Legal regulation of transactions in the digital environment as a condition for effective business cooperation

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Abstract—The article is devoted to current issues of the digital economy. The scientific development of digital rights and transactions in the digital space is in line with the priority policy of the development of the information society and the digital economy, is a factor of a steady business cooperation, including international, and this determines the relevance of the topic of the article. Based on the analysis of the norms of international, Russian and foreign law, certain areas of the digital economy in civil circulation have been analyzed, problems have been identified and proposals have been developed for their solution by organizational and legal means. The study of international experience allows for the conclusion of ever-increasing importance of transactions made in electronic form.

In the civil legislation of Russia, the regulation on making transactions in electronic form has been approved: a transaction can be concluded by electronic means and it can be executed through the use of information technology without the additional will of the parties. These adjustments guarantee distribution mechanisms requested by practice in the digital environment.

The analysis of the issues of the digital economy in Russia has revealed a number of problems: the lack of the concept of the development of the digital economy and a unified approach to the understanding of digital rights; digital inequality, and insufficient norm regulation of transactions in the digital environment. The following measures are advisable to solve problems: developing a unified conceptual approach to the digital economy and digital rights; specification of norms on transactions in the digital environment; overcoming digital inequality, in particular by providing the rural area with the Internet. To protect digital transactions, it is possible to introduce the refusal of the parties from auto payment in the event of improper execution of the contract, balancing the interests of the parties.

The results of the study are the proposals for the organizational and legal support of the realization of digital rights and transactions in the digital environment, which will help to solve the tasks of the society and the state.

Keywords—digital rights; digital transactions; electronic contract; transactions in the digital environment; information technology; digital economy; electronic commerce.

I. INTRODUCTION

Currently, the digital economy is becoming an integral part of the economy. Today, almost all states, as well as interstate organizations and associations, attach significant importance to the problems of digitalization and the digital economy. International initiative communities note that e-commerce and the digital economy have become a central part of the global economy, having an enormous potential, but at the same time causing certain problems for the effective inclusion and participation [1]. Transactions in the digital environment contribute to the mutual integration of countries, the acceleration of civilian turnover, and the optimization of financial expenses, which is of great importance for achieving sustainable business international cooperation. The digital economy has become a political, economic and cultural purpose of all the countries of the modern world [2].

The digital economy is a tool for managing digital transformation processes [3]. At the national and international level, the scientific researchers are being conducted in the direction of finding optimal solutions and developing models of legal regulation of public relations, connected with the use of digital technologies in the field of economics and business cooperation.

The digital age brings new forms of relations among people with itself, a new perception of reality; legal relationships are also changing under the influence of digital technologies [4]. Information and communication technologies affect the social and political environment into which they are introduced and where they function [5]. Legislation and policy play an important role in the implementation of digital technologies [5]. With the development of information technologies, electronic document management gains advantages over paperwork: saving time on data retrieval and delivery of documents,
reducing the risk of information loss, reducing material costs, ensuring confidentiality and integrity of information when using cryptographic protection. The security of electronic business operations assumes confidentiality, integrity, continuity, and personal identification [7]. At the same time it must be borne in mind that the development of electronic commerce is seriously influenced by the security of the electronic commerce information system in the state [8]. To solve the problems effective measures are necessary to protect data in the e-commerce system [9]. The development of e-commerce security technologies is needed [10]. The implementation of digital rights should be provided with a high level of security, usage control and traceability [11]. For the past 15 years, e-commerce has spread widely in the world [12]. Technologies make it possible to improve the methods and styles of e-commerce [13]. E-commerce is a new type of business and promotes to the development of logistics [14]. Foreign scientists point at tremendous opportunities in digital business while using a cooperation culture both for consumers and business community [15]. Thus, the use of electronic commerce in society has a positive effect on the development of the state’s economy, and has a profound impact on all the spheres of human activity and production. At the same time, it is necessary to ensure the security of the information system of electronic commerce.

At present, the category of “digital rights” is becoming widespread. But there is no universal interpretation of this term. Digital rights are considered in a broad and narrow sense. In a broad sense, digital rights are understood as inalienable human rights being a new component of natural rights, that is, the rights and freedoms of an individual in the digital space. In a narrow sense, digital rights act as a type of liability rights in civil law relations, civil law transactions.

