



# The Platform Economy

## Designing a Supranational Legal Framework

Edited by  
**Maxim I. Inozemtsev**  
**Elina L. Sidorenko**  
**Zarina I. Khisamova**

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## PREFACE

Digital ecosystems formed on the basis of digital platforms are significantly transforming modern reality. Today it is difficult to imagine life without LinkedIn, Facebook, or Amazon. The total income generated by them is estimated at trillions of dollars. Digital platforms are the main driving force of the digital economy. The impact and growth of digital platforms on social and economic processes today is difficult to overestimate. The pandemic has further deepened their influence on society, as almost all social communication and economic activity has moved to online format on digital platforms. The growth of the share of digital platforms in various segments of the economy was so rapid that regulators around the world have not been ready for such large-scale transformations. All this has caused a number of crisis phenomena when IT giants have grown into an independent branch of “power”, which has direct access to the personal and financial data of millions of citizens, and moreover, have the opportunity to directly influence them.

This monograph is a unique publication in which, for the first time, a large-scale and sufficiently deep team of experts and scholars from various countries of the world studied in detail the multidimensional phenomenon of the “platform economy” and the measures taken by states to regulate these processes.

The monograph assesses the state of Russian and foreign legislation on the regulation of various public relations with the participation of platforms from the standpoint of comparative jurisprudence.

Having analyzed in detail in the first part the concept of digital platforms, their typology, the status of the subjects of the legal relations under consideration, and the structure of the platform economy, the authors in the second part disclose the conceptual and practical issues of legal regulation of individual platforms. At the same time, the research is based on a functional approach. The authors in separate chapters examine in depth the legal regulation of payment and settlement, information and integration platforms, as well as investment, innovation, training, and social and media platforms. It is noteworthy that, relying on a broad foundation of available scientific research, analytical reports, court materials, and the media, the authors not only allow the reader to gain a deep understanding of the regulatory mechanisms used but also formulated specific proposals for their improvement. Undoubtedly, this material will be useful for prospective law-making processes.

Having revealed in detail the main aspects of regulation, the authors, within the framework of the third part, formulated specific measures to address the main and most sensitive problem in the regulation of digital platforms—the problem of digital monopolies. The authors formulated proposals for improving legislation both in individual countries and at the global level: in particular, the legal regulation of data exchange as a service for a service when shared, proposals for improving antimonopoly legislation, stimulating healthy competition, and improving certain aspects of industry regulation.

In the fourth part, attention is focused on resolving the problem of cyber threats associated with digital platforms. Having investigated the most common types of cyber threats on digital platforms, such as scams and ways of leveling the harm caused by them, the authors turned to the analysis of legal regulation measures to limit the expanding data collection by digital platforms, the use of new authentication technologies, and the use of digital technologies such as artificial intelligence for illegal purposes.

The book can be recommended to a wide range of readers interested in the problems of the development of digital platforms and the developing branch of law and science—the law of digital platforms. The uniqueness of this study is that it contains an analysis of regulations, strategies, and long-term plans for the development of digital platforms around the world, law enforcement practice, scientific research, publications of mass media, and Internet spaces from various countries of the world. The team of authors—consisting of scholars from both countries with advanced digital

economies and experts from developing countries—provides this monograph with the status of a deep, serious, and comprehensive international study on the legal regulation of the platform economy.

Moscow, Russia  
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Krasnodar, Russia

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# The Platform Economy



# The Rise of Digital Platforms and Their Legal Regulation in ESG Perspective

*Sergey Yu. Kashkin*

## INTRODUCTION

The world is changing extremely rapidly under the influence of the latest technology (Kashkin & Altokhov, 2020). Today, digitalization clearly embodies many modern values and vectors for the development of economic and social processes in societies and states. It covered the evolution of the modern market, the economy, and the life of every person, and confidently intrudes into the legal regulation of almost all spheres of social relations. Digitalization has a great impact on the formation of monopolistic associations and the relationship between them, it is part of the everyday life and legal relations between legal entities and individuals. However, the modern scientific and technological revolution,

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which significantly changes the architecture and functionality of platform law, which is rapidly developing before our eyes, invariably entails the evolution of legal concepts that improve the regulation of innovations appearing in connection with its change. The popularity and a kind of indispensability of artificial intelligence technologies in everyday life naturally require a legal assessment of the use of smart technologies and the creation of the necessary legal conditions for effective interaction of society with information technologies, network law, platform solutions, and ecosystems. In turn, it is platform and ecosystem law—as the backbone factors of the modern development of society—that will be able to provide legal regulation for the development of artificial intelligence through the prism of the priority of human rights and freedoms and at the same time save the natural environment. The paper analyzes the impact of the introduction of artificial intelligence technologies into modern digital platforms in terms of transforming the needs for legal regulation and the evolution of information, network, and platform law, and as important legal regulators leading to the development of digital ecosystems for various purposes. All this gives grounds to put forward the concept of starting the process of forming a new direction in law—the law of ecosystems. Ecosystems and legal mechanisms for their regulation may become important components of the development of the world in the very near future. They, together with information networks, platforms, and ecosystems, regulated by relevant, interacting areas of law, can become the most effective elements of the sustainable development law that is emerging today.

## METHODOLOGY

The task of using the legal regulation of the latest technologies by platform and ecosystem law to solve the problems of sustainable development requires a search for unprecedented large-scale organizational, managerial, social, economic, political, environmental, and legal mechanisms capable of solving them in a systematic and comprehensive way. It is in this direction that platform and ecosystem law that regulates them can be successfully used. However, for this, it is necessary to select and develop appropriate innovative methodological approaches (Kashkin & Altokhov, 2020). These approaches, due to the breadth, multi-objectivity, and interdisciplinarity of the tasks set, require the combination and system integration of methods used primarily in economics, technology, and law.

Thus, from the economy, a historical analysis of economic phenomena, the construction of economic hypotheses, economic modeling, and forecasting were used. Technical methods of management, environmental protection, and security turned out to be most useful. In the field of law, the application of the methodology of integration law, a new method of comparative integration law applied in the context of comparative platform and ecosystem law, proved to be particularly productive. Very important for the author was an attempt to analyze the functioning of economic platforms and ecosystem models through the prism of their compliance with the laws of nature and logic. The main detail in the approach to the study of the integration of economics, technology, and law is the observance of the principle of the priority of human rights and freedoms, as the defining goal of the development of modern platforms and ecosystems arising from them.

## RESULTS

The concept of sustainable development in its modern understanding is the first attempt of mankind, based on the solidarity of people and states, and the integration of the latest technologies, economics, and legal regulation, to turn to the instinct of self-preservation not only of an individual, but of the entire human race.

In order to effectively regulate the whole variety of interrelated social, managerial, and environmental aspects of public life using legal instruments, concentrated in a broad modern approach to the concept of sustainable development, it is necessary to find the basic foothold to which all this innovative legal regulation should be applied.

This point is the true basis of society, giving rise to diverse interconnected social relations regulated by law. First of all, it is a person, their individuality, and all the variety of their interests. But this person, even in order to simply exist and enjoy their inalienable rights—above all, the right to life—must not thoughtlessly and egoistically dominate nature (as it was during the long centuries of the development of civilization), but must find peace and harmony with it.

That is why the concept of sustainable development acquires a new, special philosophical meaning today. Therefore, it is through the prism of such a human-centric yet nature-oriented integrated approach that it is necessary to look at all the diversity of the constituent elements of the ESG concept. The study is devoted to the development of law as a result

of the modern technological revolution of an unprecedented type, which embodied the change in human potential and its management, the latest digital technologies, platform and ecosystem economic models (Fundamentals of Platform and Ecosystem Law), the digital economy (Bukht, Rumana; Heeks, Richard), and digital law (Digital Law), which governs the resulting new social relations.

The whole complex of tasks facing the researcher of this issue is closest to the ESG concept that has been formed over the past 2–3 decades and has become the most relevant for the whole world today. It arose and continues to develop simultaneously in the spheres of economics, ecology, technology, and law, affecting almost all related spheres of life, both at the national level of states, and at the supranational and international levels.

This concept, recognized by the international community, has formulated about 20 basic goals of sustainable development (Resolution adopted by the General Assembly on September 25, 2015, N70/1 “Transforming our World: The 2030 Agenda for Sustainable Development”) covering different spheres—from poverty eradication to quality medicine, education, interaction with nature and climate, a healthy lifestyle, etc (UN, 2015).

Such global tasks require a search for unprecedented large-scale organizational, managerial, social, economic, political, environmental, and legal mechanisms capable of systematically and comprehensively solving them. It is in this direction that platforms and ecosystems, and the platform and ecosystem law that regulates them, can be most successfully used (Kashkin et al., 2022a, 2022b).

Platform law emerged and evolved in the following manner. The first of the group of sciences brought to life by new technologies at the end of the twentieth century in Russia and in the world as a whole was recognized as the legal science of information law. Further, the process of the “digitalization of law” proceeded at an accelerated pace (Blazhev & Egorova, 2020: 8–9).

Based on the requirements of the modern economy, three concepts—artificial intelligence, digital technologies, and a system-based approach—have become the three pillars on which the latest trends in the development of modern economics and law are based. It is carried out today on the basis of promising technologies (“emerging technologies”), where the economy is the driver, the digital technologies are the instruments, and the law is the regulator of this drive.

Sharply changing living conditions of people made it necessary to modernize the current law in accordance with the new social relations that are formed in the networks. This was demanded most of all by the interests of economic development and new information and communication means, such as the Internet, information and communication technologies, and cellular networks. Thus, network law (Mazhorina, 2020) was born.

Professor Goloskokov defined network law as “the doctrine of networks, which is a system of norms that regulate public relations in electronic networks of various types and/or with the help of electronic networks, securing the legal content of the construction and functioning of the network” (2011). Network law ensures the effective integration of law with electronic networks, due to which speed is achieved, including in real time, accuracy, the possibility of direct and feedback legal communication, and legal certainty of the decisions made. It makes it possible to ensure the automation of information and communication technologies within the strict framework of the law (Goloskokov, 2006).

Thus, it can be observed how information law, digital technologies, and the system-based approach contributed to the emergence and development of modern network law naturally and in accordance with the objective development of scientific and technological progress, and above all economics.

The evolution of information law as a new legal institution and the emergence with its participation on the basis of digital technologies of the network law quite logically led society to a new stage—the formation of another new direction in modern law—platform law.<sup>1</sup> Four main factors have catalyzed the rapid success of this trend:

1. The emergence of a variety of platform economic models that have gained great importance in the global economy;
2. Technological features of digital platforms, which have become one of the triggers of the current stage of the technological revolution;

<sup>1</sup> Most recently, the first articles on this topic have appeared in foreign scientific journals, and they contain only references rather than comprehensive legal analysis of this phenomenon, more often concentrated on economic than on legal topics (Kenney & Zysman, 2016: 61–65; Kotyal & Grinvald, 2017; Label, 2016: 89). The latest publication in this direction of scientific research is “Fundamentals of Platform and Ecosystem Law” (Kashkin et al., 2022a, 2022b).

3. Their inextricable link with the explosive development of artificial intelligence and digital networks; and
4. Most importantly, the synergetic integration of the three elements into the organic whole that made legal regulation necessary.

Networks—an important characteristic of which is the consistency embodied in their structures—entered platform architecture, making the platform structure even more ramified, complex, and digitized, and at the same time, due to artificial intelligence, more large-scale, flexible, and manageable. This could not but affect the emergence of qualitatively new features of the law formed to serve platforms.

The integration of four basic components that led to synergy (economy, system-based approach, the latest digital technologies, AI) required the development of the legal regulation of platform entities.

At the same time, platform law seeks to break out of the framework of the national legal space, which has become narrow for it, into the vastness of integration associations, acquiring international and global scales. It is ready to apply and borrow comprehensively, effectively integrate into itself, and use all the valuable qualities and legal achievements of its predecessors. These are traditional legal instruments adapted to modern conditions, elements of information law, and effective properties of network law.

Thus, in the basic understanding, at the initial stage of its formation, the digital platform was more a tool of economic and digital interaction than social interaction. Moreover, if at first it was more involved in the online production and sale of digital software products, then gradually the platforms are moving to the offline business associated with more and more diverse products, services, and the search for fundamentally new promising areas of production—“the next new things” (the following generations of innovative products) (Kuprevich, 2018).

The most striking examples of modern platform corporations, which to a large extent determine the fate of the world today, are GAFAM: Google, Amazon, Facebook, Apple, and Microsoft. Here, in order for them to dominate around the world or to direct their activities to the service of the people and progress, platform law is necessary.

Platform law is a set of legal norms that govern public relations related to the operation of (digital) platforms. These are primarily platform solutions and cross-platform interaction. The legal platform is a basic element of the (still emerging) new direction in the development of law. It



provides the integration of systems of innovative digital technologies and artificial intelligence, based on the latest achievements of interdisciplinary scientific knowledge, systematically applied in practice.

In turn, on the basis of legal platforms, platform decisions are made and implemented in ambitious activities in the most important areas of the life of society. Such decisions can function at the level of regions, states, integration associations, and even on a global scale. They no longer fit into the tight framework of the constitution, national law, and traditional sovereignty, which are forced to make concessions.

The variety of legal platforms and platform solutions based on them, as a result of legal practice, is filled with legislation and by-laws, as well as judicial practice and precedents, and ultimately they are combined into a complex generalizing concept of platform law.

The vertical component of platform law (its emerging public law component), based on generally binding legislative acts, is designed to ensure, if possible, the harmonization or unification, unity, and subordination of the elements or systems that make up the platform in their functioning.

The horizontal component (private law component) is intended to serve to expand the legal platform space itself and to streamline and ensure (if possible) harmonization, homogeneity, and interaction of the legal and other elements that make up the platform. This component of platform law relies more on soft, recommendatory law, built on business customs, traditions, the search for common interests of participants, and ways of their mutual satisfaction. There is a certain similarity with the integration law and the legal mechanisms used in it (Kashkin, 2017).

On the basis of various platforms, complex systems of platforms are formed. They can be called super-platforms, acquiring a global influence, quite comparable to very large states. They are “new cores of business” that combine technical, technological, digital, information, economic, and legal platforms. They naturally integrate into a single, large-scale, and qualitatively more complex system.

At the same time, they cover very wide segments of the regional, integration, and sometimes global market. The question arises of the understanding by economists and lawyers of the new phenomenon of multilateral platform markets and their impact on the sovereignty of states and their law.

Moreover, they are being reborn into a fundamentally new integrated legal, economic, and political phenomenon—ecosystems. In 2002, the

general concept of digital ecosystems was formulated by a group of European scientists who studied digital business ecosystems (Abramova et al., 2021). This also applies to integration organizations and their supranational legal regulation. They, at the same time, are already practically new forms of digital monopoly or oligopoly (OECD, 2019), which also require an innovative legal understanding and regulation at the national, integration, and international levels.

When platforms develop into an ecosystem, the boundaries between them are very arbitrary, since they operate on the basis of similar principles. In this case, an interesting interaction arises: ecosystems are created on the basis of platforms and function through platforms, exploiting their capabilities to mutual benefit (albeit obviously greater for themselves).

The quality of consistency characteristics of platforms in the “ideal ecosystem” inevitably rises it to a more advanced network level—the level of distributed networks (providing a growing scale of ecosystem functioning)—and begins to interact more closely with a fundamentally new fourth-generation hybrid system of individual artificial intelligence, which is supposed to be able to combine a living human brain with a computer (Efimova, 2020: 49–50). It is designed to provide a new quality of the ecosystem. The functioning of the ecosystem—as can be seen from the definition—is also impossible without a systematic comprehensive introduction of promising digital technologies (“emerging digital technologies”).

We believe that the level of applied networks, artificial intelligence, and promising digital technologies is the main characteristic that makes it possible to draw a line between the platform and the ecosystem.

Thus, the digital ecosystem is a complex multilateral and multifunctional network system of digital platforms that meets the following main criteria: reliance on a new level of application of artificial intelligence; the availability of a comprehensive information technology infrastructure that ensures the functioning of a single information environment; the possibility of analytical use of big data; and openness for partners and users, based on the principle of win–win (mutual benefit) and a high degree of joint inclusion of ecosystem elements into each other (Klimov et al., 2019). Being distributed, it is an adaptive, open sociotechnical system with the properties of self-learning, self-organization, scalability, and sustainability.

Professor Waipan gives a capacious brief definition: “Based on the generalization of various points of view and legislation, it can be

concluded that for the purposes of legal regulation, it is advisable to define the digital ecosystem as a community of economic entities, services and connections between them, functioning in modern digital conditions” (Abramova et al., 2021).

The ecosystem, considered from the point of view of its positive capabilities, is a kind of single system of 4 “**ecos**”:

1. In relation to a person, humanity, and the humanistic ideology embedded in it—it must be **ecologically** (environmentally) friendly; i.e., it should be convenient and serve a person’s interests, being human-friendly;
2. At the same time, it must preserve the natural **ecosystem**;
3. According to the result to which the ecosystem should strive (saving money and resources for humans and humanity), it should **economize**; and
4. In terms of sphere of activity, it addresses **economics**, which is working for the well-being of the people.

Within the framework of this section, only the main principles of **ecosystem law** (and at the same time **platform**, due to their proximity) are relevant to be listed, reflecting the essence of this law. Among them, it seems necessary to single out as paramount strategic principles:

1. The principle of solidary subordination of the activity of the ecosystem to the common good and recognition of the priority of human interests, a person’s rights and freedoms, with the obligatory harmonious preservation of the surrounding natural ecosystem. The remaining functional, managerial, and organizational principles are an interconnected systemic and tactical embodiment of this strategic fundamental principle;
2. The principles of consistency and integration, as well as the network principle of functioning, are borrowed from network and integration law;
3. An ecosystem is impossible without relying on the principle of using an even higher level of artificial intelligence than in the platform;
4. The principle of taking into account the needs of environmental conservation and resource management is also an integral environmental requirement for the survival of civilization;

5. The principle of the formation and use of “good governance” mechanisms (Addink, 2015b; Cuculoska, 2014), borrowed from EU Börzel et al. (2008) the law of EU member countries Addink (2015a), is just as necessary today; and
6. The principle of digital online organization of management and control of the system in the conditions of unity and security of the integrated information environment is one of the foundations of the digital platform, ecosystem, digital market, and the entire modern digital economy Heeks and Bukht (2017).

These principles can be considered as the main principles of the legal regulation of activities, organization, and management of platforms and ecosystems. Since they directly relate to ecology, social issues, and governance, which are considered as 3 pillars of the ESG agenda, designed to ensure the sustainable development of states and the planet as a whole, this group of principles could be conditionally called the *comprehensive structural and functional principle of ensuring the unity of elements of sustainable development in the activities of platforms and ecosystems aimed at its implementation*.

Thus, it can be seen that the ecosystem, as an economic model for the implementation of the ESG concept, is quite compatible in nature and even in the evolution of its development, both with ecology and with management. It is very harmoniously combined with the modern understanding of sustainable development, and can be a very convenient large-scale instrument of legal regulation of various areas of sustainable development.

It can therefore also be seen that the ecosystem—as an economic model for the implementation of the ESG concept—is quite compatible in nature and even with the evolution of its development, both with ecology and with management. It is very harmoniously combined with the modern understanding of sustainable development and can be a very convenient large-scale instrument of legal regulation of various areas of sustainable development. Platforms that have a similar economic and legal nature, but being somewhat smaller in scale, may also be used accordingly for systemic and integrated legal regulation of various aspects of sustainable development.

At the same time, the dialectic of the development of our imperfect world today requires taking into account not only the bright goals and opportunities for the use of the concept of sustainable development that is

favorable for humans and nature, but also its reverse side—the possibility of abusing the ESG concept tools.

It is the platform and ecosystem law—with the moral and ethical use of it and necessarily in the interests of humanity and the environment—that can comprehensively and systematically find a humane legal framework for the application of the latest digital technologies, artificial intelligence, networks, genomic research, and digital economy.

If the platforms in their nature and their impact on the economic, cultural, legal, and political development of the modern world are very similar to integration (Kashkin, 2017), then ecosystems that include a whole range of platforms are similar in scale to the integration of integrations. Indeed, in their positive nature, platform and ecosystem law, sustainable development, and integration have the opportunity to serve a common noble goal, since “in the legal sense, ‘integration’ is a creation of optimal mechanisms and algorithms for the legal regulation of social relations aimed at achieving the improvement and self-development of society in its quest for a more holistic positive civilizational development” (Kashkin, 2014).

The emergence of platform and ecosystem law, together with the integration and integration of integrations, are the most ambitious and effective legal instruments of globalization and, to a certain extent, they can lead to fundamental changes and the harmonization of the legal development of the modern world in the direction of sustainable development.

## DISCUSSION

The starting point of numerous discussions on issues related to platform and ecosystem law is their extreme importance and the growing regional and global influence on almost all aspects of life, as well as the fact that this area of scientific (and especially legal) research, has appeared relatively recently and thus the terminology and even many basic provisions are not yet clearly formulated. Moreover, the legal practice necessary for full-fledged discussions is not so rich in platform law, and is very poor in ecosystem law, which develops rather at the conceptual level.

At the same time, scientific schools of platform and ecosystem law are formed more within the framework of highly developed states and the EU. This can lead to working out of interpretations and approaches to many general provisions related to the phenomena under consideration

that are initially more beneficial for states of this particular level of development. However, the problems are of a global nature, and their solution is extremely important for each state. The same is true, most notably in the evolution of the sustainable development law that is emerging right now, which is closely linked to the latest technologies, platform law, and ecosystem law (Kashkin et al., 2022a, 2022b).

One of the main issues regarding platform law is understanding the approach to the platform and its activities. In relation to this problem, there are 3 main points of view.

1. In the narrow sense, it is a purely digital platform (Kuprevich, 2018), with which, in fact, it began and which is already quite clearly fixed in the legislation adopted today in different countries of the world and in the EU (Fundamentals). However, law, naturally, traditionally lags behind the rapidly changing life (Blazheev & Egorova, 2020).
2. While platform law continues to develop at the official legislative level with a slowdown, in real life, hybridization processes take place in practice in the activities of platforms, when the previously “classical” purely digital platform corporation (first point of view) begins to combine both online and offline processes, producing digital programs, as before, and a variety of perspective products and services, in the most innovative spheres of life. Thus, they capture very wide segments of the regional—and sometimes global—market, moving toward digital monopoly or oligopoly.
3. However, law, at the same time, must be prognostic, regulating not only the situation today, but also looking into the future. Therefore, the search for a solution to the contradiction between the past, present, and future of platform law—between what is already enshrined at the level of legislation and what this law should logically and naturally become—can be found in the authors’ book *Fundamentals of Platform and Ecosystem Law* (Kashkin et al., 2022a) and in the monograph on sustainable development (Kashkin et al., 2022b).

The task of using the legal regulation of the latest technologies exploiting the global multi-regulatory nature of platform and ecosystem law to solve the global problems of sustainable development is:

- achieving the solidary survival of humanity through international legal regulation, using platform and ecosystem law in relation to the basic components of sustainable development;
- taking into account the priority of human rights while maintaining and ensuring harmony with the natural environment; and
- the connection in this legislation of high human moral and ethical requirements with the logic and laws of the development of nature, so that its humanity is nature-conforming.

The very formation of this law could proceed logically: from custom to soft law, then to semi-hard law, and then to a standard law, as was often the case in integration law.

## CONCLUSIONS

The emergence of platform and ecosystem law has demonstrated that they, together with the integration and integration of integrations, are the largest legal instruments of globalization. Given their ability to comprehensively and systematically apply and regulate the latest digital technologies, they can lead to fundamental changes and the harmonization of the legal development of the modern world.

Platform and ecosystem law, together with integration law, having significant common characteristics, in terms of their scope and the possibility of using the latest digital technologies, are the most effective legal mechanisms for the comprehensive provision of sustainable development. At the same time, their inherent qualities and scales make it possible to have a decisive impact on ensuring the effective legal regulation of artificial intelligence and other current digital technologies in the interests of humanity.

The development of modern digital technologies has moved from information law to network law. With the addition of artificial intelligence to information and network law, and thanks to the growth of complexity of the networks used, platform law appears. Platforms unite and form their own distributed network and, by increasing the level of artificial intelligence, create an intermediate link in the form of a sub-ecosystem, which, by improving networks and raising artificial intelligence to a new level, will be re-formed into a full-fledged ecosystem. The quality level of the applied networks, artificial intelligence, and promising digital technologies is the main characteristic that makes it possible to draw a

line between the network, platform, and ecosystem. At the same time, networks and platforms continue to function and develop quite effectively within a broader framework of ecosystem, but under the control of its hierarchical structures. Meanwhile, ecosystems form their own dominant ecosystem law. This is a logical chain of the process of how digital technologies influence the evolution of modern law.

An era has come when a person, even in order to simply exist and enjoy their inalienable rights (above all, the right to life), must not thoughtlessly egoistically dominate nature (as it was during the long centuries of the development of civilization), but find peace and harmony with it. However, a person lives in a society, and in it the principle of solidarity (widely used in the European Union) is becoming increasingly important. Therefore, the survival of mankind is possible only in conditions of sustainable development.

The modern technological revolution, which is changing the face of the world, requires a serious modernization of legal norms that take into account the global multi-regulatory nature of modern platform and ecosystem law in order to ensure the harmony of the natural ecosystem surrounding mankind, the objective laws of its development, and the nature of the person themselves. Law must become more and more corresponding to nature.

The synergetic interaction of the three interrelated central elements of modern life—technology, economics, and law—is possible through the formation of integrated information technology platforms, and ecosystems designed to guarantee civilizational balancing and sustainable development of human society.

## REFERENCES

- Abramova, E. N., Alekseenko, A. P., & Belova, S. N. (2021). In V. A. Vaipan & M. A. Egorova (Eds.), *Problems of Creating a Digital Ecosystem: Legal and Economic Aspects* [monograph] (p. 15). Yustitsinform.
- Addink, G. H. (2015a). *Good governance in EU member states* (pp. 44–45). Utrecht University.
- Addink, G. H. (2015b). *What's Wrong with International Law?* Brill Nijhoff.
- Blazhev, V. V., & Egorova, M. A. (Eds.). (2020). *Digital law* (pp. 8–9). Prospekt.
- Börzel, T. A., Pamuk, Y., & Stahn, A. (2008). *Good Governance in the European Union*. (Working Paper on European Integration No. 7, pp. 11, 15–45).



- Cuculoska, I. (2014). The right to good administration of the EU: Definition, scope and content. *Justinianus Primus Law Review*, 5(2), 2–3.
- Efimova, S. A. (2020). Development of artificial intelligence. *Digital Science*, 6, 49–50.
- Goloskokov, L. V. (2006). In A. V. Malko (Ed.), *Theory of network law under scientific* (p. 191). Jurid. Center Press.
- Goloskokov, L. V. (2011). On the essence of network law. In A. P. Albov (Ed.), *Network law and finance: collection of articles* (p. 8). Academy of Budget and Treasury.
- Heeks, R., & Bukht, R. (2017). Defining, conceptualising and measuring the digital economy. *International Organisations Research Journal*, 13, 143–172. <https://doi.org/10.17323/1996-7845-2018-02-07>
- Kashkin, S. Y. (2014). Integration law is the most important component of legal globalistics. *International Legal Readings*, (14).
- Kashkin, S. Y. (2017). *Integration law*. Prospekt.
- Kashkin, S. Y., & Altoukhov, A. V. (2020). In search of the concept of legal regulation of artificial intelligence: Platform legal models. *Bulletin of the O.E. Kutafin*, 4(68), 33. <https://doi.org/10.17803/2311-5998.2020.68.4.026-040>
- Kashkin, S. Y., Chetverikov, A. O., & Altoukhov, A. V. (2022a). *Fundamentals of platform and ecosystem law*. Rusajns.
- Kashkin, S. Y., Pozhilova, N. A., & Chetverikov, A. O. (2022b). *European Law of Sustainable Development in Global Comparison: Basic Concepts, Sources, Projects [monograph]*. Rusajns.
- Kenney, M., & Zysman, J. (2016). The rise of the platform economy. *Issues in Science and Technology*, 32(3), 61–65.
- Klimov, A. A., Zarechkin, E. Y., & Kupriyanovsky, V. P. (2019). On the digital ecosystem of a modern university. *Modern Information Technologies and IT Education*, 4, 812. <https://cyberleninka.ru/article/n/o-tsifrovoy-ekosisteme-sovremennogo-universiteta>. Accessed 3 December 2021.
- Kotyal, S. K., & Grinvald, L. C. (2017). Platform law and the brand enterprise. *Berkeley Technology Law Journal*, 32, 1135–1182.
- Kuprevich, T. S. (2018). Digital platforms in the world economy: modern trends and development directions. *Economic Bulletin of the University*, 37–1. <https://cyberleninka.ru/article/n/tsifrovye-platformy-v-mirovoy-ekonomike-sovremennye-tendentsii-i-napravleniya-razvitiya>. Accessed 10 January 2022.
- Label, O. (2016). The law of the platform. *Minnesota Law Review*, 101, 89.
- Mazhorina, M. V. (2020). Cyberspace and methodology of international private law. *Law Journal of the Higher School of Economics*, 2, 230–253.

- OECD. (2019). *The digital economy, new business models and key feature. Addressing the Tax Challenges of the Digital Economy. OECD/G20 Base Erosion and Profit Shifting Project* (pp. 69–97). OECD Publishing.
- UN. (2015). *Resolution adopted by the General Assembly on September 25, 2015, No. 70/1 “Transforming our world: the 2030 Agenda for Sustainable Development”*. [https://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=R](https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=R). Accessed 3 January 2022.



# Factors of Development and Success of Digital Platforms

*Anna V. Shashkova and Alexey O. Solovtsov*

## INTRODUCTION

The basis of the modern industrial society is information, and the characteristics of the speed of its processing, transmission, and storage. The civilizational challenge of the twenty-first century is that digital transformation leads to qualitative changes in social phenomena and opens up new possibilities for social construction.

The widespread use of messengers, social networks, and electronic services forms the basis of the modern information space. The information space has become global, where opportunities are created for remote interaction without transaction costs and with greatly simplified logistics. The formation of the “information society” is closely connected with the introduction of innovative technologies that have reduced the time to deliver information to the audience, allowing users to be aware of all the events that occur at any given moment (Dobrovolskaya, 2014).

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From the point of view of the humanitarian approach, the information space is a space that synthesizes knowledge and information accumulated during the evolution of society. From the point of view of the technological approach, the information space is a system in which information is stored, transmitted, and processed, and the main objects of this space are information resources.

Combining the provisions of these two approaches, it can be concluded that the information space is a sphere of information flows, which are controlled and systematized by modern technical means.

Digitalization and digital platforms are, at the moment, the backbone of the information space in the economic sphere. Digitalization is one of the factors increasing the efficiency of public administration and improving the quality of public services. However, the introduction of technical innovations also requires rapid and high-quality mastery of digital technologies by all participants in the interaction. Therefore, its pace is somewhat slower in various branches of the social sphere than in business structures, although it is expected that the digitalization of social services and bringing them to the same standard regardless of the region should largely help eliminate the difference in the quality of social services provided.

Digitalization has most clearly touched the economic sphere of society, significantly affecting traditional economic institutions and forms of interaction. Innovative development, which includes digitalization in its variety of institutions and processes, marks the transition to a new type of society (Shashkova & Verlaine, 2020).

Having appeared relatively recently (about twenty years ago), the definition of “digital economy” is firmly in the scientific turnover. The digital economy in its most general presentation is a modern concept of economic space, where digital data act as a key factor of production, ensuring the effective interaction of all subjects of economic space. The concept of the digital economy integrates notions of the changes brought about by scientific and technological progress in the direction of information and communication technologies.

Analyzing scientific publications on the problems of digital economy, Zaitsev (2019) notes that the research field of digital economy is fragmented, the reason for this being the lack of a unified interpretation of the concepts, but this only stimulates the study of the impact of digital technology on a number of socio-economic processes. The digital economy is characterized by the concentration of financial transactions on digital

platforms, the role of innovation in business management is increasing significantly, and information is becoming a form of capital (Zaichenko & Smirnova, 2019).

The modern approach to management synthesizes the components of human (intellectual) capital, organizational procedures, and digital platforms, where intellectual capital constitutes both the source of improvement of digital platforms and its ecosystem (users), organizational structures denote the basic principles and mechanisms of platform functioning, and the digital platform becomes a place of interaction. The gradual specification of the concepts of the digital economy and the description of its institutions comes from the available approaches to the formation of digital platforms.

At present, the general public understands a digital platform as a platform for digital interaction in the field of business activities. However, such a broad interpretation of this concept leads to confusion about the meaning of the digitalization of the economy. For example, a platform is often referred to as a virtual trading platform, its users, software, hardware, and networking, a business model, and the firm that implements it. Sometimes, it is said that a programmer who develops an original small program at an enterprise is already engaged in digitalization, a student studying Excel in the Biology Department is already a trained specialist for the Digital Economy Program, or a scientist who has mastered the basics of working on the computer is also a ready-made specialist. Judging by the number of publications for 2018, the whole country is already working on the implementation of this program (Medennikov, 2019).

