

# Law Support of the Digital Economy: Problems and Prospects

Olina Filonova  
*Department of theory and  
 history of state and law  
 Kurgan State University*  
 Kurgan, Russia  
 ORCID 0000-0003-3077-7534

Elena Polyakova  
*Department of Security of  
 information and automated  
 systems*  
*Kurgan State University*  
 Kurgan, Russia  
 ORCID 0000-0003-4847-7468

Alexey Neverov  
*Department of state law  
 Russian Academy of national  
 economy and public  
 administration under the  
 President of the Russian  
 Federation, Kurgan branch*  
 Kurgan, Russia  
 neverov45@mail.ru

Tatyana Mayboroda  
*Institute of Economics and Law  
 Kurgan State University*  
 Kurgan, Russia  
 tum-777@mail.ru

**Abstract**—The article is devoted to the search for a model of legal regulation of social relations arising in the transition to a digital economy. The rapidly developing information technologies require scientific justification for their promising legal regulation, which determines the relevance of the research topic. The international and world experience of legal regulation of the digital economy is investigated. The development of information technology has led to the widespread use of electronic forms of transactions. The article studies the world practice of establishing the principles of electronic communication and legal regulation of the conclusion and conclusion of an agreement in electronic form. The conclusion is made that the legal regulation of the digital economy in Russia lags behind the existing realities and is catching up. Russian legislation needs to be supplemented with its norms, which should become the basis for legal support of relations in the digital economy. The problems of legal regulation of relations in the digital economy in modern Russia are identified: insufficient correlation with the world practice of legal regulation of the digital economy; the uncertainty of the official concept of the development of the digital economy; digital divide insufficient legal regulation of transactions in electronic form. The purpose of the work is to identify the problems of legal support of the digital economy and develop proposals for their solution. The results of the study - proposals for the legal support of the transition to a digital economy - will help solve the problems of society and the state.

**Keywords**—*digital economy, information technology, public relations, legal regulation, electronic contract form, legal support, digital inequality.*

## I. INTRODUCTION

Information technology quickly broke into public life. Most people can no longer imagine themselves without mobile communications and the Internet; electronic payments, online stores, and distance learning have become commonplace. There is no doubt that scientific and technological progress, and information technology should be implemented only in the interests of man and society, and always in the legal field.

The Russian state today recognizes that despite the expansion of the use of digital technologies and the growing number of citizens with digital skills, there are problems in the transition to a digital economy, in particular, the persistence of a significant digital divide in Russia. And as

one of the key measures aimed at achieving the goals of the national project of the digital economy, "the creation of a system of legal regulation of the digital economy" is indicated [1].

The progressive development of public relations in the context of the transition to a digital economy requires the right not only to timely resolve emerging problems, but also to form a basis for future social relations. The rapidly developing information technologies require scientific justification for their promising legal regulation. This determines the relevance of the topic of this work.

Unfortunately, to date, legal regulation in the field of public relations related to the digital economy is seriously lagging. Society as a whole and a particular person in particular are exposed to a number of previously non-existent threats. The issues of legal regulation of relations related to the digital economy are the subject of research by both Russian and foreign scientists.

According to international communities, the digital economy has taken center stage in the global economy, with enormous potential, but causing problems for the effective inclusion of all countries in the world. [2]. Scientists note how important the role of legislation and public policy is in the process of introducing digital technologies into public life [3]. For sustainable international business cooperation it is of great importance how the mutual integration of countries, acceleration of civil turnover, and transactions in the digital environment take place. For many developed countries, the implementation of the digital economy has become a political, economic and cultural goal [4]. At a new stage in the development of the digital economy, legal relations are also undergoing changes under the influence of digital technologies [5]. Information and communication technologies affect the socio-political environment in which they are introduced and operate [6]. An important role in the implementation of digital technologies is played by law and policy [3]. Most researchers agree that measures must be taken to address the rule of law and digital rights management [7]. First of all, they propose to eliminate the difficulties associated with the Internet in the field of digital rights and social awareness [8-9].

