FETDE 2020
International Conference on Finance, Entrepreneurship and Technologies in Digital Economy

GOALS AND RANKS IN DIGITAL ECONOMY AND KNOWLEDGE SOCIETY BUILDING IN RUSSIA

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Abstract

This article presents that modern global digital trends in the world economy make us once again rethink the models of national systems' economic development, reevaluate the role of factors that ensure it and adjust state goals and policy. These economic development trends have both features of digital economy and knowledge society. The goals of building of digital economy and knowledge society coincide in nearly all the spheres as the authors show and argue, including environmental issues and changes in the global climate; reduction of raw materials and energy resources; security and anti-war cooperation; social aspects of development. The digitalization is an alternative for reduction of the cost of production and solution of the problems of sustainable development. The digital transformation passed through two stages that are described in the article. The improvement of information technology infrastructure and the use of large databases have enabled the expanded use of the Internet and the integration of a variety of digital services, products and systems into a single cyber-physical network, which would radically changed the world system due to ICT rankings, providing a number of countries with accelerated growth.

1. Introduction

The world community faces a unique challenge – to overcome the consequences of Corona Virus Disease 2019 and simultaneously to continue Digital Economy building, ensuring positive economic dynamics in the post-crisis conditions and outstripping the development of post-industrial society institutions. This logic is dictated by the basic international documents on global development, namely the Okinawa Charter on Global Information Society, the Declaration of principles "Building the information society - a global challenge in the new Millennium", Tunis Agenda for the Information Society, as well as derivative documents created on their basis in many countries of the world, including Russia.

Strategy for the development of the information society in the Russian Federation from 07.02.2008 assumed the basic target indicator - to reach the level of 20 countries - leaders of ICT, i.e. Russia would overcome more than 50 points behind in the global rankings. This goal was set in 2008, and up to now its achievement was in doubt due to the consequences of the global financial and economic crisis. Russia still has 25 countries ahead of it (Table 1).

Table 1. ICT Development Index 2017

#	Country	ICT Development Index 2017
1	Iceland	8,98
2	South Korea	8,85
3	Switzerland	8,74
4	Denmark	8,71
5	United Kingdom	8,65
6	Hong Kong	8,61
7	Netherlands	8,49
8	Norway	8,47
9	Luxembourg	8,47
10	Japan	8,43
…	……..	…..
45	Russia	7,07

Note: Source: Ranking of countries by the level of development of information and communication technologies (ICT). UNDP, 2018.

The strategy for the development of the information society in the Russian Federation for 2017-2030, Decree of the President of the Russian Federation of 09.05.2017 No. 203, is aimed not so much at conjunctural tasks and external assessment of success in building the information society, but at ensuring national security tasks.

Russia still retains the potential necessary for technological breakthrough, which was formed partly during the Soviet period, partly during the last years of successful implementation of ICT and development of scientific research in a number of priority technological areas. It is able to provide the necessary advantages to the national economic system, subject to detailed scientific development of this problem. In modern conditions it is extremely important to increase the growth rate of the share of technologies of the fifth and sixth technological orders in the country's GDP. But in practice, even maintaining the current trends and budget revenues may not be an easy task, requiring a balanced and comprehensive approach to its solution, given the current decline in demand for oil and the dynamics of exchange rates.

2. Methodology

Scheler (1962) proposed the following three categories for classifying knowledge: "Herrschaftswissen" - knowledge necessary for action or control - instrumental;" Bildungswissen " – knowledge acquired for General education - intellectual);" Erlösungswissen" – knowledge for high spiritual goals – spiritual. The main disadvantage of this approach is the assumption of unconditional interpretation of information and the absolute usefulness of any knowledge obtained. While the concept of Downs (1957) which assumes the presence of "entertainment" information obtained solely for the purpose of satisfying curiosity; "production", "consumer" and "political" information-used for decision-making, not only assumes automatic interpretation, but also does not take into account spiritual knowledge, which is an integral component of personal development, affecting its value orientations and preferences, including as a participant in market relations.

In the middle of the 20th century the most known theoretical constructions, reflected a role of scientific and technical progress in life of society, concepts of post-industrial economy, information economy, economies of knowledge, service economy acted, etc. (Ignatova et al., 2020).