A digital platform is a universal interaction tool that simplifies the management process and aims to increase economic efficiency. At the moment, in the studies of Russian and foreign scientists, there is a description of the types of digital platforms, their essence, and the impact on the economy and management. At the same time, with the development of scientific and technological progress, digital platforms acquire new functionality, which is of research interest.

The subject of the study itself is quite broad, due to the fact that, having firmly entered the life of society, human life, and all spheres of relationships, digital platforms continue to develop intensively, adding new functionality and new possibilities of application. In this regard, the approaches to the classification of digital platforms do not look

unambiguous. The simplest basis is the scope of application and technical characteristics, but in the near future, these approaches will be supplemented, as will the definition of a digital platform.

## METHODOLOGY

The issues raised in this study were solved using general scientific methods of research—analysis, synthesis, induction, deduction, and analogy.

Application of the structural-logical approach makes it possible to detail and consider in terms of various aspects of the problem of digitalization and the formation of institutions of the digital economy, as well as approaches to the classification of types of digital platforms.

The analysis of individual approaches to defining the criteria for classifying digital platforms enables the study to form a relevant basis for classification.

To date, in studies on the problems of the digital economy there is a multidisciplinary component, where the use of the tools of several sciences can more fully assess the impact of digitalization processes on society.

## RESULTS

In his study, Gretchenko gives a classification of digital platforms used in international practice, depending on the scope of their application. Therefore, he allocated instrumental, infrastructural, and applied models of digital platforms (Gretchenko, 2020). The list of tasks they solve has a wide range of automation of information processing procedures, interaction of market participants, and conducting operations in a single information environment.

As an example of a digital platform, “Platon” is an instrumental digital platform with a limited number of participants receiving benefits. The instrumental digital platform is designed to form software application solutions. Examples are Java, Bitrix, Amazon Web Services, etc. Infrastructural digital platforms unite a segment of participants in the information space, in order to develop and implement solutions for automation. As an example of infrastructural digital platforms, there are the Russian Glonass and Gosuslugi. Applied digital platforms are based on the request to reduce transaction costs by creating a unified digital environment and changing the division of labor. Applied digital platforms are

widespread and include numerous services such as Yandex, Uber, Avito, Booking.com, and many others.

In their work, Styrin et al. (2019) are of the opinion that, with regard to the public administration system, platform thinking (according to the concept of lean government) involves the introduction of innovations that transform processes of interaction with citizens, based on a radical reduction in the costs of interaction. They presented a more extended classification of digital platforms, distinguishing by the criteria of functionality, applied technologies, and industries.

The implementation of the concept of the state as a platform, where conditions for network interaction of a large number of subjects, individuals, and legal entities are created in the digital space, is aimed at improving the system of public administration and increasing economic efficiency by minimizing costs. Russia has advanced very far in the G2C (Government to Citizen) segment, but has lagged far behind in the G2G (Government to Government) segment, where it is necessary to move forward: to form government services in platform form, creating seamless integration between both state (federal and regional) and municipal information systems as well as with business services (RANEPА, 2019).

The measures and restrictions to counter the spread of the new COVID-19 infection have significantly affected—and in some cases forced—the implementation of digital solutions. The number of those developing and integrating digital platforms nearly doubled in 2020 compared to 2019, 25% in 2019, and 28% in 2020, respectively (RANEPА, 2019).

Government digital platforms play a role, as does infrastructure that is used to develop other information and communication products, thereby conforming to notions of an instrumental digital platform. The architecture of state digital platforms is based on the fact that it combines several information and communication systems. Among the risks associated with the widespread dissemination and use of digital platforms in public services is the unpreparedness of the population, which does not have the proper level of digital literacy and competence.

In their study, Sorokina et al. (2019) conclude that young people under 25 feel most confident in the digital environment, while people over 45–50 have a significant decline in the competencies that determine the effective use of modern technologies, services, and tools of the digital economy.

In the strategy for the development of Russia's digital economy, regulatory and legal regulation, research and development, and education and human resources are presented as the main institutions of this process.

To be more specific, it should be noted that, in this context, education should be understood somewhat more broadly. It includes the improvement of information and communicative competence of citizens who are consumers of digital services, and not only the training of specialists who implement the integration of digital solutions. The legal framework is being adapted to the new economic conditions associated with the development of digital economy processes, where the most important problem is to ensure digital security (Verlaine et al., 2020).

As Inozemtsev notes, modern relations are hybrid, unfolding in both the digital and the objective physical reality. The digital space rather complements the physical, forming an "augmented reality" (Inozemtsev, 2021). Comparing public and private digital platforms, without taking into account their intended purpose, it is noted that the platforms used in business structures have a broader functionality, which is due to the competitive environment and a shorter time for testing and implementation.

Applied digital platforms are becoming widespread in the business environment. There has been a transition to e-commerce. The leaders in e-commerce are Germany and Great Britain (10.2% and 11.4%, respectively), as well as China (8.4%), the United States (6.8%), and Japan (6.2%) (Danilova & Sarayeva, 2019). In this regard, there are threats of other countries' dependence on the "leaders of digitalization". The possibility of disconnection from digital platforms, already firmly embedded in people's daily activities and lives, creates a demand for information security and the need to develop our own digital platforms.

The customer prefers innovation and high performance, which entails the formation of organizational values in the form of skills, progressive systems, and processes that create new products and services, thereby advancing to a leading position in the market (Baranovsky & Zaichenko, 2018). The main characteristic of digital platforms is the network effect, and the value of the ability to extract data for use. The fast-growing nature of digital platforms is evidenced by the explosive growth of their market capitalization from \$4.3 trillion to \$7.2 trillion between 2015 and 2017, with 7 "super-platform" companies accounting for about 2/3 of that value (Smirnov, 2020).



A number of digital platforms, such as Yandex and Tinkoff, acquire new functionality in the course of their improvement, which allows companies to explore new areas, ensuring that a large number of participants (clients, partners, employees) are included in business processes. It is noted that the directions of development of digital platforms relate to both public and private sectors, which is what they are trying to implement in Russia.

Digitalization is closely related to innovative development: to some extent it can be said that innovative development—despite the fact that it is a broader concept—is synonymous to the development of digital institutions, as without digitalization, innovative development is impossible to imagine.

## DISCUSSION

The development of the digital economy is associated with the Fourth Industrial Revolution, although this definition does not seem quite appropriate to the author, as it is not only about changing production relations, but affects all areas of society (Guterres, 2021). According to Gribanov (2019), the creation of industry digital platforms can significantly affect the growth of Russia's GDP, which should grow by about 2% annually with a potential increase in labor productivity by at least 10% per annum, accelerating operational cycles with changes in the system of labor division.

The definition of the directions of development of digital platforms indicates, on the one hand, their specification in relation to the industry and specific functionality (advertising, financial, etc.), and on the other hand, attempts to create consolidated digital platforms that can solve a wide range of problems in the interests of participants in economic interaction.

A study conducted by McKinsey states that due to the digitalization of the economy, the GDP of the Russian Federation may grow by 4.1–8.9 billion rubles by 2025. Currently, the share of the digital economy is 3.9% (Gribanov, 2019). When transactions are made through digital platforms, transaction costs for entrepreneurial structures are minimized. Business demand for digital platforms is determined by the criterion of the ability to obtain information in real time, as well as integration into

the administrative and managerial processes of the enterprise (Zaichenko et al., 2018). Global digital platforms have a fairly strong market position in Russian markets; they account for about 30% of the total digital platform market in Russia. However, in recent years, Russian digital platforms—among which Yandex and Mail Group stand out—have also demonstrated significant growth (Geliskhanov et al., 2018).

In terms of competition in the Russian market, its importance for the largest digital companies is noted, as the share of Internet users is regularly growing. As noted by Narolina et al. (2020), citing the results of secondary data, the monthly Internet audience in Russia is 84 million people; in the dynamics there is an increase in the share of the population using the Internet to buy goods, from 15.3% in 2013 to 29.1% in 2017; and the share of the population using the Internet to obtain public and municipal services has gone from 10.7% in 2013 to 42.3% in 2017. In terms of competition, certain Russian digital platforms can compete with foreign ones, which is seen as a factor of national security and protection of personal data of Russians. However, there is also some lag in the development and implementation of applied digital platforms focused on individual industries.

The success of digital platforms depends on the users who use the platform. Many companies take a technology-driven approach to building their digital platform, acquiring technology that they hope will achieve their goals of improving customer service as well as streamlining internal business processes. This approach, often, leads to failure. In reality, digital technologies do not create value on their own. Their value is in changing the way an organization operates, it is the new operating model that creates value (Orlova, 2021).

Considering the digital economy in terms of two basic approaches—as production focused on the creation and sale of electronic goods and services, and as a qualitatively new essence of the economic environment—digital technologies significantly change the activities of business structures. Digital platforms as the main tool of the digital economy are getting a new development not only in entrepreneurial structures, but also in government. In the example of countries with a high level of state paternalism—examples of which are the countries of the post-Soviet space—the initiative to introduce digital solutions comes from the state structures, which are the pioneers of these transformations.

Digital technologies are spreading widely even in the social sphere. In healthcare, the information infrastructure are Telemedicine Centers and

Medical Information and Analytical Centers, whose main activity is the processing and structuring of information, as well as its further formalization for the unified information system of healthcare of the Russian Federation (Korobkova, 2020).

The development of digital platforms characterizes the depth of digital penetration. With digital platforms, a number of important problems are looming. Digital platforms include services that characterize their functionality. Firstly, these are the so-called system services that provide the network structure of communication. Secondly, these are application services for solving specific tasks of processing, storing, and transmitting information in the network community of digital platform users. Thirdly, these are access services, through which users are able to access information sources. For example, in terms of land management, a number of steps are being taken, such as a geographic information system designed to simplify the recording and monitoring of the condition of land resources.

The digital platform acts as a technology that ensures the functioning of the system of interaction between the subjects of the economic space. In addition to classification into instrumental, infrastructure, and application, as well as into public and private depending on their purpose and scope of operation, it is also possible to divide them by specific operational function, where individual digital platforms imply marketing, advertising, financial, or other functions. It has been noted that credit and banking institutions have adapted most rapidly to digital platforms.

With the development of the investment market, it is digital platforms using robo-advice technology that have become the driving force for the involvement of more citizens in investment processes. The largest credit institutions in Russia, such as Sber, Alfa-Bank, Tinkoff, VTB, and others, have their robo-advisers. These services are convenient for beginner investors, who can greatly benefit from the help of an automated system to form and rebalance their securities portfolios.

Digital platforms are widespread in the service sector. As an example, digital platforms have become common in tourism and recreational resources. Geolocation tools make it possible to build an itinerary; the popular digital platform Booking.com aims to quickly and efficiently book tickets and hotel rooms. Blockchain technology is also a form of digitalization for tourism; this involves finding data on the purchase of tourism services in a single digital space, which can help each of the participants in the process of providing services for the implementation

of the tourist product to focus on real information about consumers and anticipate their needs, personalizing promotional offers (Cherevichko & Temyakova, 2019).

Thus, Kuprevich (2018), based on the understanding of the digital platform as a business model resting on high technology, gives a classification which includes innovative, transactional, integral, and investment platforms.

Concretizing, innovative digital platforms stand out as a large system of interaction between multiple developers interested in the reproduction of new digital platforms.

Transactional platforms are aimed at solving specific problems in the interaction between agents of the economic space. As noted above, one of the advantages of digital platforms in today's economy for entrepreneurial structures is the ability to reduce transaction costs. However, in addition to supporting the contacts and transactions themselves, a digital platform also plays the role of an innovative search engine. Integral platforms are more functional and have a wide range of features, combining features and tools inherent in both innovative and transactional platforms. Investment platforms are holdings of several digital companies.

Small and medium-sized businesses in post-Soviet states are not yet able to develop their own digital platforms, due to the fact that they are mostly involved in trade and services, with little affiliation to high-tech technologies. However, widespread among small and medium-sized businesses are already implemented digital platforms, which allow them to order and pay for goods and services remotely. The concept of the "digital ecosystem" is widespread in scientific discourse. In its simplest sense, a digital ecosystem refers to a community of economic actors involved in the processes of interaction on a digital platform.

Denisov et al. (2020) conclude that there are three types of digital ecosystem business models: in the first case, when a digital platform relies on user-generated content, examples of such digital platforms are social networks, which in today's realities also perform commercial functions, such as Facebook and Instagram; the second type of model is the AirBnB model, which is based on the sharing economy; the third model involves the involvement of users who are also participants in the creation of models. The convenience of a digital platform is one of the main factors for the success of a new business model in the context of digital business transformation. Many mistakes begin at this stage, when the value of

a product or service based on a digital platform is visible only to developers, and the complexity of creating and using the platform significantly exceeds the benefits (Zavyalov et al., 2019).

Priority is given to digital platforms that can implement the principle of flexibility in management (that is, have several algorithms depending on requests and possible scenarios, are able to independently search the information space for the necessary solution). The second important principle is the speed of decision-making, which is especially important for management. Along with the risks posed by the introduction of digital platforms, an increase in the speed and quality of services is also evident. Due to the lag in the digital economy of Russia and post-Soviet countries, there is support at the state level.

Once again emphasizing the complex nature of the digital economy, attention should go beyond the technological component. Therefore, the following actions are proposed as part of the development of digital platforms:

- creating information and educational services, in addition to hotline phones, chat rooms, and other common user support technologies, in order to increase information and communication literacy, which will implement short-term educational programs and provide counseling;
- training for the digital economy, which requires targeted training, coordinated with interested agents of the digital economy; and
- support for experimental design and research work, which remains the most important component.

It is worth noting the fact that the widespread use of digital platforms in the form of messengers and mobile applications has led to the fact that their development has become available to a fairly wide range of individuals.

Another important aspect was the digitalization of education. This applies not only to the introduction of digital technology in traditional institutions of educational activity. Digital platforms Geekbrains or Skillbox are successful in teaching new competencies that are in demand in the digital economy. In the future, this experience can also

be used in the environment of secondary vocational and higher professional education, thereby leading to the formation of new mechanisms for the functioning of the labor market.

This example clearly shows how there is a two-way process, with digital platforms being introduced into different spheres of social life as a response to existing needs and social demands, and, on the other hand, leading to changes in these social relations themselves. Developing the ideas of knowledge economy—which also includes (in addition to the usual components of labor, capital, land, and creative entrepreneurial ability) knowledge (which is a form of information)—begins to play a key role; it is noted that the competitive advantage is obtained by those organizations that know how to integrate this knowledge into their activities. With the development of information technology, knowledge has become more accessible to a wide range of users.

In tandem with digital transformation, the possibility of servicization—that is, the automation through electronic services of interaction procedures—is being considered.

Describing the state and prospects for improving digital platforms, a number of factors affecting this process are noted:

- the rapid development of computer and information technology;
- increased competition in this area due to the desire of various economic actors to develop and adapt the best examples of digital platforms to solve their problems; and
- significant growth in the amount of data that is processed, transmitted, and stored in the information space and in digital platforms.

## CONCLUSIONS

An approach that focuses on the integration of digital application platforms is emerging in entrepreneurial structures. This type is distinguished by its focus on economic activity. The main activity on applied digital platforms is the exchange of certain economic values in given markets, and the result of the transaction (exchange) of goods (services) between market participants. The main beneficiary in this case will be the end user, solving a business problem (Kulakova & Polyanin, 2020).

To summarize, it should be noted that applied digital platforms that meet industry and/or regional specifics remain the most preferable. At the

same time, instrumental and infrastructure platforms remain in demand in the field of public administration.

Without an unambiguous methodology for assessing the effectiveness of the digital economy, the basis for evaluation is compliance with the goals and objectives that have been set during the planning of its development.

On this basis, it must be recognized that the objectives of the development of digital platforms have been met, as they have become a ubiquitous tool for economic interaction. Approaches to classification are gradually becoming more complex, due to the emergence of new digital platforms with new functionality and new areas of application. At the same time, there are a number of risks associated with the use of digital platforms, alongside the digitalization of the economy as a whole.

These problems lie in the social plane. For example, some authors have noted the risks associated with job losses due to the automation of work processes through digital platforms. Social protection is one of the most important signs of solidarity in the age of workplace automation. Ethics dictate that people who are particularly vulnerable because of insecurity, flexibility, and the rapid pace in the labor market receive social and economic protection. The massive loss of existing gainful employment is likely to result in the loss of sources of income and funding to maintain a sustainable social welfare system (Goncharenko & Sybachin, 2019).

Digital platforms, in an attempt to attract more labor, often promise independence and flexibility in terms of workload, schedule, and location. However, by classifying workers as independent contractors, digital platforms absolve themselves of all legal and social responsibility to them (Savelyeva, 2020). Thus, the problem of digitalization is multidisciplinary, involving not only technological and economic aspects, but also social and ethical ones. Therefore, planning for digitalization must be done cautiously, taking into account all the risks involved.

In the business environment, preference is given to applied digital platforms, which by their functionality are more consistent with the goals and objectives of entrepreneurial structures. It is noted that the very definition of infrastructure and instrumental and applied digital platforms is rather limited, as it seems that not all the components of these concepts and their characteristics are reflected in the proposed interpretation. The development of the digital economy, technological advances, and the emergence of new digital tools will soon enable the formation of a more comprehensive classification.

The technological aspect of the development of digital platforms requires cyber-physical systems, which refers to the integration into one system of computing, control, and communication components. Their coordination occurs as a result of placing them in the framework of a single information and communication system, which is understood as a digital platform (Gorodetsky & Skobelev, 2019).

The type and functionality of the digital platform will depend on what tasks to manage and communicate; in addition, processing and storing information will be set by the developer, responding to consumer demands. That is why digital platforms are commonly referred to as the “new market power”—some types of interactions in the market are simply impossible to imagine without participation.

Society—both national societies and humanity as a whole—faces the difficult task of a worldview and applied perception of digital platforms that will combine aspects of both economic efficiency and security, as well as a range of social and ethical contradictions that may be associated with their use.

For state digital platforms in Russia, experts at the Higher School of Economics have identified four scenarios. The first involves the transformation of government information systems into a digital platform; in this case, a number of requirements must be met, including the architecture of the information system scaling, increasing its functionality, and integrating existing information technologies. The second scenario involves the creation of state digital platform ecosystems; the concept of digital platform ecosystem (disclosed above) implies infrastructure integration (the concept of digital platform ecosystem is closer in its content to the type of infrastructure platforms), which, in the long term, implies the realization of interactions between industry participants through the synthesis of several platforms. The third scenario also assumes an infrastructural component due to the integration into a single ecosystem of public and private digital platforms, where the state retains control functions. The fourth scenario involves state support for commercial digital platforms, which in the Russian experience, as well as in the experience of a number of post-Soviet states, is of little applicability (Styrin & Dmitrieva, 2021).

The platform approach is predominant in digitalization models at the present stage. Another important conclusion is the priority in the application of infrastructure types of platforms in public administration, and application platforms for the business environment.



The concept of an ecosystem of digital platforms is in demand in modern scientific discourse. It can be stated that it determines not only the content of a digital platform, but also its focus. As a result, the choice of a digital platform is determined by its users, how much it is perceived in terms of functionality, and its ease of use.

Of course, the social and economic benefits of digital technologies are also a subject of social and ethical debate: the need to overcome the “fear of the future”. In this regard, the framework documents that regulate the development of digitalization should be based on an analysis of existing risks, the elaboration of their elimination, or their minimization. While placing high expectations on digitalization as an integral part of the image of the future, it should be remembered that, considering the context of the competition of national economies, the advantages of advanced countries in the implementation of digital technology put other participants in this interaction in a dangerous, dependent position.

On this basis, it can be stated that the global scientific community is still quite far from an objective assessment of the results and the cumulative effect of digitalization.

## REFERENCES

- Baranovsky, V. Y., & Zaichenko, I. M. (2018). Formation of a strategic management map for an enterprise based on the concept of digital business transformation. *Scientific and Technical Bulletins of St. Petersburg State Pedagogical University. Economic Sciences*, 11(3), 185–193.
- Cherevichko, T. V., & Temyakova, T. V. (2019). Digitalization of tourism: Forms of manifestation. *Izv. Nov. ser. Ser. of Economics. Management. Law*, 19(1), 59–64. <https://doi.org/10.18500/1994-2540-2019-19-1-59-64>
- Danilova, N. F., & Sarayeva, I. V. (2019). Global digital space: Prospects and threats to the economic development of countries. *Izvestiya of Saratov University Economics Management Law*, 19(1), 65–73. <https://doi.org/10.18500/1994-2540-2019-19-1-65-73>
- Denisov, I. V., Polozhishnikova, M. A., Kuttybaeva, N. B., & Petrenko, E. S. (2020). Digital entrepreneurial ecosystems: Business platforms as a means of improving efficiency. *Problems of Innovation Economy*, 10(1), 45–56. <https://doi.org/10.18334/vinec.10.1.100662>
- Dobrovolskaya, I. A. (2014). The concept of “information space”: Different approaches to its study and peculiarities. *Bulletin of PFUR, Series Literary Studies. Journalism*, 4, 140–146.

- Geliskhanov, I. Z., Yudina, T. N., & Babkin, A. V. (2018). Digital platforms in economics: Essence, models, development trends. *Scientific and Technical Bulletins of St. Petersburg State Pedagogical University. Economic Sciences*, 11(6), 22–36.
- Goncharenko, L. P., & Sybachin, S. A. (2019). Digitalization of national economy. *University Bulletin*, 8, 32–38.
- Gorodetsky, V. I., & Skobelev, P. O. (2019, June 17–20). *Digital platform of cyber-physical systems*. XIII All-Russian Meeting on Management Problems VSPU-2019 Moscow, 1–6.
- Gretchenko, A. A. (2020). Types of digital platforms and their content. Russia: Trends and prospects for development. Yearbook. In V. I. Gerasimov (Ed.), *Materials of the XIX National scientific conference with international participation* (pp. 419–422).
- Gribanov, Y. I. (2019). Main models of industry digital platforms creation. *Innovative Economy Issues*, 8(2), 223–234.
- Guterres, A. (2021). The UN Secretary-General on the global digitalization and international cooperation. *Digital Law Journal*, 2(2), 10–13. <https://doi.org/10.38044/2686-9136-2021-2-2-10-13>
- Inozemtsev, M. I. (2021). Digital law: In search of certainty. *Digital Law Journal*, 2(1), 8–28. <https://doi.org/10.38044/2686-9136-2021-2-1-8-28>
- Korobkova, O. K. (2020). *Management of the development of health services in a digital economy* (p. 340). State University of Management.
- Kulakova, L. I., & Polyanin, A. V. (2020). Development of entrepreneurship based on digital platforms under conditions of deglobalization. *Bulletin of the Academy of Knowledge*, 37(2), 12–17.
- Kuprevich, T. (2018). Digital platforms current trends and directions for the development in the world economy. *University Economic Bulletin*, 37(1), 311–318.
- Medennikov, V. I. (2019). Mathematical model of the formation of digital platforms for managing the country's economy. *Digital Economy*, 1(5), 25–35.
- Narolina, T. S., Smotrova, T. I., & Nekrasova, T. A. (2020). Analysis of the current state of digital platforms. *Science of Krasnoyarsk*, 9(2), 184–205.
- Orlova, L. S. (2021). Trends of development and implementation of digital platforms. *Creative Economy*, 15(1), 35–44. <https://doi.org/10.18334/ce.15.1.111531>
- RANEP. (2019). *The state as a platform: People and technology*. Russian Academy of National Economy and Public Administration.
- Savelyeva, E. A. (2020). Economic security of remote labor: The practice of digital platforms and the problems of regulatory and legal support. *Economic Security*, 3(3), 273–284. <https://doi.org/10.18334/ecsec.3.3.110534>
- Shashkova, A., & Verlaine, M. (2020). Change of tax policy model as a base for innovation development while transferring from the pre-industrial to the trial

- society. In J. Kovalchuk (Ed.), *Post-Industrial Society* (pp. 137–147). Palgrave Macmillan.
- Smirnov, E. N. (2020). Global digital platforms as a factor in the transformation of world markets. *Issues of Innovative Economy*, 10(1), 13–24. <https://doi.org/10.18334/vinec.10.1.100699>
- Sorokina, G. P., Shirokova, L. V., & Astafieva, I. A. (2019). Digital technologies as a factor to improve the efficiency of state and municipal government. *Intellectual Innovations Investments*, 2, 73–83.
- Styrin, E. M., & Dmitrieva, N. E. (2021, April 13–30). *State digital platforms: Key features and main development scenarios: Report for XXII April international scientific conference on problems of development of economy and society*. National Research University “Higher School of Economics”. Higher School of Economics Publishing House.
- Styrin, E. M., Dmitrieva, N. E., & Sinyatullina, L. K. (2019). State digital platforms: From concept to implementation. *Issues of State and Municipal Management*, 4, 31–60.
- Verlaine, M., Shashkova, A., & Kudryashova, E. (2020). Amendments to Russian constitution and international institutions decisions: EAEU Prospective. *Polis Political Studies*, 5, 164–176. <https://doi.org/10.17976/jpps/2020.05.12>
- Zaichenko, I. M., & Smirnova, A. M. (2019). Analysis of innovation strategies in the digital transformation of business. *Scientific Bulletin of the Southern Institute of Management*, 2, 12–17. <https://doi.org/10.31775/2305-3100-2019-2-12-17>
- Zaichenko, I. M., Smirnova, A. M., & Borremans, A. D. (2018). Digital transformation of industrial enterprise management: Application of drones. *Scientific Bulletin of the Southern Institute of Management*, 4, 76–81.
- Zaitsev, V. E. (2019). Digital economy as an object of research: Review of publications. *Issues of State and Municipal Administration*, 3, 107–122.
- Zavyalov, D. V., Zavyalova, N. B., & Kiseleva, E. V. (2019). Digital platforms as a tool and a condition for the country’s competitiveness in the global market of goods and services. *Economic Relations*, 9(2), 443–454. <https://doi.org/10.18334/co.9.2.40608>



# Evolution of Digital Platforms to Ecosystems: Is the Digital Paradox Real?

*Julia A. Kovalchuk, Igor M. Stepnov, and Tamara Petrovic*

## INTRODUCTION

Digital platforms have already become not only a mandatory attribute of modern business, but also firmly embedded in the lives of ordinary consumers. On the one hand, this reflects a certain evolution in their development; on the other hand, it requires an understanding of their role and introducing the degree of the transforming processes of value creation in the economy.

Initially, the digital platform was a technical and technological tool, i.e., a technical, software, or hardware solution (Corsi et al., 2017) which provided data exchange between the administrator and users of this platform (sellers and buyers). Such a solution fully corresponded

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to the spread of the Internet and allowed it to be used for operational actions (purchase, delivery, payment, feedback, etc.) between participants of various exchange operations. In fact, this enabled the implementation of the idea of the Internet marketplace and the emergence of a certain institution of intermediaries in the new economy.

The digital platforms' introduction to real business has led to the formation of at least two types of their representation in the economy: (1) digital platforms became the basis for the creation of companies that developed this technical solution for their commercial purposes; and (2) digital platforms, thanks to their convenience for both users and profitability for their owners, allowed them to declare themselves as new business models in the context of business transformation in a new digital environment (Mack & Veil, 2016).

Business models implemented using digital platforms (i.e., designed exclusively on the basis of modern software) allowed for market exchanges and commercialization in a new digital format. The functioning of a business based on a digital platform has become an almost mandatory attribute of a company of any size and industry, since it provides many functions, ranging from an IT system to monitoring the financial performance of a business.

The development of business models under the influence of digital platforms and improvements in technical solutions—especially with regard to payment forms and embedding additional functions for collecting big data about users, their preferences, etc., and to organizational models of business functioning in a digital environment (including remote work, outsourcing)—has led to the transformation of the entire economy (Parker et al., 2016). This confirmed the thesis of a radical shift from competition to cooperation, supported on the basis of a new competition format for digital platforms (Gawer & Cusumano, 2002). It also complemented the functions and roles of digital platforms in the economy, making them quite complex objects of research.

The complexity of the digital platforms' architecture has led to active competition between platforms—and this has contributed to the formation of new business model based on the creation of the ecosystem (some authors use the concept of platform ecosystem (Heinet et al., 2020; Smedlund et al., 2018; Yonatany, 2017) and multilateral platform (Curry et al., 2021)). The ecosystem symbolizes the transition from the functioning of a company as a key player in a competitive market to some change in the competitive environment (Iansiti & Levien, 2004), where

the industry digital platform is already presented (Gawer, 2014). In practice, this already meant the unification of digital platforms (or companies or business models, as shown above), and this made it possible to organizationally design a new model of commercialization, taking into account business in related sectors of the economy.

The priority of digital platforms in ecosystems (Tatsumoto, 2021), in contrast to the classical understanding of the ecosystem as a business environment (Jacobides et al., 2018; Moore, 1996; Teece, 2014), has led to an updated understanding of exchanges in the digital environment, and even an assessment of the effectiveness of supply and demand coordination (Hein et al., 2020). In an ecosystem, economic agents can initiate demand, and at the same time can complement it by participating in the creation of a product or service, adding new properties or conditions—this is what digital platforms in ecosystems are capable of, accumulating user data and their preferences. The owners of the platforms have a constantly updated array of data to receive feedback in order to improve the quality of response to user needs and to improve the quality of products and services, which allows them to increase their competitive advantages and assess the prospects for development in existing markets or plan to enter new markets.

Conceptually considering the interdependence of ecosystems and digital platforms (Smedlund et al., 2018), then it is digital platforms that make it possible to provide and coordinate the ecosystem of participants, indirectly also defining the business model of the ecosystem itself and its structural and technological infrastructure.

The complementarity of products and services becomes decisive in the economic architecture of the ecosystem when integration creates the basic components of income generation and creates the potential for its growth through complementary products and services presented on other digital platforms. The integration of digital platforms in one ecosystem allows the implementation of the activities of various actors, including the suppliers themselves in the ecosystem, and including consumers who create opportunities for the emergence of additional products and services to contribute to the platform (i.e., some value proposition). This position creates opportunities for other companies (digital platforms) to join the ecosystem to organize cooperation, which will increase its value for consumers. This confirms the effect of supermodular complementarity, and, in the presence of network effects, provides commercial efficiency both for digital platforms included in the ecosystem and for the ecosystem as a whole.

## METHODOLOGY

The study proceeds from the premise that the introduction of digital technologies becomes a mandatory competitive advantage, as well as a certain strategy of behavior of companies in modern business. This inevitably leads to a change in business models that were originally built on digital platforms.

The authors agree with the definition of the Massachusetts Institute of Technology (Van Alstyne et al., 2016) about a digital platform as a business model that creates value and facilitates exchanges between two or more interdependent groups of participants. At the same time, the author's research methodology takes into account both the technical and technological aspect and the economic aspect in the interpretation of the essence of the digital platform, which includes organizational solutions in the content of business models, and not digital platforms used by modern companies.

A critical analysis of the theses on the typology of digital platforms makes it possible to form the path of evolution of digital platforms to ecosystems with the priority of the principles of "digital capitalism" in the modern economy (Schiller, 1999). A comparative analysis of open data, capitalization, and income in financial statements from corporations that have developed and used digital platforms in their business models confirms the conclusions.

A prerequisite for determining the hypothesis of the "digital paradox" is the "productivity paradox" (Skinner, 1986), which is about information technology. The productivity paradox emphasizes that the growth of investments in information technology often does not lead to the expected proportional increase in productivity or cost reduction. The authors are looking for an explanation of the dynamics of expected income growth in the processes of digitalization in the modern economy of digital platforms and digital platform ecosystems.

## RESULTS

Despite some skepticism of a number of researchers, platforms are becoming a new step in the evolution of the economic cycle, opening up new opportunities to the development of ownership, financing, management, and application of the results of business processes on a platform basis.

Digitalization has not only become an additional source of income in the virtual space, but has increased revenues from products and services in the physical world. Digitalization also helps differentiate existing products and services by increasing the perceived value from consumers. Accordingly, the additional value created—the digital premium—should be reflected in the service price. However, such additional value can also be presented to the user.

Digital platforms have become the market basis for such digital solutions. Digital platforms are at the forefront of the modern economy. They have simplified the interaction between various participants in transactions and formed a new public space of market relations. Platforms benefit by charging a fee for each successful interaction or access, but in theory do not affect the pricing of the transaction subject. Of the unique phenomena, platforms are becoming a mandatory element of the activities of most companies, providing market interaction and becoming an internal functional element of companies.