With the development of information technology, the business community and citizen receive benefits: saving time on searching for data and delivering documents, reducing the risk of losing information, reducing material costs, ensuring

confidentiality and integrity of information when applying cryptographic protection. The security of electronic business operations implies [10] confidentiality, integrity, continuity and identity. The security of the e-commerce information system in the state seriously affects the development of e-commerce [11-12]. To solve problems in this direction, effective measures are needed to protect data in the e-commerce system [13-14]. This requires the development of e-commerce security technologies [15]. The implementation of digital rights must be ensured by a high level of security, control of use and traceability of [16].

The purpose of the work is to identify the problems of legal support of the digital economy and develop proposals for their solution by legal and organizational means.

The relevance of the work is due to the need for scientific development of a mechanism for legal regulation of public relations aimed at the development of the digital economy. The results of the study - proposals for organizational and legal support for the transition to a digital economy - will contribute to solving the problems of society and the state.

## II. METHODS

The methodological basis of the work is systemic and modernization approaches. Thanks to functional analysis with a systematic approach, one can study various phenomena in the digital economy as a general system. The interdisciplinary modernization approach allows in this study to reevaluate the transformation of public life in the transition to a digital economy. The research methods were the comparative legal method (when analyzing foreign and Russian experience in regulating the digital economy) and the formal legal method (to determine terminology in the digital environment).

## III. RESULTS

### A. *Foreign experience of legal regulation of digital economy*

The development of information technology has led to the emergence of an electronic form of contract. In world practice, the conclusion and execution of a transaction in a digital environment is governed by the customs of trade and business, the principles of international law, and national legislation. Both the international communities and foreign scientists point to the rapid development of the digital economy and the expansion of the application of the electronic contract. At the same time, they indicate the problems that arise in contractual relationships in the digital environment.

It is noted by international communities that the development of the digital economy, the expansion of digital entrepreneurship, the widespread adoption of digital technologies in all sectors of the economy will contribute to international integration [17]. It is proposed to increase the availability of information and reduce the barriers to its access to the development of electronic commerce and the digital economy [2]. Foreign scientists note that the use of an electronic contract in the conduct of everyday business is growing worldwide [18]. At the same time, they point to the need to develop a legislative strategy for electronic commerce by means of legislative policy [19].

Countries of the world at different speeds introduce information technology in public life. For example, in the

ranking of the international index of the development of information and communication technologies in the world (International Telecommunication Union: The ICT Development Index. 2017), France takes 15th place (index 8.24), Russia - 45th place (index 7.07), Kazakhstan - 52 place (rating 6.9) [20].

The widespread development of information technology has led to the emergence of a specific form of contract - electronic.

Article 8 of the UN Convention on the Use of Electronic Communications in International Contracts (2005) enshrines the legal force of an electronic agreement, namely, an agreement cannot be invalidated or enforceable solely on the basis that it is in the form of an electronic message. At the same time, there are requirements for the identification of parties and for the integrity of information. The provisions of the UN Convention on the electronic form of the contract have been incorporated into the legislation of several countries. The provisions on electronic contracts are introduced in the legal regulation of civil law turnover. So, the possibility of concluding an agreement in electronic form is provided for by the laws of France, Germany, the USA, South Korea, and Singapore.

The French Republic has gone far ahead not only in the development of information and telecommunication technologies, but also in the field of legal regulation of public relations in the digital environment. On October 7, 2016, the French Digital Republic Act was adopted [21]. Article L32-1 of this Law establishes the principles of electronic communication: activities in the field of electronic communications are carried out freely; the maintenance and development of a publicly accessible electronic communications service is guaranteed, which ensures, in particular, the right of everyone to use the universal electronic communications service.

The electronic communications regulatory body in France has the responsibility to take appropriate measures to develop the digital space: development of investment, innovation and competitiveness in the electronic communications sector; territorial development and the diversity of competition in the territories; consumer protection; neutrality of the Internet; respect for the protection of personal data by electronic mail operators, confidentiality of correspondence and the principle of neutrality with respect to the content of transmitted messages; the integrity and security of electronic communications networks open to the public, and respect for network operators and electronic communications service providers of the obligations of public order and defense and public safety [22].

