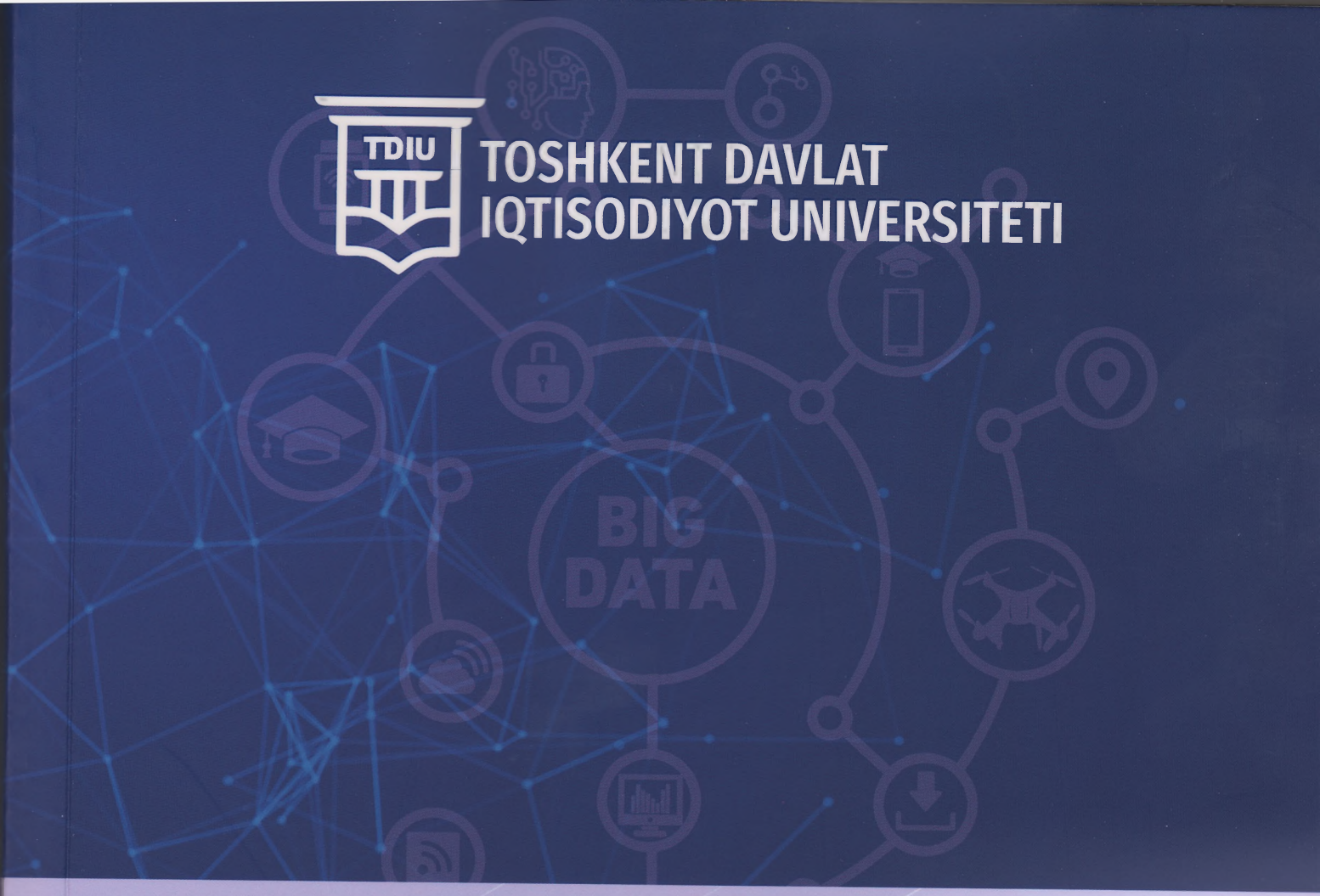

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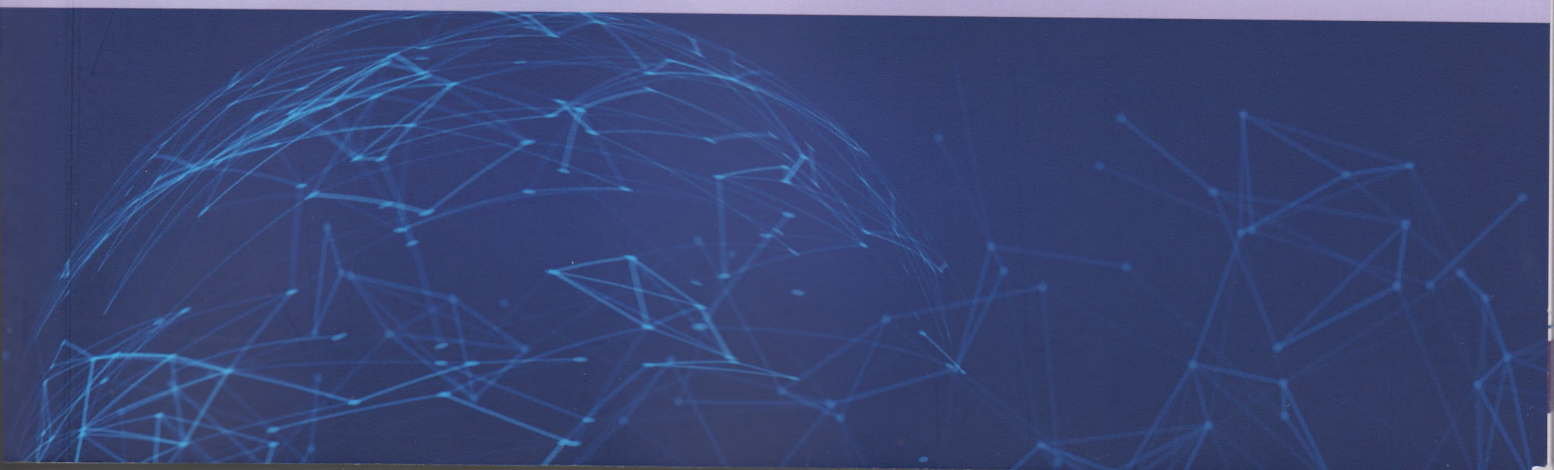

РАҚАМЛИ ИҚТИСОДИЁТ ВА АХБОРОТ ТЕХНОЛОГИЯЛАРИ
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МУНДАРИЖА

DIGITAL ECONOMY AS A NEW PERIOD OF GLOBALIZATION

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Annotation
The article deals with the issues based on the theoretical foundations, stages, factors of modern digitalization and the digital economy. The key components of the term "digital economy" are presented as analyzing issues on digital technologies, ecosystems and transformations, taking into account their interconnection and interdependence, as well as continuity with the previously developed conceptual series - informatization, intellectualization and robotization. For a clear understanding of the object and subject of research, the importance of the essence of the phenomenon of the digital economy and the stages of its development are shown.

Keywords
information, digital, environment, informatization, technological innovations, economy, digital economy, business, electronic trading platforms

Introduction

Currently, globalization is entering a qualitatively new stage of its development, which is characterized by the development of information and communication technologies (ICT), the spread of the Internet and mobile communications. The main technological attributes of the current stage of globalization are the computer and the new ICTs generated by it, which united the world into a single communicative system, creating an integral financial and information space. As well as at the beginning of the XXI century humanity has been swept by a wave of serious global changes. This stage is distinguished by the breakthrough development of digital technologies, the revolution in the information space, and the acceleration of the globalization of the economy. Information has acquired the status of a key resource in social