It is determined that the process of digitalization itself represents the emergence of two phenomena: companies that are actually platforms, and companies that are distanced from the platforms used in business. Currently, platform companies and those representing one whole with them have proved to be more successful (Salikhov, 2020). However, with the increase in technological solutions comes time for companies that have been deleted from the platform, which leads to the platform's independence, both from the developer and initiator, and from the user, which largely leads to changing patterns of competition in future markets (Stepnov, 2021).

The authors propose to define the following types of digital platforms, given the economic, entrepreneurial, and managerial positions:

- open platforms accessible to all market participants, and corporate platforms focused on the effectiveness of internal interaction. If for the former it is possible to talk about market freedom and equality of participants, then the latter become absolutely centralized;
- free access platforms (conditionally free—with the registration requirement) and monetized platforms (i.e., extracting income from providing access to participants);
- platforms whose profitability is provided by activities unrelated to the subject of exchange, and platforms independent of non-core income, including charity;



- peer-to-peer platforms (with equal participants) and hierarchical platforms, in which, in addition to the hierarchy of consumers, the institutional environment, the platform itself, and its users are also distinguished. However, according to the authors, such platforms will not have prospects on the open market, since initially the platform should contain the subject of exchange, and not be in search of it, with the exception of public goods platforms; and
- specialized platforms (on the subject of exchange) and industry-wide platforms.

A priori, the platform acts as a kind of integration basis, and the proposed types of platforms are united in confirming this fact. However, integration properties cannot be obtained only by technical solutions, so the technical component of digital solutions must necessarily be supplemented by organizational ones. Currently, many promoted platform solutions (for example, Internet banking) have become a “silence as agreement”, and not an institutional interaction, when in practice one is replaced by another. Outwardly, it looks like market participants proceed from the idea that they are achieving interaction, in fact agreeing to “silence”, which in the future may lead to the destabilization of such platforms. Therefore, the importance of the organizational component of the platforms is significant.

Thus, having systematized these differences, it can be assumed that a digital platform is a high-tech, monetized business environment with established institutional rules that ensures free coordination interaction between two or many market participants, while respecting equality between sellers and buyers (producers and consumers) in the interests of the subject of exchange that determines the content of interaction. The end of the interaction leads to the termination of the functioning of the platform.

Despite the obvious role of the influence of economic agents in ecosystems on its effectiveness, it is nevertheless necessary to highlight the role of digital platforms as technical and technological tools of business, since it is technical solutions that support market exchanges and the very existence of an ecosystem in a digital environment. In fact, the architecture of the ecosystem itself as a set of digital platforms defines technological interactions that symbolize exchanges between supply and demand sides in the digital economy and, accordingly, value creation.

It should be noted that digital platforms compete with other platforms, and ecosystems around different platforms often overlap partially because additional vendors use multiple platforms (for example, technological solutions on different operating systems and applications). The functioning of the digital platform itself also carries certain risks in the future, because open standards applied on the Internet reduce the need for platforms (Tatsumoto, 2021); however, on the other hand, there are still platform developers/vendors who provide platform-based market exchanges, while the Internet only provides interaction.

An interesting question for discussion is as follows: which way is more effective for digital platforms in the context of the development of platform ecosystem: (a) to join the existing ecosystem; or (b) to create a new ecosystem? Obviously, the answer is related to the competitive advantages of the digital platform itself, as well as the position (including financial and strategic) of its owner and the industry affiliation of the products and services offered. Most likely, companies in traditional industries tend to create their ecosystems based on designed digital platforms to suit their business needs and vision in the format of a business model, thus forming a kind of consortium of industry partners. For owners of digital platforms who do not yet have sufficient strategic advantages in their market niche, the best solution would be to join the existing ecosystem, which should be justified by: (a) assessing the composition of its participants; (b) assessing value formation in this ecosystem (Benz et al., 2021); and (c) assessing the contribution of a new digital platform in the ecosystem. It must be remembered that the provision of services or products may be impossible or unclaimed, or it is provided in sufficient volume by already existing digital platforms in the ecosystem.

The future of digital platforms in terms of its evolution is seen in the form of increased integration between platforms by many researchers (Reuver et al., 2018). This is also shown by practice, when one corporation provides the functioning of many digital platforms, which, in turn, implement exchanges among themselves, and this applies to both data and operations at the request of users. Thus, platforms turn into elements that are integrated into more extensive digital infrastructures, which are ecosystems from a technical point of view. However, only technical solutions are not decisive, since the platforms themselves do not represent value for the platform for end users without the services provided by the business model of the company using these digital platforms.

Ecosystems make it possible not only to increase the value of digital platforms, but also, ultimately, to achieve a synergistic effect for business, given that companies in ecosystem are no longer isolated from each other, and digital platforms belonging to them allow creating value together.

Digital platforms are an important symbol of the digital economy and go through certain stages of improving technical solutions and the business models evolution; they must evolve in order to be promising, given the opportunities for the development of digital money and consumption patterns in society. At the same time, digital platforms as agents in the digital economy should be stable in the conditions of increasing the level of decentralization and including distributed ledger mechanisms (blockchain), while remaining committed to the determinants of a competitive “platform market” and the rules of ecosystem functioning. It is obvious that platformization will play a particular role in the industry transformation, already replacing some traditional companies and even industries with updated ones, taking into account the spread of digital technologies. Also, the ecosystem, which combines digital platforms for business development purposes, is able to change competition in digital markets depending on the regulation degree or exacerbating monopoly positions or implementing competitive cooperation models.

Confidence about the future economy with ecosystems has a high degree of uncertainty. The main methodological difficulty lies in determining to what extent the economy will provide the necessary diversity. The pace of the onset of emerging ecosystem solutions leads to the conclusion that there are two ways of preserving: the traditional (corporate) economy, and the platform economy. However, the projected increase in ecosystem solutions will lead to regulatory issues, including government and antitrust regulation. The formation of certainty for platform manifestations about the decentralized or centralized nature of relations, and the unresolved nature of this dilemma, is largely translated into decision-making related to the formation of an ecosystem economy.

## DISCUSSIONS

Digital platforms have become the most well-known innovation of the modern economy; they are becoming the most widespread, and have not only created a new symbol and image of the economy of the future, but also received quantitative confirmation of the market leadership of the companies using them, both in terms of the company’s capitalization

and its revenues, which are both growing dynamically from year to year, confirming the change in the format of market exchanges in the economy.

Of course, the idea of digital capitalism is very attractive, so investments are increasing in digital business, as it was once a long time ago with industrial production (Kovalchuk, 2020). The authors ask the question: is there a possibility of a digital paradox (by analogy with the productivity paradox) when, as aggregate investments grow, companies do not receive the expected increase in revenue? The productivity paradox is about the growth of investments in information technology that often does not lead to the expected proportional increase in productivity or cost reduction.

Reinvesting digital income is a source of a company's digital investment, and this should increase its income in future periods. However, the process of generating income does not obey a linear dependence, and instead has the property of reducing the return on invested funds, due, among other things, to the consumer's habituation to digital reality. A possible reason for the paradox of digitalization is the refusal of companies to dynamically change their business models, which requires a revision of the previous business logic of transforming products and services into individual offers.

Considering a different ratio—namely, the investments growth rate and the growth of expected incomes in the processes of digitalization—then it can be agreed that digital transformation is broader than the concept of digitization, and that the process of generating income does not obey a linear relationship and has the property of reducing the return on invested funds. This situation can be called a “digital paradox” (Gebauer et al., 2020)—when total investments in digitalization are relatively small, and income growth remains in line with expectations. However, as total investments grow, companies increasingly face the digital paradox and do not receive the expected increase in revenue. As companies invest more and more in digitalization, the paradox becomes more likely.

The authors believe that the digital paradox can also be considered in relative coordinates: the investments share in the market value of digital companies and the profitability of the company's digital activities. This thesis should have a continuation, and its proof will confirm this author's conclusion. The phenomenon of the digital paradox demonstrates the consumer's habituation to digital reality; therefore, as part of the development of business models, companies should pay attention to:

- (a) the technologies used, assessing the threat of their obsolescence;
- (b) the amount of costs for increasing the number of consumers of this digital solution; and
- (c) the pricing models used to ensure the balancing of the business model.

Thus, a possible reason for the digital paradox may be that companies refuse to dynamically change their business models, which requires a revision of the previous business logic of transforming products and services into individual offers, including the transition from a digital platform to the platform's ecosystem.

The ecosystem as an evolutionary model of interaction between digital platforms is most effective in building an adaptive system of interactions taking into account the increasing complexity. The ecosystem architecture may include different entities that interact on their digital platforms or that carry out exchanges on a special digital platform, as well as balancing profits between all participants and a new increment in value. The authors are convinced that the ecosystem makes it possible to create additional protection from the market environment, which allows participants within the ecosystem to work according to internal rules, and not according to market rules.

## CONCLUSIONS

This chapter analyzes the digital platform's evolution from the creation of a technical and technological tool to inclusion in ecosystems, including an assessment of the effects of value creation by digital platforms in ecosystems, the prospects for the development of digital platforms, the choice between creating its own ecosystems and joining existing ones for digital platforms from the position of the owner and industry affiliation.

It is established that initially, the digital platform was represented by a technical and technological tool, i.e., a technical, software, or hardware solution that provided data exchange between the administrator and users of this platform (sellers and buyers). Business models implemented using digital platforms, i.e., designed exclusively on the basis of modern software, allowed for market exchanges and commercialization in a new digital format.

The authors' research shows that the digital platform's future in terms of its evolution is increased integration between platforms. Practice shows that one corporation provides the functioning of many digital platforms, which, in turn, implement exchanges among themselves, and this applies to both data and operations at the request of users. Thus, platforms turn into elements that are integrated into more extensive digital infrastructures, which are ecosystems from a technical point of view.

## REFERENCES

- Benz, C., Riefler, L., & Schwarz, C. (2021). Co-creating value in B2B platform ecosystems—towards a deeper understanding of the emergence and nature of actor engagement. In F. Ahlemann, R. Schütte, & S. Stieglitz (Eds.), *Innovation through information systems. WI 2021. Lecture notes in information systems and organisation* (Vol. 46). Springer. [https://doi.org/10.1007/978-3-030-86790-4\\_17](https://doi.org/10.1007/978-3-030-86790-4_17)
- Corsi, K., Mancini, D., & Piscitelli, G. (2017). The integration of management control systems through digital platforms: A case study. In K. Corsi, N. Castellano, R. Lamboglia, & D. Mancini (Eds.), *Reshaping accounting and management control systems. Lecture notes in information systems and organisation* (Vol. 20). Springer. [https://doi.org/10.1007/978-3-319-49538-5\\_9](https://doi.org/10.1007/978-3-319-49538-5_9)
- Curry, E., Metzger, A., Zillner, S., Pazzaglia, J. C., & García Robles, A. (Eds.). (2021). *The Elements of Big Data Value*. Springer. <https://doi.org/10.1007/978-3-030-68176-0>
- Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, 43(7), 1239–1249.
- Gawer, A., & Cusumano, M. A. (2002). *Platform leadership: How Intel, Microsoft, and Cisco Drive industry innovation*. Harvard Business School Press.
- Gebauer, H., Fleisch, E., Lamprecht, C., & Wortmann, F. (2020). Growth paths for overcoming the digitalization paradox. *Business Horizons*, 63, 313–323.
- Hein, A., Schrieck, M., Riasanow, T., Setzke, D. S., Wiesche, M., Böhm, M., & Krcmar, H. (2020). Digital platform ecosystems. *Electronic Markets*, 30(1), No. 13, 87–98. <https://doi.org/10.1007/s12525-019-00377-4>
- Iansiti, M., & Levien, R. (2004). *The keystone advantage: What the new business ecosystems mean for strategy, innovation, and sustainability*. Harvard Business School Press.
- Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, 39, 2255–2276. <https://doi.org/10.1002/smj.2904>

- Kovalchuk, J. (2020). Post-industrial modernization: Problems and prospects. In J. Kovalchuk (Ed.), *Post-industrial society*. Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-59739-9\\_1](https://doi.org/10.1007/978-3-030-59739-9_1)
- Mack, O., & Veil, P. (2016). Platform business models and internet of things as complementary concepts for digital disruption. *Phantom Ex Machina*, 20, 71–85.
- Moore, J. F. (1996). *The death of competition: Leadership and strategy in the age of business ecosystems*. Harper Paperbacks.
- Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. WW Norton & Co.
- Reuver, M., Sørensen, C., & Basole, R. C. (2018). The digital platform: A research agenda. *Journal of Information Technology*, 33, 124–135.
- Salikhov, D. R. (2020). “Regulatory Sandboxes” in Russia: New horizons and challenges. *Digital Law Journal*, 1(2), 17–27. <https://doi.org/10.38044/2686-9136-2020-1-2-17-27>
- Schiller, D. (1999). *Digital capitalism: Networking the global market system*. MIT Press.
- Skinner, W. (1986). *The productivity paradox*. Harvard Business Review.
- Smedlund, A., Faghankhani, H., Ikävalko, H., & Turkama, P. (2018). Platform ecosystem orchestration for efficiency, development, and innovation. In A. Smedlund, A. Lindblom, & L. Mitronen (Eds.), *Collaborative value co-creation in the platform economy. Translational systems sciences* (Vol. 11). Springer. [https://doi.org/10.1007/978-981-10-8956-5\\_2](https://doi.org/10.1007/978-981-10-8956-5_2)
- Stepnov, I. (2021). The uncertainty of the technological future. In I. Stepnov (Ed.), *Technology and business strategy*. Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-63974-7\\_2](https://doi.org/10.1007/978-3-030-63974-7_2)
- Tatsumoto, H. (2021). *Open standards and rise of new competition: Why do open standards generate new patterns of competition?* Springer. [https://doi.org/10.1007/978-981-33-6789-0\\_1](https://doi.org/10.1007/978-981-33-6789-0_1)
- Teece, D. J. (2014). Business ecosystems. In M. Augier & D. J. Teece (Eds.), *Entry in Palgrave Encyclopedia of Management*. <https://doi.org/10.1057/9781137294678.0190>.
- Van Alstyne, M., Parker, G., & Choudary, S. P. (2016, April). *Pipelines, platforms, and the new rules of strategy*. Harvard Business Review.
- Yonatan, M. (2017). Platforms, ecosystems, and the internationalization of highly digitized organizations. *Journal of Organization Design*, 6(2). <https://doi.org/10.1186/s41469-017-0012-3>



# Digital Platforms: A Challenge for States?

*Margarita Robles-Carrillo*

## INTRODUCTION

Digital platforms can be a challenge for states from different perspectives. Transnational projection, economic power, and political and social influence render platforms a key player in the global economy, as well as in the political arena. Platforms are “reshaping seemingly every area of human endeavor, from innovation to commerce to cultural production to social organization” (Cohen, 2017: 135). Regulating platforms is not simple for several reasons (Lobel, 2016: 90). Legislation, jurisdiction, and taxation have to be addressed in different ways. However, an adequate and effective regulation of these platforms is necessary and urgent. In this regard, a major problem arises from the fact that digital platforms introduce a certain breakdown in the traditional relationship between states and non-state actors. Relations between states and platforms are not without problems. Platforms seem to be escaping from the control of states and the rules of law. The solution to this problem is to be found in international cooperation.

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## METHODOLOGY

The paper examines some of the main legal problems arising for states as a consequence of the emergence and development of digital platforms. This phenomenon is approached from the perspectives of international law, domestic law, and European Union law. In all three legal systems, the article identifies a common basic factor that explains the scope and nature of this issue: the evolution of the relations between state and non-state actors fostered by the development of digital platforms. This situation is described in relation to three main areas of state action—legislation, jurisdiction, and taxation—which are analyzed from a theoretical, normative, and doctrinal point of view.

## RESULTS

Historically, political and social organizations have been built on the basis of a clear differentiation between states and non-state actors. This legal asymmetry had a natural support: the obvious and considerable differences between states and non-state actors from a political, economic, or social point of view. Their different legal status in the domestic legal sphere and in the framework of international law was logical because of their different nature and because it reflected the *de facto* inequalities existing between them. Therefore, legally, in the domestic sphere, there is a clear hierarchical relationship. The state is the authority and the non-state actors are subject to its power, particularly in terms of legislation, jurisdiction, and taxation. In the international sphere, states have the status of subjects of law with full legal capacity and the prerogatives inherent to their status as sovereign entities. Non-state actors, by contrast, are not subjects of law, but only actors without legal capacity. International law has always been a state-to-state affair.

For some time now, the processes of globalization and technification have been leading to a different factual situation marked by three main features. Firstly, there is a growing movement toward the privatization of activities and functions traditionally reserved to the public sphere that is eroding the power of the states (Brown Weiss, 2018: 127–128). Secondly, private actors are increasingly involved in regulatory and procedures traditionally reserved to the states (Ku & Yoo, 2013). As Lobel points out, “platform companies appear to want some light regulation as they attempt to shape the regulatory field” (Lobel, 2016: 161). Thirdly, there is a

progressive reduction of inequalities between state and non-state actors, particularly regarding the most powerful ones, as is the case with the digital platforms (Sur, 2012: 95). Being apparent not only in economic aspects but also in terms of power, this phenomenon undermines the real and practical support on which was based the juridical construction of subjective asymmetry.

Legal distinction no longer properly matches the reality. There are companies such as Apple, which as of January 2022 has reached a market capitalization of more than three trillion dollars. In some countries with low levels of development, companies such as Facebook offer basic services traditionally assumed by the state, such as ensuring access to communications. In this regard, Cohen observes that “dominant platform firms fit within the narrative of the transnational corporation as both constrained by and resistant to the international legal order, but they also rewrite that narrative in important ways. To begin with, platforms have both territories and populations. Platform territories are not contiguous physical spaces but rather are defined using protocols, data flows, and algorithms. Both technically and experientially, however, they are clearly demarcated spaces with virtual borders that platforms guard vigilantly. The benefits of those spaces accrue most visibly and predictably to users who maintain permanent and consistent membership. Dominant platforms like Facebook, Google, and Apple have user populations that number in the billions, vastly eclipsing the populations of all but the largest nation states” (Cohen, 2017: 200).

Although they do not have territory and population in a precise sense, they have millions of users, as well as the means and capacity to control and influence them. Sometimes they even have more resources than some states. These companies do not hide their ambition to achieve even greater power and to obtain greater prerogatives, even emulating states. Actually, although the criteria of international subjectivity still differ in terms of their legal status, both practice and reality show a curious, complex, and growing rapprochement in terms of power between states and non-state actors as digital platforms.

In the end, there is a mismatch between the norm and the reality, which undermines the effectiveness of the former and renders it useless to adequately and efficiently organize the latter. Society, economy, and politics are changing substantially and rapidly as a result of globalization and technology. Regulations are not changing at the same or at the necessary rapidity. As Suzor explains, “the governance of platforms raises

fundamental constitutional concerns—in the sense of legal and social responsibilities” (Suzor, 2018: 2). States still retain their legitimacy as public authorities, but they are gradually losing their traditional leadership position (Salmon, 2010). In the globalized and technological world (Delbrück, 2001), they increasingly need the collaboration of digital platforms to ensure compliance or to enforce their legislation. Moreover, on the other side, states are having increasing difficulty in submitting them to their jurisdiction. By contrast, digital platforms are reaching greater levels of power to arrive to the point to have even been defined as “emerging transnational sovereigns” (Cohen, 2017: 199).

On the other side, platforms are also facing some legal problems, mainly because they are subject to different legislations as they operate in different countries and at the transnational level. Conflicts of jurisdiction are frequent. Normative conflicts are difficult to resolve. All agents or platforms must comply with the law of the country in which they provide their services. Nevertheless, an agent or platform operating transnationally cannot be required to comply with the laws of all countries. In fact, compliance with the laws of all countries would be even impossible.

Long ago, the Yahoo case in France demonstrated that this American company could not simultaneously comply with French regulations concerning racism and xenophobia and with American regulations guaranteeing freedom of speech under the First Amendment. In January 2022, Twitter was also condemned by a Court of Appeal in Paris for the lack of transparency of its content moderation policy in the fight against online hate. Also in January, the Commission Nationale de l’Informatique et des Libertés (CNIL) fined Google with 150 million euros and Facebook with 60 million euros for non-compliance with the law. The sites facebook.com, google.fr, and youtube.com do not allow users to refuse cookies as easily as to accept them. Different legislations in different countries require different behaviors by the platforms. Respecting a law in a country might even imply disrespecting the law in another one. However, platforms may not be outside the law. They must be subject to a determined and certain law. These problems do not have a simple solution. In this regard, legislation, jurisdiction, and taxation are the main focus of the discussions.

## DISCUSSIONS

Traditionally, the territorial and personal criteria have been determinants of the law applicable to natural and legal persons, the submission to the jurisdiction of the state, and the fiscal obligations. Currently, in most cases, none of these criteria is really applicable. Digital platforms are foreign actors providing remote services in the national territory. As a matter of fact, the development of the internet has challenged the main paradigm of territoriality of law, and nor is it possible in many cases to apply personal law. Classical competences of the state do not easily reach the platforms, even when they provide services on its territory and to its nationals.

According to Enes, “there is a consensus that digital platforms pose major challenges to business but also to law, questioning long accepted frameworks, principles and concepts” (Enes, 2019: 19). Acquier, Daudi-geos, and Pinksec notice that platforms promote themselves “as a way to fight centralized institutions, such as the state, professions or large corporations. This view of disruption and disintermediation as an emancipatory ideal, which questions the legitimacy of established institutions, is likely to play a role in the conflictual relationship platforms tend to have with regulatory institutions” (Acquier et al., 2017: 5). In addition, platforms have developed “equally powerful strategies for avoiding regulatory accountability” (Cohen, 2017: 184). Schwarz defines this process as a budding “platformization” or an emerging “platform society” (Schwarz, 2017: 375–376).

The flourishing of the platform phenomenon has been taking place at a time characterized as the era of deregulation (Feld, 2019: 2) and with worldwide legal systems in crisis (Cohen, 2017: 176) as a result of globalization and technologization. The regulation of platforms faces then additional difficulties. On the one side, there are intrinsic issues related to the platforms themselves as the lack of a clear and widely shared definition of them (Resta, 2017: 232) or their characteristic dynamism (Williamson & Bunting, 2018: 5) that make it difficult to achieve homogeneous and durable regulations. On the other side, there are also some extrinsic complicated factors, such as: the number of legal disciplines involved from constitutional or administrative law to labor or commercial law or, of course, international and European law among others; the heterogeneity of the issues (Resta, 2017: 232); or the diversity of this sector, in which “regulatory demands are not uniform, and any regulatory

intervention must be diversity aware and must understand the business under scrutiny and its economic and societal impact very well” (Enes, 2019: 24). In the case of the European Union, the scenario is even more complex as a consequence of the vertical and horizontal distribution of competences between the Union and its Member States as well as its institutions (Enes, 2019: 28).

A solution proposed by some authors and promoted by companies to address that problem is self-regulation. Williamson and Bunting consider also the options of co-regulation or soft-regulation (Williamson & Bunting, 2018: 23). Among the arguments in favor of self-regulation, there are two that stand out: firstly, the recognition that digital platforms have “extraordinary economic, social, and political power” which have to be regulated; secondly, the fact that platforms “are more likely to get serious about self-regulation when they see a credible threat of government regulation, even if self-regulation may hurt short-term sales and profits” (Cusumano et al., 2021: 1277–1278).

However, a public and integral regulation is needed. There are several reasons. Feld notes that it has to be “either because of the monopoly power of these companies, or because they constitute “public utilities” and should therefore be regulated like public utilities” (Feld, 2019: 48). Moreover, there are many ground rules at stake that can be affected by a self-regulatory system ranging from consumer or workers’ rights to the fundamental rights and freedoms of individuals. As Suzor explains, “Facebook’s experiment with democratic ideals neatly illustrates the disconnect between the social values at stake and the hard legal realities” (Suzor, 2018: 3). There are specific issues that could be subject to self-regulation while others should be excluded. Public interest has to be preserved face to private corporations. For the time being, states are the only legitimate authority with competence for legislation. If platforms had had the power to regulate themselves, states would lose a main instrument to control them and to sanction their illegal actions by applying justice.

Jurisdiction issues concern both Public International Law and Private International Law (De Groote, 2009; Huang, 2018: 879). The scope of jurisdiction over digital platforms has also been a main issue in the case law of the European Union Court of Justice (Svantesson, 2020). The criteria for the attribution of jurisdiction are a competence of the states. Each state determines its jurisdictional competence in compliance with international norms. Positive and negative conflicts of jurisdiction arise, respectively, when two or more countries aspire to exercise their

jurisdiction or when none of them intends to exercise it. Along with more contentious jurisdictional titles such as the protection of national interests or universal jurisdiction, the main criteria for determining jurisdiction are the territorial and personal.

As transnational actors, platforms are reluctant to the idea of being under a foreign state's jurisdiction. Cohen notes that "powerful economic interests have always sought to reshape jurisdictional, procedural, and methodological rules to their advantage" (Cohen, 2017: 176). In his opinion, platforms "have developed a suite of powerful strategies for evading accountability in litigation" (Cohen, 2017: 177).

States are also been looking for strategies in order to be able to exercise their jurisdictional powers over transnational actors. As Huang explains, in recent years, China "has strengthened, rather than weakened, the territorially-based jurisdiction rule" (Huang, 2018: 91). As the author observes, "internet is an amorphous space, but the location of the server can be physically and geographically territoriality with cyberspace sovereignty" (Huang, 2018: 110). Some countries, such as the United States, have defended the extraterritorial scope of their competences.

In this regard, as Svantesson explains, international law imposes limitations to an eventual court order with worldwide or extraterritorial effects. Such a judicial decision would raise several juridical issues: (1) it may potentially infringe the sovereignty of the other states; (2) it may be difficult to reconcile it with the limits international law imposes regarding jurisdiction; (3) it may be contrary to the principle of non-intervention in internal affairs; and (4) it may be incompatible with international human rights law as well as some democratic basic principles (Svantesson, 2020: 9). In this regard, the author observes that "the battle of scope of jurisdiction has begun" (Svantesson, 2020: 13).

De Groote argues that both public international law and international human rights law have to be the main approaches toward the problem of international jurisdiction over transnational agents. According to the author, "both branches of law are relevant for the delimitation of a state's exercise of sovereignty" (De Groote, 2009: 450). In the Amendments adopted by the European Parliament on 20 January 2022 on the proposal for a regulation of the European Parliament and of the Council on a Single Market for Digital Services, this institution expressly introduces the requirement of respect of the fundamental rights and freedoms guaranteed in the Charter of Fundamental Rights of the European Union, in particular the rights to privacy, protection of personal data, respect for

human dignity, private and family life, the freedom of expression and information, the freedom and the pluralism of the media, the freedom to conduct a business, a high level of consumer protection, the equality between women and men, the right to non-discrimination, and the rights of children (European Parliament, 2022). They also recognize that, acting independently, states can hardly face the problem posed by the submission to their jurisdiction of a transnational agent such as digital platforms. More than ever before, there is a need for deeper and broader international cooperation in order to avoid conflicts of jurisdiction and to ensure both the provision of justice and the end of impunity. The need for tax justice has also become a global problem.

Traditional taxation regulations are not operational, nor are they fair for the taxation of digital platforms in a globalized world. According to them, as well as international treaties on the subject (Cui, 2019), a territorial or personal connection with the state is required. Elke Asen explains that under current international tax rules “multinationals generally pay corporate income tax where production occurs rather than where consumers or, specifically for the digital sector, users are located” (Asen, 2021). However, through the digital economy, “businesses (implicitly) derive income from users abroad but, without a physical presence, are not subject to corporate income tax in that foreign country” (Asen, 2021). Consequently, the state of the users of the services cannot tax the income of the foreign platforms derived from these services when they provide them remotely (Kjaersgaard & Schmidt, 2018: 148). Moreover, taxation itself does not guarantee its collection. Actually, it may become a disincentive for platforms and eventually lead to the search for a more advantageous taxation outside that state (Lamensch, 2017). Taxation issues concerns both direct (corporate profit) and indirect (consumption) taxations (Olbert & Spengel, 2019: 2). As Olbert and Spengel explain, “taxing digital businesses ranks high on the international policy agenda” (Olbert & Spengel, 2019: 22).

There is no definitive agreement among the states nor in the doctrinal sphere on the possible solutions. For instance, while Cui defends the digital services taxes option (Cui, 2019: 839), Kjaersgaard and Schmidt prefer the use of significant digital presence of the platform in the line proposed by the European Commission (Kjaersgaard & Schmidt, 2018: 171). Okeke compares the continuous economic presence with the permanent establishment as main criteria for digital taxation (Okeke, 2018: 25). Although the challenge is a complex one, a just and definitive

taxation solution must be found (Lobel, 2016: 124). Fiscal issues have long divided platforms and states.

Some years ago, European Economy and Finances Ministers released a Political Statement about a Joint Initiative on the Taxation of Companies Operating in the Digital Economy. They recognized that they “should no longer accept that these companies do business in Europe while paying minimal amounts of tax to our treasuries. Economic efficiency is at stake, as well as tax fairness and sovereignty” (Ministero dell’Economia e delle Finanze [MEF], 2018). Hence, the Commission’s initiative to establish a common framework for digital taxation has been so necessary and important. The process is not going to be a simple one because it is a privileged area of the sovereignty of the states (European Commission, 2021).

Tax policy is a sovereign competence of states that could be exercised individually and discretionally in the society and economy that existed prior to the phenomena of globalization and digitization. In the current context, national tax policies or classical international cooperation are not effective with respect to actors such as digital platforms. As Cui explains, traditional treaty frameworks have fundamental limitations (Cui, 2019: 853). The solution has to be found in a deep and renewed international cooperation.

In this regard, the G7, the G20, and, finally, the OECD have reached a consensus on the framework for international tax reform involving more than one hundred and thirty countries representing more than 90% of the world’s GNP. The G7 reached an agreement on 5 June 2021 (G7, 2021a) that was endorsed in the Carbis Bay G7 Summit Communiqué (G7, 2021b). The aim was establishing a “tax system that is fair across the world”. From the beginning, the idea was to extend this consensus through the G20/OECD framework (Asen, 2021). This organization has been working on the topic for some years now (Olbert & Spengel, 2019: 2).

The OECD/G20 adopted the Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy on 1 July 2021 (OECD, 2021a). In October, a detailed implementation plan was also adopted (OECD, 2021b). Based on this and in its previous work, on 22 December 2021, the European Commission presented a Proposal for a Council Directive on ensuring a global minimum level of taxation for multinational groups in the Union (European Commission, 2021). The aim of this proposal is “to establish an efficient and coherent framework for the global minimum level of



taxation at Union level”. The Directive lays down “rules for ensuring minimum level of effective corporate taxation of large multinational groups and large-scale purely domestic groups operating in the Single Market” (European Commission, 2021). The European policy closely follows the OECD Model Rules. Supported by the European Union, the large number of states that have endorsed this taxation framework is an evident demonstration of the magnitude and relevance of the agreement.

Although this is an important step forward, it is not enough for two main reasons: on the one hand, not all countries are participating because it is not a universal agreement; and, on the other hand, the fact that it has been negotiated within the OECD—which represents the world’s most developed economies—raises the dilemma of whether it will be a valid and useful agreement for the less developed countries. In this regard, Solomon Rukundo has analyzed the specific and substantial challenges to traditional tax regimes in Africa (Rukundo, 2020). Okeke accurately explains the “need to investigate taxation jurisdiction on digital business from the angle of a developing country such as Nigeria” (Okeke, 2018: 2), and Rukundo argues that African countries must participate in the multilateral discussions on the reform of international taxation and they must also acknowledge that their challenges are different from those of developed countries and their final solutions have to be uniquely African (Rukundo, 2020). Such a proposal is not without problems: actually, an African solution would not solve the problem of platform taxation in a global context, but would be a limited regional solution within the framework of worldwide globalization. By contrast, the integration of the African uniqueness—as well as others—in the negotiations of the universal agreement is not only an option but even an obligation if there is a real interest in resolving the problem globally. At the end, the solution must be “global solutions for global problems” (Williamson & Bunting, 2018: 25). If the United Nations Model Double Taxation Convention between Developed and Developing Countries (United Nations, 2017) was aimed at eliminating double taxation, taking into account their different situations, a similar universal digital taxation treaty—taking into account undeveloped and developed countries’ issues—might be the solution. Once again, broader and more inclusive cooperation is the solution to platform taxation at the international level.

## CONCLUSIONS

An international society divided into states by borders is no longer feasible in legal terms in the twenty-first century. Since the middle of the twentieth century, the growing process of the internationalization of social life led to a situation in which economic, political, and social interdependence compelled states to increase their cooperation. Since then, international cooperation has gradually and progressively displaced unilateral action by states as the main normative instrument. However, states have preserved their prerogatives with a significant degree of discretion over the determination of the applicable law, submission to their jurisdiction, and taxation.