On the basis of the Law on the Digital Republic in France, the rules of civil law have been adjusted. Section 4 of the Civil Code of France (revised March 25, 2019) governs the conclusion of an agreement in electronic form. It is fixed that the information requested for the conclusion of the contract and in the process of executing the contract can be transmitted by e-mail, if the recipient agrees to use this method. The party that offers the provision of goods or services in electronic form is obligated to transfer the terms of the contract so that they can be stored and reproduced. Contracts in electronic form must meet certain requirements, for example, the recipient of the proposal must have the technical capabilities to be able to identify possible errors made during data entry

and correct them before concluding the contract; French should be one of the languages offered for the conclusion of the contract. The impossibility of depriving an electronic contract of legal force is provided only on the basis of its paperless form. Thus, French law contains a detailed regulation of public relations related to the digital economy. A basic law has been adopted in this area (“Digital Republic”), significant changes have been made to civil law.

On December 12, 2017, the State program “Digital Kazakhstan” for 2018-2022 was approved in the Republic of Kazakhstan [23]. The Program recognizes that Kazakhstan is a catch-up country in international rankings for the current level of digitalization. The goal is to accelerate the pace of development of the economy of the republic and improve the quality of life of the population through the use of digital technologies, the creation of a digital economy. To achieve this goal, it is supposed to move in two directions of development: digitalization of the existing economy, creation of a digital industry of the future. These directions include the digital transformation of traditional sectors of the economy, the development of digital infrastructure, a breakthrough in the development of the entrepreneurship system in the field of digital technologies.

A serious problem in the development of the digital economy in the world is the digital divide. Foreign scientists point to significant improvements in this area for some indicators, for example, in the case of the introduction of broadband infrastructure in rural areas. But for other indicators, such as fixed and mobile broadband penetration, there is only a slight improvement in bridging the digital divide [24]. In connection with these, it is necessary to implement a policy of state intervention in the sphere of dissemination of information and communication technologies. This will help bridge the digital divide, establish equitable digital opportunities, promote the Internet and digital applications in different countries and regions [25].

#### *B. Problems of legal provision of digital economy in Russia*

##### *1) Features of the legal regulation of the digital economy*

The Russian state sets the task of creating a system of legal regulation of the digital economy and introducing civil circulation based on digital technologies.

Modern information technologies have long gone beyond the limits of information activity itself — they began to directly interact with people and society, exerting a direct influence on this interaction. Information relations have moved into a complex sphere, regulated by many sectors (civil law, administrative law, criminal, constitutional) [26].

The Constitution of the Russian Federation contains more than 30 provisions enshrining the fundamental rights and obligations of participants in informational legal relations. The legal foundation governing relations in the field of information in the Russian Federation are Federal laws and international agreements. At the by-law level, these relations are regulated by a set of acts of the President and the Government of the Russian Federation.

However, rapidly developing information technologies require constant improvement of legal regulation issues.

Today, the question is clearly posed - do legal norms and normative acts ensure the effective and safe development of

public relations in the context of the transition to a digital economy?

According to scientists, lawmakers and law enforcement, at present, legislation is significantly lagging behind existing realities.

In addition, it should be noted that the fundamental regulatory act in the studied sphere of public relations (Federal Law “On Information, Information Technologies and the Protection of Information”) does not provide for the adoption of any program documents (strategies, concepts, doctrines). However, it is in this form that the position of the state in the field of the digital economy and information technologies is reflected.

Thus, we can state the fact that the current legal regulation does not fully cope with the function assigned to it to ensure the legal regulation of public relations related to the digital economy.

Based on the foregoing, it is necessary to conclude that the legal mechanisms and procedures that ensure the development and implementation of norms in the field of the digital economy should be detailed in regulatory legal acts and other sources of law.

