

# Modern Mechanisms for Regulating Digital Relations in the Digital Economy

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## ABSTRACT

The purpose of the research is to develop the main mechanisms and models of legal regulation of digital relations in the digital economy. Research methods include both General scientific-the method of system analysis, historical, predictive, and special-the method of legal modeling, technical and legal (technological) method. Results. The article highlights modern mechanisms for regulating digital relations, which made it possible to identify models for regulating digital relations. Model of priority use of the legal regulation mechanism. This model allows interaction with technical regulation, but does not apply self-regulation, co-regulation of digital technologies, ethical regulators are divorced from legal ones. A model based on the preferential use of the mechanism of legal regulation, allowing the use of mechanisms of other regulators, including actively using technical regulation, introducing self-regulation and co-regulation, but with a number of obstacles. A model based on the state delegating part of its functions for regulating digital technologies to professional communities in this area. Within the framework of such models, the state can determine priority areas in the field of digital technologies at the level of strategic planning, and adopt General rules on support for the use and restrictions in the field of digital technologies. At the same time, ethical regulators have a direct impact, as the professional community actively develops codes of ethical conduct and monitors their implementation. Technical regulation also actively interacts with legal regulation, and is the basis for the formation of many norms of professional communities in the process of self-regulation and regulation.

**Keywords:** *regulatory mechanisms, legal regulation, technical regulation, digital relations, digital technologies*

## 1. INTRODUCTION

The digitalization of all spheres of public life taking place in the digital economy contributes to the transformation of modern society, including the transformation of law. This determines the transformation of the existing fundamental legal categories, institutions and theoretical and methodological foundations of legal regulation, which, in turn, also plays a significant role in the development of digital technologies.

Today, it is clearly necessary to integrate and diversify existing conceptual approaches, theories and methods of legal regulation, self-regulation of public relations in the use of digital technologies, taking into account the analysis of knowledge of technical and natural sciences, which would make it possible to form the main approaches to understanding the role and place of legal regulation, self-regulation in development digital technologies for effective scientific and technological progress and large-scale implementation in Russia of breakthrough technologies, including artificial intelligence systems, as well as overcoming existing legal barriers to building a digital economy in Russia in the context of predicted

systemic threats of technological changes in the global economy [1].

In the context of the development of digital technologies, the modern legal system is not able to quickly respond to the development of digital technologies, since they develop much faster. In this regard, it is important, having identified the patterns of legal regulation of digital technologies, the features of their technical regulation, to identify the main mechanisms and models for regulating digital technologies. First of all, it is important to study the issues of legal regulation and technical regulation of digital technologies, their interaction, and mutual influence.

The processes of integration, globalization, and digitalization are intensifying the need to address a number of doctrinal, legislative, and law enforcement issues in the development, production, and circulation of digital technologies through the formation of a new conceptual model of technical regulation in order to build a promising scientifically grounded technological ecosystem.

## 2. METHODOLOGY OF THE STUDY

The study used such scientific methods as dialectical, logical, historical, predictive, systems analysis, content analysis, as well as private scientific methods such as statistical, technical-legal, comparative-legal, legal modeling, the method of experimental legal regimes.

All these methods will effectively ensure the implementation of the research goal - to identify the main mechanisms for regulating digital relations in a developing digital economy.

The method of systems analysis, as well as predictive methods, make it possible to identify the main directions and patterns in the development of mechanisms for regulating digital relations.

The study is based on the application of the technical and legal method, which will allow extrapolating technical regulatory mechanisms, technical norms into new models of legal regulation of digital technologies in the digital economy. Today there is a need to develop a technical and legal method based on the methods of informatics, which underlie the research of the nature and features of the functioning of information systems in the digital world. On the basis of the technical and legal method, the theory and methods of informatics are used to solve legal problems for the construction of new models of legal regulation, ensuring the transition to the use of end-to-end digital technologies based on a system of legal and technical methods and means of regulation. The use of this method is also due to the transformation of the legal categorical apparatus, which changes under technical influence and is conditioned by technical processes. The result is the emergence in law of a huge number of concepts from the technical sphere, which need constant adjustment due to the rapid development and updating of the information technologies used, changes in their legal perception. The relationship to the legal conceptual apparatus is lost as a value. Today, the legislator often mechanically transfers concepts from the technical sphere and their definitions to the legal environment, without thinking about the problems of further law enforcement. The use of the technical-legal method just make it possible to ensure the reasonable implementation of the technical categorical apparatus, taking into account the peculiarities of the rules of legislative technique, the laws governing the formulation of the definition of legal concepts [2].