Currently, the situation has changed significantly as a result of the processes of globalization and technification. The exercise of those state competences faces several problems, particularly with respect to powerful subjects such as digital platforms acting on a transnational level. Acting individually, the state cannot easily meet the challenges posed by their regulation. However, there is no possible alternative, nor would it be legitimate enough to displace the state. If it wants to maintain its authority and legitimacy, the state must be able to address this situation. To this end, the solution is to promote and maintain international cooperation as the primary manner of exercise of state competences. States are not losing their sovereign powers; rather, they are exercising them in a different way through extended and qualified international cooperation that is needed in order to address the challenge of digital platforms.

## REFERENCES

- Acquier, A., Daudigeos, T., & Pinkse, J. (2017). Promises and paradoxes of the sharing economy: An organizing framework. *Technological Forecasting & Social Change*, 125, 1–10. <https://www.sciencedirect.com/science/article/pii/S0040162517309101?via=ihub>
- Asen, E. (2021). What European OECD countries are doing about digital services Taxes. *Tax Foundation*. <https://www.vatupdate.com/2021/11/23/what-european-oecd-countries-are-doing-about-digital-services-taxes-4/>
- Brown Weiss, E. (2018). Establishing norms in a Kaleidoscopic World. General course of public international law. In *Recueil des Cours: Collected Courses of the Hague Academy of International Law* (Vol. 396, pp. 37–415). Brill Nijhoff Publishers.

- Cohen, J. E. (2017). Law for the platform economy. *U.C. Davis Law Review*, 51(1), 133–204.
- Cui, W. (2019). The superiority of the digital services tax over significant digital presence proposals. *National Tax Journal*, 72(4), 839–856.
- Cusumano, M. A., Gawer, A., & Yoffie, D. V. (2021). Can self-regulation save digital platforms? *Industrial and Corporate Change*, 30, 1259–1285. <https://doi.org/10.1093/icc/dtab052>
- De Groote, B. (2009). Jurisdiction problems regarding Internet torts: Critical remarks. *Computer Law & Security Review*, 25, 447–454.
- Delbrück, J. (2001). Structural changes in the international system and its legal order: International law in the Era of globalization. *SZIER - Zeitschrift für internationales und europäisches Recht Herausgeber Die Schweizerische Vereinigung für internationales Recht (SVIR)*.
- Enes, G. (2019). Digital platforms and European Union law—challenges from a perspective of multilevel constitutionalism. *EU Law Journal*, 5(1), 16–39.
- European Commission. (2021). *Proposal for a Council Directive on ensuring a global minimum level of taxation for multinational groups in the Union*. COM (2021) 823 final, Brussels.
- European Parliament. (2022). *Amendments adopted by the European Parliament on 20 January 2022 on the proposal for a regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC (COM(2020)0825 – C9-0418/2020 – 2020/0361(COD))*. [https://www.europarl.europa.eu/doceo/document/TA-9-2022-0014\\_EN.html](https://www.europarl.europa.eu/doceo/document/TA-9-2022-0014_EN.html)
- Feld, H. (2019). The case for the Digital Platform Act: Market Structure and Regulation of Digital Platforms. *Roosevelt Institute*. [https://entertainment-report/Resources/Whitepapers/cbebb8af-2bb4-439f-a752-0fa0d7b4ce5a\\_Case\\_for\\_the\\_Digital\\_Platform\\_Act\\_Harold\\_Feld\\_2019.pdf](https://entertainment-report/Resources/Whitepapers/cbebb8af-2bb4-439f-a752-0fa0d7b4ce5a_Case_for_the_Digital_Platform_Act_Harold_Feld_2019.pdf)
- G7. (2021a). *G7 Finance Ministers and Central Bank Governors Communiqué*. <https://www.gov.uk/government/publications/g7-finance-ministers-meeting-june-2021-communicue/g7-finance-ministers-and-central-bank-governors-communicue>
- G7. (2021b). *Carbis Bay G7 Summit Communiqué. Our Shared Agenda for Global Action to Build Back Better*. <https://www.g7uk.org/wp-content/uploads/2021/06/Carbis-Bay-G7-Summit-Communiqué-PDF-430KB-25-pages-3.pdf>
- Huang, J. (2018). Personal jurisdiction based on the location of server: Chinese Territorialism in the Internet Era. *Wisconsin International Law Journal*, 36(1), 87–122.
- Kjaersgaard, L., & Schmidt, P. (2018). Allocation of the right to tax income from digital intermediary platforms challenges and possibilities for taxation in the jurisdiction of the user. *Nordic Journal of Commercial Law*, 1, 146–171.

- Ku, J., & Yoo, J. (2013). Globalization and sovereignty. *Berkeley Journal of International Law*, 31(1), 210–225.
- Lamensch, M. (2017). *European value-added tax in the digital era. A critical analysis and proposals for reform*. International Bureau of Fiscal Documentation.
- Lips, W. (2020). The EU Commission’s digital tax proposals and its cross-platform impact in the EU and the OECD. *Journal of European Integration*, 42(7), 975–990.
- Lobel, O. (2016). The law of the platform. *Minnesota Law Review*, 101(1), 87–166.
- Ministero dell’Economia e delle Finanze (MEF). (2018). *Joint Initiative on the Taxation of Companies Operating in the Digital Economy*. [https://www.mef.gov.it/inevidenza/banner/170907\\_joint\\_initiative\\_digital\\_taxation.pdf](https://www.mef.gov.it/inevidenza/banner/170907_joint_initiative_digital_taxation.pdf)
- OECD. (2021a). *Base erosion and profit shifting project. Statement on a two-pillar solution to address the tax challenges arising from the digitalisation of the economy*. <https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-july-2021.pdf>
- OECD. (2021b). *Base erosion and profit shifting project, two-pillar solution to address the tax challenges arising from the digitalisation of the economy*. <https://www.oecd.org/tax/beps/brochure-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf>
- Okeke, O. S. (2018). *Taxation jurisdiction on digital business in Nigeria*. <https://www.researchgate.net/project/Taxation-Jurisdiction-on-Digital-Business-in-Nigeria>
- Olbert, M., & Spengel, Ch. (2019, April). *Taxation in the digital economy—recent policy developments and the question of value creation* (Discussion Paper, No. 19-010).
- Resta, G. (2017). *Digital platforms and the law: Contested issues*. Conference “Plattformen. Geschäftsmodelle und Verträge”, Universität Bayreuth. <https://www.medialaws.eu/wp-content/uploads/2019/05/17.-Resta.pdf>
- Rukundo, S. (2020). *Addressing the challenges of taxation of the digital economy: Lessons for African countries*. (ICTD Working Paper, No. 105). Institute of Development Studies.
- Salmon, J. (2010). Quelle place pour l’État dans le droit international d’aujourd’hui? In: *Recueil des Cours: Collected Courses of the Hague Academy of International Law* 37-415 (Vol. 347). Brill Nijhoff Publishers.
- Schwarz, J. A. (2017). Platform logic: An interdisciplinary approach to the platform-based economy. *Policy & Internet*, 9(4), 374–394.

- Sur, S. (2012). La créativité du Droit International. Cours Général de Droit International Public. In *Recueil des Cours: Collected Courses of the Hague Academy of International Law* 37-415 (Vol. 362). Brill Nijhoff Publishers.
- Suzor, N. (2018). Digital constitutionalism: Using the rule of law to evaluate the legitimacy of governance by platforms. *Social Media + Society*, 4(3), 1–11. <https://journals.sagepub.com/doi/pdf/10.1177/2056305118787812>
- Svantesson, D. J. B. (2020). Scope of jurisdiction online and the importance of messaging—lessons from Australia and the EU. *Computer Law & Security Review*, 38, 105428.
- United Nations. (2017). *United Nations model double taxation convention between developed and developing countries*. [https://www.un.org/esa/ffd/wp-content/uploads/2018/05/MDT\\_2017.pdf](https://www.un.org/esa/ffd/wp-content/uploads/2018/05/MDT_2017.pdf)
- Williamson, B., & Bunting, M. (2018). *Reconciling private market governance and law: A policy primer for digital platforms*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3188937](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3188937)



# Digital Platforms: User Status

*Elina L. Sidorenko and Pierre von Arx*

## INTRODUCTION

According to the report of the Ministry of Economic Development of the Russian Federation “The concept of general regulation of the activities of groups of companies developing various digital services based on a single ‘ecosystem’” (Ministry of Economic Development of the Russian Federation, 2021), the main advantages of digital platforms for the main consumers (citizens and companies) are: an unhindered customer journey, a breadth of choice, attractive conditions, reduction of territorial barriers, access to a new client base, and convenient business services (logistics, marketing, etc.).

Among the risks of the platform economy, the authors of the report identify: abuses of customer relationships (for example, sales by misleading), the imposition of goods and services, irresponsibility of the

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platform at the final cost, goods, and services, and violations of consumer rights.

If the risks associated with the abuse of a dominant position are in many ways similar to the risks of a classic business, then the issues of protecting consumer rights and determining the status of platform employees are still seen as unresolved, largely due to a lack of understanding of which a regulatory model should be recognized as the basic one and differentiate the legal one, with policy depending on the type of digital platforms.

In particular, it is argued that universal regulation of digital platforms in relation to the protection of user rights is not possible due to significant differences in the activities of the digital platforms themselves (Lobel, 2016). This position has long gone beyond the scope of theory. For example, in California law, the status of new legal entities—transportation network companies—was assigned to digital platforms such as Uber and Lyft. Today, more and more often, American experts advocate a differentiated approach to determining the status of participants in digital platforms, depending on their type and industry.

Without questioning this point of view, it is nevertheless difficult to deny the need to determine a universal basis for regulating the rights and obligations of platform users. First of all, questions arise in terms of fixing the company's responsibility for a product or service of inadequate quality, etc. The solution of these issues requires experts to answer the question of whether modern law is able to satisfy the demands of the platform economy or new legal structures should be proposed reflecting the economic features of relations “digital platform—client.”

## METHODOLOGY

This chapter is based on a set of general scientific methods of cognition: analysis, synthesis, research, deduction, and generalization. The work is not a formal legal relationship to a group of users belonging to the category of consumers. The status of digital platform clients takes into account the technological specifics of online services as well as current trends in the development of local, administrative, and antitrust laws. System analysis revealed the relationship between the consumer and the digital platform as a set of changing characteristics, manifested by features, legal, and technological processes.

The extrapolation method made it possible to study the status of the platform client through an assessment of statuses similar in legal nature (consumers, agents, employees, etc.), and the statistical method and the method of summarizing and grouping judicial practice made it possible to assess the stability and effectiveness of existing models of legal regulation.

## RESULTS

In the doctrine of law, the idea is often heard that consumer protection issues in relation to the digital economy are not of fundamental importance. Most of these issues are resolved within the framework of antimonopoly regulation and do not require the adoption of separate laws.

However, this approach seems somewhat superficial. On the one hand, while ensuring a free and competitive market, many issues of protection of the rights of consumers of platforms are resolved by themselves, both in the application of traditional antitrust law and in the framework of the *sui generis* model. On the other hand, there are a number of unsolvable issues in the antimonopoly legislation related to the actual implementation of consumer rights in the event of a legal conflict.

The Center for Strategic Studies Foundation lists among the issues that need to be addressed first:

- the introduction of the obligation of aggregators to take reasonable proportionate actions to establish the reliability of information provided by sellers (executors) (taking into account transaction costs of sites);
- the introduction of liability of the aggregator to the consumer in case of non-performance and/or improper performance of the contract by the seller (executor), if the consumer has the impression that the counterparty is the aggregator;
- the possibility of liability of the aggregator in the absence of consumer confidence, but in the presence of a decisive influence of the aggregator on the activities of sellers (performers), predetermining their actions and the terms of contracts with consumers;
- regulation of the sale to consumers through marketplaces of products that do not meet safety requirements at the level of the EAEU or Russia; and



- regulation of the reputation/ranking/rating system by consumers and other users within the platforms by setting the conditions under which a consumer review can be removed, ensuring transparency and immutability of reviews, etc. (CSR, 2021).

Most of these issues are based on the German doctrine, which assumes liability to the consumer directly of the platform itself, followed by recourse claims against the manufacturer.

Modern law offers several strategies for the legal protection of consumer rights:

- the introduction of general principles for their protection; and
- detailed regulation of individual cases of violation of the rights of customers of digital platforms.

As part of the first strategy, it is important to note the work of the OECD in developing principles for the development of legislation on consumer protection in digital commerce. Among these principles, the OECD lists the following:

- Fair business and advertising practices;
- Appropriate disclosures;
- Effective processes for transaction confirmation and payment;
- Measures to address privacy and security risks;
- Product safety across e-commerce supply chains; and
- Meaningful access to effective mechanisms to resolve disputes (OECD, 2018).

Earlier in 2016, the OECD prepared “Recommendations on consumer protection in digital commerce.” Among them were the following:

1. Consumers in digital commerce should have no less rights than ordinary consumers;
2. Internet businesses must comply with all fair trade, advertising, and marketing standards that apply in normal business activities: the terms of contracts must be honest, advertising must be truthful, customers must be able to refuse a transaction under certain conditions, etc.;

3. All types of information communicated to the client (about a product, transaction, enterprise) must be accurate, simple, truthful, and sufficient for a reasonable person to make a decision. At the same time, the information must meet all these requirements in all languages used by the seller.
4. The transaction should be considered concluded only upon receipt of the client's explicit consent to this. Information about the transaction must be available to the client in full and after its conclusion;
5. Internet payments should be simple and reasonably secure;
6. Digital platforms must provide a working mechanism for resolving disputes from relationships on this platform; and
7. It should be possible to file a complaint directly with the platform management (OECD, 2016).

At the same time, the OECD distinguishes between the status of consumers depending on the type of platform: if the ecosystem trades its product, the usual consumer protection rules apply. If the platform trades someone else's product, then it does not bear any responsibility for these transactions.

This position is supported in the EU Directive on electronic commerce (EU, 2000) (Directive 2000/31/EC of the European Parliament and of the Council of June 8, 2000) on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce"). The directive states that a digital platform is not responsible for the actions of persons for whom it acts as an intermediary, unless it knew about the illegality of these actions and did not take all necessary measures to prevent these actions. In the EU, it is forbidden to retroactively enforce the obligation of platforms to verify the legality of user actions.

This approach led to the fact that the platforms began to move away from what users did on them as much as possible. This prompted the jurisprudence to tighten the requirements for digital platforms.

An approach is gaining popularity in which both the platform and the sellers bear a common responsibility to consumers: the seller is responsible for the product that is actually of poor quality, and the platform is responsible for admitting such a seller to the resource (Helberger & Van Hoboken, 2010).

While agreeing with this position on the merits, it can hardly be called applicable to all types of platforms. The widespread development

of the platform economy has led to the transformation of the “platform–producer–consumer” relationship. Now they are directly dependent on the architecture of the platform and cannot be included in the framework of a universal approach to consumer protection.

It is no coincidence that experts reproach states for their timid position regarding the definition of the status of consumers depending on the nature of the platform.

Perhaps the most daring approaches include the Model Rules for Digital Platforms developed by the European Law Institute (Report of the European Law Institute Model Rules on Online Platforms, hereinafter referred to as the “Model Rules”) (European Law Institute, 2019).

The recommendations to the Model Rules distinguish four types of digital platforms that have a fundamentally different structure of the “platform–client” relationship:

1. online marketplaces where customers can enter into contracts with suppliers;
2. platforms on which providers can display advertisements that allow customers to contact them;
3. platforms offering comparative or other advisory services that identify relevant providers for users; and
4. Platforms that offer reputation systems that allow platform users to rate or review vendors, goods, services, or digital content offered by vendors (European Law Institute, 2019).

Depending on which ecosystem service is the main one for it, the issue of responsibility to the user is decided.

A common feature of these platforms, unlike search services, is that the platforms actually influence the conclusion of the contract between the provider and the user through the rating system, ranking, reputation system, etc.

At the same time, special attention is paid to the obligations of the platform to properly inform the consumer about the supplier.

Before concluding an agreement between the provider and the user, the operator of the digital platform is obliged to inform the user that the user will conclude an agreement with the provider, and not with the operator of the digital platform. Also, when concluding a contract between a user and a provider, the digital platform operator must inform the user

whether the provider offers its goods, services, or digital content as a seller.

If the supplier is not a seller, the platform operator must also inform the user that consumer protection law does not apply to the contract between the supplier and the user. In addition, the operator must ensure that the user communicates with the supplier and is obliged to disclose the address of the supplier (Articles 13 and 14 of the Model Rules).

At the same time, there is a “presumption of information reliability”: the system operator relies on the information provided by the supplier if they do not know and cannot know about its unreliability. In case of “good faith misrepresentation,” the platform is not liable to the consumer for incomplete or incorrect product information.

Model Rules reveal the concept of “prevailing influence of the platform operator.” In the presence of such an influence, the operator bears equal responsibility with the supplier of the product.

The following signs indicate the presence of a predominant influence:

- the contract between the supplier and the user is concluded exclusively through the means provided on the digital platform;
- the operator of the digital platform hides the identity of the supplier or his contact details until the conclusion of the contract between the supplier and the user;
- the digital platform operator uses exclusively payment systems that allow the digital platform operator to retain payments made by the user in favor of the provider;
- the terms of the contract between the supplier and the user are mainly determined by the operator of the digital platform;
- the price to be paid by the user is set by the operator of the digital platform;
- marketing is focused on the operator of the digital platform, and not on suppliers; and
- the digital platform operator promises to monitor supplier behavior and enforce its standards beyond what is required by law (Article 20 of the Model Rules).

These provisions are consistent with the practice of European and American courts in terms of recognizing the liability of digital platforms to users, but at the same time they are advisory in nature.

## DISCUSSIONS

De facto, in modern legal practice, a rule has been formed that constitutes the “gold standard” of platform liability: the operator of a digital platform is liable on an equal footing with the supplier if they directly represent their interests. If the platform only mediates the relationship between the consumer and the supplier, liability arises only for failure to fulfill its direct duties. This rule is reflected in Art. 13 Package Travel Directive (EU), 2015/230275 (EU, 2015).

However, more and more exceptions are being made to this rule. For example, the possibility of bringing the operator to liability on an equal basis with the supplier began to be confirmed by European and national courts.

Thus, the responsibility of the digital platform as a third party not a party to the contract was upheld by the European Court of Justice (CJEU [Court of the Justice of the European Union] C-149/15 [Wathelet]). The European Court of Justice confirmed this position, stating that an intermediary qualified as a seller is liable if an affiliated seller violates user rights (Report of the European Law Institute).

The stability of judicial practice is confirmed by the following cases.

The United States Court of Appeals for the Third Circuit held in *Oberdorf v. Amazon* No. 18-1041 of 03/07/19 that Amazon is the seller of the product because Amazon has gone beyond its “editor” function and taken on an overly active role. directly in the process of selling goods.

Of interest is the case of *Oberdorf v. Amazon.com Inc.* (2019). The plaintiff, Heather Oberdorf, purchased a dog collar from a third-party Amazon seller. While walking the dog, the collar broke and knocked out Heather’s eye. She sued Amazon for damages, and a Pennsylvania court upheld the claim on the grounds that Amazon had sufficient control over the distribution of the dangerous product, could withdraw it from sale, and was the only party from whom Oberdorf could claim damages, so Amazon can be considered the seller.<sup>1</sup>

In other cases, the court did not consider the affiliation of the platform with the supplier of goods to be sufficient. *Philadelphia Indemnity Ins. Co. v. Amazon.com Inc.* Insurance company Philadelphia Indemnity filed a subrogation lawsuit against Amazon seeking damages caused by the fire

<sup>1</sup> [https://www.martindale.com/legal-news/article\\_thomas-thomas-hafer-llp\\_2519310.htm](https://www.martindale.com/legal-news/article_thomas-thomas-hafer-llp_2519310.htm).

of a blender purchased from Amazon. The blender was delivered to the customer via the Amazon shipping system in a box with its logo. The court found Amazon not guilty, because Amazon neither made nor sold the blender.<sup>2</sup>

In *Fox v. Amazon.com Inc. and State Farm Fire and Casualty Co. v. Amazon.com Inc.*, the court also acquitted Amazon of harm caused by the fire of a hoverboard bought on the platform because Amazon did not have proper control over the goods and was not considered a seller.

The French Tourist Association is suing Airbnb for failing to comply with French property law.

The EU Court of Justice ruled in 2019 that Airbnb is an information society, not a real estate broker. Therefore, Airbnb is not required to obtain a license to operate a property rental business and is not required to comply with applicable regulations applicable to the hospitality business. This decision of the EU Court of Justice has the force of precedent and must be respected in all EU countries.<sup>3</sup>

This decision is fully compliant with the Unfair Commercial Practices Directive 2019 (EU, 2019). The directive states that the digital platform operator is not required to make full statements about the supplier of goods, but if such statements are made, the operator is liable to the consumer. In this case, the placement of the statement is considered as confirmation of the information by the platform.

The above court decisions point to the practice of bringing digital platform operators to liability for violating consumer rights, but there are no universal criteria for assessing their guilt.

From these positions, the norms of German and Russian legislation establishing the responsibility of aggregators are of interest.

Pursuant to § 311 of the German Civil Code (hereinafter referred to as “BGB”), a breach of an obligation may be held liable by a person who is not a party to the contract. This is possible when a person contributes to the emergence of special self-confidence and is especially actively involved in the negotiation process and the conclusion of the contract.

This approach is typical for Russian legal practice. After several high-profile lawsuits on compensation for harm caused by Yandex taxi drivers,

<sup>2</sup> <https://www.jdsupra.com/legalnews/and-you-are-not-done-the-future-of-41953/>.

<sup>3</sup> <https://www.bbc.com/news/technology-50851419>.

the Plenum of the Supreme Court, in “On some issues of the application of legislation on the contract for the carriage of goods, passengers and luggage by road and under the contract of transport expedition” dated June 26, 2018 No. 26, specified that the responsibility of the aggregator, to which the client applies to conclude a contract for the carriage of passengers and baggage. The aggregator is liable to the passenger for damage caused during the transportation process, if this person has concluded a transportation contract on its own behalf or on the circumstances of the conclusion of the contract (including information on the website on the Internet, correspondence of the parties when concluding the contract, etc.) a conscientious citizen-consumer could form the opinion that the contract of carriage is concluded directly with this person, and the actual carrier is their employee or a third party involved in the performance of transportation duties.

Subsequently, this approach was enshrined in the Federal Law of July 27, 2018 No. 250-FZ “On Amendments to the Law of the Russian Federation “On Protection of Consumer Rights”; an aggregator is “an organization or an individual entrepreneur that owns a website or a program and provides the consumer, in relation to a certain product, with the opportunity to simultaneously familiarize himself with the seller’s offer to conclude a contract for the sale of goods, conclude such an agreement, and also make an advance payment by transferring funds to the owner of the aggregator within the framework of the existing forms of non-cash payments.”

At the same time, the aggregator is liable to the consumer both for losses caused by the supplier and for providing false or incomplete information, but at the same time, the aggregator is recognized as an operator providing exclusively information services. This means that they should not have a license for transport and other services.

## CONCLUSIONS

The issue of protecting the rights of consumers of digital platforms is directly related to determining the status of online platforms and the nature of their relationship with suppliers.

In the European Union, most online platforms are considered information society service providers (EC Directive on Electronic Commerce [E-Commerce Directive 2000/31/EC]). However, there are no proper

criteria for determining the boundaries of the operator’s information activity.

In 2017, the Court of Justice of the European Union ruled that the Uber service, which consists of connecting a non-professional driver using their own car with a person who wants to use a car, should be considered a transport service, not an information society service, which means that Uber is not subject to EU Directive 2000/31/EC and must be considered a transport company (2017). In another decision in 2019, the court upheld its position. In refusing to recognize Uber as a purely information company, the court emphasized that it directly offered transport services, without which drivers could not transport passengers; therefore Uber has a “decisive influence” on the economically significant aspects of the transport business, and should be held accountable as an organizer of transport services.<sup>4</sup>

Thus, through court decisions and model laws, the practice of determining the boundaries of the responsibility of platforms to consumers is being formed.

In fact, the responsibility of the platform operator directly depends on its control and influence on the services offered. Platforms must control the services they consider most important to their business model. It does not matter if the Platform charges a fee for the services offered. It is much more important whether it participates in pricing, establishes unified payment systems, etc.

The criterion of “control,” which underlies the definition of the boundaries of the site’s responsibility, has led to the emergence of a new pattern: the higher the company’s control over the quality of services, and the higher its responsibility. Digital platforms have responded to this situation by looking for options to weaken control over the provision of services and, as a result, weaken consumer protection mechanisms.

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<sup>4</sup> What makes Uber and Airbnb different in the eyes of the EU—and why it matters. <https://theconversation.com/what-makes-uber-and-airbnb-different-in-the-eyes-of-the-eu-and-why-it-matters-121708>. Accessed 23 March 2020.



## REFERENCES

- Center for Strategic Research Foundation (CSR). (2021). *Abstract of the study on current issues in ecosystem regulation*. <https://www.csr.ru/upload/iblock/cb1/ghds1y1rnejvy2zzeo2dow249v9932uc.pdf>
- EU. (2000). *Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (“Directive on electronic commerce”)*.
- EU. (2015). Directive (EU) 2015/2302 of the European Parliament and of the Council of 25 November 2015 on package travel and linked travel arrangements, amending Regulation (EC) No. 2006/2004 and Directive 2011/83/EU of the European Parliament and of the Council and repealing Council Directive 90/314/EEC. *Official Journal L 326*, pp. 1–33. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L2302>. Accessed 9 August 2021.
- EU. (2019). Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules. *Official Journal L 328*, pp. 7–28. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L2161>
- European Law Institute. (2019). *Model Rules on Online Platforms*. [https://www.europeanlawinstitute.eu/fileadmin/user\\_upload/p\\_eli/Publications/ELI\\_Model\\_Rules\\_on\\_Online\\_Platforms.pdf](https://www.europeanlawinstitute.eu/fileadmin/user_upload/p_eli/Publications/ELI_Model_Rules_on_Online_Platforms.pdf). Accessed 4 August 2021.
- Helberger, N., & Van Hoboken, J. (2010). Little brother is tagging you—legal and policy implications of amateur data controllers. *Computerrecht International*, 4, 101–109. [https://unctad.org/meetings/en/Contribution/dtl-eWeek2017c05-occd\\_en.pdf](https://unctad.org/meetings/en/Contribution/dtl-eWeek2017c05-occd_en.pdf)
- Lobel, O. (2016, March 4). *The Law of the Platform*. *Minnesota Law Review*. *San Diego Legal Studies* (Paper No. 16-212). <https://ssrn.com/abstract=2742380>
- Ministry of Economic Development of the Russian Federation. (2021). *The concept of general regulation of the activities of groups of companies developing various digital services based on one “ecosystem”*. [https://www.economy.gov.ru/material/departments/d31/koncepciya\\_gos\\_regulirovaniya\\_cifrovyh\\_plattform\\_i\\_ekosistem/](https://www.economy.gov.ru/material/departments/d31/koncepciya_gos_regulirovaniya_cifrovyh_plattform_i_ekosistem/)
- OECD. (2016). *Consumer Protection in E-commerce OECD Recommendation*. <https://www.oecd.org/internet/consumer/ECommerce-Recommendation-2016.pdf>

OECD. (2018). *Toolkit for protecting digital consumers: a resource for G20 policy makers*. <https://www.oecd.org/internet/consumer/toolkit-for-protecting-digital-consumers.pdf>



# Definition of “Digital Platforms”

*Elina L. Sidorenko*

## INTRODUCTION

The development of digital platforms is one of the most sustainable and at the same time large-scale areas of development of the modern economy. According to the OECD, a new stage of globalization, expressed in particular in the process of cross-border movement of data and information, is transforming international trade in goods and services (OECD-WTO, 2019). In particular, the need for cross-border movement of services is decreasing; the demand and supply of goods are determined by digital virtualization algorithms; priorities are shifting in favor of digital services and products; and the philosophy of the relationship between the consumer and the seller is changing. These processes are most pronounced in the activities of digital platforms and ecosystems.

According to experts, companies using platform solutions achieve greater economic benefits in the form of accelerated growth in labor productivity and in the optimization of logistics and cooperation

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compared to companies in the analog economy (Formation of a portfolio of digital industrial solutions using powerful business ecosystems. Deloitte Insights (2020)). Cross-border digital platforms such as Facebook, Google, and Apple, with billions of users around the planet, can successfully compete with the traditional largest multinational corporations in the world (Cohen, 2017).

Today, 1 million EU businesses already sell goods and services through online platforms, and more than 50% of SMEs operating through online marketplaces sell goods and services abroad. As noted in the European Commission report “Online Platforms and the Digital Single Market. Opportunities and Challenges for Europe,” “the platform economy provides major innovative opportunities for European start-ups as well as existing market operators to develop new business models, products and services. Europe has a thriving startup community with dynamic entrepreneurs targeting new opportunities in the collaborative economy, energy, healthcare, banking, creative content and more. For example, applications created by European developers account for 30% of the global revenue of the leading application distribution platforms” (European Commission, 2016).

The UNCTAD report “Digital Economy Report 2021. Cross-Border Data Flows and Development: Whom the Data Flow Is For” states that the largest digital platforms—Apple, Microsoft, Amazon, Alphabet (Google), Facebook, Tencent, and Alibaba—are increasingly investing in all parts of the global data value chain. For example, Amazon has invested \$10 billion in satellite broadband, while Amazon, Apple, Facebook, Google, and Microsoft were the biggest buyers of AI start-ups between 2016 and 2020. The four major digital platforms (Alibaba, Amazon, Google, and Microsoft) accounted for 67% of global cloud infrastructure service revenue in the last quarter of 2020 (UNCTAD, 2021).<sup>1</sup>

The number of platforms has quintupled in the last decade, being concentrated in a few countries, mainly in the US and, to a lesser extent, in India and the UK. That in itself has led to a growing digital divide between different parts of the world. 96% of all investments in digital work platforms are concentrated in North America, Europe, and Asia. About 70% of the revenue generated from digital labor platforms or

<sup>1</sup> <https://news.un.org/en/story/2021/09/1101542>.

income is concentrated in just two countries: the US (49%) and China (22%).<sup>2</sup>

The active development of digital platforms not only led to qualitative shifts in the economy, but also raised the question of the legal regulation of this area. In an effort to offer a universal algorithm for the legal regulation of digital platforms, states are guided by the creation of guarantees for the security of digital transactions by determining their viability and tort, and are looking for a “golden mean” in the issue of regulation and self-regulation, and regulation of digital platforms.

The problem, however, lies in the fact that a universal definition of digital platforms has not yet been developed, and criteria for distinguishing them from related legal institutions (digital commerce, digital services, ecosystems, etc.) corresponding to modern economic trends have not been proposed.

Given the discrepancies in the definition of the legal features of digital platforms, it is fundamentally important for experts to focus on the search for legal features of digital platforms and to identify the main points on which the legal framework for the legal regulation of the platform economy should be built.

## METHODOLOGY

The process of studying the law of digital platforms requires the use of not only humanitarian methods of analysis, but also the introduction of methods of cybernetics and informatics. In addition to using philosophical methods (principles of dialectics), general scientific (analysis, synthesis, induction, deduction, concretization, modeling), and private scientific legal methods, the author used the principles of mathematical modeling, formalization, and virtualization of relations between participants in digital contracts as auxiliary methods.

The system method has significantly expanded the scope of scientific research. It provided a comprehensive application of humanitarian information materials and made it possible to consider issues of digital law through the prism of the transformation of traditional legal relations in the context of technological development.

<sup>2</sup> <https://www.aa.com.tr/en/science-technology/digital-platforms-creating-new-labor-challenges-un/2154636#>.

The system analysis proposed in the paragraph is based on the following key methodological thesis: modern digital platforms are new legal institutions that should be built into the existing legal system. There can be no right to digital platforms, just as there can be no right to technology. Any legal system is the regulation of relations between people. And therefore, the law of digital platforms should be considered based on the general principles of regulation of legal relations without direct reference to specific technologies or platform solutions.

Given this thesis, the present study is focused on finding such qualities and properties of digital platforms that would make it possible to explain their nature, focusing on traditional legal concepts, while at the same time taking into account the technological specifics of the platform. Only if this requirement is observed is it possible to build an adequate system of guarantees for the protection of users of digital platforms and seamlessly “implant” the rights of digital platforms into modern legislation.

## RESULTS

Despite the widespread development of the platform economy, there is no universal definition of digital platforms. This is due to a number of circumstances: the relative novelty of digital platforms, the diversity of their types, and most importantly, the lack of a single starting point in the analysis of this new legal institution.

Depending on which sign of digital platforms experts consider key, there are three main approaches to their definition:

- digital platform as a way to provide a certain type of service (service model);
- digital platform as a special technological solution (technological model); and
- digital platform as a digital ecosystem (ecosystem model).

The development of ideas about the legal nature of digital platforms began with their connection to the Internet and the nature of the services provided (service model).