The introduction of the category of “digital rights” into the Russian legislation necessitates clarifying terminology and adjusting the regulation of certain areas of legal relations in the digital economy. The digital economy problems have attracted the attention of scientists - economists, lawyers, information security technicians, politicians. At the same time, a number of problems remain poorly studied. Researchers point to the need of taking measures in solving problems in the rule of law and digital rights management [16]. And they propose to eliminate the difficulties associated with the Internet in the field of digital rights and social awareness [17]. It seems appropriate to explore the problems of regulation and implementation of digital rights, considered as the objects of civil rights, as well as digital transactions.

The purpose of the work is to identify the problems of regulation and implementation of digital rights within the framework of civil circulation and electronic transactions, and to develop proposals for the organizational and legal support of the implementation of digital rights.

The relevance of the study is due to the importance of the scientific development of a mechanism for the implementation of digital rights in civil law relations and, in particular, in business circulation, aiming at the development of the information society and the digital economy. The results of the study are the proposals for the organizational and legal support of the implementation of digital rights and transactions in the digital space which will contribute to the solution of the tasks of society and the state.

II. METHODS

The methodological basis of the work is an interdisciplinary modernization approach, which involves the comprehension of fundamental social transformations from the point of view of their correspondence with the requirements of modernity, particularly in the context of transition to an information society.

The study is based on functional analysis as an external aspect of the system approach, which allows studying phenomena (electronic transactions, digital rights) within a more general system - in the digital economy.

The following methods are used in the work: comparative law method (for analyzing Russian and foreign experience in regulating transactions in the digital environment), formal legal method (for specifying terminology and identifying the importance of information technology in business intercourse).

III. RESULTS

A. The importance of digital economy in international integration

A special role in the digitalization process for achieving sustainable business international cooperation is played by electronic commerce, which promotes the mutual integration of countries, accelerates turnover, and optimizes financial expenditures. The use of modern information and communication technologies is of great importance for the simplification and automation of international trade procedures.

The global nature of the digitalization of the economy makes clear the need for supranational regulation of these processes [18]. International principles of creating an information society, which is the basis for the deployment of the digital economy, were laid in the Okinawa Charter of the Global Information Society (2000).

The G20 Ministerial Declaration “Digital Economy” (2017) notes that the development of the digital economy will contribute to achieving the goals of the United Nations, and the expansion of digital entrepreneurship and the wider introduction of digital technologies in all sectors of the economy will contribute to international integration [19]. For the development of electronic commerce and the digital economy, it is proposed to reduce access barriers and regulatory complexity, as well as to increase the transparency and accessibility of information [1].

The European Union adopted Regulation 2016/679 of the European Parliament and the Union “On the protection of individuals regarding the processing of personal data and on the free movement of such data, as well as on the repeal of Directive 95/46 / EC (General Regulation on the Protection of Personal Data)”, put into effect on May 25, 2018. Being related to digital technologies, the Regulation can be applied not only to the member states of the European Union, but also to other countries, in particular to Russia. Experts believe that a sufficient condition for application of the Regulation may be the fact that a Russian company has a website in the language of at least one of the
One of the radical changes in the modern economy is the emergence of new global communication and platform-type business structures, for example, Amazon, Uber, eBay, Google. Global digital platforms serve as an arena for the emergence, change, and termination of cross-border private law relationships, which are regulated by a variety of legal instruments, in particular, a cross-border contract as the central institution of private international law. The use of electronic contract in the conduct of everyday business continues to grow worldwide. But at the same time, in many countries there is no special education in the field of electronic contracts, for example, adequate training of law enforcement officers in the field of electronic commerce security. It is necessary to develop a legislative strategy for e-commerce in terms of legislative policy and orientation.

