

Zueva O.A., Gorovoy A.A.

THE CONCEPT OF A DIGITAL ECONOMY AS A QUALITATIVELY NEW ELEMENT OF THE NATIONAL ECONOMY OF RUSSIA

Zueva O.A., Candidate of Economic Sciences, associate professor
of business and commercial activity of St.Petersburg State University of
ITMO, Russia

Gorovoy A.A., Doctor of Economic Sciences, associate professor of
business and commercial activity of St.Petersburg State University of
ITMO, Russia

Abstract

In article different concepts of a phenomenon and development of digital economy are analyzed. The phenomenon of digital economy as the economy of data presented by the countries – leaders, strengthens information chaos in economy. The necessity of forming the national concept of development of the digital economy as a qualitative component of the Russian economy on the basis of a comprehensive scientific approach is substantiated. The essence of the domestic digital economy as an economic cyber system providing information interaction of subjects in the real and financial sectors, through information technologies, the Internet and communication and being a competitive advantage of the Russian economy is considered. The necessity of creating a competitive domestic digital economy is substantiated. This problem should be solved by economists through the formation of a scientifically objective econometric model, and technological support should be formed by IT specialists.

Keywords: digital economy, industrial Internet of things, national economy, real sector, financial sector, information technologists, innovative potential.

In the Address to Federal Assembly in 2016 and a performance at the international economic forum of 2017 in St. Petersburg the Russian President has noted need of start of a large-scale trend of development of an important

component of national economy of Russia – digital economy, taking into account his innovative development.

The need to develop the concept of the digital economy in the national economy of Russia is justified by statistical data on the growth of the proportion of the digital economy in the GDP of many national economies. So, in 2015 the specific weight of digital economy in GDP of the USA was 6%, in GDP of the EU – it is slightly higher than 5%, including, in Great Britain - about 8,4%, in Russia about 2,1% that by 1,3 times more, than 5 years ago [1].

By data Boston consulting of groups in 2016 national economy of Russia is in the 39th place in the world economy from 85. At the same time, within the last 5 years the national economy Russia from group of the catching-up farms has moved to the main group. Along with it, national economy Russia takes the leading positions on the level of development of infrastructure among farms of BRICS. However, lag of national economy of Russia from the leading national farms makes about 6 - 8 years.

At present, among national economies, there are different approaches to interpreting the concept of the digital economy (Fig. 1). In Russia, it has not yet been formed taking into account the scientific integrated approach.

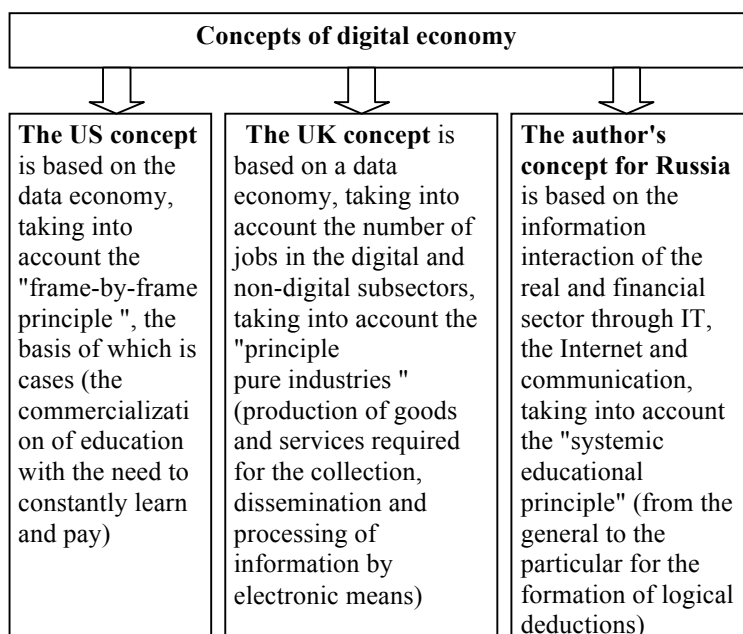


Fig. 1 The concept of digitalization of national economies

OECD introduced the term digital subsector using standard industry classifications [2], the main components of which are information, communication and technology.