Initially, their definition was based on their digital nature: that is, work based on and at the expense of the Internet (Nooren et al., 2018). Within this concept, digital platforms are defined solely as a set of digital services

and are not directly tied to specific companies. For example, one company can own multiple digital platforms, such as Apple owning Apple Music and the App Store (Khan, 2019).

Thus, the service model allows us to consider digital platforms as a kind of legal asset—a set of software and hardware elements that provide services.

This position went beyond theory. Thus, the National Digital Council of France defines a digital platform as “a service that performs an intermediary function when accessing information, services or goods. These services organize and prioritize content for presentation to end users” (Conseil d’État de la République française, 2014). The proposed definition of online platforms is based on stakeholder awareness of the impossibility of identifying hosts with a hybrid nature of the platform.

The focus of the service model is the nature of cooperation between sellers and buyers of goods and services. It is the use of cross-network principles that makes it possible to create an algorithm for the legal relations of the parties and connect several types of agents within the same space. It is this argument that formed the basis of the OECD definition of digital platforms. In the OECD report, they are defined as online services that are intermediaries between different groups in the purchase, sale, and exchange of various goods and services, usually collecting and using huge amounts of data to provide their services (in particular, e-commerce platforms, peer-to-peer networks, peer-to-peer platforms, social networks, and search engines) (OECD, 2021a, 2021b).

Without questioning this approach, it is nevertheless important to note that an overly broad approach to online platforms as a technological base of services does not allow a distinction between platforms, mobile applications, and websites, which negatively affects the quality of their regulation.

In the search of criteria for differentiating between digital platforms and websites, it has been proposed to consider platforms as a technological model of intermediation. In particular, Professor Lobel defines a digital platform as a set of intermediary services provided wholly or in large part using the Internet. The author emphasizes that the fundamental difference between digital platforms is that they do not provide services on their own, do not have appropriate assets, do not bear associated risks, and, ultimately, do not engage in core activities in their field at all. That is, AirBNB does not rent housing, and Yandex itself does not carry out transportation, does not deliver food, etc. (Lobel, 2016).

Other authors also point to the intermediary nature of digital platforms. In their opinion, digital platforms are a set of online services for connecting stakeholders, as a result of which they can interact without significant transaction costs (Bauer & Prado, 2020).

Emphasizing the intermediary nature of digital platforms, other researchers expand the circle of participants in the relationship, including not only the producer and consumer of the service and the agent, but also the developers of the platform (Parker et al., 2016).

An interesting position regarding the interaction of users of online platforms is presented by the Australian Competition and Consumer Commission (hereinafter referred to as “ACCC”). The ACCC Digital Platforms Inquiry 2019 report defines them as “applications that simultaneously serve multiple groups of users, with each group of users benefiting from the use of the platform through the presence of other users” (Australian Competition and Consumer Commission, 2019).

Another approach to the definition of digital platforms can be conditionally called technological.

Within this approach, a digital platform is a complex system of technologies, computer programs, and computer equipment and devices that provides a set of service capabilities on the basis of which many different products can be developed and deployed. Operating systems (Microsoft Windows, iOS, Android) are good examples of technological platforms that support a wide range of digital applications and services (services), often provided by third-party providers (Kartskhiya, 2020; Sidorenko et al., 2021; Ibáñez, 2021)

Digital platforms are also defined as cyber-physical structures (organizations, systems, technologies) focused on creating value by providing and facilitating direct interaction and exchange between two or more groups of external users within a single digital ecosystem (Osipov et al., 2018).

It is the technological approach that formed the basis for the definition of online platforms given by the Supreme Eurasian Economic Council (AES, 2017): digital platforms are ecosystems; that is, business models that combine several groups of products, services, and information to meet customer needs.

This approach was reflected in the Concept of General Regulation of the activities of groups of companies developing various digital services based on one “ecosystem,” which was prepared by the Russian Ministry of Economic Development in May 2021 (Ministry of Economic Development of the Russian Federation, 2021). According to this document,



a digital platform is a business model that allows consumers and suppliers to connect online to exchange products, services, and information.

Among the advantages of digital platforms for citizens, the Concept names quick and convenient satisfaction of final needs, a hassle-free customer journey, a wide choice, attractive conditions, and a reduction in territorial barriers. Benefits for business include access to a new client base throughout the Russian Federation, and convenient business services (logistics, marketing, etc.).

The consideration of digital platforms through ecosystems has become a major trend in modern European law. Of interest is the draft regulation “On Digital Markets” (European Parliament, 2020), published in the European Union on December 15, 2020. DMA limits its scope to only a certain kind of platform—platforms with basic platform services.

The main platform services include: e-commerce services, search engines, social networks, video hosting, communication services, cloud services, operational services, and advertising services (OECD, 2019; UN, 2021). This approach allows for the development of competition in the digital market, but at the same time generates a dispute about how digital platforms and gatekeepers relate to each other in the context of DMA and the ecosystem.

In particular, it is proposed to consider the platform as a technical and institutional infrastructure for the interaction of various participants. An ecosystem is a group of complementary goods and services that form a set that can be consumed by the end user and can create a “closed” effect for the user within the ecosystem, with the result that the person who controls the ecosystem wins. The ecosystem is often based on the platform, but is not limited to it and reflects not a technical aspect (mediation between different participants) but intra-organizational relationships. As for the gatekeeper, it means the dominant player in the digital market; the gatekeeper can be both a platform (platform of players) and an ecosystem as a business model for the circulation of goods and services (Jacobides & Lianos, 2021).

Thus, under the influence of DMA, there is a gap in the understanding of digital platforms and ecosystems. This means that the circulation of goods can be carried out on the basis of several sites, and platforms can become part of several ecosystems at once.

The European Commission proposes a broad definition of digital platforms. The commission includes online marketplaces, social media,

content stores, app stores, price comparison sites, sharing economy platforms, and search engines.<sup>3</sup>

In our opinion, when defining a digital platform, one should pay attention not only to its technological shell, but also to those key features that determine the place of the platform in modern economics and law.

Among these signs, experts name the following:

- high scalability—i.e. the ability to adapt their business models and lists of products offered to new conditions;
- low transaction costs—for example, carsharing has existed since the 1980s, but has become widespread only now because of the ability to carry out all operations for free and via the Internet;
- strong network effect—platforms unite wide groups of users who independently exchange goods and information, which ensures the success of the platform; and
- special market dynamics—with the simultaneous emergence of two similar digital platforms, there is a high chance that one of the platforms will almost completely take away customers and the market from the second platform.

The report “Online Platforms and the Digital Single Market Opportunities and Challenges for Europe,” prepared by Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions Online platforms, highlights the following main characteristics of digital platforms:

- they have the ability to create and shape new markets, to challenge traditional ones, and to organize new forms of participation or conducting business based on collecting, processing, and editing large amounts of data;
- they operate in multisided markets but with varying degrees of control over direct interactions between groups of users;
- they benefit from “network effects,” where, broadly speaking, the value of the service increases with the number of users;

<sup>3</sup> <https://digital-strategy.ec.europa.eu/en/policies/online-platforms>.

- they often rely on information and communication technologies to instantly and effortlessly reach their users; and
- they play a key role in digital value creation, notably by capturing significant value (including through data accumulation), facilitating new business ventures, and creating new strategic dependencies (European Commission, 2016).

I believe these signs are of great importance for the economy, but do not reflect the legal nature of digital platforms.

The legal features of a digital platform include:

- a set of technologies that provide network interaction between producers and consumers of goods and services;
- the content of the provided platform services (core platform services); and
- the special status of the platform as a digital intermediary between the seller and the buyer of goods (services).

These signs are reflected in the definition of a digital platform presented in the Report of the Central Bank of Russia “Ecosystems: Approach to Regulation.” An ecosystem (digital ecosystem) is defined as a set of services (including platform solutions) of one group of companies or a company and partners that allow users to receive a wide range of products and services within a single seamless integrated process. An ecosystem may include closed and open platforms. The line of services offered by an ecosystem meets most of the client’s daily needs or is built around one or more of its basic needs (ecosystems at the initial stage of their formation or niche ecosystems) (CBR, 2021).

It is characteristic that, unlike the Ministry of Economic Development of Russia, the Central Bank of Russia does not share the concepts of “digital platforms” and “ecosystems,” which at the present stage of development of the platform economy is correct and reasonable.

## DISCUSSIONS

The main legal factor of digital platforms is the insufficient adaptation of modern legislation to their regulation.

This is explained not only by the fact that the relations between the participants in legal relations and the digital nature of transactions do not correspond to traditional ideas about the terms of the contract, but by a much deeper problem, lying in the lack of agreement on the general direction of the development of legislation on digital platforms.

In fact, the experts faced a difficult choice. What to prefer: self-regulation of digital platforms based on user agreements, or total regulation of relations? Should legislation regulate all relations between the parties, or only minimize risks?

To determine the basic model of regulation, experts propose answering three main questions:

- Will the proposed rules affect the business model of a particular digital platform?
- Will the proposed rules have a beneficial effect on the public interest?
- Will the proposed norms harm the interests of society?

However, the answers to these questions should be individual and take into account the unique characteristics of each digital platform (Nooren et al., 2018).

As noted in the Report of the Central Bank of Russia, “national regulation should, first of all, ensure the protection of the competitive environment in the domestic market in the context of a potentially rapid increase in the dominance of global ecosystems” (CBR, 2021).

The European Commission lists the following key principles for the design of legislation on digital platforms:

- a level playing field for comparable digital services;
- responsible behavior of online platforms to protect core values;
- transparency and fairness to maintain user confidence and protect innovation; and
- open and non-discriminatory markets in a data-driven economy (European Commission, 2016).

Among the risks that should be minimized by law today, the Ministry of Economic Development of Russia names: unreasonable competition, tax risks, and risks of loss of control over the use of data (personal and commercial) (Concept).

These risks form a request for the development of state policy in the field of regulating the activities of digital platforms and ecosystems and the formation of a secure digital environment.

However, neither at the interstate level, nor at the level of individual states, has a framework for such regulation been built.

The doctrine proposes considering the following ways of developing law to regulate digital platforms:

- obligatory free exchange of client bases between platforms;
- reducing the ability of digital platforms to collect user data and establishing the obligation to identify customers and store their data; and
- establishing the right to check the information security policy of digital platforms by third parties (Westerlund & Enkvist, 2016).

The same idea is expressed by some authors, arguing that digital platforms are designed to operate outside the legal field (Cohen & Zehngbot, 2014). In this regard, there is a trend to ban digital platforms or force their adaptation (Lobel, 2016).

For example, in 2015, the city of Orlando, Florida made it mandatory for all taxi drivers, including those who use digital platforms, to charge \$2.4 per mile, up from 75 cents per mile for Uber.<sup>4</sup> This has deprived the digital platform of a competitive advantage over conventional taxis.

In some cases, digital platforms are forced to cease their activities. In particular, Aereo service existed in 2012–2014. This platform provided broadcasting of cable channels over the Internet. Broadcasters sued Aereo for failing to pay secondary broadcast royalties. As a result, in 2014, the US Supreme Court in *American Broadcasting Cos., Inc. v. Aereo Inc.* recognized the work of Aereo as illegal. The decision was agreed by the Department of Justice and the US Copyright Office, who feared that other countries would accuse the US of violating international agreements on the protection of intellectual property.<sup>5</sup>

<sup>4</sup> <https://www.orlandosentinel.com/news/breaking-news/os-uber-taxi-drivers-20150123-story.html>.

<sup>5</sup> [https://en.wikipedia.org/wiki/American\\_Broadcasting\\_Cos.,\\_Inc.\\_v.\\_Aereo,\\_Inc.](https://en.wikipedia.org/wiki/American_Broadcasting_Cos.,_Inc._v._Aereo,_Inc.)

In 2019, a German court banned Uber, citing its drivers' lack of driving licenses and antitrust violations.<sup>6</sup> Now in Germany there is a standard taxi service UberX, whose drivers are properly licensed and insured.<sup>7</sup>

On December 15, 2020, the European Commission submitted a draft law on a new regulation of the digital market (European Parliament, 2020). The purpose of the Law is to create a unified legal framework to prevent unfair trade practices faced by companies and consumers when using the services of the largest platform companies acting as so-called gatekeepers to the EU single market.<sup>8</sup>

The Digital Markets Act imposes certain obligations and prohibitions on gatekeepers that they will need to comply with in their daily activities in order to ensure a fair and open digital market, such as:

1. Gatekeepers must allow users to uninstall any pre-installed software applications.
2. Gatekeepers must allow the installation and effective use of third-party software applications or software application repositories on the gatekeeper's own operating system.
3. Gatekeepers should provide efficient portability of data generated by end user activities.
4. Gatekeepers shall refrain from combining personal data obtained from the main services of the platform with personal data from any other services offered by the gatekeeper, or with personal data from third-party services, unless the person whose personal data does not agree with this.
5. Gatekeepers should refrain from treating their own rating services and products more favorably than similar third-party services or products.<sup>9</sup>

At the same time, this activity should combine elements of power influence and self-regulation. The combination of these methods will

<sup>6</sup> <https://www.reuters.com/article/us-uber-court-idUKKBNIYN171>.

<sup>7</sup> <https://www.quora.com/Is-Uber-banned-in-Germany>.

<sup>8</sup> <https://tem.fi/en/digital-markets-act>.

<sup>9</sup> <https://tem.fi/en/digital-markets-act>.

allow users to make more informed decisions, simplify implementing these steps, and provide constant review and evaluation of the work of digital platforms.

## CONCLUSIONS

The current development of digital platforms does not yet make it possible to talk about the creation of reliable legal guarantees for the protection of platform users. At the same time, there is every reason to say that we are currently witnessing the emergence of a new legal phenomenon—the customary law of digital platforms. As Professor Larry Baker notes, “the American company Walmart, which operates the world’s largest wholesale and retail chain, has become an important participant in the transformation of the lawmaking process. This transformation challenges the state’s monopoly on regulation and can help build a global system of customary law” (Backer, 2007).

Characteristic features of customary law are its general acceptance, adaptability, and flexibility. These principles fully reflect the needs of the new platform economy.

Legal regulation of digital platforms can only be effective if the scope and goals of legal regulation are clearly defined. It is fundamentally important to single out a block of key issues that should be in the nature of strict prescriptions and prohibitions, and at the same time ensure discreteness of regulation in other issues.

The problem, however, is to draw the right line between the spheres of imperative (legal law) and dispositive (law of user agreements) methods of legal regulation.

Among the areas that require proper centralized regulation, it is possible to distinguish:

- antimonopoly regulation and development of competition. However, while recognizing the hegemony of the state in this area, it should be noted that regulation must be correct and careful. Thus, in particular, within the framework of the chosen direct memory access, a special *sui generis* regime is established for gatekeepers. However, with the introduction of a new regime, states begin to unreasonably abandon the already-established practice of antimonopoly regulation. In essence, the legislator abstracts from the experience gained in the application of antitrust law, while at

the same time relies heavily on antitrust proceedings in establishing the duties of gatekeepers (Basedow, 2021; Kenny, 2021)

- protection of personal data of users of online platforms;
- ensuring the required level of cybersecurity of the system; and
- determination of the regime of offenses of operators and owners of digital platforms.

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## REFERENCES

- AES. (2017). *Decision of the Supreme Eurasian Economic Council of October 11, 2017 N 12 “On the Main Directions for the Implementation of the Digital Agenda of the Eurasian Economic Union until 2025”*. [https://docs.eaeunion.org/docs/en-us/01415213/scd\\_10112017\\_12](https://docs.eaeunion.org/docs/en-us/01415213/scd_10112017_12)
- Australian Competition and Consumer Commission. (2019). *Digital Platforms Inquiry – final report*. <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>
- Backer, L. C. (2007). Economic globalization and the rise of efficient systems of global private lawmaking: Wal-mart as global legislator. *Connecticut Law Review*, 39(4), 3–46.
- Basedow, J. (2021). Das Rad neu erfunden: Zum Vorschlag für einen Digital Markets Act. *ZEuP*, pp. 222–226 (In German).
- Bauer, J. M., & Prado, T. S. (2020). *Digital Platforms and Innovation: Lessons for Innovation Policy and Regulation* (Quello Center Working Paper, TPRC48). <http://dx.doi.org/10.2139/ssrn.3749670>
- CBR. (2021). *Ecosystems: approaches to regulation. Report for public consultations*. [https://www.cbr.ru/Content/Document/File/119960/Consultation\\_Paper\\_02042021.pdf](https://www.cbr.ru/Content/Document/File/119960/Consultation_Paper_02042021.pdf) (In Russian).
- Cohen, J. E. (2017). Law for the platform economy. *University of California*, 51(133), 199–201. [https://lawreview.law.ucdavis.edu/issues/51/1/symposium/51-1\\_Cohen.pdf](https://lawreview.law.ucdavis.edu/issues/51/1/symposium/51-1_Cohen.pdf)
- Cohen, M., & Zehngbot, C. (2014). What’s old becomes new: Regulating the sharing economy, *Boston Bar Journal*.



- Conseil d'État de la République française. (2014). *Le numérique et les droits fondamentaux Etude annuelle*. <https://www.alain-bensoussan.com/avocats/plateforme-en-ligne-definition/2017/03/02/> (In French).
- Deloitte. (2020). *Building a portfolio of digital industrial solutions leveraging powerful business ecosystems*. <https://www2.deloitte.com>
- European Commission. (2016). *Online platforms and the digital single market. Opportunities and challenges for Europe*. <https://digital-strategy.ec.europa.eu/en/policies/online-platforms>
- European Parliament. (2020). *Digital markets act*. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690589/EPRS\\_BRI\(2021\)690589\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690589/EPRS_BRI(2021)690589_EN.pdf)
- Ibáñez, C. P. (2021). The role and limits of competition law in digital markets: On the reports and the reforms proposed. *ZEuP*, 8, 33–34.
- Jacobides, M. G., & Lianos, I. (2021). Ecosystems and competition law in theory and practice. *CLES Research Paper Series 1/2021* (pp. 5–10). <https://www.ucl.ac.uk/cles/sites/cles/files/cles-1-2021.pdf>
- Kartskhiya, A. A. (2020). Digital corporations in a new quality of management. *Civil Law*, no. 4, pp. 22–26.
- Kenny, P. (2021). Digital platforms creating new labor challenges: UN. *AA*. <https://www.aa.com.tr/en/science-technology/digital-platforms-creating-new-labor-challenges-un/2154636>
- Khan, L. (2019). The separation of platforms and commerce. *119 Columbia Law Review* 973. <https://ssrn.com/abstract=3180174>
- Lobel, O. (2016). *The Law of the Platform Minnesota Law Review* (San Diego Legal Studies Paper No. 16-212). <https://ssrn.com/abstract=2742380>
- Ministry of Economic Development of the Russian Federation. (2021). *The concept of general regulation of the activities of groups of companies developing various digital services based on one “ecosystem”*. [https://www.economy.gov.ru/material/departments/d31/koncepciya\\_gos\\_regulirovaniya\\_cifrovyh\\_plattform\\_i\\_ekosistem/](https://www.economy.gov.ru/material/departments/d31/koncepciya_gos_regulirovaniya_cifrovyh_plattform_i_ekosistem/)
- Nooren, P., van Gorp, N., van Eijk, N., & Fathaigh, R. (2018). Should we regulate digital platforms? A new framework for evaluating policy options. *Policy & Internet*, 10, 264–301. <https://doi.org/10.1002/poi3.177>
- OECD. (2019). Artificial intelligence in society. *OECD Publishing*. <https://doi.org/10.1787/eedfee77-en>
- OECD. (2021a). *Model Reporting Rules for Digital Platforms: International Exchange Framework and Optional Module for Sale of Goods*. <https://www.oecd.org/tax/exchange-of-tax-information/model-reporting-rules-for-digital-platforms-international-exchange-framework-and-optional-module-for-sale-of-goods.pdf>

- OECD. (2021b). *Model Rules for Reporting by Platform Operators with respect to Sellers in the Sharing and Gig Economy*. <https://www.oecd.org/tax/exchange-of-tax-information/model-rules-for-reporting-by-platform-operators-with-respect-to-sellers-in-the-sharing-and-gig-economy.pdf>
- OECD-WTO. (2019). *Handbook on Measuring Digital Trade (SDD/CSSP/WPTGS)*. [www.oecd.org](http://www.oecd.org)
- Osipov, Y. M., Yudina, T. N., & Geliskhanov, I. Z. (2018). Digital platform as an institution of the era of the technological. *Economic Strategies*, 5, 22–29. (In Russian).
- Parker, G., Van Alstyne, M., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. W. W. Norton & Company.
- Sidorenko, E. L., Arzumanova, L. L., & Amvrosova, O. N. (2021). Adaptability and flexibility of law in the context of digitalization. *Engineering Economics: Decisions and Solutions from Eurasian Perspective* (pp. 523–532). Cham.
- UN. (2021). *New approach needed to make digital data flow beneficial for all*. <https://news.un.org/en/story/2021/09/1101542>
- UNCTAD. (2021). *Cross-border data flows and development: For whom the data flow*. Digital Economy Report 2021. [https://unctad.org/system/files/official-document/der2021\\_en.pdf](https://unctad.org/system/files/official-document/der2021_en.pdf)
- Westerlund, M., & Enkvist, J. (2016). *Platform Privacy: The Missing Piece of Data Protection Legislation*. <https://www.jipitec.eu/issues/jipitec-7-1-2016/4390>



# Employment Status of Digital Platform Workers

*Elina L. Sidorenko and Maxim I. Inozemtsev*

## INTRODUCTION

Nowadays, digital platforms are becoming the new economic reality. They not only change traditional business processes, but also transform the working environment and lead to qualitative shifts in the structure of the labor market.

The World Economic Forum experts claim that about 0.5–2% of the workforce in advanced economies is employed in platform work (World Economic Forum, 2021).

Between 2016 and 2020, labor platform revenues almost quintupled from around €3 billion to around €14 billion (De Groen et al., 2021). Today, more than 28 million people in the EU work through digital work platforms. This number is expected to reach 43 million in 2025 (European Commission, 2016). McKinsey & Company experts argue that it is precise because of the development of the digital platform that

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1.46 million jobs will disappear in fifteen years, but 1.4 new vacancies with fundamentally new competencies will appear (McKinsey & Company, 2017).

The UN estimates that the use of remote platforms in the gig economy is growing globally by more than 25% per year (UN, 2021). The European Commission believes that today there are more than 500 digital work platforms operating in the EU alone (European Commission, 2016).

Somewhat different figures are given by the International Labor Organization: the number of digital labor platforms increased from 142 to 777 in the period from 2010 to 2020 (ILO, 2021). A few global firms in the United States and China account for 90% of the market capitalization of the world's top 70 digital platforms (Dun et al., 2020). The share of Europe is 4%, while the share of Africa and Latin America combined is 1% (UN, 2021).

At the same time, most platform employees are classified as self-employed or contractors working on the basis of a public accession agreement. Among the 28 million people estimated to be working through digital work platforms, most people are indeed self-employed. However, there may be up to 5.5 million “false” self-employed people (SWD, 2021).

The distinction between workers and the self-employed is becoming increasingly blurred. For many people working on labor platforms, access to the protection of their labor rights is limited, but together they have the opportunity to work remotely with self-adjustment of working hours.

The ILO released the Global Employment and Social Outlook: Trends 2021 report, in which it noted the state of the employment crisis due to the job gap. One of the opportunities for the capitalization of human resources is to change the model of work on online platforms, subject to the protection of the rights of the employed (ILO, 2021).

In order to optimize the operation of platforms, countries are trying to expand the rights of workers. In particular, mandatory platform insurance contributions against accidents (France), social security for the self-employed (Brazil), benefits for industrial injuries (Indonesia), sickness benefits (Ireland), etc., are being introduced.

The problem, however, is that the actions taken are not systemic and do not take into account the specifics of digital platforms. In addition, against the background of the uncontrolled growth of ecosystems that

commercialize human labor, few people see the differences in their structures and are able to offer adequate and correct procedures for confirming the status of an employee or self-employed. As Florian A. Schmidt rightly points out, “emerging business models rely on individuals who, as independent contractors, do small jobs in their spare time; an army of more or less unreliable workers who can be hired or fired in an instant. In recent years, literally thousands of digital platforms have emerged for the commercial coordination of digital labor. However, at the moment it remains to be seen how many of these are economically viable in the long run and to what extent new types of work will replace more traditional forms of employment” (2017).

Under these conditions, science is faced with the need for a detailed study of trends in legislation and judicial practice in order to develop evidence-based recommendations and criteria for distinguishing types of employment on labor platforms.

## METHODOLOGY

The authors rely on a systematic method, which made it possible to consider all issues related to the economy and law of digital labor platforms in their unity and interconnection. The work also uses general scientific methods and a formal legal approach to explain a new legal phenomenon—“platform employment.” The comparative legal method made it possible to compare various legal regimes for the regulation and protection of labor rights in the workplace and to assess the effectiveness of these regimes in the context of stimulating employment and the economic situation in individual countries.

Taken together, these methods made it possible not only to analyze the legislation, but also to assess the possibility of borrowing foreign experience for the development of Russian legislation and judicial practice.

## RESULTS

At present, the issue of legal regulation of employment status on digital labor platforms has not even been correctly posed. Experts cannot decide even on a fundamental point: whether it is necessary to introduce special legislation for digital platform workers, or whether it is necessary to adapt

the traditional system to solve new digital problems. Those who advocate adaptation cannot answer for themselves the question of how this adaptation should be built and whether it will be enough to introduce the correct typology of labor platform workers and submit cases to the courts.

In 2018, the International Labor Office published a review in which it outlined 18 conditions for ensuring an appropriate digital work environment: addressing the problem of misclassification of employment; enabling crowdworkers to exercise their freedom of association and collective bargaining rights; application of the prevailing minimum wage at the location of employees; ensuring transparency of payments and fees assessed by the platform; ensuring the possibility of refusing to complete the task; covering the cost of lost work in case of technical problems with the task or platform; establishing strict and fair rules on non-payments; ensuring that terms of service agreements are presented in a readable format, clearly and concisely; informing employees about why they receive unfavorable evaluations; creating and enforcing clear rules of conduct for all users of the platform; providing employees with the opportunity to challenge non-payment, negative assessments of qualification testing; creating a customer screening system that is as comprehensive as employee screening; ensuring that engagement instructions are clear and verified; providing employees with the ability to view and export the full human and machine-readable history of work and reputation at any time; allowing employees to continue working with a client outside of the platform without paying a disproportionate amount of remuneration; ensuring that customers and platform operators respond to employee communications; informing employees about the identity of their customers and the purpose of the work; and ensuring that tasks that may be psychologically stressful and damaging are clearly marked by platform operators in a standard way (ILO, 2018).

At the same time, ILO does not distinguish between employees and the self-employed, guaranteeing everyone equal guarantees of transparency and labor safety. There are 2 types of employees: workers who work on the creation and maintenance of the platform; and workers who were able to find work thanks to the platform (gig workers).

The first attempt to legally define the status of a digital platform worker was made by the European Commission in 2016. The following features were defined in the European agenda for the collaborative economy:

- (1) the employee must actually perform work that has economic value;
- (2) the employee must receive remuneration for it, not being a volunteer;
- (3) the employee must be in a subordinate position; and
- (4) the employer must determine the working conditions, remuneration, and type of activity for the employee (European Commission, 2016).

This decision started a debate about what should be the criteria for distinguishing between workers and the self-employed, and whether these criteria can be applied to all kinds of platforms.

In fact, experts are divided into three camps. Some insist on the need to adjust the current legislation to meet modern challenges; others insist on the need to maintain the framework of traditional regulation in order to preserve the true legal nature of labor relations (Schmidt, 2017); others insist that the regulation of employment platforms is very late, and the practice of determining the status of those employed on digital platforms as a “fait accompli” (Graham et al., 2017). There are also authors who propose abandoning the traditional formulation in favor of a new status—a dependent contractor as a platform employee (Harris & Krueger, 2015).

The problem of finding a universal approach to defining the employment of digital labor platforms is that there is no uniform definition of a worker in the corpus of European social law. In many countries, there is a lot of confusion due to different interpretations of the term “employee” in relation to different branches of law (tax law, migration law, social law). In the context of the internal heterogeneity of European legislation, any generalization can be dangerous and provoke abuse of the right by workers or digital labor platforms.

As an example, consider the status of a food delivery platform courier. Under German law they can be considered an employee, under Italian law a quasi-subordinate worker, under French law a self-employed person, under Belgian law a temporary worker, and under UK law a zero-day contract worker. At the same time, different criteria will be used to determine this status in different countries: tax payments, localization, working hours, etc.

For example, in the Netherlands, a worker is recognized as an employee with a guaranteed minimum wage if they work 15 h a week. In the UK, it is important that the work is done under the supervision of the employer (usually on their premises). If an employee works under

such control, but independently determines the amount of work, a special agreement (zero-hours contract) may be concluded with them, according to which the employee receives payment only for the time that they spent on work or while waiting for work, being at the disposal of the employer (usually, in their room) (Sidorenko et al., 2021). In Italy, to recognize a person as an employee of a digital platform, the regularity and volume of work performed are taken into account,<sup>1</sup> and in Poland, this is answered by the employer's power over the worker.

In the United States, the issue of delimiting the status of an employee and self-employed is usually resolved in the courts. This approach is based on a presumption: a person is recognized as an employee until the opposite is proven by the platform.

Thus, California Law AB5 2020 expressly states that any employees are considered to be employees until the employer proves otherwise.<sup>2</sup> At the same time, employees of digital labor platforms are guaranteed the minimum wage and sick leave.

This rule was based on the case law of *Dynamex Operations West, Inc. v. superior court*.<sup>3</sup>

In 2018, the California Supreme Court heard a lawsuit filed by dynamex drivers. They claimed that they were illegally classified as independent contractors and therefore illegally deprived of the minimum wage. The court ruled that workers are employees for the purposes of wage orders and that the burden of proof to differ is on the organization through passing the "ABC test."<sup>4</sup>

This test involves the establishment of three factors:

- (A) that the worker is free from the control and direction of the employing organization in connection with the performance of the work, both in contract and in fact;

<sup>1</sup> <https://cms.law/en/int/publication/gig-working-platform-companies-and-the-future>.

<sup>2</sup> <https://www.sfchronicle.com/business/article/Senate-passes-AB5-gig-work-bill-tur-ning-14430204.php>.

<sup>3</sup> <https://scocal.stanford.edu/opinion/dynamex-operations-west-inc-v-superior-court-34584>.

<sup>4</sup> *Dynamex Operations W. v. Superior Court*, 4 Cal. 5th 903, 914 (Cal. 2018)//<https://scocal.stanford.edu/opinion/dynamex-operations-west-inc-v-superior-court-34584>.



- (B) the employee performs work that is outside the ordinary activities of the employing organization; and
- (C) the worker is customarily engaged in an independently established trade, occupation, or business of the same nature as the work performed.

The criteria enshrined in the court decision are repeated in the legislation of most states. At the same time, American law gives companies the right to appeal the decision to recognize their workers as employees.

The platform may recognize its workers as self-employed if the following conditions are met:

- the self-employed person can set the price of his services himself;
- the self-employed person can directly negotiate with the client; and
- the self-employed person earns at least twice the minimum wage.<sup>5</sup>

Many companies in the United States seek such permission as it exempts the platform from the obligation to pay the minimum wage, but this requirement is rarely met. In particular, the authorities refused to issue such permission to such digital giants as Uber, Lyft, and DoorDash.<sup>6</sup>

Unlike the United States, in European countries there is no common understanding of either the status of an employee of a digital platform or the criteria for distinguishing it from a self-employed person.

For example, in Germany, an employee is any person who, under a private law contract, is employed by another person to perform work in accordance with instructions and is determined by the other person in such a way that there is a “personal dependence” (Section 611a(1) sentence (1) German Civil Code [BGB]). In December 2020, the German Federal Labor Court confirmed that platform workers must be qualified as employees (decision of the German Federal Labor Court of December 1, 2020—9 AZR 102/20).

In Belgium, the distinction between employees and the self-employed is based on the measurement of four dimensions of freedom:

<sup>5</sup> <https://www.dlawgroup.com/what-is-california-ab5-law/>; [https://en.wikipedia.org/wiki/California\\_Assembly\\_Bill\\_5\\_\(2019\)](https://en.wikipedia.org/wiki/California_Assembly_Bill_5_(2019)).

<sup>6</sup> <https://www.nytimes.com/2019/08/29/technology/uber-lyft-ballot-initiative.html>.

- freedom of expression of the will of the parties expressed in the agreement;
- freedom of organization of working time;
- freedom of labor organization; and
- possibility of hierarchical control.

French policy on the protection of digital platform workers is based on judicial precedents, according to which a worker is recognized as either an employee of the platform or an independent worker. At the same time, the nature of the worker's activity in each specific case is assessed by the court.