Researchers point out the possible impact of the digital economy on reducing the shadow economy. On average, in Europe, the shadow economy is estimated at 18.5% of the volume of economic activity. Almost two thirds of the shadow economy of Europe is concentrated in five countries - the UK, Germany, France, Italy, Spain. In Eastern European countries (Bulgaria, Croatia), the shadow economy is approximately 30% of the size of the official economy. The use of cash in the economy is a powerful factor in preserving the scale of the shadow economy. Paying with cash facilitates the participation in the shadow economy, since cash is very difficult to track. Accordingly, the transition to electronic transactions and non-cash payments will reduce the level of the shadow economy.

In international private law, there is a tendency to regulate certain segments of cross-border relations, the national law that is better to be exercised is usually chosen as the applicable law. Thus, the regulation of contracts for international transportation traditionally takes place on the basis of the norms of the English law, and in the regulation of franchise relations, American law is applied.

This trend has been reflected in the Russian civil law. Article 1186 of the Civil Code of the Russian Federation, regulating the issues of determining the law to be applied to civil law relations complicated by a foreign element, contains the proviso that if it is impossible to determine the law to be applicable, it is the law of the country with which the civil law relation (complicated by a foreign element) is most closely connected with. It appears that this trend will contribute to sustainable business international cooperation to a large extent. At the same time, there is such a problem of the legal regulation of the digital economy in Russia as the absence of correlations with established international legal practice in this field.

Thus, the use of modern information and communication technologies, digitalization of the economy on a global scale contribute to the mutual integration of countries, accelerate turnover, optimize financial expenditures, and, on the whole, achieve the goal of developing business international cooperation. The international principles of this process were laid in the Okinawa Charter of the Global Information Society and are currently being developed. In particular, it is noted that the development of the digital economy and the expansion of digital entrepreneurship will contribute to the achievement of the goals of the United Nations and international integration. At the same time, the following problems are pointed out: regulation complexity, access barriers, non-availability of information.

It is noteworthy that the norms adopted by certain interstate communities may also apply to the states that are not members of these communities. For example, on the basis of digital technologies, European Union Regulation 2016/679 may also be applied to non-EU countries. The rules of private international law in the context of globalization are implemented into national law. This should encourage sustainable business international cooperation.

IV. INTERNATIONAL AND FOREIGN EXPERIENCE OF LEGAL REGULATION OF ELECTRONIC FORM TRANSACTIONS

The widespread development of information technology has led to the emergence of a special, electronic form of contract. At the international level, the possibility of concluding transactions in electronic form is realized on the basis of the customs of business turnover and the norms of international law.

The UN Convention on the use of electronic communications in international treaties (2005) is applied to the use of electronic communications in connection with the conclusion or execution of contracts between the parties whose commercial enterprises are located in different states. The Convention states that there is no requirement that the communication or contract be drafted or confirmed in any particular form. The demands for the identification of the party and the integrity of the information are made. In particular, the criterion for evaluating integrity is the preservation of information in a complete and unchanged form, without any changes occurring in the normal process of transmission, storage and display. Article 8 of the Convention governs the recognition of the legal validity of electronic communications: communication or contract cannot be deprived of its validity or enforceability on the basis of the fact that they are drawn in the form of an electronic communication.

The provisions on the electronic form of the contract contained in the UN Convention have been implemented into the national legislation of several countries.

The possibility of concluding transactions in the digital environment in electronic form is legislatively fixed in a number of countries, in particular, in the USA, Germany, France, South Korea, and Singapore. In many countries, electronic contracts are included into the legal regulation of civil law turnover.

It seems interesting and possible to borrow the French experience in regulating an electronic contract. France adopted the Digital Republic Act on October 7, 2016. The regulation of the contract concluded in electronic form is incorporated into French law: Section 4 of the French Civil Code (revised March 25, 2019) regulates the issues of electronic contract (article 1125-1127). It is indicated that an electronic form can be used to enter into a contract, to provide information about goods or services. Information
requested in order to conclude a contract, or issues that will be resolved in the course of its execution, can be transmitted via e-mail if the recipient has agreed to use this method. The one who offers the provision of goods or services in a digital environment must provide the terms of the contract in such a way that they can be stored and reproduced.

