GCPMED 2020
Global Challenges and Prospects of the Modern Economic Development

LEGAL BASIS FOR TECHNOLOGICAL TRANSFORMATION AND DIGITAL ECONOMY DEVELOPMENT

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Abstract

Under the active penetration of digital technologies in all spheres of society, the business community and the state are aware of the need to accelerate processes of digitalization and digital transformation in order to achieve a stable competitive position in the global digital space. The digital economy sets a vector for the development of economic systems at the micro-, meso- and macro- levels. Digital transformation is widespread, and the successful implementation of its key areas and projects is a strategically important and vital condition for the development of individual industries, regions and countries. The importance of digitalization encourages the state to develop national projects for the digital economy development. The article examines state policy, in particular the development of the legal framework for the digital economy. Goals and objectives of the national program "Digital economy" were studied, and indicators of digitalization development were considered. The authors study the structure of expenditures and sources of funding in the key areas of this national program. The article investigates interim results of the national program implementation, key areas that require close attention and further development of legislation for their successful implementation. Special attention is paid to the need to create conditions and ensure state funding for the development of domestic software. The authors study the national index and sub-indices of the digital economy in Russia, making international comparisons. In general, the authors conclude that the implementation of the national program is satisfactory and the development of the digital Russian economy is relatively low.

Keywords: Digital economy, national index of economic development, national program

1. Introduction

Currently, you can find research by many foreign and domestic authors on the development of the digital economy and technological breakthroughs. A lot of researchers study the significance and the impact mechanisms of digitalization processes on the economy development and its individual spheres (Popkova & Sergi, 2020). Separate works are devoted to the study of the role of the digital economy in creating innovative business models (Ranta et al., 2021), investigate the impact of information, communication and digital technologies on GDP and labor productivity (Watanabe et al., 2018).

At the same time, there are practically no studies that consider the issues of state participation in regulating the digital economy development. Some authors only explore issues of public services digitalization (Gong et al., 2020; Pittaway & Montazem, 2020). Others study problems of the digital state and digitalization processes of public values (Panagiotopoulos et al., 2019). In other words, most authors focus their research on the study of the digital economy as a key factor in changes and transformations of economic reality. In this article, the main research object is state regulation, mechanisms and directions of impact on the digital economy. And the latter is not the cause, but the object of influence. Government regulation, support of information and communication technologies and digital transformation is a key factor in the country's sustainable economic development. This study is devoted to the study of this aspect.

2. Problem Statement

Research on the digital economy and new information technologies usually speaks of huge opportunities for their development, on the one hand, and technological problems and limitations, on the other hand. The limited economic resources of private businesses to implement large-scale transformations in the digital economy require active financial support from the state in this area. The need to streamline, plan and organize development processes involves the development of strategic and tactical decisions on the part of the state. In this study, we will look at the main directions of the state policy in the field of the economy digitalization. We will also conduct international comparisons to determine the development level of the digital economy in Russia.

3. Research Questions

The main research questions that are considered in this article are:

- research on the legal foundations of the digital economy;

- defining development goals and objectives;

- identification of directions and targets of the economy digitalization;

- study of priority areas of the state support;

- analysis of interim results of the national program "Digital economy";

- international comparisons of the national index and sub-indices of the digital economy.

4. Purpose of the Study

The main purpose of this study is to consider development directions of the digital economy in the framework of the state policy in the field of informatization. The research object is the national program "Digital economy" (National program "Digital economy of the Russian Federation", 2019) and the mechanism of its implementation. The study of the interim results of this program implementation and problems of digital economy development will help to develop optimal strategic and tactical solutions in the field of the state digital policy. International comparisons will enable to identify the development level of digital technologies in the Russian Federation. Identifying and developing key areas for the digital economy in the future will ensure the formation of a stable competitive position of Russia in the international market.

5. Research Methods

The methodological basis of this research is a systematic approach that allows us to consider the digital economy as a system including a lot of elements, a set of relationships and links between these elements. Therefore, the formation of regulatory conditions and development directions is based on identifying factors that affect the generation of digitalization. Therefore, we also use process and situational approaches that allow us to consider change management as a process.

The following research methods were used: formal-logical (deduction, induction, justification, argumentation); abstract-logical (when setting goals and objectives of research); empirical (observation and experimentation); economic-statistical. Data processing was performed using the Microsoft Office application software package (Excel, Word).