The lack of a unified approach to determining the status of a digital platform employee actually paralyzes transnational companies, which are forced in each individual European country to “adapt” to its judicial practice.

Under these conditions, in December 2021, the European Commission issued a release “Commission proposals to improve the working conditions of people working through digital labor platforms,” in which it confirmed its readiness for a comprehensive regulation of employment on digital platforms.

It is assumed that, in the near future, a Directive will be prepared which will determine the status of employment of workers, separate the rights of employees and self-employed, and also create guarantees for the safety of their work on digital platforms. The Directive will develop criteria for classifying persons as employees or self-employed. If the employment conditions of a person correspond to labor relations, then the person will enjoy all social and labor rights that are guaranteed to the employee (the right to the minimum wage, the right to leave, unemployment and sickness benefits, insurance payments, etc.). At the same time, the platforms will have the right to challenge the criteria for classifying employees as employees. In this case, the burden of proving the fact of the absence of an employment relationship will lie solely on them.

In itself, the development of employment criteria is of great importance for digital platforms and workers. For digital platforms, this is primarily the establishment of legal certainty and simplification of business planning, while for employees it is the creation of labor safety guarantees.

An important task of the new Directive should be to create the necessary conditions for public authorities to control the operation of the platform. In particular, the state may require online platforms to provide

all necessary information about the activities of the company and the people who work in it.

Under the new rules, digital platforms such as Uber, Deliveroo, Amazon, and Bolt will be required to renegotiate their contracts with their employees who are freelancers on paper but in reality work full-time.

The issue of legal protection of digital platform workers in Russia is being addressed in an interesting way.

Labor and related relations are regulated by the Labor Code of the Russian Federation (Articles 5, 6, 8–10 of the Labor Code of the Russian Federation), but it does not define the status of digital platform workers and their difference from the self-employed.

An indirect answer to this question is given by the Decree of the Plenum of the Supreme Court of the Russian Federation dated May 29, 2018 N 15 “On the application by the courts of the legislation regulating the labor of employees working for employers—individuals and for employers—small businesses that are classified as micro-enterprises.” It notes, “from a contract for the provision of services for a fee, an employment contract differs in the subject matter of the contract, according to which the contractor (employee) performs not some specific one-time work, but certain labor functions ... Also, under the contract for the provision of services for a fee, the contractor retains the position of an independent business entity, while under an employment contract, the employee assumes the obligation to perform work in a specific labor function (specialty, qualification, position), is included in the employer’s staff, obeys the established work regime and works under the control and guidance of the employer; the contractor under the contract for the provision of services works at his own risk, and the person working under the employment contract does not bear the risk associated with the implementation of his work” (2018).<sup>7</sup>

However, as practice shows, the criteria set by the Supreme Court are not met.

In Russia, the issue of distinguishing between workers and the self-employed is viewed through the prism of the activities of taxi aggregators. They developed their own business model based on the conclusion of

<sup>7</sup> Plenary Ruling of the Supreme Court of the Russian Federation, “On the application by the courts of legislation regulating the labor of employees working for employers—individuals and employers—small businesses that are classified as micro-enterprises,” of May 29, 2018, No. 15, Ros. Gaz., June 6, 2018.

an agency agreement. Taxi aggregators associate themselves with intermediaries providing information services to the customer and service provider.

There are some examples of consideration of claims for the recognition of drivers as employees of Yandex.Taxi LLC, in which the court supported the platform's arguments and did not recognize the relationship as labor. Court decisions are based, as a rule, on formal arguments: the nature of the concluded contract, the driver's ability to refuse the order, or renting a car not from the platform but from another organization.<sup>8</sup>

According to the court, these signs are sufficient to refuse to recognize drivers as employees. However, in their assessments, the courts do not take into account the recommendations given by the ILO regarding the definition of working conditions.

For example, it is not taken into account that Yandex.Taxi establishes control over the driver: it unilaterally establishes employment conditions, determines the minimum and maximum limits for the driver on the line, introduces penalties for refusing to transport a passenger, and introduces a rating system on which the driver's income depends.

In favor of the conclusion that the driver is not an employee of the aggregator is the wording of Art. 12 of the Law of the Russian Federation "On Protection of Consumer Rights." It clearly delineates the responsibility of the owner of the aggregator and the provider of a specific service and notes that the provider is responsible for observing the rights of consumers violated as a result of the service.

<sup>8</sup> Decision of the Zamoskvoretsky District Court of Moscow dated May 14, 2019 in case No. 2-2792/2019 on the claim of V. Y. Golovanov to Yandex.Taxi LLC. *Courts of General Jurisdiction of the City of Moscow*. URL: <https://www.mos-gorsud.ru>.

## DISCUSSIONS

In the context of the existing legal uncertainty, public authorities and digital labor platforms are trying to find solutions through the formation of sustainable judicial practice or the creation of new original forms of cooperation.

Among the most striking precedents is the case of *Uber BV and others v Aslam and others* [2018] IRLR 97 EAT. The Employment Appeals Tribunal (EAT) has ruled that Uber drivers are “employees” for the purposes of statutory labor rights. Thus, the court rejected Uber’s arguments about concluding an agency agreement with the driver.<sup>9</sup>

In 2019, a Madrid court in Spain ruled that Deliveroo’s employees are its employees and not self-employed. In September 2020, this approach was confirmed in another ruling by the Spanish Supreme Court, which stated that there was an employment relationship between the Glovo platform and one of its workers providing services as a “courier,” and that the platform’s workers are employees and not self-employed.<sup>10</sup>

On March 4, 2020, the French Court of Cassation recognized that there is an employee-employer labor relationship between the Uber company and the driver who acted within the framework of the platform of the same name and ordered to extend the entire package of social rights to drivers.<sup>11</sup>

A detailed justification regarding the recognition of drivers of taxi aggregators as employees was proposed by the Administrative Commission for the regulation of labor relations in Belgium. Drivers were recognized as Uber employees on the following grounds: Uber bears entrepreneurial risk; Uber defines the terms of the business and defines the relationship with the customer; Uber fixes the price without any influence from the driver; the driver offers a service, not a result; replacement of the driver is theoretically possible, but impractical; the driver acts as an “Uber driver” and not as an individual entrepreneur; the driver works in an environment defined by Uber and uses their app as a central tool.

<sup>9</sup> [https://assets.publishing.service.gov.uk/media/5a046b06e5274a0ee5a1f171/Uber\\_B.V.\\_and\\_Others\\_v\\_Mr\\_Y\\_Aslam\\_and\\_Others\\_UKEAT\\_0056\\_17\\_DA.pdf](https://assets.publishing.service.gov.uk/media/5a046b06e5274a0ee5a1f171/Uber_B.V._and_Others_v_Mr_Y_Aslam_and_Others_UKEAT_0056_17_DA.pdf).

<sup>10</sup> <https://cms.law/en/int/publication/gig-working-platform-companies-and-the-future>.

<sup>11</sup> [https://www.courdecassation.fr/jurisprudence\\_2/communiqués\\_presse\\_8004/prestation\\_chauffeur\\_9665/374\\_4\\_44528.html](https://www.courdecassation.fr/jurisprudence_2/communiqués_presse_8004/prestation_chauffeur_9665/374_4_44528.html).

However, in 2019, the Business Court of Brussels took into account the arguments of the platform and confirmed the status of drivers as self-employed. The decision was based on the following arguments: the driver is not obliged to work any minimum number of hours but is free to organize their working time; the contract allows replacement and subcontracting; Uber does not require its brand or logo to be visible on a vehicle or clothing; the platform does not place restrictions on working with competitors (Hießl, 2021).

In 2018, the Labor Court of Turin (Italy) rejected the claim of employees of the food delivery company Foodora to be recognized as employees.<sup>12</sup> The court recognized that workers were free to decide when to work and could ignore previously agreed shifts (De Stefano, 2018).

These decisions confirm the fact that the confrontation between public authorities seeking to ensure the rights of workers and labor platforms is only intensifying. In an effort to absolve themselves of responsibility for occupational health and safety and the payment of minimum wages and benefits, platforms are seeking to offer legal compromises.

One of the compromises is the umbrella companies being created in Sweden. The essence of the design is that a gig worker negotiates working conditions with a client, but the client concludes an agreement with umbrella companies, and umbrella companies are hiring a contractor. The calculation is made on the umbrella companies' side, and they pay all social contributions on behalf of the employee. Thus, the worker remains a freelancer, but becomes an employee for the duration of the order (Westregard, 2019).

Another model of compromise is the conclusion of collective agreements. In 2018, an agreement was concluded in Denmark between cleaners and a digital platform. Under this agreement, the cleaners remained freelancers for 100 hours of cleaning. After that, they could decide whether they would remain freelancers or acquire the status of an employee (Munkholm & Schjoler, 2018).

<sup>12</sup> <https://www.reuters.com/article/us-spain-deliveroo/madrid-court-rules-deliveroo-couriers-are-employees-not-freelancers-idUSKCN1UI170>.

## CONCLUSIONS

Legal regulation of the use of digital platforms is just beginning to take shape. In this regard, it is very important to find the right regulatory framework to prevent abuse by online platforms and at the same time not to stifle the new employment system.

When forming legislation, it is important to take into account modern trends in the development of platforms:

- digital labor platforms are becoming transnational in nature and need clear, transparent, and universal criteria for their assessment;
- new models of using other people's labor are being formed (umbrella companies, collective agreements);
- large companies have a request to find compromise solutions regarding platform workers. For example, it is proposed to create conditions for the conclusion of collective agreements with the self-employed;
- laws are being adopted that equalize self-employed and hired workers; and
- the legislator strives to take into account the specifics of platforms, etc.

In the present conditions, an important principle is the rule “do no harm.”

Legal regulation of digital employment should be carried out carefully, consistently, and with an eye on labor economics and traditional constructions of labor law.

## REFERENCES

- De Groen, W., Kilhoffer, Z., Westhoff, L., Postica, D., & Shamsfakhr, F. (2021). *Digital labour platforms in the EU: Mapping and business models*. European Commission. <https://www.ceps.eu/ceps-publications/digital-labour-platforms-in-the-eu/>
- De Stefano, V. (2018). *Platform work and labour protection. Flexibility is not enough*. <http://global-workplace-law-and-policy.kluwerlawonline.com/2018/05/23/platform-work-labour-protection-flexibility-not-enough/>
- Dun, L., Yuan, G., & Lunqu, Y. (2020). The age of digitalization: Tendencies of the labor market. *Digital Law Journal*, 1(3), 14–20. <https://doi.org/10.38044/2686-9136-2020-1-3-14-20>

- European Commission. (2016). *European legal framework for “digital labour platforms”*. [https://publications.jrc.ec.europa.eu/repository/bitstream/JRC112243/jrc112243\\_legal\\_framework\\_digital\\_labour\\_platforms\\_final.pdf](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC112243/jrc112243_legal_framework_digital_labour_platforms_final.pdf). Accessed 25 June 2020.
- Graham, M., Hjorth, I., & Lehdonvirta, V. (2017). Digital labour and development: Impacts of global digital labour platforms and the gig economy on worker livelihoods in Transfer. *European Review of Labour and Research*, 23(2), 153.
- Harris, S. D., & Krueger, A. (2015). *A Proposal for Modernizing Labor Laws for Twenty-First-Century Work: The “Independent Worker”*, Discussion Paper, The Hamilton Project. [http://www.hamiltonproject.org/assets/files/modernizing\\_labor\\_laws\\_for\\_twenty\\_first\\_century\\_work\\_krueger\\_harris.pdf](http://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf). Accessed 25 June 2020.
- Hießl, C. (2021). Case law on the classification of platform workers: Cross-European comparative analysis and tentative conclusions (October 1, 2021). Forthcoming, *Comparative Labour Law & Policy Journal*. <https://ssrn.com/abstract=3839603> or <http://dx.doi.org/10.2139/ssrn.3839603>
- ILO. (2018) Digital labour platforms and the future of work: Towards decent work in the online world. *International Labour Office*. [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_645337.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_645337.pdf)
- ILO. (2021). *World Employment and Social Outlook – Trends 2021*. <https://www.ilo.org/global/research/global-reports/weso/trends2021/lang-en/index.htm>
- McKinsey & Company. (2017, January). *McKinsey Global Institute. A Future that works: automation, employment, and productivity. Executive Summary*.
- Munkholm, N. V., & Schjoler, C. H. (2018). Platform work and the Danish Model—legal perspectives. *Nordic Journal of Commercial Law*, 1, 138.
- Schmidt, F. A. (2017). *Digital Labour Markets in the Platform Economy Mapping the Political Challenges of Crowd Work and Gig Work*. <https://library.fes.de/pdf-files/wiso/13164.pdf>
- Sidorenko, E. L., Galstyan, I. S., & Sitnik, A. A. (2021). Legal regulation of digital platforms: reference points of modern legislation. In the book: *Engineering Economics: Decisions and Solutions from Eurasian Perspective. “Lecture Notes in Networks and Systems”* (pp. 408–418).
- SWD. (2021). *Impact Assessment report accompanying the proposal for a Directive on improving working conditions in platform work, Section 2.1 and Annex 5*.
- UN. (2021). *Digitally enabled new forms of work and policy implications for labour regulation frameworks and social protection systems*. <https://www.un.org/development/desa/dspd/2021/09/digitally-enabled-new-forms-of-work-and-policy-implications-for-labour-regulation-frameworks-and-social-protection-systems/>



- Westregard, A. (2019). *Key concepts and changing labour relations in Sweden. Part 1. Country report Nordic future of work project 2017 – 2020* (Working paper No. 8, Pillar VI). <https://www.fafu.no/images/pub/2019/Nfow-wp8.pdf>
- World Economic Forum. (2021). *Digital platforms must recognize gig workers' rights*. <https://www.weforum.org/agenda/2020/03/digital-platforms-gig-workers-labour-rights>



# Online Services Platforms: Household Sector Digitalization and Peer-To-Peer Transactions in the Russian Economy

*Marina D. Simonova and Geng Yuan*

## INTRODUCTION

With digital economy development, various activities in Russia are inter-linked via digital platforms, which in turn mediate between households in peer-to-peer transactions in transport and other services. That exacerbates the problems of statistical measurement on rising numbers of new interaction models among economic agents. SNA methodology should provide for higher granularity of some provisions to improve output and value-added statistical accounting of the above services and include them in GDP.

Extensive research, scientific advice, and further methodological guidelines were conducted after international SNA UN 2008 standards

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had been adopted with establishing Inter-Secretariat Working Group on National Accounts,<sup>1</sup> (ISWGNA) and Working Party on National Accounts in OECD,<sup>2</sup> as well as approving the 2008 SNA Research Agenda.<sup>3</sup> As part of the process, experts from international organizations were engaged in research to improve the SNA methodology and outline its new trends and phenomena in the economy and the social sector. The guidelines can be adapted to the national SNA methodology in specific countries and Russia.

The SNA is a tool of macroeconomic management and industry regulation. The possibilities of adjusting GDP are expanding due to the need to reflect digitalization processes and the emergence of new types of operations.

Firstly, this is connected with the adoption of the 2008 UN SNA international standard, which makes it possible to take into account to a greater extent the elements of the informal economy and peer-to-peer transactions of households.

Secondly, this is due to the adoption of the concept of the digital economy, which makes it possible to develop digital platforms used in various markets to provide transportation and other online services.

When studying the digitalization of markets for goods and services, new phenomena and trends in the economy and the social sphere emerge, requiring in-depth analysis at the sectoral level, at the regional level, and at the economy as a whole, taking into account the growing volumes of household peer-to-peer operations through digital platforms.

The Russian Federal State Statistics Service advances and develops SNA and GDP methodologies (Federal State, 2010<sup>4</sup>; About GDP, 2018<sup>5</sup>).

<sup>1</sup> <https://unstats.un.org/unsd/nationalaccount/docs/mandate.pdf>.

<sup>2</sup> Working Party on National Accounts [https://unstats.un.org/unsd/nationalaccount/aeg/2018/M12\\_3c1\\_Data\\_SNA\\_asset\\_boundary.pdf](https://unstats.un.org/unsd/nationalaccount/aeg/2018/M12_3c1_Data_SNA_asset_boundary.pdf).

<sup>3</sup> Research Agenda.

<sup>4</sup> Federal State Statistics Service. Rosstat methodological programs. Methodological development in statistical areas. URL: [http://www.gks.ru/bgd/free/meta\\_2010/Main.htm](http://www.gks.ru/bgd/free/meta_2010/Main.htm).

<sup>5</sup> About GDP production in the second quarter 2018. URL: [http://www.gks.ru/bgd/free/B09\\_03/lssWWW.exe/Stg/d01/175.htm](http://www.gks.ru/bgd/free/B09_03/lssWWW.exe/Stg/d01/175.htm).

CIS Statistics Service works out further guidelines for the CIS zone (The Measurements, 2003<sup>6</sup>; The Survey, 2008<sup>7</sup>).

The purpose of this article is to study peer-to-peer transactions of households via digital intermediaries on the online car services market under the sharing economy. The research methodology is based on the key principles of SNA international standard. The fundamental of SNA is expanding value-added concept in market and nonmarket production of goods, financial services, and nonfinancial services. The sectoral approach in SNA implies household accounts with non-observed economy survey adjusted.

## METHODOLOGY

Evaluation methods of the shadow economy and informal employment amid economy digitalization are of special interest.

The study of “collaborative consumption” started in 1978 by the authors Felson and Spaeth (Felson & Spaeth, 1978). However, it was not until 2010 that a detailed study of the “sharing economy” began.

The methodological foundations of this are presented in the monograph of the authors Botsman and Rogers. Its structure and distinctive features were identified (Botsman & Rogers, 2010).

The term “sharing economy” is determined as a peer-to-peer consumption model where consumers engage in collaborative consumption of underutilized inventory through fee-based sharing. Some other segments of the sharing economy and the specifics of their development were highlighted by Zervas et al. (2017).

Hamari et al. (2016) define collaborative consumption as “a peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services.”

Due to huge speed of digitalization development, the number of diverse electronic platforms is dramatically increasing. This has given impetus to the growth of the market of digital intermediaries such as Airbnb, Uber, Lyft, Sidecar, Gett, and Yandex.Taxi in Russia and

<sup>6</sup> The Measurements of Non-Observed Economy. 2003. A guide, 296. URL: [http://www.gks.ru/free\\_doc/new\\_site/vvp/metod.htm](http://www.gks.ru/free_doc/new_site/vvp/metod.htm).

<sup>7</sup> The Survey of Informal Activities Estimates as GDP component in the CIS. (2008). URL: [cisstat.com](http://cisstat.com).

some CIS countries. According to Wallston (2015) “the rise of the so-called ‘sharing economy’ has created new competition across a number of industries, most notably hotels, through Airbnb, and taxis, through ride-sharing services like Uber, Lyft, and Sidecar.”

The relevant learned treatises underpin the thesis by Vorobieva and other authors (Vorobjeva et al., 2018) dealing with an assessment of shadow employment in the Russian economy based on the method of labor balance.

The study of Hall and Krueger (2015) focuses on preferences of the Uber platform in the context of labor force, official employment, and informal employment. Uber’s driver-partners having full- or part-time employment opportunities, and thanks to the rating system, their reputations are shared with potential customers.

Scientific papers written by the Russian scientist and expert Ivanov cover the problem of adopting the current SNA concept and macroeconomic indicators in Russia and their assessment in the era of globalization and digital economy (Ivanov, 2017; Ivanov & Homenko, 2017).

Surinov (2018) in his scientific publications reviews digital analytical platforms and key ways of digital economy measurement as the basic tools for the transition of the official statistics toward modified technological fundamentals.

The idea behind “The Smart Statistics” vision by Oksenoit (2018) is to directly involve statistical surveys in the system of digital primary records with further automated data processing (ADP), and as a result to receive aggregated statistics indicators.

Research papers by Egorenko (2018) highlight new factors and phenomena that focus on refinement in official statistics and statistical methodology. He emphasizes on improving SNA methodology amid digital economy development in Russia.

Research by Kosarev (2016) deals with SNA methodology adjustment and the impact of current economic development aspects on value added and GDP calculations, estimates of the scale of shadow sector, and the birth, growing role, and scope of peer-to-peer transactions. Research of digitalization influence on well-being is of special importance herein.

Statisticians in Russia and abroad are closely involved in the debates on pressing issues related to the emergence of the digital economy in Russia being discussed at scientific and practical conferences such as “Current

Challenges of The Russian Statistics: Economic Digitalization And Globalization,” “Statistics In Digital Economy: Training And Practice,” and others (Burova, 2018).

The current periodical OECD publications such as “OECD Digital Economy Outlook 2015”<sup>8</sup> define digitalization, its manifestations in terms of globalization, directions of influence on markets development, new business models, multinational companies, economic growth, employment, and productivity.

Measured growth in labor productivity and total-factor productivity slowed in developed economies and Russia. According to Byrne (Byrne et al., 2016), there is evidence that the slowdown arises from growing mismeasurement of the gains from innovation in IT-related goods and services. Fundamentals of SNA and GDP measurement capture the goods and services. Digital taxi platforms promote mismeasurement of GVA created by informal online taxi services. Informal taxi drivers build up informal employment in the transport industry.

OECD experts’ research “Measuring GDP in a Digitalized Economy” (Ahmad et al., 2016), among others, reveal problems in the methodology for GDP measurement caused by digitalization and related to peer-to-peer services, well-being, financial intermediation, intellectual property, etc.

In the context of the potential scale of GDP mismeasurement in key areas, digitalization is of great concern. The digital economy has increased the importance of peer-to-peer transactions, with platforms such as Uber intermediating the provision of taxi services by households to other households. According to Ahmad (Ahmad et al., 2017), in practice, the measurement framework used by national accountants at least partially covers the output of these activities. Estimating the size (and impact on growth) of these activities is of great importance. However, even if the output of these services is reasonably captured in current estimates of GDP, at least for taxi services, the underlying fixed assets (vehicles) used in the provision of these services are often not correctly recorded as fixed assets. This affects the current official estimates of the capital stock, and, in turn, multifactor productivity.

Online taxi aggregators operate as transport companies. It is important to analyze their activity in the context of urban public transport services. Online taxi aggregators form a segment of the transport market.

<sup>8</sup> OECD (2015), OECD Digital Economy Outlook. 2015. OECD Publishing. Paris. URL: <http://dx.doi.org/10.1787/9789264232440-en>.

Using the approaches of Zizka (2017), it is relevant to identify the impact of online taxi aggregators on the effectiveness of urban public transport operators. The output, GVA, and employment of online car services depend much on the urban public transport operators.

OECD statistical databases show variable time series of indicators in households activities, GDP, and GVA required for calculation (OECD databases).

Companies' websites with regularly published reports are current companies' activities databases. Yandex.Taxi<sup>9</sup> (Yandex, 2018) in Moscow has never been "a cab company" in the real sense of the word. The service company aggregates clients' queries and sends them to cab companies as well as private drivers. Thanks to lots of taxis being in service, a client is able to take a taxi at the best price and at short notice.

## RESULTS

To systemize arising problems in the current SNA methodology and value-added sectoral accounting, it is required to define digitalized and sharing economies as crucial factors for the intensive development of an information-oriented society. According to the OECD Digital Economy Outlook, "the digital economy permeates countless aspects of the global economy impacting sectors as varied as banking, retail, energy, transportation, education, publishing, mass media or health. Information and Communication Technologies (ICT) are transforming the ways social interactions and personal relationships are conducted with fixed, mobile and broadcast networks converging, and devices and objects increasingly connected to form the Internet of things (IoT)."<sup>10</sup> The digital economy covers all facets, transforming and reshaping our life. The contemporary statistics methodology should reflect these factors accordingly.

Most of the distinctive features of the sharing economy are common to informal economy transactions, i.e. deals between unincorporated enterprises. However, the aspect related to the role of intermediary services is of special importance. The crucial problem is whether the latest available statistics tools can capture intermediation fees charged by new digital

<sup>9</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.

<sup>10</sup> OECD (2015a). OECD Digital Economy Outlook. 2015. OECD Publishing. Paris. URL: <http://dx.doi.org/10.1787/9789264232440-en>.

agents incorporated at the territory of a certain country. “Therefore, in scope for traditional business surveys, the answer must be that their activity is likely to be as well captured in the accounts as other registered entities. Where the entities are not registered in the national territory and, so, the transactions between households and the intermediary are cross border, other complications (not unique to the sharing economy) may arise (as discussed below)” (Ahmad et al., 2017).

The study of characteristics of online taxi aggregator’s activities in Russia come to the conclusion that it is important to conduct several stages: firstly, accurate cash flow records of online taxi aggregators; secondly, estimates of the growing number of shadow taxi drivers; thirdly, an assessment of their wages; fourthly, an assessment of their value-added produced; and fifthly and finally, an assessment of their commission to online agents.

Widely used new digital innovations are expected to spark off a new wave of productivity growth, similar to those seen in the past (e.g. as a result of electrification, and the ICT wave in the 1990s), but this has not, at least, yet materialized, raising a number of questions. Slowdown and problems in productivity in developed countries are so obvious that revision of SNA methodology becomes extremely relevant.<sup>11</sup>

According to the OECD (OECD Prod.),<sup>12</sup> annual weak labor productivity growth continues to mark all G7 countries. Productivity plunged from 8 to 4% in the early 1970s to 3.5–1% at the annual rate in 1980s. Germany shows a fall from 5 to 1.5% within the period, Italy from 6.3 to 0.5%, Japan from 8 to 4%, Great Britain from 6.3 to 3%, and the USA from 3.5 to 0.5%. After this, the upward trend continued up to the early 1990s.

In the twenty-first century, over the most recent 10–15 years, the G7 saw a feeble labor productivity rate amounting to 0.5–1% by 2015 (Byrne et al., 2016; OECD Prod.). The downward trend has affected Russia as well. Based on a Federal State Statistics Service (Rosstat) report covering 2003–2016, annual labor productivity fell to 99.7% in 2016 from 107.0%

<sup>11</sup> OECD (2015). OECD Digital Economy Outlook. 2015. OECD Publishing. Paris. URL: <http://dx.doi.org/10.1787/9789264232440-en>.

<sup>12</sup> OECD Productivity Database. URL: <http://www.oecd.org/sdd/productivity-stats/>.  
OECD Statistics Database. URL: <http://www.stats.oecd.org>.



**Table 1** Digitalization and household peer-to-peer transactions

<i>Household peer-to-peer transactions</i>			
Dwelling services	Transport and business services	Distribution services	Financial intermediation services etc

*Source* Compiled by the authors

in 2003 (and in transport and communication sectors from 107.2 to 99%).<sup>13</sup>

Perhaps mismeasurement in SNA methodology is expected to partly impact estimates showing productivity slowdown.

The pace and scale of digitalization affect management approaches and the way in which households as consumers engage with businesses and with each other. This allows manufacturers of goods and services to advance production processes and capture a niche on the new markets. For businesses, digitalization provides scope for improvements in production processes and access to new markets, and has also spawned many new businesses and new business practices, while also providing significant scope for profit shifting across international borders. Digitalization has also impacted on the role of the consumer, with households increasingly engaging in intermediation services that blur the lines between pure consumption and participative production (Ahmad et al., 2017). Rapid technology development as an effect of digital economy progress results in new ways of intermediary, services, and consumption: for example, digital platforms facilitating peer-to-peer transactions on consumer-to-consumer basis (Kosarev, 2016). In the meantime, it aggressively expands “free” media services financed by advertising, Big Data, and e-commerce, develops new activities (such as crowd-sourcing), scales up the number of those occasionally self-employed, and so on.

Pursuant to the above aspect of digital economy and its expanding is peer-to-peer transactions (Kosarev, 2016) via corporate intermediaries (Table 1).

Peer-to-peer transactions include peer-to-peer rental dwelling services on CIAN, Ostrovok, and other platforms; transport and business

<sup>13</sup> About GDP production in the second quarter 2018. URL: [http://www.gks.ru/bgd/free/B09\\_03/lssWWW.exe/Stg/d01/175.htm](http://www.gks.ru/bgd/free/B09_03/lssWWW.exe/Stg/d01/175.htm).

services—e.g. taxi providers (often informal) like Uberpop, Yandex.Taxi, GETT in Russia, and others. Distribution services gain momentum as well as including the sale of second-hand and new goods (Ahmad et al., 2017); for example, on flea markets and online message board Carprice, Avito, and others. There are a lot of various providers like TaskRabbit in the USA rendering assistance to provide multiple-choice alternatives and access to the markets of business and transportation services for the self-employed in various activities. In some respect, a Russian alternative of the American platform is the aggregator CONSTART. Over recent years, crowd-funding and peer-to-peer lending as new sources of alternative financing have become more extensive.

However, it is important to recognize that such online agents as eBay began to grant similar intermediary services far earlier. Key transactions identifying new aspects of the sharing economy took place long ago.

GDP, at least theoretically, considers all these transactions being included in the value added, if they have been affected. All the countries practicing SNA methodology reckon household production account to estimate households' contribution to the country's value added and GDP. The output of the sector comprises market and nonmarket outputs.

The data in Table 2 show indicators of household production account in SNA.

The indicators from Table 2 show that households' value added of the countries' gross value added (GVA) in the USA totals 22%, in France 16%, in Germany 17%, and in Russia 14.3%.

The US statistics offices do not convey any information on households' production accounts to OECD, stating just value added in revenue accounts.

The rise in peer-to-peer services is driven by opportunities given by online agents to ease market sectoral entry barriers and minimize risks (for producers and suppliers of related services) as well as a surge in computing powers and customers' access to broadband networks. More often they use smartphones for web searches, e-mail, and social networks, coupled with online banking, online shopping, job hunting, and taxi aggregators. Many of these services offer mobile appliances. Recent years

**Table 2** Households production account

<i>Unit</i>	2010		2013		2014		2016		
	<i>Output</i>	<i>Value added</i>	<i>Output</i>	<i>Value added</i>	<i>Output</i>	<i>Value added</i>	<i>Output</i>	<i>Value added</i>	
Russia	Trln rubles	11.3 (2011)	7.9	13.9	9.5	14.6	9.9	15.4	10.7 (2015)
Germany	Bn Euro	–	–	786	507	798	513	830	546
France	Bn Euro	424	334	433	342	436	346	440	357
USA	Bn \$	–	3704	–	3628	–	3771	–	4013

*Source* National Accounts. URL: <http://stats.oecd.org/>

have witnessed a rapid emergence of popular travel and shopping appliances, reflecting the growing sway of digital services through mobile appliances.<sup>14</sup>

The unique feature of the sharing economy is the influence of intermediaries in interaction between informal service suppliers (as a rule, self-employed) and households (consumers) participating in a host of transportation, business, and other services.

The Russian sharing economy has an international character. Households interact in peer-to-peer transportation (taxi) online services as follows:

Households, consumers, and taxi service providers are integrated on online aggregator platforms. Service providers, in this case, are both formal and informal drivers, using their own vehicles along with rented ones. Formal taxi drivers operate officially; therefore their output, value added, and income are subject to direct statistical recording and facilitate GDP measurement.<sup>15,16</sup> The output, value added of peer-to-peer taxi services, revenues of informal taxi drivers (self-employed), and their number are a part of the informal economy. Informal taxi drivers' value added, aggregator fees, and cash flows are of concern from a variety of angles: firstly, in respect of SNA methodology improvement; secondly, investigating informal household activities; and thirdly, estimating this part of the informal economy and including it in SNA for GDP measurement.

Uberpop is one of the largest multinational online taxi aggregators. The market of the services offers other providers (for example, the US online platform TaskRabbit, charging 20% of the worker's revenues).

The estimates of the number of informal taxi drivers rendering services on the labor force balance basis (Vorobjeva et al., 2018) are of special interest.

The growth rate of the Russian online taxi aggregator market is highly brisk. In Moscow, daily taxi trips amount to 760,000 as of November

<sup>14</sup> OECD (2015a), OECD Digital Economy Outlook. 2015. OECD Publishing. Paris. URL: <http://dx.doi.org/10.1787/9789264232440-en>.

<sup>15</sup> The Measurements of Non-Observed Economy. 2003. A guide, 296. URL: [http://www.gks.ru/free\\_doc/new\\_site/vvp/metod.htm](http://www.gks.ru/free_doc/new_site/vvp/metod.htm).

<sup>16</sup> Recommendations on improving measurement of non-observed economy. 2000. 28. URL: <http://www.cisstat.com/>.



**Fig. 1** The scheme of interaction between taxi aggregators and households (*Source* Compiled by the authors)

2018. A CS forecast published in RBC in 2017<sup>17</sup> claims that market capacity will increase more than eightfold by 2022 and exceed 1 trillion rubles (Fig. 1).

Through the lens of market structure (Fig. 2), the taxi aggregator leader is Yandex.Taxi. This is a Russian multinational company incorporated in the Netherlands and owning a homonymous automatic web search system, websites, and services in several countries. Its market footprint is most perceptible in Russia, Turkey, Belarus, and Kazakhstan (Fig. 3).

