

Theoretical aspects of the essence of the digital economy in the paradigm of modern philosophy

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Abstract — The purpose of this study is to study the approaches to the definition of the essence of the digital economy in the context of the ontology of the philosophy of modern economics. The article analyzes three approaches describing the content of the digital economy, some of which are accepted in world practice, and some are described in Russia at the legislative level. Based on the analysis, it was concluded that the level of development of information and communication technologies determines the opportunities for the development of the digital economy, in which data in digital form is a key factor in production. The features associated with the description of the IT sector in the International Standard Industrial Classification of Economic Activities and in Russian Practice are considered. The problem described by the authors as “the absence of identical statistical aggregates in determining the essence of the digital economy” is noted.

Keywords — *digital economy, philosophy of economics, IT, information and communication technologies, information technology industry*

I. INTRODUCTION

The structure of the modern philosophy and economics as special purpose knowledge includes:

1. Ontology - the study of the essence, the fundamental objects, the processes of their relationship in the field of economics (producing people, producing economy, universal laws of its development, mode of production, needs).
2. Epistemology - the study of knowledge of the essence of the economy as a good, ways to ensure human well-being.
3. A methodology that considers the type of rational-reflexive thinking, which performs a critical-analytical and design-constructive function in the field of super-complex self-organizing modern economic systems.
4. Anthropology, which allows comprehending the civilizational role of man as a key factor in the economic sphere.
5. Axiology - the study of the structure, functions, hierarchy of traditional and innovative values in economic systems.

6. Ideology describing the conceptual formulation of ideas, views of various social groups, political parties on the essence, functions, role of the economy in society. [6]

In this article, the authors, while remaining within the ontology of the philosophy of modern economics, consider the theoretical aspects of the digital economy essence. Xenophon is known to view economics as the science of running the household. Later - it became a set of religious, theological, ethical and philosophical disciplines, gradually turning, with the development of society, into something else.[4]. The economy, in the form in which we perceive it today, is a cultural phenomenon, the product and continuation of post-industrial transformation, the most important source and driving force of which is technological progress. New technologies generated as part of this process were the impetus for the emergence of the digital economy, a term that N. Negroponte (Massachusetts Institute of Technology) introduced into general circulation more than twenty years ago.

Despite the rather long history since the introduction of this term into the scientific circulation, today there is not only a number of definitions of the digital economy, but also variety of approaches to description its concept, differ points of view on the totality of the elements making up such an economy. The discussion about the definition of the digital economy essence covers a number of areas [3]. Although, with respect to the goals of digital transformation, the consensus of experts is mainly achieved, the concept of “digital economy remains very vague and more likely marketing in nature, following market trends in the interests of the main players” [1].

II. LITERATURE REVIEW

Defining the ontology of the philosophy of modern Economics as the doctrine of the essence, fundamental objects and processes of their relationship, it is necessary to consider and systematize various approaches to the definition of the content of the digital economy and to make certain terminology.

Thus, one of the approaches proposed by the World Bank is based on a set of relations between subjects, defining the digital economy as "a system of economic, social and cultural relations based on the use of digital information and communication technologies».

The basis of another approach, which was applied in the Decree of the President of the Russian Federation" on the strategy of development of the information society in the Russian Federation for 2017-2030 "from 09.05.2017 N 203, is the concept of "activity" and in this context, the digital economy is defined as " economic activity, in which the key factor of production is data in digital form, processing large volumes and the use of the results of analysis of which in comparison with traditional forms of management can significantly improve the efficiency of various types of production, technology, equipment, storage, sale, delivery of goods and services" .

The third approach, along with the first one, is based on a set of relations, but the emphasis is not on the subjects of relationships, but on the specifics of the processes taking place. In the Program of development of the digital economy in the Russian Federation until 2035, it is determined that" the digital economy is a set of social relations that develop with the use of electronic technologies, electronic infrastructure and services, technologies for analyzing large amounts of data and forecasting in order to optimize production, distribution, exchange, consumption and increase the level of socio – economic development of States."