In order to conclude a transaction in electronic form, according to the French law, certain requirements must be met: measures are taken to conclude a contract in electronic form; there are technical possibilities of the recipient of the proposal before entering into a contract in order to identify possible errors made during data entry and their correction; among the languages offered for the conclusion of the contract should be French. It should be noted that in France the procedure for conducting electronic correspondence is regulated at the conclusion of the contract so that later such correspondence has evidentiary force: a letter related to the conclusion or performance of the contract can be sent by e-mail; date of dispatch is established on the basis of electronic data and is considered reliable if there is no evidence to the contrary. The French civil law provides for an equal legal regime for a contract in the traditional and electronic form and the impossibility of invalidating a document only on the basis of its non-paper form.

The UK digital strategy, adopted on March 1, 2017, sets the goal of helping every UK business become a digital business. It indicates that the UK’s global competitiveness will increasingly depend not only on the thriving digital sector, but also on all UK businesses using the best digital technologies. All enterprises should be helped to become highly productive and competitive, and the introduction of digital technologies will be crucial. For this, it is necessary to provide assistance to a larger number of British enterprises to export, including through negotiations with a number of electronic markets.

Thus, the development of information technologies has led to the emergence of an electronic form of a contract, which is implemented on the basis of usual business practices, the norms and principles of international law, and the national legislation of a number of countries.

The opportunity and conditions are fixed for the conclusion and execution of contracts between the parties, using electronic messages. The demands for the identification of the party and the integrity of the information are made. At the same time, the most important principle of recognizing the validity of electronic contracts is enshrined, namely, the contract cannot be deprived of the validity or claim protection only on the basis of the fact that it is made in electronic form. It is possible to borrow the French legal experience to regulate digital transactions in Russia.

V. DIGITAL RIGHTS AS OBJECTS OF CIVIL RIGHTS IN THE RUSSIAN FEDERATION

In Russia, on March 18, 2019, Federal Law No. 34-FZ “On Amendments to Parts One, Two, and Article 1124 of Part Three of the Civil Code of the Russian Federation” was adopted to ensure the protection of the rights of citizens and legal entities in the digital economy. Chapter 6 of the Subsection “Objects of Civil Rights” of the Civil Code of the Russian Federation is amended with Article 141.1 "Digital Rights”. Part 1 of the newly introduced article gives the designation of digital rights: obligation and other rights named as such in the law, the content and conditions for the exercise of which are determined in accordance with the rules of the information system that meets the criteria established by law.

The draft of the Federal Law contained a slightly different interpretation of digital rights. Digital right was defined as a digital code or designation (that is, an aggregate of electronic data existing in an information system) that can certify rights to objects of civil rights.

Digital rights as a new type of property rights may be alienated or transferred from one person to another on the same conditions as objects of civil rights, rights to which they certify [26].

Digital rights as objects of civil rights are provided with negotiability. This is indicated by the changes made to Article 128 of the Civil Code of the Russian Federation: the list of objects of civil rights is supplemented by digital rights assigned to one of the types of property rights.

Objects of civil rights include: things (including cash and documentary securities), other property, including property rights (including non-cash money, non-documentary securities, digital rights).

Implementation, disposal, including transfer, pledge, encumbrance of a digital right by other means or restriction of disposal of digital law are possible only in the information system without recourse to a third party. Thus, the turnover of digital rights is possible only in a specialized information system between the subjects that have access to it.

In accordance with Part 2 of Article 141.1 of the new edition of the Civil Code of the Russian Federation, the holder of a digital right is a person who, in accordance with the rules of the information system, has the opportunity to dispose of this right. In cases provided by law, another person may be recognized as the holder of a digital right. In the draft of the Federal Law, the owner of a digital code, i.e. the person who has unique access to a digital code or designation, is recognized as a subject of digital law, which allows them to perform actions under the disposal of digital law.

Thus, the Russian law establishes digital rights as obligation and other rights, the content and conditions for the implementation of which are determined by the rules of the information system, and the holder of the digital right is a person who, in accordance with the rules of the information system, has the ability to manage this right.

The comparison of the adopted version of the civil law with the draft law makes it possible to notice significant differences in the definition of digital rights themselves, as well as their subject. Obviously, there has not yet been a unified approach to the definition of digital rights. Meanwhile, the term “digital rights” needs specifying.