The formation of legislation in the field of information relations is one of the most important tasks of state policy in the field of the digital economy and the main way in solving the problems of legal support for the transition to the information society at the national level. The legal basis of a single information space is designed to regulate the relations of producers and consumers of information in the digital economy. The purpose of normative legal regulation in the field of using information technologies is to create an effective legal framework for the realization of the rights of citizens and organizations in the digital economy.

Today, science faces difficult challenges. The most important of these is to guarantee regulatory support for the transition to the information society and the digital economy. The final result will be the development of specific legal norms to create the necessary conditions for the progressive development of public relations in the development of information technology.

##### *2) Problems of legal regulation of digital economy institutions (on the example of the institution of a treaty)*

The development of information technology caused a gradual transition to electronic document management, which has a number of advantages compared to paper document management [27].

The electronic form of the contract is in line with the goals of the digital economy and contributes to the cooperation of countries, the expansion of civil turnover and reduce financial costs.

In the framework of the global trend aimed at digitalization of economic relations, new laws have appeared in the legislation of Russia on the conclusion and execution of transactions in the digital environment, which is of progressive importance for the development of the digital economy and cooperation [28].

In order to regulate civil turnover in the context of the transition to a digital economy, Russian civil legislation has been amended to legalize transactions electronically.

The new version of Article 160 of the Civil Code of the Russian Federation provides that the written form of a transaction is considered to be observed if a person completes a transaction using electronic or other technical means, allowing the contents of the transaction to be reproduced on a tangible medium. It is specified that the requirement of a signature is deemed to be fulfilled if any method is used to reliably determine the person who expressed the will. An example is confirmation of consent by clicking the necessary button on the site after filling out a special form on the Internet. For this purpose, SMS messages are used. To ensure the identification of the parties, it is advisable to use the input of confirmation codes, PIN codes of payment cards, electronic signatures, mobile devices and biometric characteristics.

It is legislatively stipulated that a contract in writing can be concluded by drawing up an electronic document signed by the parties, or by exchanging letters, telegrams, electronic documents.

The new edition of Article 309 of the Civil Code establishes that the terms of the transaction may provide for the execution by the parties in the event of certain circumstances without the additional expressions of will expressed by the parties aimed at fulfilling the obligation through the use of information technologies determined by the terms of the transaction. Fulfillment of an obligation in this way has long been put into practice. For example, an automatic payment is made from the bank account of a subscriber of communication services - writing off a predetermined amount. Auto payment is often used to replenish the balance on a phone number. This is considered a smart contract ("smart deal").

Obviously, the legal regulation of electronic communication in the digital economy has undoubtedly promising significance:

- 1) will contribute to legal certainty and the protection of obligations in a digital environment;
- 2) will simplify the process of concluding transactions;
- 3) will simplify the process of fulfillment of obligations;
- 4) provide the parties to the contract with legal protection for transactions in the digital environment;
- 5) the wide possibilities for concluding and completing a contract in the digital environment will contribute to international cooperation.

However, it is very important to develop a legal mechanism for protecting transactions in the digital environment.

The following measures can be proposed to protect electronic transactions to transaction parties:

- 1) foresee the possibility of refusing automatic payment in case of improper performance of the contract or suspicion of fraud;
- 2) conclude additional agreements, within the framework of which to provide a dispute resolution procedure in order to balance the interests of the parties in the event that an electronic transaction makes one of the parties less secure;
- 3) conclude a mixed contract in form: the main contract is in writing and in part a smart contract;

4) to make the fulfillment of an obligation under a contract concluded and executed in electronic form dependent on specific conditions.

A significant problem in the development of the digital economy in Russia, as in the world, is the digital divide. A manifestation of this is a different level of implementation of information technology in different regions and administrative-territorial units - the digital divide.

As analysis by foreign scientists shows, in some cases, as in the case of the availability of broadband infrastructure in rural areas, clear improvements have been achieved; at the same time, other indicators, such as fixed and mobile broadband penetration, indicate that a slight improvement has been achieved with respect to bridging the digital divide [25; 29–30]. Various measures of state policy of state intervention are proposed in relation to the spread of information and communication technologies, the digital divide, equitable digital opportunities, and the popularization of digital applications and the Internet in different countries [31–32].