The method of legal modeling, used in the context of the rapid development of the digital economy, outstripping the development of legislation, using the technical and legal method, makes it possible to develop the main mechanisms, methods, approaches to legal regulation of digitalization processes, as well as to identify the main factors and conditions affecting the development of new mechanisms for regulating digital relations based on a combination of various regulators [3].

The method of legal modeling and the method of experimental legal regimes used for digital innovation provides today the development of optimal models and approaches for the legal regulation of digital relations that stimulate socio-economic and innovative development at

the micro and macro levels [4, 5]. Epistemological, prognostic and axiological methods will reveal the features, trends and conditions for the formation of new scientific areas related to the legal regulation of digital relations in the digital economy [6].

## 3. RESULTS OF THE STUDY

Today we are witnessing the development of several key mechanisms for regulating digital relations in the digital economy. First of all, all over the world, legal mechanisms of regulation are traditionally developing, which are customary for states; their application in conditions of stress and crises is considered the easiest for solving priority tasks. Within the framework of the modern mechanism of legal regulation, one can speak of the absence of long-term planning and the absence of forecasting the application and further development of legislation. The development of legal norms is carried out to ensure a particular task, which is set to solve the problems arising today in society or the state, but does not take into account the prospective development of relations in this area, as well as possible problems, for example, in relation to countering the COVID-19 pandemic [7]. Forecasting the development of digital relations for the long term can be put in roadmaps, strategies, but the content of regulatory legal acts on digital financial assets, experimental legal regimes in the field of digital innovations, and other institutions of the digital economy clearly indicate the initial planning of regulation in the short term to somehow solve the problem.

There is also a clear pattern in the desire to regulate relations in the use of digital technologies primarily at the level of federal laws and not by-laws. At the same time, the content of the adopted laws clearly indicates the need to adopt a significant number of subordinate regulatory legal acts in an indefinite period of time, which clearly indicates possible obstacles to the implementation of many provisions of the laws, and these are additional conflicts and gaps. At the same time, the development of a draft of this or that federal law occurs in the absence of, in fact, the relations themselves. The world experience in regulating digital relations testifies to the effectiveness of the subordinate legal regulation of this area. In the Russian Federation, the main task is to regulate these relations at the level of federal laws. A feature of the system of legal regulation of digital relations is the decentralization of regulation, associated with the fact that each individual area of application of digital technologies is regulated by a separate federal law and other regulatory legal acts, as well as acts of a non-regulatory nature. Unfortunately, there is no and no attempts are made to develop a single basic law regulating the conceptual apparatus, subjects, principles of regulating digital relations. The solution to this problem could be amending the Federal Law "On Information, Information Technologies and Information Protection" or the development of the Federal Law "On Digital Technologies".

Despite the priority of legal regulation mechanisms, technical regulation and its interaction with legal regulation are becoming more active in Russia. A new model is being created that combines legal and technical regulation with a significant extrapolation of technical norms into legal ones. Large challenges in the information society necessitate the search for more universal, complexly organized mechanisms for building a system of legal regulation of digital relations, the need for a closer development of legal, technical, moral and corporate norms, in connection with which another important process under the influence of digitalization is the transformation and adaptation of legal norms with other social regulators, technical norms that are used to regulate digital relations [8]. Strengthening the role of technical norms, the active use of the "technical" conceptual apparatus in legislation and the description of technical processes entails the complication of modern law. At the same time, software and digital code are increasingly playing the role of regulatory tools, and the technologies of blockchain, big data (Big Data), cloud computing, the Internet of things, artificial intelligence and other end-to-end technologies, which have rapidly burst into the legal field, pose new challenges to the law. At the same time, the legal regulation of the information sphere has certain limits and the issue of regulation of digital technologies is interdisciplinary.

The development of digital technologies requires ethical, technical and legal norms for the design, production, operation and disposal of digital objects to ensure the sustainability of their functioning and safety, as well as a single information space in Russia, which is especially important for minimizing the risk of harm in various physiological and anthropogenic manifestations. At the same time, a technical standard focused on digital technologies should meet the following criteria: should not contain specific technical characteristics of the system, its elements and processes; provide for the possibility of extending the norms to the designed facilities; be addressed to all subjects of the digital environment.