The primary influence of knowledge on socio-economic transformations, creation the economies of knowledge is expressed in a new phenomenon for the post-industrial world – the "codification of theoretical knowledge" and its increasing role in the creation of new knowledge, the production of goods and services. In this regard, it is advisable to refer to the classification of types of knowledge proposed by Nordhaus (1969), according to which there are two types of knowledge – General and Technical, and this difference is related to the utility of knowledge in the production of either new knowledge or more goods. At a higher level is General knowledge, the subject of which is the laws of nature, the liberal arts and languages, knowledge that is not particularly useful for solving specific problems of production. At a lower level is technical knowledge, which includes computer programs and engineering formulas needed to produce goods, but not information.

It should be remembered that Russia has declared the task of building a knowledge society and forming a digital economy based on the current legal framework (National program…, 2020). There is no contradiction in this, although this circumstance requires some explanation, tspecially when solving huge problems as such:

• environmental issues related to environmental pollution and changes in the global climate;

• reduction of raw materials and energy resources necessary to meet the growing needs of humanity;

• issues of security and anti-war cooperation, including ensuring struggle with terrorism;

• social aspects of development – ensuring the sufficient level of health, education and preservation of national cultures;

• ensuring the necessary level of economic development to ensure a decent standard of living for the population of countries that require coordinated actions to address them on the part of national states.

This makes it possible to evaluate knowledge as a resource and classify it as a means of production. Moreover, a number of researchers emphasize its absolute priority in this context. For example, from the point of view of Tapscott (1994), knowledge is not just another resource among the traditional means of

production, which include labor, capital, and land. This is the only thing that has any value at all. Accordingly, the knowledge worker is the main asset of any organization.

A comparison of traditional resources with information resources shows that the former are usually characterized by material flows and reserves, while knowledge and information are characterized by non-material flows and reserves. Knowledge increases if it is transmitted, replicated and used, and vice versa, if it is not used, it decreases and is destroyed. This is how they differ from fixed assets, which the more they are used, the more they wear out, reducing their cost.

A traditional resource is usually a private good whose consumption by one consumer excludes its consumption by another consumer. Features of an information resource are determined by the combination of properties: network good (complementarity and standardness, significant savings on the scale of production, network externalities, the "trap" effect); public good (non-exclusivity, non-competition); independence from space; irrevocability; inalienable.

If we exclude depreciation of material data carriers, the only type of depreciation to which information resources are subject is moral depreciation. Similarly, any product containing the value created by knowledge can be devalued. At the same time, the loss of part of the value created by knowledge does not mean that the price of the product is reduced to zero, since it is caused by the cost of the material component used for its production. There is no such restriction on information in its pure form, i.e. it can be instantly and completely devalued, so transactions for the transfer of information do not fit into the standard contract scheme.

Therefore, knowledge can be regarded as a commodity in the sense close to the traditional one, or as an integral part of the product (and its value), which increases many times in the conditions of post-industrial transformation. In this regard, attention is drawn to the fact that knowledge, which is not really a commodity, may turn out to be such, and this will mark a change in the socio-economic formation. For example, Karl Marx believed that the transition from the capitalist system to the highest (Communist) phase will be possible when the intermediary link in relations between people will not be a commodity, but something that is not a commodity by its nature – knowledge, spiritual activity. Today, these changes are tangible, but the achievement of terminological unity in the description of the global transformation has not been achieved due to the objective features of the previous period of development of economic sciences. But, in general, it is obvious that the basis for the development of the Russian economy should be based on the digitalization.

3. Results of Research

The analysis of expert estimates of digitalization of national economies of the world shows that the five most competitive countries in the digital environment look like this: USA, Singapore, Sweden, Denmark and Switzerland. This is confirmed, among other things, by the IMD World Digital Competitiveness Ranking 2019, which was calculated by the IMD business school (Switzerland) on the indicators of 63 world economies in addition to its World Competitiveness Ranking. Unfortunately, Russia still cannot manage to occupy higher than average positions in international ratings. So, for example, in the international rating of digital competitiveness - IMD World Digital Competitiveness Ranking, Russia has been improving its position for the third year in a row, but has not achieved significant success. In IMD

World Digital Competitiveness Ranking 2017, our country was in 42nd place, in 2018 - in 40th place, and in the recently published ranking of 2019 moved to 38th place.

The analysis of the strengths and weaknesses of the domestic system of sectoral state regulation from the point of view of Russia's achievement of the highest global indicators of digitalization is extremely relevant. Corona Virus Disease 2019 created unique conditions and prerequisites for the development of the ICT industry, made significant adjustments to the Russian Federation's plans for international information integration, requiring a prompt and adequate response to global processes.