Yandex.ru, a web search system, takes the fourth position in the rating of the global search systems by the amount of web search queries (over 6.3 bn a month as of the beginning of 2014) (Sokolov-Mitrich, 2014). According to Alexa.com ranking,<sup>18</sup> Yandex.ru secures the 23rd place in the global rating and 2nd in Russia as of June 12, 2018<sup>19</sup> (About GDB, 2018). It accounted for 51 m users as of May 2018. Yandex.ru has been formally operating since 1997 as a unit of the company CompTek International and since 2000 as an independent company Yandex. The company held its IPO in May 2011. After being restructured in 2007, Yandex has become a subsidiary of the Dutch parent company Yandex N.V., with capitalization of the affiliated firm working out at \$10.73 bn (Nasdaq).<sup>20</sup>

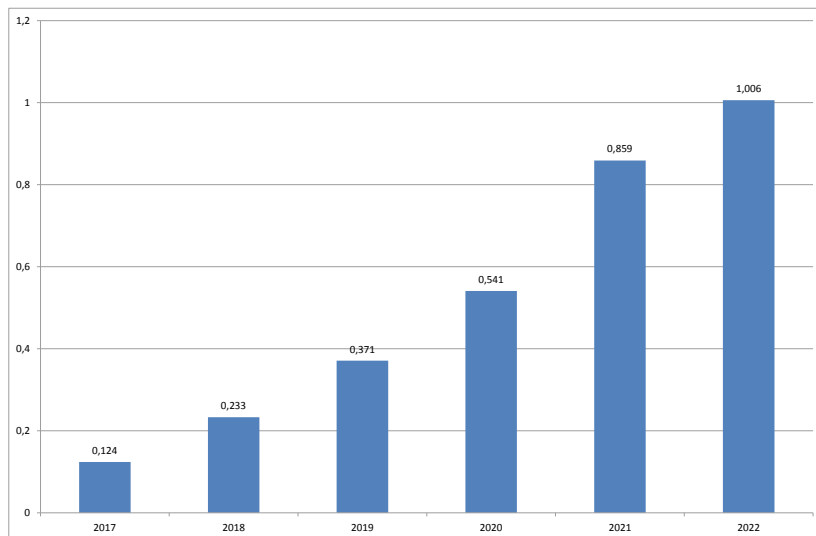
In line with the official financial accounting of the company (Table 3—indicators of 2016 annually compared to those of 2015), revenues of Yandex surged by 24% in 2017 upward to 2016 and exceeded 94 bn rubles. The net profit went up by 28% to 8.7 bn rubles. Much of the

<sup>17</sup> Credit Suisse forecast, RBC 2017. URL: [https://www.rbc.ru/technology\\_and\\_media/27/07/2017/597894089a7947dc52200ccl](https://www.rbc.ru/technology_and_media/27/07/2017/597894089a7947dc52200ccl).

<sup>18</sup> Alexa website. URL: <http://www.alexa.com/siteinfo/yandex.ru>.

<sup>19</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.

<sup>20</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.

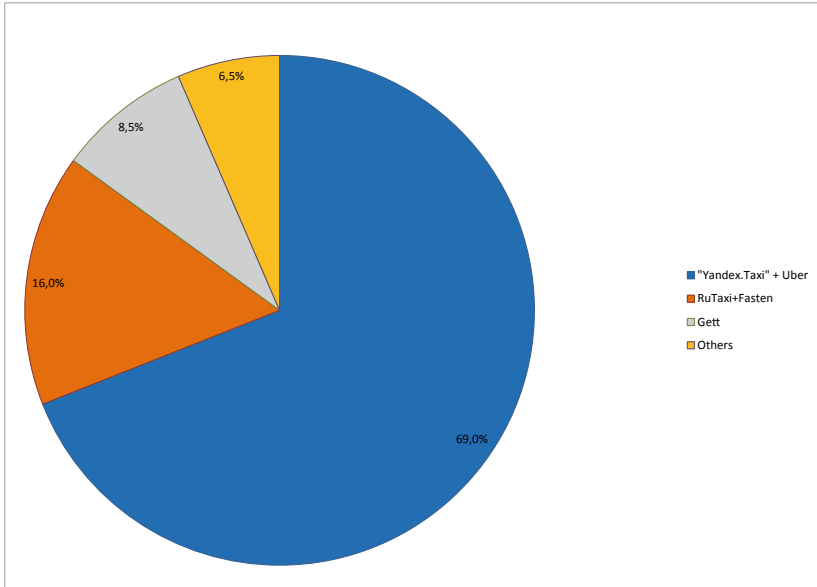


**Fig. 2** The Russian online taxi aggregators market value (trillion rubles) (Source Credit Suisse forecast, RBC 2017. [https://www.rbc.ru/technology\\_and\\_media/27/07/2017/597894089a7947dc52200cel](https://www.rbc.ru/technology_and_media/27/07/2017/597894089a7947dc52200cel))

revenue mix accounts for income from digital advertising, “Search and Portal,” and “Yandex.Market.” Online advertising sales are a significant business in the company’s activities. The rising relative share of online taxi services in the revenue of the company hit 5.2% in 2017 compared to 3% in 2016. The indicator soared to 12.7% for 6 months in 2018.<sup>21</sup>

Yandex.Taxi dominates in online taxi services and accounts for about 70% of the online segment. The total amount of the trips through Yandex.Taxi worked out at 335 m from the service launch in 2011 to September 2018. The service Yandex.Taxi showed the brisk growth in 2017 (including courier food service Foodfox, acquired by Yandex in December 2017): revenues went up by 111% to \$4.9 bn. The service is available in 150 cities in 6 countries (Georgia, Belarus, Kazakhstan, Moldova, and Armenia, besides Russia), compared to December 2016 when Yandex.Taxi operated just in 49 big cities. At that time, Yandex

<sup>21</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.



**Fig. 3** Corporate structure of online aggregators on the Russian market in 2017 (%) (Source Credit Swiss forecast, RBC 2017. [https://www.rbc.ru/technology\\_and\\_media/27/07/2017/597894089a7947dc52200cel](https://www.rbc.ru/technology_and_media/27/07/2017/597894089a7947dc52200cel))

published their number of trips for a month—at the rate of 16.2 m—5.6 times as much as in December 2015.<sup>22</sup> At present, 280,000 drivers are in-lined to the service.

The two largest market players in the taxi market—Yandex and Uber—in the middle of 2017 signed a merger agreement on online taxi requests in the territories of Russia, Azerbaijan, Armenia, Belarus, Georgia, and Kazakhstan for the newly merged company. The participants in aggregate provide over 35 m trips a month. The merged business benefits from, one the one hand, the technologies and expertise of Yandex in cartographic, navigation, and web search services, and on the other hand, the experience of Uber as a global leader in online car services. This policy will contribute to the sophisticated development of the market, provide

<sup>22</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.

**Table 3** Financial indicators of Yandex N.V.

	2016		2017		2018 6 months				
	<i>M rub</i>	<i>Annual growth rate (%)</i>	<i>Structure (%)</i>	<i>M rub</i>	<i>Annual growth rate (%)</i>	<i>Structure (%)</i>	<i>M rub</i>	<i>Growth rate (%)</i>	<i>Structure (%)</i>
Revenue	75,926	27	100	94,054	24	100	56,245	21	100
Taxi services	2313	135	3	4891	111	5.2	7180	363	12.7
E-commerce	4718	39	6.2	4968	5	5.3	1697	-31	3

*Source* <https://smart-lab.ru/q/YNDX/f/y/>, <https://yandex.ru/company/prospectus>. Company's report



more dynamic and sustained business that will meet both customers' and drivers' requirements, and improve the transport infrastructure of various cities and regions. Both software apps practiced by Yandex.Taxi and Uber are available for users. A milestone in the global development trends of the transport services market was a carsharing service rolled out by Yandex in February 2018.<sup>23</sup>

The company's chief competitor on the Russian market of online taxi aggregators is Gett. According to Credit Suisse's report in 2017<sup>24</sup> (Credit Suisse, 2017), Gett accounts for 12–20% of the overall online taxi services depending upon gauge for measuring progress in the number of taxi requests which fall at conventional taxi aggregators through their own online applications.

In general, informal taxi services account for about 20% of the share of the online segment, amounting to 13–17% of the total market of car services. In 2015, a share of the transport services in the level of value added in the informal sector in Russia totaled 21, 20% in Georgia, 35% in Kazakhstan, and 40% in Tajikistan, as per CIS STAT records.<sup>25</sup>

Thus, the contribution of informal online taxi services to household value added in Russia is of great interest while conducting peer-to-peer transactions. However, it is imperative to understand how effective the available accounting methods are at present for accurate measurement of these small-scale transactions for inconsiderable amounts (basically already included in national accounts for GDP measurements).

For the SNA methodology and GDP measurement, it is extremely relevant to identify the goods designed for transport services (for example, taxis). In this case, however, it is essential to distinguish between durable consumer goods and gross fixed investments.

## DISCUSSIONS

The issues of the massive expanding scope of digital technologies covered in the article allow opening up new research horizons such as consumer

<sup>23</sup> Yandex Official Reports. URL: <https://yandex.ru/company/prospectus>, <https://smart-lab.ru/q/YNDX/f/y/>.

<sup>24</sup> Credit Suisse forecast, RBC 2017. URL: [https://www.rbc.ru/technology\\_and\\_media/27/07/2017/597894089a7947dc52200ccl](https://www.rbc.ru/technology_and_media/27/07/2017/597894089a7947dc52200ccl).

<sup>25</sup> The Survey of Informal Activities Estimates as GDP component in the CIS (2008). URL: [cisstat.com](http://cisstat.com).

expectations in taxi services, quality of service, transport and technological components of passenger traffic, and the related profitability indicators en route.

Estimating the volume of peer-to-peer online car services, cash flows on online platforms, in shadow and informal taxi services are of special interest. The authors suggest carrying out a special survey to assess how informal employment contributes to the online taxi services. This will allow identifying the scope of informal activities and their impact on household value added on the Russian market. In future, this methodology may be applied in EEU and CIS countries.

## CONCLUSIONS

The economy digitalization implies global economic activities with transferring information into digital formats based on digital technologies as a fundamental of “the architecture of the Fourth Industrial Revolution.” In the transition to the digital economy, one can notice plenty of new businesses and ways of interactions in which consumers engage with businesses and with each other (peer-to-peer transactions).

Slowdown in productivity is noticeable amid dramatic technological changes. This tends to be in Russia as well. Digitalization is not the only factor to be blamed for this tendency.

SNA methodology is suitable for mainstreaming digital economy, output, household value added, and GDP in the current context. However, practical issues of price fluctuations measurement and recording transborder transactions remain unresolved.

The essential problem in improving SNA methodology concerns the measurement accuracy of small-scale peer-to-peer transactions involving inconsiderable sums of money and the role of households as producers: in particular, the relevance of the current SNA methods in accounting value added generated by households whenever possible, especially in transportation services online aggregators.

In Russia, the number of peer-to-peer transactions is growing, and the online aggregators market is expanding along with taxi services. Firstly, this results in a rise in shadow and informal employment of taxi drivers. Secondly, upon receipt of online requests (example, from Yandex.Taxi), some part of them remains informal, resulting in underestimated revenues of transportation services. Thirdly, online aggregators charge a commission from taxi drivers on requests. Service fees from taxi drivers for

the orders sent to them and online intermediary cash flows are partly concealed from tax and, more importantly, from statistics accounting for the framework to adjust macroeconomic indicators in SNA. Shadow and informal employment keep growing.

## REFERENCES

- Ahmad, N., & Schreyer, P. (2016). *Measuring GDP in a Digitalised Economy*. OECD Statistics Working Papers. <https://dx.doi.org/10.1787/5jlwqd81d09r-en>
- Ahmad, N., Ribarsky, J., & Reinsdorf, M. (2017). Can potential mismeasurement of the digital economy explain the postcrisis slowdown in GDP and productivity growth? *OECD Statistics Working Papers*. OECD Publishing. <https://doi.org/10.1787/a8c751b7-en>
- Botsman, R., & Rogers, R. (2010). *What's mine is yours: The rise of collaborative consumption*. Harper Business.
- Burova, N. V. (2018). Results of the international scientific and practical conference 'Statistics in the digital economy: Training and practice.' *Voprosy Statistiki*, 25(2), 81–88.
- Byrne, D., Fernald, J., & Reinsdorf, M. (2016). Does the United States have a productivity slowdown or a measurement problem? *Brookings Papers on Economic Activity*. <http://www.briokings.edu/about/projects/bpea/papers/2016/byrne-et-al-productivity-measurement>
- CIS Stat. (2008). *The survey of informal activities estimates as GDP component in the CIS*. [www.cisstat.com](http://www.cisstat.com)
- Egorenko, S. N. (2018). Official statistics amidst the emergence of the digital economy in the Russian Federation. *Voprosy Statistiki*, 25(10), 3–6.
- Felson, M., & Spaeth, J. (1978). Community structure and collaborative consumption: A routine activity approach. *American Behavioral Scientist*, 21, 614–624.
- Hall, J. V., & Krueger, A. B. (2015). An analysis of the labor market for Uber's driver-partners in the United States. *Amazonaws*. [https://s3.amazonaws.com/uber-static/comms/PDF/Uber\\_DriverPartners\\_Hall\\_Kreuger\\_2015.pdf](https://s3.amazonaws.com/uber-static/comms/PDF/Uber_DriverPartners_Hall_Kreuger_2015.pdf)
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67, 2047–2059.
- Ivanov, J. N. (2017). To the debate about accuracy of macroeconomic statistics. *Voprosy Statistiki*, 1(9), 10–18.
- Ivanov, J. N., & Homenko, T. A. (2017). Globalization in SNA. *Voprosy Statistiki*, 4, 3–11.

- Kosarev, A. E. (2016). To: 'Is GDP still measured correctly in the era of digitalization?' by Nadim Ahmad and Paul Schreyer. *Voprosy Statistiki*, 8, 14.
- OECD. (2015). *OECD digital economy outlook*. OECD Publishing. <http://dx.doi.org/10.1787/9789264232440-en>
- Oksenoyt, G. K. (2018). Digital agenda, big data and official statistics. *Voprosy Statistiki*, 25(1), 3–16.
- Sokolov-Mitrich, D. V. (2014). *Real stories. Yandex.Book*. Mann, Ivanov and Ferber.
- Surinov, A. E. (2018). Digital economy: Challenges for the Russian statistics. *Voprosy Statistiki*, 25(3), 3–14.
- Vorobjeva, O. D., Topilin, A. V., & Chukhnin, V. S. (2018). About approaches to estimating informal employment (based on labour-force balance sheet for 2015). *Voprosy Statistiki*, 25(8), 36–42.
- Wallston, S. (2015). *The competitive effects of the sharing economy: How is Uber changing Taxis?* [https://www.ftc.gov/system/files/documents/public\\_comments/2015/06/01912-96334.pdf](https://www.ftc.gov/system/files/documents/public_comments/2015/06/01912-96334.pdf)
- Zervas, G., Proserpio, D., & Byers, W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of Marketing Research*, 5, 687–705.
- Zizka, M. (2017). An assessment of the efficiency and effectiveness of the services of urban transport operators in the Czech Republic. *Transformations in Business & Economics*, 16(1[40]), 134–152.

# Regulating the Platform Economy



# Digital Platforms for Cross-Border Settlement of CBDC

*Maxim I. Inozemtsev and Artyom V. Nektov*

## INTRODUCTION

Over the past three years, the central bank digital currency has been on the agenda of national and international economic, legal, and technological centers of thought. The World Bank and Bank for International Settlements have been publishing CBDC analysis reports almost monthly.

While the question of whether they can be issued by central banks has been resolved mostly positively resolved, their actual implementation into national economies poses significant challenges. The issues of the coexistence of national CBDCs in the world market, their mutual exchange, and exchange for other currencies and securities are even more problematic.

A digital settlement platform is a key to solving the problem of cross-border payments in CBDC. So far, eight trials have been conducted to create and test such platforms. In terms of its significance for the field of finance and legal regulation of technology and the banking sector, the

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research is similar in significance to the experiments of Marie Curie or the first launches of a man into space. Despite the fact that a large part of its design is still unclear, the choice of cross-border settlement models in these projects indicates their possible adaptation for future large-scale use.

The most significant step in the development of digital payment platform—project Jura—took place in November 2021. An analysis of the Jura settlement platform is developed in the chapter. Based on this analysis, the regulatory and legal risks of implementing these models have been formulated.

## METHODOLOGY

Given that the concept of CBDC is more or less established, the authors analyze the further development of the evolution of the dynamics of CBDC cross-border payments. The authors review projects to create digital platforms for payments in CBDC, focusing on the wholesale CBDC platforms. By analyzing the regulations and clarifications of the central banks of the countries participating in the projects, as well as explaining the technical, economic, and legal structure of payment digital platforms, the authors formulate and analyze the legal risks that accompany their implementation. The comparative legal aspect of the study makes it possible to predict possible further regulatory steps to create international digital settlement platforms.

## RESULTS

The central banks' efforts to formulate the concept and legal terminology of central bank digital currency in their act are not enough to establish it as a means of payment. Central bank digital currency to become a real legal tender should be transferred via specially constructed digital platforms which serve as a fundament for CBDC payment systems.

Traditional account-based payment systems—i.e. systems of instruments and rules for fund transfer—have drawbacks that can be eliminated with the issuing CBDC and their transfer via digital platforms to make the payment system more efficient, prompt, and cheap. However, there are some precautions in implementing CBDC. The flexibility of modern technologies provides an opportunity to design a digital payment platform in a manner that can cover most possible regulatory, economic, and social risks.

Types of CBDC payment systems differ by the following criteria:

- (1) retail- and wholesale CBDC payment;
- (2) the result of payment (payment v. payment; payment v. delivery).

The model of r-CBDC payment differs from ordinary payment transactions using bank deposit accounts. The problem of cross-border payments primarily concerns the w-CBDC payment.

CBDC digital platforms may rely on the centralized ledger technology as well as on the distributed ledger technology. However, the latter model is the most popular and is used in the recent experiments of transfer CBDC via digital platforms. The DLT allows to avoid the most complicated issues of conflict of laws in payment regulation and provides the basis for a decrease in the number of intermediary commercial banks.

There are three models of cross-border CBDC payment systems and, thereby, three models of digital platforms: domestic platform (compatible CBDC systems), corridor network platform (interlinked multi-CBDC systems), and third-party platform (single multi-currency system). All of them have their own regulatory peculiarities. The first model is similar to the traditional payment system in essential aspects. The second one strictly divides the common regulatory framework and governance under national laws. The third platform is the most controversial from private international law positions.

To date, there have been eight experiments on issuing w-CBDC via digital payment platforms. One of the recent projects is Project Jura, based on the single multi-currency system, purposed for transferring w-CBDC (euro, Swiss franc) using DLT settlement system with dual notary signing. The Jura digital platform has successfully settled payment v. payment as well as payment v. commercial paper. The project is one of the unique experiments which have been conducted in real-life conditions in compliance with existing legal regime (without using sandboxes).

The possible implementation of cross-border CBDC digital platforms challenges current legal regulation in different aspects: international private and public law, banking law, antitrust law and in the field of personal data protection. The most essential risks are based on the conflict of different legal orders regulating a single platform, as well as on the consequences of digitalization of payments for banking and the dominance of central bank as a new antitrust issue.



## DISCUSSIONS

### *Central Bank Digital Currency Definition*

Nowadays the creation of a national central bank digital currency determines the economic policy agenda of many states. The academic and business communities, as well as representatives of states, come to the conventional unity defining CBDC (Ozili, 2022). CBDC is a currency in digital form that is issued by a central bank and is a liability of the issuing bank (Auer et al., 2021).

CBDC differs from fiat money, bitcoin, and stablecoin. In simple terms, bitcoin is issued by individuals and legal entities. It is not backed by anything except the unique and valuable technology of mining and the use of distributed ledger technology to store transaction data. However, stablecoin is issued by individuals against the backing of real currency, gold, and precious metals. Unlike both previous types of digital assets, CBDC is issued by central banks and is secured by their reserves. CBDC represents a new step taken by sovereign states to control the commercial stream providing an alternative digital asset.

However, it is not enough to simply develop the concept of a new means of payment and legitimize it through a simple decree of the central bank. It is well known that the central bank does not create money; central banks establish a regulatory framework of currency turnover, whose basic principles are stated in the central bank laws. This is the task of the entire banking infrastructure cooperating with individuals. Commercial banks confer the quality of legal tender in the course of providing loans to citizens and organizations, as well as a result of depositing their money into the account (Rohan, 2019). Considering that under some models CBDC is constructed as a direct claim of a private person to the central bank (which theoretically excludes the intermediation of commercial banks), it is important to establish a proper infrastructure for CBDC, which will ensure its dynamics of the future legal tender. Due to the “digital” nature of the CBDC, the payment system is to be digital as well.

### *Digitalization of Cross-Border Payment System*

Before moving on to digital payment systems, it is worth analyzing what they are intending to replace: namely, the existing and pre-existing payment systems.

A payment system is “a set of instruments, procedures, and rules for the transfer of funds from one bank to another” (Athanassiou, 2020). Traditional payment systems are account-based systems implementing transactions through the correspondent banking arrangements. Such systems have some deficiencies which impede making cross-border payments efficient and a low-cost system.

Firstly, account-based payment is implemented via a chain of numerous commercial banks, which creates significant costs and increases the time spent on making a payment. Secondly, the different hours of operation of banks located in different time zones limit the enforcement of banking operations to their hours of work. The real-time gross settlement system (RGTS) implemented almost universally today—“under which payments are processed on a one-by-one basis, without netting, with final settlement occurring real-time, to guarantee immediate finality of payments” (Athanassiou, 2020)—speeds up processes, but does not exclude a time gap in the work of banks subject to different RGTS (for example, European RGTS does not correspond to American RGTS). Thirdly, the account-based principle of payment requires centralized settlement which is reflected in the bank’s balance sheet. That excludes the possibility of notifying other banks about the status of payments in the common exchange network (Kochergin, 2021).

Meanwhile, the G20 has oriented the global economies to the acceleration of payments. This can be facilitated by the introduction of CBDC and the digitalization of banking infrastructure. Using CBDC digital platforms, central banks will be able to monitor the financial market in a more efficient and complete way.

At the same time, there is a heated debate about the idea of issuing CBDCs and payment systems based on them. Firstly, the discussed possibility of changing the infrastructure of payment systems—namely eliminating the intermediary of commercial banks—faces opposition from the banking lobby and leads to a number of other serious economic and political problems. Secondly, the sustainability of such a feature payment system in the face of economic crises is questionable. Thirdly, central banks’ direct control over all payment system may undermine the privacy of payments; this is especially risky in the context of retail payments while interbank payments have been always efficiently controlled by the regulators. Fourthly, the introduction of CBDC payment systems requires reconsidering different areas of law to provide a safe and efficient legal mechanism of CBDC operation.

For these purposes, it is planned to create a digital platform of settlement, which can have different technical designs and solve various regulatory tasks, having the necessary flexibility to resist all the challenges.

### *Types of CBDC Payment Systems*

CBDC payment systems vary depending on the type of currency. There are two types of CBDC—retail CBDC and wholesale CBDC. According to the Bank for International Settlements, retail CBDC (r-CBDC) is “a CBDC for use by the general public,” while wholesale CBDC is “a CBDC for use by financial institutions (wholesale transactions) that is different from balances in traditional bank reserves or settlement accounts” (Bank for International Settlements, 2021a, 2021b, 2021c).

Digital platforms for retail CBDC payments are currently modeled on the basis of a particular central bank (Bank of Russia, 2021). For that reason, they are subject to the national law of the central bank. The cross-border use of r-CBDC can have two forms: the use of a r-CBDC by non-residents visited the relevant jurisdiction, and by non-residents located in a different jurisdiction (Auer et al., 2021).

Correspondingly, legal issues of cross-border r-CBDC payment can arise in two areas: the status of foreigners, and issues of using national r-CBDC abroad. The first question does not require a fundamental revision of the existing conflict of law rules for determining personal status. The second question is more problematic, since it entails the possibility of national currency depreciation without the possibility of its conversion into the currencies of foreign states. In addition, it can create currency competition between the non-resident’s national currency and the foreign CBDC that he acquired in another country (World Bank, 2021).

It is necessary to distinguish platforms for the r-CBDC payments from digital platforms for making ordinary payments from commercial bank deposits. For example, Singapore’s and Thailand’s authorities are developing a special digital platform “Nexus” for instant cross-border payment, which is designed to modernize the SWIFT payment system (2021a, 2021b, 2021c).

The solution to the global problem of CBDC exchange is the use of w-CBDC in interbank payments. To make such cross-border payments, regulators invent special digital platforms that provide for the technical framework to use CBDCs of a certain jurisdiction in another currency area.

The CBDC payment systems differ in the results of transaction enforcement. There are two possible models: payment v. payment (PvP) and payment v. delivery (PvD). The PvP system allows users to exchange one state's w-CBDC to another state's CBDC. The PvD system potentially makes it possible to use w-CBDC for purchasing securities in the digital form which are able to carry interest (International Securities Services Association, 2021). The development of PvD will encourage the use of this technology in other areas of the financial market, e.g. in securities settlement systems (Inozemtsev, 2021).

### *Centralized V Decentralized Settlement*

Decentralized settlement is another specific criterion for comparing CBDC payment systems. There are CBDC digital platforms that do not include DLT in their core, i.e. account-based CBDC systems that presume using central bank ledger to operate transactions or token-based CBDC systems that use centralized settlement (Brummer, 2019). "A centralized ledger stores data and is maintained by a trusted administrator, recording transfers of assets upon receipt of verified notifications." (Arner et al., 2019).

However, in recent experiments with w-CBDC digital platforms, regulators prefer the decentralized system. This makes it possible to relocate the risk of hacking and manipulating data. "In distributed ledgers many data storage points (nodes) are connected with each other and store all data simultaneously, together constituting the common ledger. DLT requires consensus of those nodes" (Arner et al., 2019).

Moreover, according to some expert organizations, DLT removes the issue of national factors of various jurisdictions in the regulation of w-CBDC. This is possible because DLT is based on the use of smart contracts that "allows for the digital codification of entire legal institutions and also helps to ensure the automatic enforcement of respective rights and duties" (Möslein, 2019). Besides, a smart contract allows users to avoid intermediaries who would govern the process of payment in traditional payment system, i.e. commercial banks.

DLT can be permissioned and permissionless systems. Permissioned DLT has the defined governance structure where data authorization depends on the coordination between multiple predefined servers (Möslein, 2019). In the permissionless ledger, there is no restriction

on participation in the system; participants may not know who else use the data, which creates additional security (Digital Currency Governance Consortium, 2021).

### *Models of Payment Systems*

To date, there are several models of digital platforms (BIS paper) and relevant w-CBDC payment systems:

1. domestic platform (compatible CBDC systems);
2. corridor network platform (interlinked multi-CBDC systems); and
3. third-party platform (single multi-currency system).

The model of the compatible CBDC system consists of two separate CBDC systems. Such a model presumes two independent systems with their own technical infrastructure, legal regulation, and participation criteria. Both systems have their own correspondent and clear services which they are ready to offer another jurisdiction for use. As all infrastructure under this model is located within a single jurisdiction, the law of that state will generally be applicable to payment relationships. Therefore, the streamlined idea of this model is that both jurisdictions are interested in adaptation and harmonization of their CBDC systems. In fact, the cooperation between these two systems would be similar to the traditional payment system, as absolute harmonization is not achievable and is a long-term costly process.

Interlinked multi-CBDC systems rely on the intermediary digital platform which provides for clearing and settlement (centralized or decentralized). The platform unites a close list of jurisdictions with similarities, and establishes a convenient CBDC service for central banks, commercial banks, and legal entities. The corridor network platform is regulated under the special common legal regime, which has been developed by the states-participants. The most famous payment platform has been developed in the project mBridge (Bank for International Settlements, 2021a, 2021b, 2021c).

The problem of the legal regulation of the second platform is hidden in the separation of the general special and national levels of legal regulation. This model has the advantage that the currency used in this case will

not be a national currency but will be a specially agreed currency that is recognized by all countries participating in the corridor, which will not entail problems of its validity within this closed system. This creates a duality of legal regulation of transactions within the framework of such a model: the level of common unified regulation and standards, as well as the national level, which, in essence, is founded on the super-mandatory rules and rule of public policy.

The single multi-currency system potentially makes it possible to simultaneously transfer CBDC of different jurisdictions via a single platform that is governed by a particular country. The most eminent experiment on creating such a digital platform is Project Jura, which is considered in detail below. The legal regulation of this model is the most controversial because the scenario of using third-party platforms by the central banks of different states clearly demonstrates the conflict of laws.

### *Experiments with CBDC Cross-Border Payments*

The demand for CBDC will depend on its design. The task is complicated by governments' doubts about the use of their CBDC abroad (Auer et al., 2021). We presume that the multinational use of, at least, wholesale CBDC is a necessary step for implementing digital currency in both national and global economic systems and the undoubtful path of its development.

Currently, there are different experiments, both being conducted and planned to be implemented on constructing cross-border CBDC payment platforms (see Table 1). Central banks and governments are united with the best IT specialists, outstanding economists, and leading law firms in the efforts to create enforceable payment systems, locate possible risks, and find all the pros and cons of using CBDC in real life.

We suggest considering one of the recent experiments—Project Jura—as a model case of implementing a w-CBDC payment system via digital platforms.

### *Project Jura*

Project Jura is a public–private collaboration between Banque de France, Swiss National Bank, and Bank for International Settlements, as well as commercial banks and law firms aiming the creation of a cross-border payment digital platform for transfer CBDC.

**Table 1** Experiments on the use of w-CBDC in cross-border payments and settlement

<i>Project</i>	<i>Date</i>	<i>Participants</i>
Jasper-Urbin	2019	Bank of Canada, Monetary Authority of Singapore
Stella	2019	European Central Bank, Bank of Japan
Inthanon-Lionrock	2020	Bank of Thailand, Hong Kong Monetary Authority
Aber	2020	Saudi Arabian Bank, Central Bank of UAE
Dunbar	2021	Bank for International Settlements Innovation Hub
mCBDC bridge	2021	Bank for International Settlements Innovation Hub
Jura	2021	Bank for International Settlements Innovation Hub, Banque de France, Swiss National Bank
Helvetia II	2022	Bank for International Settlements Innovation, Citi, Credit Suisse, Goldman Sachs, Hypothekbank Lenzburg and UBS

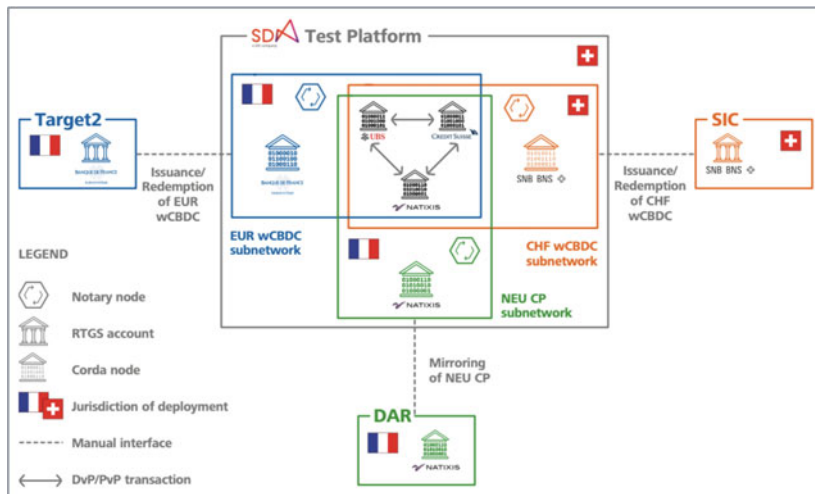
*Source* Created by authors. <https://www.bis.org>

The digital platform has the following characteristics:

- a single multi-currency system;
- being purposed for transferring w-CBDC (euro, Swiss franc);
- using the DLT settlement system with dual notary signing;
- settling payment v. payment or payment v. delivery (French tokenized negotiable instrument);
- complying with existing legal regimes (without using sandboxes); and
- an intraday system.

The peculiarity of this payment project is that it has been conducted on the single digital platform that made it possible to pay euro w-CBDC against the Swiss franc, as well as to make payments in both currencies against the commercial paper. This is the first experience of using a platform by non-resident central banks that are presumed to be governed by a third party.

Firstly, French and Swiss commercial banks have transferred funds to their relevant central banks. Each Central Bank controlled a node on the DLT platform that could hold and transfer the w-CBDCs as well as the tokenized commercial paper. Special notary nodes have validated the transaction. The dual-notary signing allows digital assets to be exchanged



**Fig. 1** Scheme of w-CBDC payment system under Project Jura (*Source* Created by authors on the basis of Banque de France, Bank for International Settlements and Swiss National Bank [2021])

without requiring the issuers to trust each other or give up control over their assets. Such a payment method allows its users to safely transfer all or nothing.