Despite the breadth and difference in approaches to the definition of the content of the digital economy, let us make some generalizations and note that the key factor of production in the digital economy in all interpretations describes the data in digital form, and their useful use is possible through the introduction of processes and the use of methods of interaction with information, known as information and communication technologies. With this approach, it is obvious that it is the level of IT development that determines the potential opportunities and conditions for the emerging digital economy of any state. The core of the information industry is the IT sector, which remains the main driver of innovation, accounting for the largest share of enterprises ' R & d expenditures in the OECD and more than one third of all patent applications in the world. Today we are witnessing a new era when the industry is becoming increasingly smart with the use of the Internet of things (IoT), intensive data exchange and predictive Analytics. Benefits in this case are many: automation and optimization of processes can improve productivity and profitability by saving costs, speeding up production and significantly reducing errors [8]. That is why it is especially important to analyze the development of information and communication technologies as a basis for the creation and functioning of the digital economy. However, the large – scale introduction of information and communication technologies (IT) in various spheres of human activity and the steady growth of their impact on production and economic relations contributed to the formation of different points of view on the place of IT in the economy [2]. Moreover, until the present time among the scientists and specialists not formed a unified approach in respect of what should be included in the composition of the

IT. In this regard, the authors propose to consider different approaches to the description of aggregates (activities, industries and sectors of the economy) included in the IT.

III. RESEARCH METHODOLOGY

Achieving Russia's strategic development goals depends not only on the level of development and efficiency of its scientific and technological potential, but also on a number of external conditions associated with global trends, which include environmental change, demographic and social transformations, transition to new models. economic growth, the transformation of the geopolitical situation and systems of global governance, and in particular - the formation of a new concept of scientific and technological development. Therefore, on the one hand, the study of the theoretical aspects of the essence of the digital economy should take place within the paradigm of the new economy, formed within national boundaries taking into account the described trends, which are closely interrelated and can both strengthen and level each other's influence, give rise to "big challenges" windows of opportunities or threats to the field of science and technology.[7] On the other hand, it is necessary to take into account the main provisions of the theory of the post-industrial development of society, within which special attention is paid to innovative sectors of the economy, of which IT is undoubtedly included.

IV. PRACTICAL SIGNIFICANCE, SUGGESTIONS AND RESULTS OF INTRODUCTIONS, RESULTS OF EXPERIMENTAL RESEARCHES

Depending on the scope, the analysis of opportunities and prerequisites for the emergence of an economic phenomenon, which the emerging digital economy is undoubtedly, requires statistical classification, which in turn is the result of a compromise that allows for theoretical considerations, practical considerations, as well as the speed with which reality around us.

According to researchers who study the digitalization of various spheres of human existence, the new technological revolution provides for at least a transformation of humanity, and the complexity and ambiguity of the events that occur and the changes following them are beyond doubt. For this reason, standardized aggregates in the economy (sectors, sectors) supplying data for analysis and used in both Russian and international statistics cannot be fully used to assess the prerequisites for the opportunities and conditions for the development of the digital economy. Recognizing this circumstance, international practice goes along the way of consideration for the purpose of analyzing some alternative population based on the types of economic activity already existing and described in the International Standard Industrial Classification of Economic Activities (hereinafter referred to as ISIC) developed by the UN [9]. Given that IT development is taking place against the backdrop of the most complex processes affecting all aspects of social and economic relations, ISIC is introducing into the scientific circulation the definition of the information and communication technology sector, which has been used in developed countries since 2007. As follows from the contents of this international standard industrial classification, the types of activities (sectors) included in the IT sector are already described in

other sections of ISIC and are included in subgroups of a number of its subsections. However, realizing the growing demand for data related to the information economy, that is, information and communication technologies and so-called content, ISIC introduces a criterion for assigning a particular industry to the IT sector, which is described as follows: "production (of goods and services) of the considered industry be mainly aimed at performing or facilitating the function of information processing and communication through electronic means, including the transmission and visual reproduction of data." According to the compilers of ISIC, the definition of the IT sector "provides a statistical basis for measuring internationally comparable methods of the part of the economic activity that is related to the production of IT goods and services." And so, the IT sector according to the international classification includes a set of industries a) IT production, b) IT trade, c) IT services.