The processes that have been taking place in the natural environment of the digital economy for years and decades, namely the mass transfer of employees to remote work, the use of outsourcing to optimize organizational structures, the development of distance and e-education, etc., are currently taking place in a short time and, in general, these processes are quite successful. This is due to the fact that Russia has formed a technological base, in particular, the extremely high penetration of cellular communications (higher than in some European countries), the coverage of the population with broadband Internet access.

Thus, an analysis of the intensity of use of certain technologies in our country, taken into account when calculating the digitalization index of a business, shows that 82% of organizations use broadband Internet access, 23% use cloud services, 19% ERP systems, 12% electronic sales, RFID -technologies - 6%. The gap between Russian indicators and similar data for Finland, which has the highest Index value, varies from 9 to 43 percentage points. The minimum deviation was recorded in such areas as electronic sales (9 percentage points) and the use of RFID technologies (17), the maximum - in relation to cloud services (43). While the institutional component, especially the regulatory framework, has lagged significantly in development.

A striking example is the Chapter No. 49.1 "Peculiarities of remote workers' labor regulation", which appeared only in 2013 in the Labor Code of the Russian Federation, which led to a huge number of difficulties for organizations in their subsequent interaction with the inspection bodies because of their decision to apply it at least somewhat widely. Another example is the model time limits for calculating the teaching load of professors, which do not provide for separate payment for tutoring, proctoring, or even digitization of training courses.

Today, the main trend of technological development has become digitalization. It is an alternative for reduction of the cost of production and solution of the problems of sustainable development. The emergence of digital innovations in the world economy can be attributed to the 1960s. The digital transformation in fact passed through two stages. The first is related to the beginning of use of digital technologies, mainly reduced to automatization of existing business processes. The second stage can be dated to the mid-1990s. Its distinctive feature was the global spread of the Internet and mobile communications in the life of society (Titov, 2018). Today, the improvement of information technology infrastructure and the use of large databases have enabled not only the expanded use of the Internet by millions of sellers and buyers, but also the integration of a variety of digital services, products and systems into a single cyber-physical network. According to McKinsey Global Institute (MGI), the development of digitalization of the world economy in scale can be comparable to the industrial revolution of the XVIII–XIX centuries, which radically changed the world system for the balance of power, providing a number of countries with accelerated industrialization and growth, which formed a new concept of development.

Modern digitalization is an intensive introduction and widespread use of IT technologies in all areas of public production, which provides high-speed transmission and instant processing of large amounts of information that moves from the buyer to the seller (Kapranova, 2018).

In our previous article we highlighted "the main digitalization features that differ it from traditional economy:

Digital industrial cooperation (simplification of the search for cooperative ties, import substitution, creation of highly efficient value chains, optimal capacity utilization, integration of small and medium businesses in the value chain)

Transfer of digital technologies (timely and effective stimulation of innovative activity, creation of channels of mutually beneficial exchange of innovations)

Digital transport corridors (effective supply chain management, reduction of transportation time and associated costs, improvement of logistics systems efficiency, development of new transportation routes)".

Russia finds itself in the conditions of an objective necessity to improve the institutional framework for the development and use of ICT. Theoretical and methodological analysis of the stated issues is particularly in demand, taking into account the time constraints on the selection and testing of regulatory schemes in practice. In the current conditions, it is advisable to develop optimal solutions and regulatory models, identify negative deviations in their implementation, and reallocate priorities and limited resources promptly and in advance.

The development of virtual global space covers all spheres of life of the world community in parallel with the real world, and, in addition to strengthening integration process it creates new threats to the system of national security (Dudukalov et al., 2020) and stability of financial development (Alexakis et al., 2019). Among the basic problems of digitalization of the global system there should be mentioned: information vulnerability, increasing pressure from the instability of the virtual financial system, weak development of institutions ruling the digital national and world systems, etc. (Alexakis et al., 2019).

4. Conclusions

We see that the solution of the problem of building a knowledge society and forming a digital economy at the same time, identified as a priority, can only be solved by solving the issues of obtaining the surplus value created by knowledge.

The pace of technology development, creation, processing and dissemination of information has significantly exceeded the ability of most people to learn and apply knowledge. This simplifies the influence on people's views and preferences, contributes to the formation of imposed behaviors, which gives an advantage in achieving economic and political goals to those states and organizations that own information dissemination technologies. Such a phenomenon (so-called "clip thinking") leads to threats for national security and requires consideration when implementing a policy of comprehensive digitalization.

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