6. Findings

According to the current legislation, the main document in the field of the economy digitalization is the national program "Digital economy of the Russian Federation". It was developed as part of the implementation of the President Decree "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024" to accelerate the introduction of digital technologies in the economy and social sphere (President of the Russian Federation, 2018). The national program includes the following list of federal projects:

- "Digital public administration";

- "Digital technology";

- "Information security";

- "Information infrastructure";

- "Personnel for the digital economy";

- "Normative regulation of the digital environment".

The implementation period of the national program is until 31.12.2024.

The main goals and targets are:

1. Increase in internal expenditures on the development of the digital economy from all sources (as a share of GDP) by at least three times compared to 2017.

2. Creating a stable and secure information and telecommunications infrastructure for high-speed transmission, processing and storage of large amounts of data, accessible to all organizations and households.

3. Use of mainly domestic software by state bodies, local self-government bodies and organizations.

The total budget of the national project is 1,634. 9 billion rubles, the share of the federal budget in total expenditures is 67.3%, and the remaining funds are planned to be covered from extra-budgetary sources. Figure 1 shows the structure of expenditures in the key areas of the program.
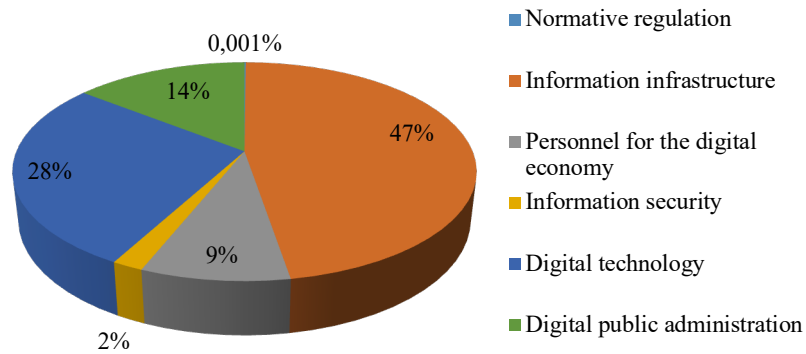
Figure 1. Budget structure of the national project "Digital economy".
Source: authors based on (National program "Digital economy of the Russian Federation", 2019).

The main objectives of the national program are:

1. Creating a system of legal regulation of the digital economy based on a flexible approach to each area.

2. Formation of a global competitive infrastructure for data transmission, processing and storage, mainly based on domestic developments.

3. Providing training of highly qualified personnel for the digital economy.

4. Ensuring the information security based on domestic developments in the transmission, processing and storage of data, which guarantees the protection of interests of individuals, businesses and the state.

5. Creation of end-to-end digital technologies mainly based on domestic developments.

6. Application of digital technologies and platform solutions in the areas of public administration and public services.

7. Transformation of priority sectors of the social economy, including health, education, industry, agriculture, construction, urban economy, transport and energy infrastructure through the application of digital technologies and platform solutions.

8. Creation of a comprehensive system for financing projects for the development and implementation of digital technologies and platform solutions, including venture financing and other development institutions.

Let's consider the main target and additional indicators of the national project (Table 1).

Table 1. Target and additional indicators of the national project "Digital economy of the Russian Federation"

| Target indicator	Base value	Target value				
		2020	2021	2022	2023	2024
<u>1 Goal:</u> 1.1. Internal costs of digital economy development in GDP, %	1,7	2,5	3,0	3,6	4,3	5,10
<u>2 Goal:</u> 2.1. Percentage of households with broadband Internet access», %	72,6	84	89	92	95	97
2.2. Share of socially significant infrastructure objects that can connect to broadband Internet access»,%	30,3	72,6	88,6	93,5	96,8	100
2.3. Share of the Russian Federation in the global volume of data storage and processing services, %	0,9	1,5	2	3	4	5
2.4. Reference data processing centers in Federal districts, in pieces	-	4	5	6	7	8
2.5. Average downtime of state information systems as a result of computer attacks, hours	-	24	18	12	6	1
<u>3 Goal:</u> 3.1. Share of domestic software purchased or leased by public authorities, %	-	70	75	80	85	90
3.2. Share of domestic software purchased or leased by state corporations and companies with state participation	-	50	55	60	65	70

Source: authors based on (National program "Digital economy of the Russian Federation", 2019).