#### **4. DISCUSSION OF RESULTS**

Today, most researchers of the problems of regulating digital relations note the need to develop the complex application of various regulators - legal, ethical, self-regulation, technical [6, 9-10]. However, in fact, today mainly legal and technical regulation is developing. Moreover, in order to solve modern problems of the state in the context of digitalization, the system of legal regulation of digital relations must meet the following requirements: ensuring the possibility of rapid adaptation to the changing conditions of public life and the possibilities of legal regulation mechanisms, i.e. be flexible; it is important to develop mechanisms for self-regulation and co-regulation; should be based on the technical and legal (technological) method of legal regulation; it is important at the level of the basic federal law to consolidate the provisions on the objects of digital

relations, the subjects of such relations and their rights and obligations; the system must be ready for the implementation of international legal norms, including the norms of "soft" law; cross-sectoral institutions should be developed, based on regulation both with the help of information and legal norms and other sectoral ones.

The active process of transformation of modern society, under the influence of the introduction of the latest digital technologies, has a serious impact on the transformation of law [10]. Before talking about the transformation of law, it is necessary to find out what should be understood by transformation as a whole. Traditionally, under it is considered the transformation, transformation, change in the form, form, essential properties of something. Transformation is often assessed as a deep, cardinal change in properties, the formation of new characteristics of the transformed object. Naturally, such a change is determined by a number of factors and conditions on which the direction, features of the transformation, its depth and scale depend. Transformation can be directed both at the formal side of a particular object, process, and at its content, and a complex transformation is also possible. It can be associated both with a change in all key parameters, characteristics of the subject of influence, so it can be associated with a certain characteristic, but its change is total, affecting the new vision of the subject of transformation. The transformation model is most often programmable and presupposes a methodologically verified chain of actions carried out by the system within which the transformation takes place. The lack of a clear, balanced, methodologically sound approach to this process leads to the creation of a significant number of barriers that impede the implementation of transformation.

Digital transformation of law meets all the specified characteristics of transformation in general. Since the process of digital transformation of law has been going on for several years, it is possible to summarize certain results and highlight several emerging patterns of this process.

Firstly, the regularity of accounting for digitalization in determining the subject of relations subject to legal impact was clearly manifested. Sometimes the desire of the state in this direction is very categorically and unilaterally aimed at the need to ensure regulatory regulation of a number of digitalization processes in one area or another.

Unfortunately, there is no accounting and analysis of alternative mechanisms of social and technical impact on these relations. And this is another regularity that clearly manifests itself in the transformation of law. Despite the declared need for a comprehensive accounting of various regulators, at the state level there is no comprehensive work on the development of roadmaps, plans, development strategies for the use of other regulators of relations in the use of digital technologies in addition to the regulatory legal one. Thus, the mechanism of technical regulation and its integration with the mechanism of legal regulation in the process of regulating the use of digital technologies is practically not taken into account. The exception is the field of artificial intelligence regulation. The National Strategy for the Development of Artificial Intelligence in the Russian Federation specifically provides for the need

to take into account the mechanisms of ethical regulation when using artificial intelligence [11]. However, in this case, unfortunately, there are still no proposals for the implementation of the task set by the President of the Russian Federation.

Secondly, modern legal regulation is notable for the haphazard and contradictory nature of the norms being developed, and the low level of legal technique. The construction of normative material is carried out without taking into account the main provisions of the theory of state and law, legal axioms, basic information legislation, and sometimes key general legal and sectoral principles of law. The formation of many legal categories is carried out without taking into account the rules and mechanisms laid down by science, concepts are often formulated by "adjusting" them to the relations that need to be regulated. The vectors of development of technical regulation at the international and national levels are also actively discussed today. The state system of technical regulation, being a component of the economic and legal system of Russia, is undergoing a transformation under the influence of digital technologies and the blurring of the boundaries between physical, biological, and digital. At the same time, the development of technical regulation is determined by the needs of protecting the rights, freedoms, and legitimate interests of citizens and organizations in the information sphere, ensuring cybersecurity, protecting the rights to the results of intellectual activity, and creating conditions for the development and promotion of end-to-end technologies and innovations and requires a balance between the interests of the state and business in strengthening the economy and the interests of citizens in relation to the safety of products, works, and services.