VI. LEGAL REGULATION OF TRANSACTIONS IN THE DIGITAL ENVIRONMENT IN RUSSIA

The passport of the national program “Digital Economy of the Russian Federation” contains the federal project
“Normative regulation of the digital environment”, where the main task is to create a system of legal regulation of the digital economy based on a flexible approach to each sphere, as well as the introduction of civil circulation based on digital technologies. For the compliance with this direction, a federal law is adopted prescribing the settlement of the status of transactions executed in a written (electronic) form, as well as automated (self-fulfilling) contracts.

In order to regulate the civil turnover of digital rights enshrined in the legislation, amendments have been made to the Civil Code of the Russian Federation regarding the execution of civil law transactions and the fulfillment of obligations.

A number of civil law novels are aimed at legal legalization of transactions in the digital environment.

1. Paragraph 1 of Article 160 of the Civil Code of the Russian Federation “Written form of a transaction” is set forth in a new edition. It is envisaged that if the law, other legal acts and the agreement of the parties do not provide a special way to reliable determination of the person who expressed the will, the written form of the transaction is considered to be observed if the person makes the transaction using electronic or other technical means as well that allow reproducing the content of the transaction. It is specifically stipulated that the requirement to have a signature is considered fulfilled if any method is used of reliable determination of the person who has expressed the will. An example can be a confirmation of consent by clicking the appropriate button on the site after filling out a form on the Internet. You can also use SMS-messages. You can use verification codes, payment card PIN codes, electronic digital signatures, mobile devices, and biometric characteristics to ensure the identity of the person.

In continuation of this, the updated version of paragraph 2 of Article 434 of the Civil Code of the RF clarifies that a written contract may be concluded by drafting a single document, including an electronic one, signed by the parties, or exchanging letters, telegrams, electronic documents or other data in accordance with the rules of paragraph 1 of Article 160 of the Civil Code.

2. The norm of the new paragraph introduced into Article 309 of the Civil Code of the Russian Federation provides that the terms of the transaction may provide for the parties to fulfill it under certain circumstances without the separate additional will of the parties directed to the fulfillment of the obligation by applying information technologies defined by the terms of the transaction.

The fulfillment of the obligation in this way is common in practice, in particular, it occurs when a predetermined amount is written down off the service subscriber’s bank account to replenish the balance on a phone number or other auto payment that can be set up in a bank. This type of transaction is called smart –contract or “smart deal”.

After the user is identified in the system, the digital right is transferred from one person to another automatically upon the occurrence of the circumstances specified in the user agreement [27].

3. Part 3 of Article 141.1 of the new edition of the Civil Code of the Russian Federation states that the transfer of a digital right on the basis of a transaction does not require the consent of the person obligated under such digital law.

It seems that the normative legal regulation of certain options for the fulfillment of obligations in the digital environment has a number of positive and progressive consequences:

- it will contribute to the streamlining of obligation relations;
- it will allow simplifying the process of making transactions on digital rights and in the digital environment in general;
- it will facilitate the process of performance of obligations;
- it will promote business cooperation in the conditions of the possibility of the execution of the transaction in the digital environment, through the use of information technologies;
- the parties will receive legal protection for transactions with digital rights.

At the same time it is necessary to ensure the protection of digital transactions.

To do this, several measures can be taken:

- the parties may provide for the waiver of auto payment in the event of improper performance of the contract or fraud;
- the parties may conclude framework agreements, within the framework of which the procedure for resolving disputes is stipulated, designed to balance the interests of the parties if the digitalization of relations makes one of the parties vulnerable;
- the parties may conclude a contract mixed in form - in particular, the traditional contract with reference to the smart contract in the part where it is appropriate;
- the parties may involve an independent intermediary to evaluate the performance under the contract or make the execution dependent on objective conditions.

The adjustments of Russian civil legislation related to the conclusion and execution of transactions in the digital environment have a positive significance for the development of the digital economy and business cooperation, reinforce the mechanisms of legal regulation of social relations in the digital environment requested by practice.