Analysis of the dynamics of target indicators shows that the most ambitious of all is goal 3 – the use of own (domestic) software (by 2024, the share should be 80% on average). In 2020, its achievement is brought to the fore by the state. Thus, in accordance with the instructions for the implementation of the "President's Address to the Federal Assembly" dated January 24, 2020, the national program "Digital economy of the Russian Federation" should be amended to provide the development and implementation of domestic software (President of the Russian Federation, 2020). Within the digital economy, the use of the program financial resources is strictly regulated: funds are allocated for the purchase of ready-made solutions. The problem is that this does not contribute to the development of competitive domestic software products, the production of which is a very long and expensive procedure.

Summing up the interim results of the project, it can be noted that only 6 planned tasks were completed from the whole amount (231) of the national project tasks in January-March 2020. 150 projects are behind the schedule, and 66 were considered as unfulfilled for May 2020. The deadlines for many initiatives have been violated (for instance, the development of 5G, the creation of a state unified cloud platform, a typical automated workplace for a civil servant, a venture fund to support educational projects, etc.). The Analytical center under the Government of the Russian Federation assessed the implementation of the national project programs as satisfactory (Kommersant, 2020). It is expected that some unresolved in 2019 tasks will be completed in the near future. To speed up the implementation of a number of areas, it was proposed to postpone the implementation of some projects of the national program and redistribute the 1.6 billion rubles allocated for them to other tasks. This applies, first of all, to a number of activities in the "Information security" direction. We can also note the low cash execution of expenses for the national project. So, for the first nine months of 2020, this figure was only 20.6%. Another drawback is too modest

funding for regional projects, which should make a significant contribution to achieving the indicators which are stated in the national project passport.

In addition to the unfavorable macroeconomic situation caused by the pandemic, one of the obstacles to the timely implementation of the project is the introduction of a large number of changes. Since mid-2019, 94 changes have been made to the national program, and about twice as many to federal projects. The implementation of the program is also affected by a complex management structure involving government agencies, state corporations, autonomous nonprofit organization (ANO), and development institutions. To improve the effectiveness of the program implementation, it is necessary to simplify the management structure, strengthen the relevant project office with competencies, and conduct an audit of the program's activities, revising priorities based on the already accumulated experience and the changed economic situation. In 2018-2019, as part of the implementation of the Federal project "Digital technologies", a system of indicators of the national index for the development of the digital economy in the Russian Federation was actively developed. We will make international comparisons for this index and its sub-indices (Figure 2).
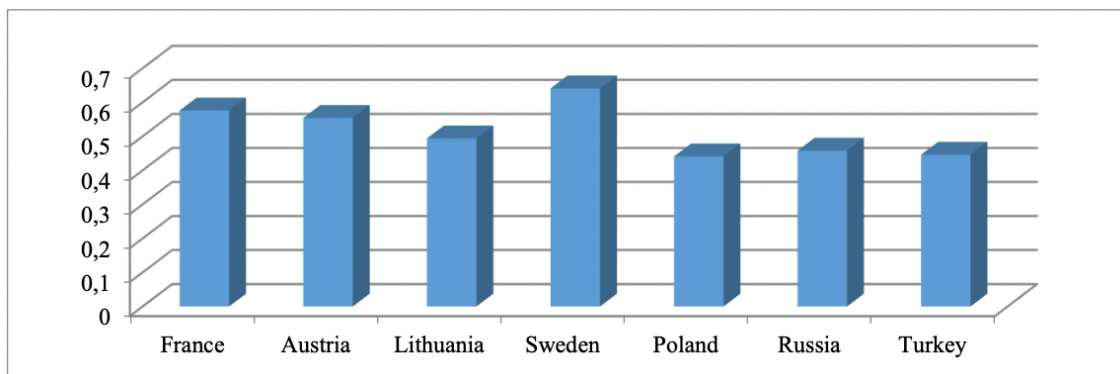
Figure 2. National index of the economic development (international comparisons)
Source: authors based on ROSATOM State Corporation (2018).

As we can see in Figure 2, the national digital economy index in Russia is lower than the values of most of the presented countries, it is slightly higher than the values of Poland and Turkey only. The most developed countries in the field of digital economy are the Scandinavian countries (Sweden, Norway, Finland, Denmark), the outsiders of the rating are the countries of South-Eastern Europe (Romania, Bulgaria). Russia has an indicator value below the average one.