The combination of IT manufacturing ISIC presents agree:

- 1) *Production of electronic parts and boards.*
- 2) *Production of computers and peripheral equipment.*
- 3) *Production of communication equipment.*
- 4) *Production of consumer electronic equipment.*
- 5) *Production of magnetic and optical media.*

The set of IT trade sectors include:

- 1) *Wholesale of computers, peripheral equipment and software.*
- 2) *Wholesale of electronic and telecommunication equipment and parts for it.*

The set of IT services industries includes:

- 1) *The edition of the software.*
- 2) *Activities in the field of wired communications.*
- 3) *Activities in the field of wireless communication.*
- 4) *Activities in the field of satellite communications.*
- 5) *Other activities in the field of communications.*
- 6) *Software development collateral, consulting activities related to computers, and related activities.*
- 7) *The development of the software.*
- 8) *Consulting activities related to computers.*
- 9) *Activities on management of computer equipment.*
- 10) *Other activities in the field of information technology and computer services techniques.*
- 11) *Data processing, hosting and related activities, web portals.*
- 12) *Data processing, hosting and related activities*
- 13) *Web portal.*
- 14) *Repair of computers and communication equipment.*
- 15) *Repair of computers and peripheral equipment.*
- 16) *Repair of communication equipment.*

In this regard, it should be noted that in Russia there is no description of the IT sector, as not the (standardized or alternative) set, able to fully describe the structure of information - communication technologies, the level of development of which, as noted earlier, determines the possibilities of for the development of the digital economy. In contrast to the sectoral division adopted in the classification ISIC, in the domestic legislative field describes the concept of "information technology industry», however, the content of this concept in different documents is different. Thus, according to the "Strategy for the development of the

information technology industry in the Russian Federation for 2014–2020 and for the future until 2025," the information technology industry is a collection of domestic companies that carry out the following activities:

- 1) *development of replicable software;*
- 2) *the provision of services in the field of information technology, in particular custom software development, design, implementation and testing of information systems, consulting on issues of informatization;*
- 3) *development of hardware and software systems with high value-added software;*
- 4) *remote processing and provision of information, including on sites on the Internet information and telecommunications network.*

According to the Order of the Ministry of Communications and Mass Media of Russia of December 30, 2014 No. 502, the information technology industry includes a collective classification grouping of the following types of economic activity according to OKVED2:

- 1) *development of computer software;*
- 2) *advisory work and work in the field of computer technology;*
- 3) *computer equipment management activities;*
- 4) *data processing activities, the provision of information placement services and related activities.*

Analyzing the described definitions of the information technology industry, we come to the understanding that, in the Russian legislative field, the information industry is, on the one hand, viewed as a set of subjects of economic relations (companies), and on the other, as certain types of economic activity that meet specified criteria. Comparing the corresponding definitions with the definition of the IT sector adopted in the UN classification, it should be noted that they are to some extent close to what is described in the ISIC regarding the alternative set for IT. At the same time, after a more detailed examination, it becomes obvious that the collective classification group describing the information technology industry in relation to the domestic economy is represented only by those types of economic activity in which resources are combined into a production process with the sole purpose of providing services, which, in our opinion, is not entirely true. In this regard, K.A. Semyachkov notes that the core of the digital economy is not only the service sector, but also the production of digital goods, determining the place of IT trade in the same way as important [5]. In addition, in the Digital Economy Development Program in Russia until 2035, the main task is to formulate approaches to the organization of manufacturing industries, trade, services, which also shows that not only the provision of services determines the composition of the information technology industry. In spite of this, the types of industrial and trade economic activities in the IT sector in Russia are not included in the "information technology industry", which does not allow to fully define the very essence of the digital economy, and therefore to understand and realize this phenomenon in the context of modern global technologies trends.

V. CONCLUSIONS AND DISCUSSION OF RESULTS

The investigation revealed the ambiguity of approaches to the definition of the essence of the digital economy, while

defining data in digital form as a common key production factor. It has been established that the level of IT development determines the possibilities and conditions for the transition to digital reality. At the same time, the problem of the lack of identical statistical aggregates in defining the essence of the digital economy is noted, and the concept of “information and communication technology sector” in Russia, unlike most developed countries, is not currently used, while its clear description in ISIC could, in our opinion, provide a better assessment of opportunities for Russia's transition to a digital economy.

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