For international comparability, the UN is characterized by a digital subsector, like any other sector, taking into account output and employment, reflecting this in international standards since the 1960s [3]. All subsequent adopted international UN standards expanded the "economy of the data under consideration" and presented a number of econometric models, which leads to a certain increase in information chaos, both in data collection and in the size of the econometric models used by national economies.

In the US, the concept of the digital economy is based on the "data economy", taking into account a lot of statistical data and a "frame-by-frame principle", based on cases. The implementation of this principle is based on the commercialization of education, which presupposes a mechanism for the realization of permanent learning and its payment.

The UK government takes into account the content of the "digital economy" the number of jobs in the digital subsector, as well as digital workers in non-digital sub-sectors. At the same time, the key criterion for choosing the sectors that are included in the digital economy is the production of goods and services necessary for the collection, dislocation and processing of information by electronic means, that is, the "clean sector principle". In the UK, the "data economy" is understood as the set of statistical data collected in the context of the above-mentioned "clean industries".

Thus, in accordance with the program for the development of the digital economy in Russia, enterprises of the real sector should provide data on the developed forms for their entry into the unified state information system of industry, which request a huge number of unrelated indicators. At the same time, information contained in various forms is repeatedly duplicated, which reduces the productivity of labor and contradicts the very idea of the digital economy about the effective application of eventualities (that is, possibilities) of modern information technologies.

The existing approach to the use of the digital economy as a "data economy" in both the US and the UK and its subsequent growth will increase the enormous costs of gathering chaotic economic information that unnecessarily overloads managers at the microlevel, macrolevel and meturolevel, transforming the digital economy into a catalyst for the world crisis.

This does not make it possible to solve one of the main problems of globalization - the disproportionality of the world economy, as well as the divergence of the real and financial sectors of national economies, including in Russia. The consequence of this situation will be not only a drop in the standard of living of the population of Russia, but also the problems of integrating the digital economy into cyberspace in order to ensure the prosperity of society.

From the point of view of the authors, there is no concept describing information interaction between different economic agents of the real and financial sectors of the Russian national economy. Therefore, in the digital transformation of the real and financial sectors of the national economy of Russia, it is necessary to take into account the features of the system approach to the study of reality in combination with the cybernetic approach.

Within system approach under the industrial economy, the efficiency of production of the real sector due to the economies of scale is predetermined by the possibilities of increasing the physical parameters of production-fixed capital, the number of workers, the sizes of production, storage and other areas, which requires substantial monetary costs. In the conditions of digital transformation of the economy, the basic resources of production and the component of the interrelation between the real and financial sectors are information, as well as new technologies. As a result of the application of information, its availability does not decrease, production capacities, trade and storage areas are located in the Internet space and are not limited in practice. New technologies, including information technologies, provide a synergetic effect and allow to maximize profits to business entities within the virtual space and to increase their innovative potential [4, P. 77]. At the same time, the competitiveness of firms is not determined by its size, and the role of the scale effect begins to perform a network effect. During the genesis of the digital economy, its base was electronic commerce. At the present stage, the digital economy covers the IT -sector, the financial sector, the public services sector, education, healthcare, etc.

N. Negroponte applied the notion of "digital economy" for mapping the transformation of the national economy from the movement of atoms to the movement of bits, using the category of virtuality associated with the lack of weight of goods, raw materials and the availability of transport [5, p. 35]. To inscribe the real and financial sectors of Russia's national economy in cyberspace, that is, the virtual space formed by computer systems, including the Internet, in which cybernetic systems are formed that reflect the behavior of real objects-agents of the sectors in question that react to regulatory influences and events of the exogenous environment in real-time mode, it is necessary to take into account a number of circumstances. Any virtually formed cybernetic system must behave identically to a material system. Therefore, their developers should be based on a systematic approach, taking into account the objective laws of the development of material systems.