Analysis of values of the digital economy sub-indices (Figure 3) shows that Russia is characterized by relatively large values of the "Human capital" and "Internet Use" sub-indices. But the country is an outsider in terms of "Integration of digital technologies" and "Connectedness". In general, it can be noted that the polygon that reflects the digitalization level of the Russian economy is located inside the polygons of most of the analyzed countries, which means that the development of the considered sub-indices is lagging behind. The area of the Russian sub-index polygon is comparable to the area of the Chinese sub-index polygon and is only larger than the area of the Turkish polygon.
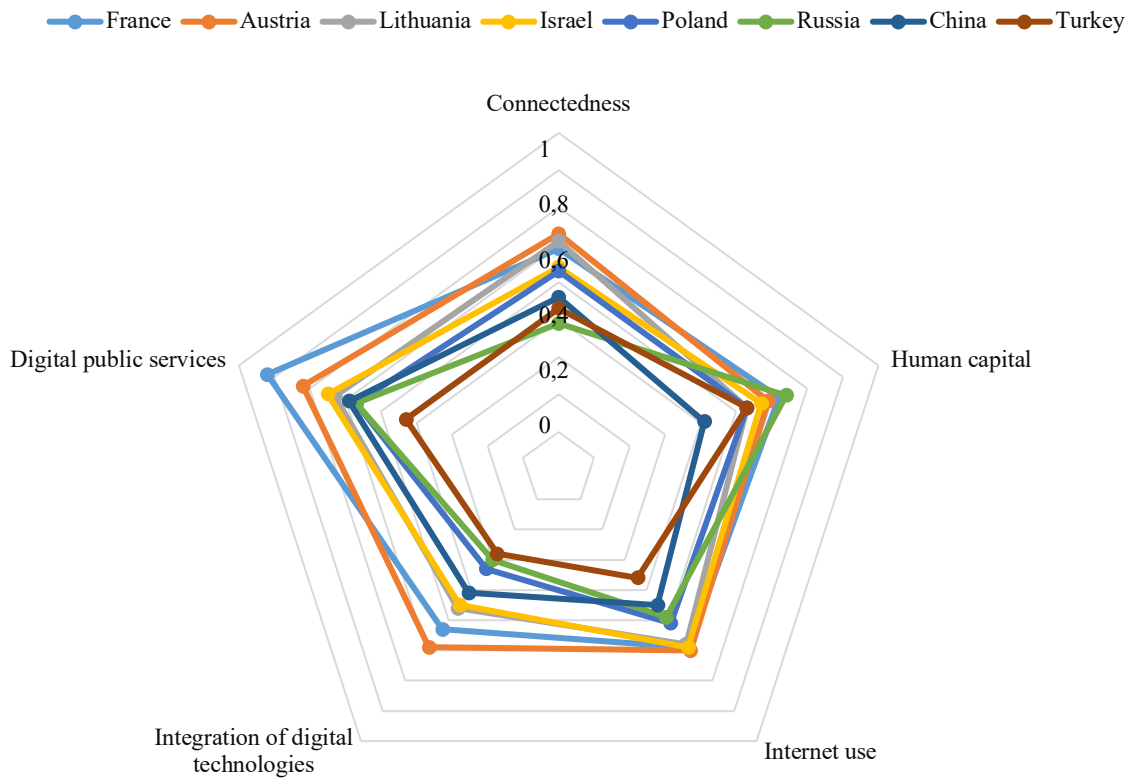
Figure 3. The national sub-indices of the economic development index (international comparisons)
Source: authors based on Higher School of Economics (2019).

7. Conclusion

This paper examines the digital economy and its development. The directions of state regulation were studied and the amount of funding for separate federal projects of the national program was determined. The analysis allows us to conclude that Russia has the necessary intellectual and scientific base for the development of the digital economy. To accelerate this development, it is important to optimize the structure of governing bodies. It is also necessary to finalize the existing legislation in the field of domestic software development and improve training of qualified personnel. The comparative international analysis of the national digital economy index reflects the relatively low development level of digital technologies in Russia. The problem of accelerated development of digital, information and communication technologies is a priority for the state, as they ensure sustainable economic development of the country and contribute to the formation of Russia's competitive position in the foreign market. The imperative of the new digital economy should be the creation of maximum conditions for the development of human capital, the development, accumulation and use of domestic software products, and the development of new types of knowledge-intensive areas and industries.

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