and economic processes. The penetration of digital technologies into life is one of the characteristic features of the future world. This is due to progress in the fields of microelectronics and telecommunications, IT technologies. The transition to digitalization is today one of the key priorities for the development of our state.

Methods and analysis

Both general scientific methods of cognition (dialectical, a combination of historical and logical unity, methods of structural and functional analysis, traditional methods of analysis and synthesis) and specific methods for assessing the digitalization of the economy were used. The stages of development of society under the influence of industrial revolutions are studied. The role of the digital economy as a new development paradigm is substantiated. The goals and targets of the digital economy are outlined. The importance of the digital segment of the economy in the activities of a modern company is determined. Positive effects are identified and risks (threats) to economic development from the mass introduction of digital technologies are identified. The problems of the development of the digital economy are revealed.

Discussions

As well as, it should be noted that the directions, forms and types of activities related to the use of ICT, digital technologies and Big data analysis are developing so rapidly that even definitions cannot keep up with them. In this regard, both the clarification of the conceptual apparatus of digitalization and the assessment of

its current state and prospects are relevant, which requires appropriate theoretical justifications for this phenomenon. Its two main aspects should be pointed out: digitalization and digital economy. The digital economy will put an end to the dominance of office clerks and other non-material workers and mark the emergence of a new social stratum. The key factor in digital transformation in the activities of market entities is the development of digital culture.