However, there are problems of regulation and implementation of the digital economy in modern Russia:

Firstly, it is the lack of a clearly defined official concept for the development of the digital economy. Thus, the Program “Digital Economy of the Russian Federation” was approved by Decree of the Government of the Russian Federation dated 28.07.2017 No. 1632-p. And already by the Order of the Government of the Russian Federation of 12.02.2019 No. 195-p, the Program was declared invalid.
Secondly, it is the lack of a unified approach to understanding digital rights.

Thirdly, it is the lack of correlations with international legal practice in the development of the digital economy.

Fourthly, it is insufficient normative regulation of transactions in the digital environment.

Fifthly, it is the digital inequality.

One of the main obstacles to the further spread of information and communication technologies is the presence of a “digital gap” - a different level of technology introduction among regions. The analysis of European countries, made by foreign scientists, shows that in some cases, as in the case of the presence of broadband infrastructure in rural areas, there have been obvious improvements; at the same time, other indicators, such as fixed and mobile broadband penetration, indicate that there has been a slight improvement in bridging the digital gap [28]. Measures of state policy of state intervention are proposed in relation to the spread of information and communication technologies, the digital gap, fair digital opportunities, the popularization of digital applications and the Internet in different countries [29].

The development of digital technologies in Russia is associated with the phenomenon of “digital inequality”, that is, stratification of citizens depending on the availability of modern means of processing and transmitting information, including access to the Internet [30]. In particular, information technologies in the sphere of citizens' appeals are inaccessible to a large extent to rural residents which limits the availability of the realization of digital rights in public circulation. Overcoming digital inequality requires the adoption of public policy measures, in particular by allocating funds to compensate for possible losses to telecom operators that provide the Internetization in rural areas.

VII. CONCLUSION

Within the framework of the global trend of digitalization, the Russian legislation has established the norms on concluding and executing transactions in the digital environment, which has a positive significance for the development of the digital economy and business cooperation. The advantages of electronic transactions are: streamlining obligation relationships and simplifying the process of making and executing transactions.

The transaction can be concluded, among other things, in the case of a person making a transaction using electronic means, and the requirement to have a signature is considered fulfilled if any method is used of reliable determination of the person expressing the will; a written contract may be concluded by drawing up a document, including an electronic one, signed by the parties. The transaction can be executed by the parties through the use of information technologies without the additional will of the parties.

The problems of regulating the digital economy in Russia include the absence of a long-term official concept for the development of the digital economy, digital inequality, the lack of a unified approach to understanding digital rights, and insufficient normative regulation of transactions in the digital environment.

The problems can be solved in the following way:

1. To develop a single conceptual approach to the digital economy in general and to digital rights in particular.

2. To specify the norms on the conclusion and execution of transactions in electronic form, using international and foreign experience.

3. To overcome digital inequality through public policy measures, in particular by allocating funds for the Internetization in rural areas.

Certain articles of the Civil Code of the Russian Federation (articles 160, 309, 434) were amended to regulate transactions concluded and executed in electronic form. However, the norms governing electronic transactions are not included in a separate article of the Civil Code. It seems reasonable, taking into account the growing importance of turnover in the digital space, the possible risks while making transactions in the digital environment, and using the French experience of legal regulation to introduce changes to Russian legislation. Namely, to withdraw the norms governing the conclusion of the transaction in electronic form in article 160 of the Civil Code of the Russian Federation, into a separate article 160.1 “Transactions concluded in electronic form”.

We offer to fill art. 160.1 with the following content:

“The written form of the transaction is considered to be complied if a person makes a transaction using electronic or other technical means allowing to reproduce the contents of the transaction on a tangible medium, at the same time the requirement to have a signature is considered fulfilled if any method is used to identify the person who expressed the will. The law, other legal acts and the agreement of the parties may provide for a special way to reliable determination of a person who has expressed the will. The information requested in order to conclude a contract can be transmitted by e-mail if the recipient has agreed to use this method. The party proposing to conclude a transaction in a digital environment must provide the terms of the contract in such a way that they can be saved and reproduced. The recipient of the proposal must have the technical capabilities to enter into a contract in order to identify possible errors made during data entry and correct them. The document may not be invalidated solely on the basis of its non-paper form”.

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