The purpose of technical regulation is the competitiveness of Russian goods, works and services at the national, regional and global levels. At the same time, basic protective mechanisms are being created in Russia today, aimed at protecting the economic interests of Russia, domestic manufacturers and consumers of technical regulation objects while promoting highly effective advanced digital technological solutions. The growing scale of digital technologies contributes to the development of technical regulation and cooperation at the international and supranational level, including interaction within the WTO and the EAEU. At the same time, in many issues there are no uniform universally recognized international documents of technical regulation. At the same time, success in interstate competition depends on the available technological potential of the country, and the dynamics of regional interstate associations with the existing digital inequality of states makes it possible to remove interstate economic barriers and intensify interstate relations by expanding sales markets, reducing costs, mastering and promoting new technological solutions.

In the interests of Russia's national security, the transition to a new level of technological development is vitally important. On this path, it is strategically important to develop a system of scientific, design and scientific-technological organizations and technical regulation, the

imperfection of which can become a serious obstacle on the path of innovation-oriented economic activity. In this regard, in conditions when technologically complex digital solutions and devices presuppose trust on the part of their users, the state is pursuing a legal policy aimed at protecting national interests and creating conditions for introducing the latest advances in science and technology into production, as well as developing state support measures of innovative entrepreneurship.

## 5. CONCLUSIONS

Today, there are several models of legal regulation of digital relations in the digital economy, built on various mechanisms of their regulation:

1. A model that considers as a priority the mechanism of legal regulation, which does not allow direct use of other mechanisms, with the exception of technical regulation. Within the framework of this model, self-regulation, co-regulation of digital technologies is not allowed, ethical regulators are divorced from legal ones.
2. A model based on the predominant use of the legal regulation mechanism, which allows the use of mechanisms of other regulators, including actively using technical regulation of the creation and use of digital technologies. The latter is most often the basis for extrapolating technical norms into legal ones based on the technical and legal (technological) method of regulation. The connection with technical regulation is due to the active creation and use of digital technologies in all spheres of public life. Interaction also occurs through the fact that the law directly refers to technical norms in the process of regulating certain relations, the limits of borrowing and coexistence in a common regulatory mechanism are developed. Within the framework of this model, self-regulation, co-regulation of digital technologies is allowed formally, but there are obstacles to its implementation.
3. A model based on the delegation of a part of its functions by the state to regulate digital technologies to professional communities in this area. Within the framework of such models, the state can, at the level of strategic planning, determine priority areas in the field of digital technologies, adopt general norms on the support of use and on restrictions in the field of digital technologies. At the same time, ethical regulators have a direct impact, since the professional community actively develops codes of ethical conduct and monitors their implementation. Technical regulation also actively interacts with legal regulation, is the basis for the formation of many norms of professional communities in the process of self-regulation and regulation [6].

Thus, in almost all models, we see an increase in the role of technical regulation of digital relations. In order to increase the efficiency of technological innovations and technical regulation of the digital sphere, it is necessary to further develop the system of accreditation, licensing and certification in Russia.

There is a need for legislative regulation of relations in the field of end-to-end digital technologies, including the priority regulation of big data, blockchain and artificial intelligence: defining these phenomena, setting the boundaries of data processing and solving other issues. At the same time, it is necessary to protect the data collected by digital devices and solutions and comply with the privacy policy, including in the process of identification and cross-border transfer. The use of the Internet of Things and artificial intelligence is driving the growth of security threats and generating new digital risks.

There are three main vectors for the development of technical regulation: a) "stimulating" - stimulating the development of the industry through strategic planning; b) "regulatory" - direct regulation of public relations arising in connection with the use of digital technologies by laws and by-laws; c) "mixed" - a hybrid model, is a combination of the first two models. Leading states in the development of IT systems form their own reference models in the industry, including the reference architecture of the industrial Internet of things and the reference standardization model, as well as implement the corresponding government standardization programs. In Russia, there is a discussion of the editions of standards in the field of digital technologies, including standards in the field of the Internet of things, smart cities and smart manufacturing. At the same time, standardization documents in this area should be aimed at public-private partnership and harmonization with foreign suppliers and developers.

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