Recently, a significant number of scientific works have been devoted to the problems of digitalization of the economy, among which the works of V.B. Betelin [1], Veduta E.N. [2], G.I. Kudryavtsev [3], I.V. Sudarushkina [4], A.A. Kovalenko, B. B. [5] C.P. Martin-Shields, H. Goldstein and others. The area of scientific interests of V.B. Betelina: programming technology and operating systems, information security, architecture of microprocessors and computers, micro-electronics. He gave his ideas on digital Economy in his book Digital Economy: Imposed Priorities and Real Challenges Economy [1]. The “digital economy” was first used in 1995 by the famous American scientist from the Massachusetts Institute of Technology N. Negroponte [6] in connection with the intensive development of ICT and the beginning of the second generation informatization process. He pointed out that virtually all spheres of human life (economic, social, political, cultural, social, and others) have changed to one degree or another due to the development of ICT and the Internet, but the changes in recent years allow us to assert that a new stage of informatization is beginning, at - the title of which is "digital economy".

The first is a long, complex and multifaceted process of transferring production and management technologies and information resources to a state suitable for the effective use of digital devices and technologies and involves the achievement of the following goals:

■ reducing the cost and increasing the reliability of data collection, systematization, transmission and analysis (due to discrete sensors - the Internet of Things, RAG-tags, etc.);

■ cost reduction and simplification of communications in the economy and society (digitization of content and communication channels);

■ creation of a system for multi-interaction of people and business processes vertically and horizontally (interorganizational digital systems).

As well as informatization and automation, digitalization, according to the definition of J. Nacebit, is a megatrend in the development of the economy, which is based on cybernetic methods and controls, big data analysis tools and artificial intelligence [2]. Achieving a critical point in the digitalization of a business process (or an enterprise as a whole) leads to its qualitatively new state (transformation), which is characterized by higher efficiency. It is advisable to consider the process of digitalization in a broad and narrow sense. The first one understands the multidimensional organizational and technological processes of mass application of new digital technologies in production and management in order to reduce costs and increase the speed of business processes. In the second, narrower, technical sense, it means the transition from the analog form of transmission, processing and presentation of data (information) to digital, carried out through the use of appropriate technologies and platforms.

According to economic logic, the advantages of digitalization become obvious, which are determined by the following efficiency factors [4]:

■ accelerating the use of new market opportunities by enterprises due to direct digital signals from the external environment;

■ improve the customer experience by making it easier and cheaper to collect data to personalize their requests and stay in constant contact with them;

Basic difference between informatization and digitalization

■ expanding the possibility of optimizing business processes (by eliminating delays as much as possible), as well as simplifying and accelerating them using digital devices;

■ increasing the target audience and geographic coverage of the enterprise through the use of all forms of digital channels and their points of contact. These factors are of tactical importance and are more characteristic of an enterprise that is switching to the use of digital technologies in the production and marketing of products.

To form a national strategy in the field of digitalization and the digital economy, it is important to take into account that the relevance of digitalization is due to the growth in the scale of social communications carried out through networks and digital platforms that increase the speed and variety of exchanges and open fundamentally wider opportunities for the development of the economy and society [5]. The concept of "technological modes" developed by S.Yu. Glaziev, also indicates the presence of stages in the life cycle of a particular technological mode. During the period of depression (change of the old way of life), the economy is most susceptible to various kinds of innovations, including digitalization, to the search for survival

opportunities. The beginning of a new technological order does not yet give significant results due to the high uncertainty of the results from new knowledge and technologies, but as they accumulate and improve, the tendency to increase results accelerates and a new way is established. Under these conditions, self-tuning and adaptation of socio-economic systems to the changing conditions of the micro- and macroenvironment, as well as the world market, takes place [9]. Suppliers and consumers are increasingly interacting with each other without intermediaries, and the price factors of linking supply and demand are being replaced by new cooperation mechanisms, which, in turn, expands markets in terms of the composition of participants and the variety of products, leads to the accelerated application of technical and organizational innovations in enterprises, which become more flexible and manoeuvrable. At the same time, a distributed model for coordinating the interconnections between producers and consumers through network nodes (hybrid network order) is being formed, which allows systems of all levels to increase their adaptability to changes in the external environment [5].