Accelerating the development of production, the rapid transition to digitalization of all spheres of life and the information society has revealed another acute problem: the moral aging of knowledge acquired by graduates of educational institutions of vocational education. The rapid change in the forms and methods of basic and applied research, the constant reduction of the time taken to introduce modern scientific discoveries and technical inventions into production require specialists who are able to build the knowledge potential of an adequately changing world. In the era of the digital economy, education and, in particular, the continuity of education become a strategic factor in the development of a country [33–35].

The development of information technology in Russia is also associated with a digital divide. It manifests itself in the stratification of the population depending on the availability of Internet access and the availability of digital technology. Information technology is sometimes inaccessible to rural residents, which impedes the development of civil turnover in the digital environment. To overcome the digital divide, focused attention from the state is needed. For example, the allocation of funds by the state to compensate for possible losses to telecom operators that provide Internet access in rural areas.

It should be pointed out some problems of the legal regulation of relations in the digital economy in modern Russia:

1. Insufficient correlation with the global practice of legal regulation of the digital economy.
2. Uncertainty of the official concept of the development of the digital economy. By Decree of the Government of the Russian Federation of July 28, 2017 No. 1632-r, the Digital Economy of the Russian Federation Program was approved. And in accordance with the Decree of the Government of the Russian Federation of February 12, 2019 No. 195-r, it has lost force.
3. The digital divide.
4. Inadequate legal regulation of transactions made in electronic form.

#### IV. CONCLUSION

At the global and national levels, a scientific search for a model of legal regulation of public relations in the digital economy is being carried out.

The legal consolidation of relations related to the conclusion and execution of a contract in the digital environment is of undoubted promising importance for the development of the digital economy and business cooperation. But in essence, legal regulation is catching up: the law consolidates the social relations in the digital environment that are demanded by practice, often already independently developed.

The widespread dissemination of information technology has great prospects and contributes to the development of the digital economy and international cooperation. But due to insufficient legal regulation of such relations, society as a whole and a particular person in particular are vulnerable to a number of previously non-existent threats.

International communities point to the rapid development of the digital economy and the expansion of the application of the electronic contract. At the same time, they warn of problems arising from contractual relations in the digital environment. Scientists emphasize the need to develop a legislative e-commerce strategy.

A serious problem in the development of the digital economy in the world is the digital divide. Foreign scientists point to improvements in this area by some indicators and the insufficient solution to the problem by other indicators. It also points out the need to implement a government intervention policy to bridge the digital divide.

For the legal regulation of contractual relations in the digital environment in Russia, the successful experience of foreign countries can be borrowed. An attractive French experience seems to be. There, the development strategy of the information society is fixed at the legislative level. In France, the fundamental law "Digital Republic" has been adopted and significant changes have been made to civil law. The amended norms of the French Civil Code regulate in detail and in detail the process of concluding and completing an agreement in electronic form.

In Russia, the state's position in the digital economy is not expressed in law, but in Strategies, Programs, which are also often replaced. It can be stated that the current legal regulation does not fully cope with the function assigned to it to ensure the protection of public relations related to the digital economy.

Thus, the problems of legal regulation of relations in the digital economy in modern Russia are insufficient correlation with the global practice of legal regulation of the digital economy; the uncertainty of the official concept of the development of the digital economy; digital divide incomplete legal regulation of transactions in electronic form. To protect transactions in a digital environment, a legal mechanism needs to be developed.

Obviously, the legal regulation of electronic communication in the digital economy is of undoubted promising importance: it will contribute to legal certainty and the protection of obligations in the digital environment; will simplify the process of concluding transactions and the process of fulfilling obligations; provide the parties to the

contract with legal protection for transactions in the digital environment; will facilitate international cooperation through the possibilities of concluding and completing a contract in a digital environment.

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