digital economy is based on the use of the results of process analysis and the processing of large amounts of data, which allows for a significant increase in the efficiency of storage, sale, and delivery of various productions, technologies, equipment, goods, and services, and information in digital form is the main production. is a factored activity.

Digital transformation is the integration of digital technologies into all areas of business, fundamentally changing how you operate and deliver value to customers. It is also a cultural change that requires organizations to constantly challenge the status quo, experiment, and fail.

The analysis of the development of the digital economy and its transformation on a global scale shows that the development of electronic commerce on a global scale requires the need to widely introduce innovative technologies in the electronic payment system. The current new trends in this field, including the development of digital platforms and e-commerce, are being positively assessed as having an important place in the field of e-business. The following trends are observed in this direction:

- based on the development of the global digital economy, the digitalization of the retail settlement system, the introduction of new innovative technologies into it, including co-branded cards, NFC technology settlement systems, etc., are becoming stronger;

- there is a need to provide citizens with the ID card system, which allows for increasing the number and volume of remote financial services and strengthens the mechanism of its widespread use in financial transactions.

#### Used literature:

1. Gulomov S.S. etc. Information systems and technologies. Textbook for university students. - T: East, 2000. p. 336-368.

2. Rakhimov N.O. Knowledge representation models in intelligent learning systems //TATU messages. - T, #4. 2010. pp. 64-68.

3. Kadyrov M.M. Textbook of information technology. Part 1. - T.: "Sano-standard" publishing house, 2018. p. 192-237.

4. Brusilovsky P.L. Intellectual training system. //Informatics. Scientific and technical collection. Kyiv, 1990. No. 2.

5. Bessmertny I.A. Iskusstvennyy intellekt. Uchebnoe posobie-St. Petersburg, 2010. 27-32 p.

6. David Moursund. Brief Introduction to Educational Implications of Artificial Intelligence. <http://darkwing.uoregon.edu/~moursund/dave/index.htm>. 24.04.2006, p. 45

7. <https://elibrary.ru/item.asp?id=32878163> Investment in electronic commerce and formation of new markets and transformation of traditional business models

8. Bowman Joel P. The digital economy: promise and peril in the age of networked intelligence. (1996).

[http://el.tfi.uz/images/Raqamli\\_iqtisod--2019-\\_.pdf](http://el.tfi.uz/images/Raqamli_iqtisod--2019-_.pdf)

9. ("Economics and innovative technologies" scientific electronic journal. N1 6, November-December, 2019 year 186/2019 (N1 00044) <http://iqtisodiyot.tsue.uz>))

10. [http://economyjournal.uz/maqola/Maqolalar\\_2021\\_2\\_son.pdf](http://economyjournal.uz/maqola/Maqolalar_2021_2_son.pdf)

11. <https://elibrary.ru/item.asp?id=42326999>

12. <https://elibrary.ru/item.asp?id=42326999>

13. <https://review.uz/post/uzbekistan-otsifroviyvaetsya>

14. <https://hbr.org/2020/12/which-economies-showed-the-most-digital-progress-in-2020>