The advantages of horizontal network interactions over hierarchical ones are the basis of new economic growth, which always depends on the speed and variety of exchanges. According to the Nobel laureate O. Williamson, the post-industrial economy builds itself in the form of a set of horizontal (non-hierarchical) network partnerships that are much more flexible in their configuration than rigid vertical hierarchies, and at the same time more integrated than flexible, but atomistic markets [5]. That is, the creation by the state of opportunities for combining and skillfully using information (knowledge) in the course of communications through networks and platforms is the most important condition for innovation and growth of the post-industrial economy.

The sharp decline in prices for the latter has become an incentive for enterprises and organizations to supplement and replace existing factors of production (labor and capital) with information and digital technologies, as well as to robotize some types of activities. That is, the digital segment has defined a new paradigm for the accelerated development of the economy, based on real-time data exchange and an increase in the level of intelligence of their processing in order to improve automated and automatic production control.

The technological foundations of digital development traditionally include big data, sociality, mobility and cloudiness. Their combination makes it possible to significantly reduce the cost of business processes, analytically adapt products to the needs of a particular client (customization), and deliver goods and services when and where they are needed.

The production component of the digital economy is becoming technologies that were originally more associated with the storage and transmission of audio and video information in electronic form. The emergence and spread of the Internet, which led to the formation of a single information space, is considered to be the most important feature of globalization and the mechanism that generates it at the end of the last and the beginning of this century. This is a new, third, stage of globalization, which can be called “Internet globalization” or “digital globalization”, which is explained by the following considerations.

First, the Internet has had a significant impact on information globalization. Instead of reading local newspapers, the population of the smallest town (to the best of their knowledge of languages) got access to information from all over the world. The Internet has become the main source of news. Colorful websites have successfully replaced print publications and traditional television. There is evidence that 80% of Financial Time subscribers and 60% of BBC readers prefer the online version of these media. News in this format is very popular among the youth audience.

Secondly, the Internet has created the phenomenon of social globalization. Instead of communicating with relatives, neighbors and work colleagues, people now have the opportunity to find friends of interest in any country and freely communicate with them through social networks (Facebook, Instagram) or messenger programs (Telegram, WhatsApp). There is also a huge number of professional networks (LinkedIn, Moi Krug, etc.) that allow exchanging information on professional activities, attracting new clients, business partners; Thanks to such networks, employers have the opportunity to receive additional information about current and future employees, advertise new vacancies, and job seekers receive interesting job offers. The scientific community is creating new global networks for the dissemination of knowledge. You no longer need to wait 2–3 years for a publication in a “paper” journal – new thoughts and ideas instantly become known to an interested audience via the Internet.

Thirdly, the Internet is instant and most often free access to content from all over the world. Thanks to Youtube and similar services, mankind has the opportunity to watch films that have not even been released yet, read books and scientific articles that have not yet been published. Of course, there are problems with the use of intellectual property and the disclosure of trade secrets, but often world fame becomes higher than the

prejudices that took place in the XX century. Thus, the Internet has led to the virtualization of the world economy and instant access to its services.

Fourth, the Internet has fundamentally affected retail, which in many countries has already become 20% virtual. Amazon, eBay, Alibaba have changed the way people buy goods and services. Electronic trading platforms, for example, Yandex. Express.uz, Berol.uz, abba, uybor.uz, OLX, Glotr.uz, ZoodMall and others not only allow you to buy a product at the best price, but also get to know its characteristics better (including reviews from real users), as well as compare your choice with other options. Now, instead of the nearest store, our people find the highest quality and cheapest goods on the Internet and purchase them with subsequent delivery to their homes. The global integration of retail markets without customs duties is a powerful factor in Internet globalization. In that case we can say that, today the world community has begun the third stage of globalization — the digital transformation of society, primarily under the influence of a large increase in cross-border data. The digital transformation of the economy is understood as a manifestation of qualitative, revolutionary changes, which consist not only in the digital transformation of individual processes, but also in a fundamental change in the structure of the economy, in the transfer of value-added centers to the sphere of building digital resources and end-to-end digital processes [2]. A new stage of globalization has begun in connection with the growth of the scale of cross-border digital transactions thanks to virtual goods and services.