In this case, users of the created cybernetic system will be able to influence material objects taking into account objective laws. As the national economy of Russia develops according to its own objective laws, for its effective regulation, as well as the convergence of the real and financial sectors, it is necessary to present them as economic systems, taking into account the digital transformation. At the same time, it is necessary to be based on objective

economic laws of development and cybernetics, applying this knowledge in the modeling of data of economic systems for carrying out calculations using information technologies.

From the authors' point of view, the current trend is the interconnection of the digital economy with the need to introduce new information technologies for the purpose of monitoring and control, automation of settlements, as well as document circulation, provision of services, etc., which, in fact, are organizational innovations [6, p. 156], providing a communicative interaction between the subjects of the real and financial sectors. Therefore, the digital economy should be regarded as an economic cyber system that provides information interaction of entities in the real and financial sectors, through information technology, the Internet and communications, and is a competitive advantage of the Russian economy. It represents a qualitatively new component of the national economy of Russia in the process of becoming the sixth technological order.

At the same time, it is necessary to take into account one of the most important prerequisites for the success of the formation of the digital economy in Russia - the presence of a decent standard of scientific - technical and human research potential [7] on the basis of the traditional education system and the educational principle from the general to the particular, allows you to create logical reasoning effectively. Integration and development of specific examples (cases) based on the modern principles of the digital economy will create synergies and lead to the total growth of the national economy of Russia.

Consequently, the analysis carried out by the authors proves the necessity of not only developing a domestic concept of the digital economy. Disclosure of the phenomenon of the digital economy as a data economy complicates information chaos in the national economy. This trend in the period of the global financial and economic crisis will lead to the transition of such leading national economies as the United States, Great Britain and China, which are creating the world digital economy, to a stateless, robotic society with increasing social stratification and degradation of personalities at the expense of economic victims.

Besides, creation and the embodiment of strategy for improvement of digital economy as new qualitative element of national economy of Russia for the purpose of ensuring by 2035 the international technological leadership is necessary [8]. Therefore it is necessary to create competitive digital economy in Russia within world digital space. Economists within creation of econometric model have to solve this problem, and IT- specialists have to form technological support. If the national economy of Russia has no competitive advantages as new digital economy, then it will be forced to become digital colony.

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Shestakova E.V., Yumasheva I.A.

PROBLEMS OF PRACTICAL IMPLEMENTATION OF THE COMMUNICATION OF PROFESSIONAL AND EDUCATIONAL STANDARDS IN MODERN CONDITIONS

**Shestakova E.V. Orenburg State University, Head of Department
of Personnel Management, Service and Tourism Candidate of Economics,
Russian Federation**

**Yumasheva I.A. Autonomous non-profit organization of additional
professional education "Training centre" Profstandart ", Assistant
Director, Candidate of Pedagogics, Russian Federation**

Abstract

The article reveals the notion of «professional» from the point of the employer and the education system. The problems of interrelation between educational and professional standards are singled out. The directions of the development of the system of practical-oriented training of higher educational institutions are indicated. Systemic changes are indicated at each stage of dual formation.

Keywords: professional, professional standard, employer, practical-oriented training, education system, dual training

Одной из проблем высшего образования выступает разрыв между теоретической подготовкой, получаемой в учебной заведении, и практическими навыками, предъявляемыми со стороны работодателей и рынка труда. Решение данной проблемы приобретает особую значимость в связи с актуализацией федеральных государственных образовательных стандартов и образовательных программ с учетом принимаемых профессиональных стандартов, а также формированием организационных механизмов проведения квалификационных экзаменов.

Необходимость соответствия получаемого образования требованиям производства; компетенций, получаемых молодыми специалистами в учебных заведениях, запросам работодателей определяет