The processes of production, distribution, exchange and consumption of information are becoming increasingly important compared to other types of economic and economic activities, increasing the virtualization of the economy and giving rise to a new form of organization of economic relations - the digital economy. The further formation of the electronic segment of the economy can be characterized as a transition to smart management - a qualitatively new stage, when digital technologies will be considered as labor-saving, reducing trade, transport and time costs, forming a new business culture and an active "biological species" - digital ecosystems that allow automatic personalization of the buyer and individualization of orders, optimization of production and supply chains. There is a formation of the so-called innovation pyramids, when the required income from the sales of already created goods is calculated for the transition to the development, development of new ones.

It is important to take into account that the processes that led to digitalization matured gradually and long before the emergence of the concept of "digital economy", which became an integral part of the information environment, formed in accordance with the needs of the real sector of the economy and the demands of society, changing under the influence of advanced technologies.

In relation to the digital economy, a figure is understood as a signal that transmits a number or a control impulse that reaches each economic agent (supplier, consumer, intermediary, etc.), which creates qualitatively new opportunities for the automatic management of production and logistics processes within the enterprise and the whole economy of the country. The maximum level of efficiency is achieved when all transactions are carried out automatically along the entire chain (end-to-end technologies), without human intervention, and transaction costs are reduced to almost zero. End-to-end digital technologies include:

- big data (Big Data);
- artificial intelligence (AI) and neurotechnologies;
- distributed registry systems (blockchain);
- quantum technologies;
- Industrial Internet;
- robotics and sensor components;
- wireless communication technologies (introduction of 5G networks);
- technologies of virtual and augmented reality, which are becoming more and more available for mass use.

The concept of "digital ecosystem" is the next in the hierarchy of the conceptual apparatus of the digital economy. The business effects of digital technologies are manifested through changes in consumer demand, competition and supply chains. A more comprehensive approach involves redesigning a company's key customer offering by turning it into an integrated solution or platform. Therefore, in economic terms, the essence of digitalization is the transition to the creation of partnerships in order to build an ecosystem around a digital platform. Examples of digital ecosystems are the platforms of such Internet giants as Amazon, Alibaba, the Facebook social network and other large-scale Internet systems for the complex interaction of consumers with suppliers of goods and services.

The idea of a digital ecosystem is based, in turn, on the following provisions:

■ the concept of a digital twin, a model of some object with its inherent relationships with the outside world. In relation to real production, this is the creation of virtual prototypes of a specific physical product or process in order to collect and reuse digital information;

■ automatic management of interaction chains as a further development of the customer-centric approach implemented earlier within the framework of the well-known concept of VMI logistics management, the essence of which is that the level of stocks of a particular product in the retailer's warehouse is controlled by its supplier;

■ the concept of integrated product life cycle management, implemented using appropriate tools that allow you to track each batch (and even each copy) of the product at all stages of the life cycle - identifying the needs of the consumer, taking into account his various requirements, all stages of production, shipment and operation, as well as end-of-life disposal and archiving of all information. Digitalization involves the use of sensors embedded in equipment and permanently determining its state, that is, we are talking about the Internet of things. The functioning of the digital ecosystem determines the development of outsourcing (service model) according to the “product-service” principle. Digital transformation as another key component of the concept of "digital economy" involves not so much the introduction of digital technologies as a change in business processes and management institutions so that an enterprise, organization or government body can take advantage of new technologies.

The most complete concepts of "digital transformation" and "digital technologies" are given in the Working Paper of the Institute for Research on Emerging Markets of the Skolkovo Business School. It noted that successful digital transformation is realized by transforming existing business processes in the enterprise in the direction of their "seamlessness" and following the principle of the concept of intelligent management, due to which there is a transition from planning based on information processing through ICT, when information is presented in the form of an image numerical value, to direct automatic control based on an end-to-end digital signal.

At the same time, if traditional information technologies are aimed more at analyzing the state of the enterprise and solving individual problems, formal, controlled and under centralized control, then the use of digital technologies is more focused on solving user problems, which are mostly informal and aimed on the interests and convenience of customers.

At the enterprise level, digital transformation means moving from a traditional IT service (task-focused, formalized, controlled, managed, and costly) to a human-centered, open systems world (informal, spontaneous, empathic, and affordable). As a result, information and digital technologies cease to be internal resources and assets of an enterprise and turn into factors in the formation and development of new markets for goods and services based on new business models.

Thus, the transformation of business models under the influence of digital technologies and the formation of digital ecosystems is objectively due to the ever-increasing complexity of the economy and, as a result, the growth of information activities to ensure the interaction of all links in the production of goods and services and the increasing consideration of individual consumer needs.

The digital economy is formed on the basis of digitalization and has its own specifics, determined by the nature of creating added value by increasing and systematizing digital content (object of labor), increasing the intellectualization of its processing algorithms automatically (without human intervention and with increasing consideration of the nonlinearity of real processes) and depending on environmental signals. One of the key characteristics of the digital economy is the speed of changes in the production of goods and services, in the applied business models and management.

Quantitative changes in business models under the influence of cheaper and more widespread use of digital devices have led to the emergence of new digital technologies that are the basis of a modern economy based on predominantly horizontal interactions (self-organization and singularity), innovative entrepreneurship (self-development), information engineering (self-improvement) and auto-formalization (auto-structuring) of economic processes. The basis of the digital economy is the decentralized cross-border blockchain technology, cloud computing, big data, cyber-physical systems, the Internet of things, 3D printers, which together implement the concept of "Industry 4.0" - a new approach to the integration of production and consumption, which represents - a symbiosis of technical devices (robotic workshops and factories), software (artificial intelligence) and the Internet.

According to the World Economic Forum, the digital economy affects all aspects of society, including the nature of people's interaction with each other, the skills needed to get a good job, and even the political decision-making process (e-government) [7].

The digital economy, due to the presence of certain properties of non-material functioning, makes it possible to overcome the country restrictions that are characteristic of the classical economy:

– material products cannot be used by several people, and there is no such barrier for digital products: they can be copied and distributed among an unlimited circle of people around the world;

- material products are subject to wear and tear during use, and digital products do not lose their original properties, which can even be improved in the process of joint operation or exchange;

– digital trading platforms allow avoiding restrictions on the size of areas, the volume of assortment and the number of simultaneously served customers.

A significant consequence of the process of introducing digital economy technologies has been an increase in intangible information flows (big data, cloud computing, video, transactions, e-commerce, analytics, etc.) between countries, regions, corporations and individuals. The number of users of the largest online platforms is already comparable to the population of the largest states

The digital dimension of economic globalization includes:

– formation and development of global electronic networks, production of intangible products and services of IT companies;

– the emergence of fundamentally new cross-border virtual markets for transport, banking, and insurance services, as well as new financial markets operating around the clock;

The digital economy opens up great opportunities for information exchange, education, transparent business conduct, international cooperation and is characterized by high growth rates, rapid innovation and wide application in other economic sectors. It is becoming an increasingly important driver of sustainable economic growth and plays a significant role in accelerating the pace of economic development, increasing the productivity of existing industries, and creating new industries and markets.

Conclusions

We can say that digital globalization is a fundamentally new stage in the evolution of the global world, the formation of which is due to the development of digital technologies, on the one hand, and the digital economy, on the other. The technological prerequisite for digital globalization can be considered the achievements of the fourth industrial revolution - robotization and the Internet of things, cloud and cognitive technologies, virtual and augmented reality, nano- and biotechnologies, etc. Digital globalization is inextricably linked with innovations in the field of economy. The digital economy involves changes in the very structure of doing business, in the contingent of its participants, in expanding economic opportunities, including the establishment of cross-border relations and communications. This is largely facilitated by the introduction of artificial intelligence technology, the attraction of global data and information flows, the use of digital platforms and the development of digital commerce.

References

1. Betelin V.B. Digital Economy: Imposed Priorities and Real Challenges Economy. 2017. No. 3-4. P. 22 - 25.
2. Veduta E.N. Intersectoral-intersectoral balance: a mechanism for strategic planning of the economy. M.: 2016.
3. Kudryavtsev G.I., Skobelev P.O. Digital economy: the concept of managing a large high-tech enterprise // Horizons of the economy. 2017. No. 5. P. 54-62.
4. Sudarushkina I.V., Stefanova N.A. Digital economy. 2017. V. 6. No. 1. P. 182 - 184.
5. Kovalenko, B. B. Digital globalization: opportunities and risks of strategic development of business organizations. 2017. - No. 10 (79). - P. 140-142.
6. Negroponte N. Being Digital. NY, Knopf, 1995. 256 p.
7. Sundararajan, A. The future of work / A. Sundararajan // Finance and Development. - 2017. - No. 2 (54). – P. 6–11.
8. Aptekman, A. Digital Russia: a new reality / A. Aptekman [and others]. - McKinsey, 2017. - 133 p.
9. Glaziev, S. The Great Digital Economy: Challenges and Prospects for the Economy of the 21st Century / S. Glaziev // Tomorrow. - 2017. - No. 37 (1241). – P. 4–5.

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