Notary nodes provide information for central banks that use their w-CBDC. As the system is divided into subnetworks for each central bank, thanks to the notary node, they have an opportunity to observe participants with access to their w-CBDC and its settlement. The notary node provides a central bank participant in the system with a limited amount of information. It does not disclose the details of transactions, which allows its users to keep the balance of control over and privacy of w-CBDC payments (Fig. 1).

### *Legal Regulation of w-CBDC Payment Systems*

Difficulties of legal regulation possibly arise in the field of various areas of law: international private and public law, banking law, antitrust law, and in the field of personal data protection.



For their implementation as legal tender, a legally issued CBDC must be recognized in other states. In traditional payment systems, the parties to payment are usually subject to the exhaustive regulation of the contract between them, which is supplemented by existing banking practices. In the event of gaps, it usually applies the law of the jurisdiction where the processing, clearing, and set-off of payments took place (processing, clearing, and settlement) (World Bank, 2021). In order to recognize digital transfers of CBDC, the use of CBDC digital platforms will presumably require enforceable acceptance within its own jurisdiction and the use of concept of public policy of the state to protect it from legal risk. According to Schwarcz, the system of sponsoring commercial banks, instead of performing intermediary functions, will control those payments that may threaten the stability of the financial system, which should be supported by central banks, being overall supervisors (Schwarcz, 2022). In addition, when developing some projects of cross-border CBDC payment systems (for instance mBridge), the nature of the mandatory rules and rules of *ordre public* (e.g. anti-laundering and anti-terrorist financing laws) have been already taken into account (Möslein, 2019). In these aspects, the regulation of payment systems remains exclusively national, which creates the need for their maximum harmonization.

This, in turn, may require the conclusion of international treaties. Since central banks generally have the power to recommend the conclusion of international treaties with central banks of other states (Bank of Russia, n.d.), this instrument can be efficiently used to provide a regulatory environment for cooperation in w-CBDC development.

Potential lobbying of special regulation for the Central Bank at the international level, as well as a complete change in the role of commercial banks from intermediary to controlling, following the example of some w-CBDC introduction projects, creates risks of monopolization of the banking services market by a central bank. The same circumstance will undoubtedly cause changes in banking legislation, which requires taking into account the peculiarities of the CBDC payment system model chosen by the regulator.

If the CBDC digital platform includes DLT, then it is necessary to take into account the scope of legislation on the protection of personal data. The use of DLT in CBDC payment systems requires the protection of data which is transferred to the payee as well as limited volume data which becomes public for the participants of the system (World Bank, 2021).

The choice of law issue in the context of legal protection of personal data can be resolved in different ways, either to apply the law of jurisdiction separately to each leg of a transaction within the DLT or to fully subject this transaction to relevant law.

## CONCLUSIONS

In conclusion, cross-border CBDC digital platforms are in the stage of active development. Experiments of issuing cross-border CBDCs are conducted on a regular basis and provide new data for research. Currently, they are constructed in the framework of existing models: domestic platform, corridor network platform, and third-party platform.

The potential implementation of a cross-border CBDC digital platforms is accompanied with manifold legal challenges. They are on the international private and public law, banking law, antitrust law, and in the field of personal data protection.

Therefore, further research should be conducted on the cross-border CBDC models. The focus of future research should be accurate and specific and based on the background of the specific branch of law. Since the global agenda on the CBDC platform invention constantly changes, a researcher should have a mind mobile enough to catch the relevant regulatory aspects in the development of this technology. The value of such research is invaluable because it demonstrates the reverse causation between technological design and its legal regulation, thereby, opening new horizons of technological design of CBDC issuance.

## REFERENCES

- Arner, D., Buckley, R. P., Zetzsche, D., Zhao, B., Didenko, A. N., Park, C. Y., & Pashoshka, E. (2019). Policy and regulatory challenges of distributed ledger technology and digital assets in Asia. In C. Brummer (Ed.), *Cryptoassets legal, regulatory and monetary perspectives* (pp. 263–305). Oxford University Press. <https://doi.org/10.1093/oso/9780190077310.003.0011>
- Athanassiou, P. L. (2020). Payment systems. In F. Amtenbrink, & C. Herrmann (Eds.), *The EU law of economic and monetary union* (pp. 711–735). Oxford University Press. <https://doi.org/10.1093/oso/9780198793748.003.0029>
- Auer, R., Boar, C., Cornelli, G., Frost, J., Holden, H., & Wehrli, A. (2021). *CBDC beyond borders: Results from a survey of central banks*. (Report No. 116). Bank for International Settlements. <https://www.bis.org/publ/bppdf/bispap116.htm>

- Bank for International Settlements. (2021a). *Annual economic report*. <https://www.bis.org/publ/arpdf/ar2021e.pdf>
- Bank for International Settlements. (2021b). *Inthanon-LionRock to mBridge: Building a multi CBDC platform for international payment*. <https://www.bis.org/publ/othp40.pdf>
- Bank for International Settlements. (2021c). *Nexus: A Blueprint for instant cross-border payments*. <https://www.bis.org/publ/othp39.pdf>
- Bank of Russia. (n.d.). International cooperation. <https://www.cbr.ru/PSystem/mezhdunarodnoe-sotrudnichestvo/>
- Bank of Russia. (2021). *Digital ruble concept*. [https://www.cbr.ru/Content/Document/File/120239/dr\\_cocept.pdf](https://www.cbr.ru/Content/Document/File/120239/dr_cocept.pdf)
- Banque de France, Bank for International Settlements, & Swiss National Bank. (2021). *Project Jura: Crossborder settlement using wholesale CBDC*. <https://www.bis.org/publ/othp44.pdf>
- Cunha, P. R., Melo, P., & Sebastião, H. (2021). From bitcoin to central bank digital currencies: Making sense of the digital money revolution. *Future Internet*, 13, 165. <https://doi.org/10.3390/fi13070165>
- Digital Currency Governance Consortium. (2021). *CBDC technology considerations* (White paper series No 8). World Economic Forum. [https://www3.weforum.org/docs/WEF\\_CBDC\\_Technology\\_Considerations\\_2021.pdf](https://www3.weforum.org/docs/WEF_CBDC_Technology_Considerations_2021.pdf)
- Geva, B. (2019). Cryptocurrencies and the evolution of banking, money and payments. In C. Brummer (Ed.), *Cryptoassets legal, regulatory and monetary perspectives* (pp. 11–38). Oxford University Press. <https://doi.org/10.1093/oso/9780190077310.003.0002>
- Inozemtsev, M. I. (2022). Legal regulation of crypto-asset markets in the EU in the post-COVID period. In V. S. Osipov (Ed.), *Post-COVID economic revival: Sectors, institutions, and policy* (Vol. 1, pp. 315–326). Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-83561-3\\_22](https://doi.org/10.1007/978-3-030-83561-3_22)
- International Securities Services Association. (2021). *Blueprint for central bank digital currencies in post-trade settlement*. <https://issanet.org/content/uploads/2021/12/ISSA-Blueprint-CBDC-in-Post-Trade-Settlement-December-2021-FINAL.pdf>
- Kochergin, D. A. (2021). Modern models of systems of central bank digital currency. *St Petersburg University Journal of Economic Studies*, 37(2), 205–240. <https://doi.org/10.21638/spbu05.2021.202>
- Möslein, F. (2019). Conflict of laws and codes: Defining the boundaries of digital jurisdictions. In P. Hacker, I. Lianos, G. Dimitropoulos, & S. Eich (Eds.), *Regulating blockchain: Techno-social and legal challenges* (pp. 275–288). Oxford University Press. <https://doi.org/10.1093/oso/9780198842187.003.0016>

- Ozili, P. K. (2022). Central bank digital currency research around the world: A review of literature. *Journal of Money Laundering Control*. <https://doi.org/10.1108/JMLC-11-2021-0126>
- Radicati di Brozolo, L. G. (2000). International payments and conflict of laws. *The American Journal of Comparative Law*, 48(2), 307–326. <https://doi.org/10.2307/840973>
- Rohan, G. (2019). Banking in a digital fiat currency regime. In P. Hacker, I. Lianos, G. Dimitropoulos, & S. Eich (Eds.), *Regulating blockchain: Techno-social and legal challenges* (pp. 169–180). Oxford University Press. <https://doi.org/10.1093/oso/9780198842187.003.0009>
- Salikhov, D. R. (2020). “Regulatory sandboxes” in Russia: New horizons and challenges. *Digital Law Journal*, 1(2), 17–27. <https://doi.org/10.38044/2686-9136-2020-1-2-17-27>
- Schwarcz, S. L. (2022). Regulating digital currencies: Towards an analytical framework. *Boston University Law Review*, 102, 1037. <https://doi.org/10.2139/ssrn.3775136>
- Shen, W., & Hou, L. (2021). China’s central bank digital currency and its impacts on monetary policy and payment competition: Game changer or regulatory toolkit? *Computer Law & Security Review*, 41, 105577. <https://doi.org/10.1016/j.clsr.2021.105577>
- World Bank. (2021). *Central bank digital currencies for cross border payments: A review of current experiments and ideas*. World Bank Group. <https://openknowledge.worldbank.org/handle/10986/36764>



# Legal Regulation of Information and Integration Digital Platforms

*Stanislav S. Ageev and Anastasia M. Ageeva*

## INTRODUCTION

Digital platforms have become an integral part of people's lives. As Hein et al. (2020) write, "digital platforms as technical infrastructures and their ecosystems of social actors continue to change entire industries." With references to particular studies, they note that Airbnb lists over 4 million accommodations, more than the top five hotel brands combined; Uber has a network of 7 million drivers, overshadowing local taxi companies; and Facebook coordinates 2 billion active users each month, vastly outnumbering newspaper subscriptions.

These platforms have obviously changed certain sectors of the economy. For example, a case study of Toronto conducted by Shauna Brail "exemplifies the history of ride-hailing as a service that aggressively entered the city, disrupted its right to operate, and legally established a case requiring the municipal government to establish a set of regulations

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specifically directed to ride-hailing as a form of ground transportation distinctive from taxi and limousine” (2018).

This example shows how old forms are replaced by new ones. However, that does not mean that this process is out of governmental control. Instead, the government decides whether to accept new forms or not. The new forms are not meant to be better than the older ones, but merely differ; even when they solve the problems of the past, they create new ones at present.

Digital platforms in general, as Kharitonova and Sannikova (2021) write (with reference to the European Commission), may be defined in either a broad or a narrow sense. Thus, in a broad sense, an online platform is “an enterprise operating in two (or many) third-party markets that use the Internet to enable interaction between two or more different groups of users who are connected by indirect network effects.” Narrowly, a digital platform is defined as “an information society service accessible via the Internet or similar digital means that allows customers to enter into contracts with suppliers of goods, services or digital content” (Kharitonova & Sannikova, 2021).

Derave et al. (2021) define a digital platform as “a service offering by the digital platform management to the users. The primary action offered are interactions between users and these interactions are enabled by a software.” The authors agree that this definition is very broad “as these interactions can consist solely of information transfer (e.g. WhatsApp, Tinder) but can also include offerings of products (e.g. eBay) and/or services (e.g. Airbnb). It is required that the interactions are the primary actions offered by the platform, and not secondary actions such as product reviews on regular B2C e-commerce sites and apps” (Derave et al., 2021).

All in all, digital platforms have become a complex subject which can be divided into certain types. One of them is information and integration digital platforms.

For the purposes of the research we have formulated the following questions:

1. Is it possible to single out such a type of digital platforms as information and integration ones? This takes into account that all digital platforms per se work with information and are aimed at integration.

2. What spheres of legal regulation should be developed primarily? This considers the fact that digital platforms may be self-regulated and excessive governmental regulation may impede their growth.

## METHODOLOGY

In order to answer the questions formulated above, we have analyzed some of the recent research on digital platforms in general, national legislation of different states and supranational law of the EU on the matters of platform economy, some of the latest judicial cases and administrative practice concerning the application of the aforementioned sources of law, and the official positions of international organizations such as the OECD. The use of the comparative-legal method has enabled us to find one and the same legal problems in different jurisdictions, and identify the peculiar approaches to their solution.

## RESULTS

The rapid development of digital platforms explains the lack of their regulation by the government, though in some cases they have succeeded in self-regulation (Cusumano et al., 2021).

In light of this, according to Kitsing and Vallistu (2020), different scenarios have been developed by international organizations and national states. For instance, “the OECD’s digital transformation scenarios address the future of digital platform ecosystems most directly. Their scenario ‘Corporate Connectors’ is probably one of the most realistic from today’s perspective as it foresees the increasing dominance of large private digital platforms. The scenario ‘Platform Governance’ foresees increasing importance of government or government-supported platforms, which is more likely in some parts of the world than others. The scenario ‘iChoose’ emphasizes the importance of privacy and individual rights to data control. However, the least likely scenario is ‘Artificial Invisible Hands’ which represents radical decentralization of governance where nobody controls the data.” Similar scenarios were developed by the European Commission’s Joint Research Centre (JRC), Foresight Centre in Estonia, and the Institute for Policy Studies (IPS) in Singapore.

However, as Tereszkievicz (2018) correctly notices, “the absence of a comprehensive legal framework on digital platforms does not mean that their structure, operation, activity and liability are unregulated. Digital

platforms are subject to existing general rules on electronic commerce, consumer protection, data protection, intellectual property rights, or competition.”

Trying to identify the primary directions of the legal regulation of digital platforms, Sidorenko et al. (2021) refer to the positions of the World Bank and the EU. The experts of the World Bank say that such spheres are: (1) antitrust regulation; (2) licensing; (3) taxation; and (4) the protection of personal information. In the EU, the problem of legal regulation becomes even more complicated, since there are supranational and national levels of law. Regardless, the experts of the European Commission speak about such areas as: (1) licensing and other restrictions on market entry; (2) detailed legislation on the regulation of labor relations at the level of individual countries; (3) establishing basic requirements for the protection of consumer rights, protection of copyright and personal data at the European Union level; and (4) data laws: legal regulation of data transfer between digital platforms, access mode to authorities’ data, use of open data received from authorities, and establishing new copyright regimes for text and data mining.

### *Broad and Narrow Definitions of Information and Integration Digital Platforms*

From our point of view, information and integration digital platforms are a fundamental part of the platform economy and one of the main types of digital platforms due to their nature. That is why their legal regulation is a priority for national states and international community.

However, the fact that the nature of such digital platforms is information makes it difficult to differ them from the others. Here we mean the perception of information and integration digital platforms in a broad and narrow sense.

Broadly, all digital platforms work with information and are aimed at integration. The idea of any digital platform is to connect two sides of a deal through the intermediary. The interesting thing is that the intermediary has one and the same role no matter what the deal is; they are an operator of information. Thus, digital platforms are integrative platforms where an operator provides exchange of information between two sides of a deal.

Since, within the broad approach, information and integration digital platforms have no difference from digital platforms in general, it seems



to be more preferable to use a narrow approach. The narrow approach demands a unique definition for information and integration digital platforms, meaning that there should be criteria to separate them from the others.

Like the division of law in branches, the division of digital platforms in types is artificial. For example, Uber is a digital platform that is aimed at connection of taxi drivers with their clients by provision of information. However, the ultimate goal of a user of such a digital platform is to have a taxi ride, not to obtain information.

The criterion of the ultimate goal of a user of a digital platform may be used as the main criterion for the division of digital platforms into types. Thus, information and integration digital platforms may be defined narrowly as digital platforms where users' ultimate goal is to get information.

A similar definition is suggested by Parker et al. (2020). In their research, the authors differentiate between digital platforms with a criterion of primary goal as well. However, they speak about the "primary objective" of digital platforms. In our concept, the center is a user but not a digital platform, and it is a user whose ultimate goal matters. As far as we can see, this is true since all digital platforms are united in their goal: the exchange of information between or among users via the operator. The only thing that differentiates them is the ultimate product that users are eager to achieve.

Remarkably, information itself is a very broad concept. Consequently, information and integration digital platforms may be further subdivided. For example, search engines that work with information in different formats (Google, Microsoft's Bing) and digital platforms that process information in video format (YouTube). As a result, such a criterion as format of information let us divide information and integration digital platforms in subtypes.

### *Personal Data Protection Law*

In Russia, there is no special law on digital platforms; because of this, personal data protection issues are regulated by Federal Law "On personal data" from 27.07.2006 № 152-FZ (2006). It covers such important issues for digital platforms as the principles and conditions of personal data processing (Chapter 2), the rights of a personal data subject (Chapter 3), the obligations of an operator (Chapter 4), and

federal governmental control (supervision) over personal data processing and liability (Chapter 5).

Despite the fact that most of the general issues connected with the operation of digital platforms are covered by this Federal Law, it ignores the peculiarities of digital platforms. For this reason, Yushchenko and Gumerova (2020) suppose that the actual Russian legislation on personal data protection may be improved in two ways:

1. the content of “personal data” should be reviewed to include technical data such as IP address, device identifiers, location data, and other online identifiers that can be used to identify the person; and
2. the mandatory addressing notification to the consumer should be introduced. Such notifications, as the authors write, “should be concise, transparent, written in a comprehensible language, and provided free of charge”; that will help the consumer to “make an informed choice and control the way to collect, use, and disclose personal information” (Yushchenko & Gumerova, 2020).

These two recommendations are based on the experience of Australia, where the Digital Platforms Privacy Code is being developed. There are two privacy principles in the center of the Code: notification and consent. The consent mechanism, as the authors say, operates for “the collection, use, and disclosure of personal information, the processing of children’s data, information security and data storage, and complaints handling procedures” (Yushchenko & Gumerova, 2020).

In the EU, where General Data Protection Regulation (GDPR) (2016) has a direct application in the Member States, administrative practice supports this legislative trend. For instance, in Austria and France, there have been two recent cases in the field of cookies collection by the operators of information and integration digital platforms.

Thus, in France, the National Commission for Computing and Liberties (Commission Nationale de l’Informatique et des Libertés, CNIL) has fined Google 150 million Euro and Meta/Facebook 60 million Euro for the violation of the GDPR (CNIL, 2022). In the opinion of the French data regulator, both companies failed to allow French users to easily reject cookie tracking technology as required by the EU privacy rules.

The same case has taken place recently in Austria (DSB, 2021). The Austrian data protection authority (die Datenschutzbehörde, DSB) has

ruled that the use of Google Analytics cookies by the website operator violates both Chapter V of the GDPR, which establishes rules on international data transfers, and the Schrems II judgment of the European Court of Justice (ECJ) (Case C-311/18, 2020).

However, not all the scientists agree with the effectiveness of the GDPR. For instance, Geradin et al. (2021) claim that “while the GDPR has delivered positive outcomes by enhancing the protection afforded to users of digital services and strengthening the rights of data subjects, it has also had adverse effects on competition by strengthening the position of large online platforms on digital markets.”

This link between the personal data protection law and the antitrust law is shared by Strowel and Vergote (2016), who say that “the fact that digital platforms exploit huge quantities of data, including personal data, raises new issues usually not well taken into consideration in the reasoning of regulatory authorities. The increasing importance of data as a component of the digital economy has to be factored in the analysis of competition law for instance.”

### *Antitrust Law*

Speculating on antitrust law, Flew and Wilding (2021) describe in their article the Digital Platforms Inquiry conducted by the Australian Competition and Consumer Commission (ACCC). The main result of this Inquiry was the list of recommendations concerning: (1) harms caused to news producers and advertisers; (2) harms caused to consumers and citizens. Here we refer to the former, since it deals directly with antitrust law.

Thus, inter alia the authors highlight such problems as:

1. Potential harm that may be caused by the market power of digital platforms. It may be (though will not necessarily be) caused because the possession of market power is not an infringement of antitrust law, although its exercise might be. As is reported in the Inquiry, “the unrestrained exercise of market power by digital platforms against advertisers and content creators could lead to market failure.” In light of this, Google and Facebook possess market power in regard to volume and value of consumer data acquired by the digital platforms. Thus, one of the recommendations specific to Google was as follows: “If it does not voluntarily offer Australian

users of Android devices with the option to choose a default search engine and Internet browser, it should be subject to new laws that require it to do so” (Flew & Wilding, 2021).

2. Complex value chains for online advertising lead to the lack of transparency on pricing, cost effectiveness, and overall value of digital advertising. Such a state of affairs, according to the authors, may “adversely affect both advertisers and the owners of websites.” The suggestion of ACCC was to create a special branch within its structure “that would investigate potential anti-competitive conduct and conduct a wide-ranging inquiry into competition for the supply of ad tech services” (Flew & Wilding, 2021).
3. Google and Facebook have substantial bargaining power in their dealings with news media businesses in Australia. The suggestion to address the problem faced by local media business in negotiating terms for the use of their content by digital platforms is to develop codes of conduct by individual digital platforms that would govern business relations between the two sides (Flew & Wilding, 2021).

Interestingly, some of these recommendations form the basis of the recent antitrust lawsuits against Google in the US courts. For instance, in 2020 the US Department of Justice (DOJ) along with eleven state Attorneys General filed a civil antitrust lawsuit in the US District Court for the District of Columbia to stop Google from unlawfully maintaining monopolies through anticompetitive and exclusionary practices in the search and search advertising markets and to remedy the competitive harms (United States of America v. Google LLC, 2020).

Another recommendation that may be utilized in general and applied to the Russian Federal Law “On protection of competition” from 26.07.2006 № 135-FZ (2006) in particular is suggested by Yushchenko and Gumerova (2020). They write that “the merger of organizations allows removing a potential competitor and gain access to the data of consumers (customers) and their confidential information as a result of the acquisition.” Thus, from their point of view, “it is advisable to envisage obtaining preliminary permission for large digital platforms (for example, Google and Facebook) for the acquisition of any organization operating in the territory of the Russian Federation.”

Naturally, this recommendation may be strongly opposed by operators of information and integration digital platforms. Still, the latest judicial cases from abroad show that such an amendment to the Russian legislation may be effective.

For example, Woods (2021) writes that similar actions taken by the UK Competition and Markets Authority (CMA) were challenged by Facebook in court; thus, “Facebook appealed against the CMA’s intervention in Facebook’s acquisition of Giphy, arguing the intervention was irrational, disproportionate and infringed the principle of legal certainty. The CAT (Competition Appeal Tribunal) unanimously dismissed the application, and the CMA is now carrying out a full merger inquiry.”

## DISCUSSIONS

In our research, we have arrived at the conclusion that the broad definition of information and integration digital platforms seems to be inappropriate. However, it actually may be appropriate if certain conditions are met.

For instance, the classification of digital platforms suggested by Nooren et al. (2018) includes: (1) resellers or distributors (Netflix); (2) market places (the Dutch e-commerce platform Bol.com); (3) social networks (Facebook, WhatsApp, and Twitter); and (4) platforms of platforms (Apple’s iOS mobile operating system). Presuming that information and integration digital platforms are platforms of platforms, they may be perceived in a broad sense and be a type of digital platforms simultaneously.

Our presumption may be supported by Busch (2021), who, indirectly speculating on platforms of platforms, notes in his research: “Google’s role as the operator of central informational infrastructures of the digital society goes far beyond the conventional search of websites using ‘Google Search’. For example, ‘Google Books’ enables a full-text search in millions of books in a wide range of languages. <...> ‘Google Scholar’ is becoming an increasingly important resource for finding scientific publications, ‘Google News’ brings together news from all over the world and ‘Google Maps’ provides geographical information of all kinds.” Then he quotes Google’s corporate goal: “To organize the world’s information and make it universally accessible and useful” (Busch, 2021).

Two classifications of digital platforms are presented by Fu et al. (2021) as follows: by industry, and by activities of their users. By industry, digital platforms may exist in the hospitality industry (Airbnb), in the transport sector (Uber, Bolt, BlaBlaCar, and Lift), in the food delivery industry (Uber Eats and Deliveroo), in the communication industry (Facebook and WhatsApp), and in the entertainment industry (Netflix, Youtube, TikTok). The other suggests their division in dependence on how the users engage and share experiences (Facebook, WhatsApp), move around (Uber, Bolt, Lift), buy products and food (Amazon, Alibaba, eBay, Uber Eats, and Deliveroo), pay for goods and services (PayPal, Apple pay, Alipay), access health care (PatientsLikeMe), and share accommodation and resources (Airbnb).

From our point of view, these classifications would not make sense if we did not perceive information and integration digital platforms broadly.

## CONCLUSIONS

The research has shown that information and integration digital platforms may be singled out as a type of digital platforms. To be identified as such, they should be interpreted narrowly since their broad definition erases all the differences between them and digital platforms as a class. The narrow definition emanates from the unique criterion that is peculiar only for information and integration digital platforms. Such a criterion is the ultimate goal of users, which seems to be obtaining information. The existence of the broad definition is questionable and is a matter for further discussions.

The legal regulation of information and integration digital platforms may be found in an array of traditional spheres of law, but the primary and closely connected ones are personal data protection law and antitrust law. On the example of these two spheres of law, it was demonstrated how traditional legal regulation may be improved if the peculiarities of information and integration digital platforms are taken into account. Still, it was concluded that digital platforms should not be fully regulated by the government—there should be a space for their self-regulation.

## REFERENCES

- Brail, S. (2018). From renegade to regulated: The digital platform economy, ride-hailing and the case of Toronto. *Canadian Journal of Urban Research*, 27(2), 51–64.
- BSD. (2021). *Die Entscheidung der Datenschutzbehörde vom 22. Dezember 2021, GZ: D155.027, 2021–0.586.257*. [https://privacyblogfullservice.huntonwilliamsblogs.com/wp-content/uploads/sites/28/2022/01/E-DSB-Google-Analytics\\_DE\\_bk\\_0.pdf](https://privacyblogfullservice.huntonwilliamsblogs.com/wp-content/uploads/sites/28/2022/01/E-DSB-Google-Analytics_DE_bk_0.pdf). Accessed 29 January 2022.
- Busch, C. (2021). *Regulation of digital platforms as infrastructures for services of general interest*. *Wisio Diskurs*. <https://library.fes.de/pdf-files/wisio/17836.pdf>. Accessed 24 January 2022.
- CNIL. (2022). *Cookies: The CNIL fines GOOGLE a total of 150 million euros and FACEBOOK 60 million euros for non-compliance with French legislation*. <https://www.cnil.fr/en/cookies-cnil-fines-google-total-150-million-euros-and-facebook-60-million-euros-non-compliance>. Accessed 29 January 2022.
- Cusumano, M. A., Gawer, A., & Yoffie, D. B. (2021). Can self-regulation save digital platforms? *Industrial and Corporate Change*, 30(5), 1259–1285. <https://doi.org/10.1093/icc/dtab052>
- Data Protection Commissioner v. Facebook Ireland Limited and Maximilian Schrems. (2020). *Case C-311/18*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62018CJ0311&from=EN>. Accessed 29 January 2022.
- Derave, T., Sales, T. P., Gailly, F., & Poels, G. (2021). Comparing digital platform types in the platform economy. In *Advanced information systems engineering* (pp. 417–431). [https://doi.org/10.1007/978-3-030-79382-1\\_25](https://doi.org/10.1007/978-3-030-79382-1_25)
- Federal Law “On personal data” from 27.07.2006 № 152-FZ. (2006). URL: [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_61801/](http://www.consultant.ru/document/cons_doc_LAW_61801/). Accessed 29 January 2022.
- Federal Law “On protection of competition” from 26.07.2006 № 135-FZ. (2006). URL: [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_61763/](http://www.consultant.ru/document/cons_doc_LAW_61763/). Accessed 29 January 2022.
- Flew, T., & Wilding, D. (2021). The turn to regulation in digital communication: The ACCC’s digital platforms inquiry and Australian media policy. *Media, Culture & Society*, 43(1), 48–65. <https://doi.org/10.1177/0163443720926044>
- Fu, X., Avenyo, E., & Ghauri, P. (2021). Digital platforms and development: A survey of the literature. *Innovation and Development*, 11(2–3), 303–321. <https://doi.org/10.1080/2157930X.2021.1975361>

- Geradin, D., Karanikioti, T., & Katsifis, D. (2021). GDPR Myopia: How a well-intended regulation ended up favouring large online platforms – the case of ad tech. *European Competition Journal*, 17(1), 47–92.
- Hein, A., Schreieck, M., Riasanow, T., Setzke, D. S., Wiesche, M., Böhm, M., & Krčmar, H. (2020). Digital platform ecosystems. *Electronic Markets*, 30, 87–98. <https://doi.org/10.1007/s12525-019-00377-4>
- Kharitonova, Y., & Sannikova, L. (2021). Digital platforms in China and Europe: Legal challenges. *BRICS Law Journal*, 8(3), 121–147. <https://doi.org/10.21684/2412-2343-2021-8-3-121-147>
- Kitsing, M., & Vallistu, J. (2020). Future of governance for digital platform ecosystems. *Proceedings of Fifth International Congress on Information and Communication Technology*, 2, 334–341. [https://doi.org/10.1007/978-981-15-5859-7\\_33](https://doi.org/10.1007/978-981-15-5859-7_33)
- Nooren, P., van Gorp, N., van Eijk, N., & Fathaigh, R. (2018). Should we regulate digital platforms? A new framework for evaluating policy options. *Policy and Internet*, 10(2), 1–38. <https://doi.org/10.1002/poi3.177>
- OJ L 119 (2016). *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02016R0679-20160504&from=EN>. Accessed 29 January 2022.
- Parker, G., Petropoulos, G., & Van Alstyne, M. (2020). *Digital platforms and antitrust*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3608397](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3608397). Accessed 24 January 2022.
- Sidorenko, E. L., Galstyan, I. S., & Sitnik, A. A. (2021). Legal Regulation of digital platforms: Reference points of modern legislation. *Lecture Notes in Networks and Systems*, 139, 408–418. [https://doi.org/10.1007/978-3-030-53277-2\\_49](https://doi.org/10.1007/978-3-030-53277-2_49)
- Strowel, A., & Vergote, W. (2016). *Digital platforms: To regulate or not to regulate? Message to regulators: Fix the economics first, then focus on the right regulation*. [https://ec.europa.eu/information\\_society/newsroom/image/document/2016-7/uclouvain\\_et\\_universit\\_saint\\_louis\\_14044.pdf](https://ec.europa.eu/information_society/newsroom/image/document/2016-7/uclouvain_et_universit_saint_louis_14044.pdf). Accessed 27 January 2022.
- Tereszkiewicz, P. (2018). Digital platforms: Regulation and liability in the EU law. *European Review of Private Law*, 26(6), 903–920.
- United States of America v. Google LLC. (2020). *Case 1:20-cv-03010*. <https://www.courtlistener.com/docket/18552824/united-states-of-america-v-google-llc/>. Accessed 29 January 2022.
- Woods, L. (2021). The UK's approach to regulation of digital platforms. *Perspectives on Platform Regulation*, 1, 329–350. <https://doi.org/10.5771/9783748929789-329>



Yushchenko, N. A., & Gumerova, E. F. (2020). Regulation of digital platforms in Russia: A glimpse into the future. *Advances in Economics, Business and Management Research*, 138, 960–965. <https://doi.org/10.2991/aebmr.k.200502.158>



# Legal Regulation of Innovation Platforms in Russia

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## INTRODUCTION

The platforms are now unanimously mentioned among the drivers of the digital economy (UNCTAD, 2019). The growth of global and regional platforms shows their significance. The diversity of digital platforms calls for their categorization and classification for regulatory and many other purposes. Around 16 types of technology platforms were already identified in the specialized research on computer sciences in 2019 (Spacey, 2019).

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While generativity on the one hand provides opportunities for digital service innovation, on the other hand it challenges the traditional business logic of industrial manufacturing firms. The traditional stable product-centric businesses, where industrial manufacturing firms control resources of a product platform, have become destabilized and driven toward a flexible service innovation (Chowdhury et al., 2021). The bigger platforms typically set high standards of quality in order to attract the public, and potentially other platforms could more easily get users' traction if rules were to require them to maintain a similarly high standard (Gutbrod, 2020).

In 2019, UNCTAD, in its report, distinguished the innovation platforms from transaction platforms. While transaction platforms provide the infrastructure for different users' intercommunication and interactions (marketplaces), the innovation platforms are technological solutions for those who develop technologies including software, designs, etc. (Android, Linux, MPEG video, etc.). However, the classification of UNCTAD has not yet become common internationally or for legislators in different countries. The legal wording and terminology about the digital platforms are not unified yet.

The tools for developing and growing the innovative ideas are opposed to the transaction platforms. Innovation platforms include those which allow to prototype or modeling of different things (web sites, design projects, construction projects, etc.), and at the same time those which accelerate innovations only by pure exchange of ideas. The latter platforms just pool together seekers from the business or public sector and solvers—those who have the technology or other scientific solutions. The transaction platforms are widely known and draw more attention comparing to the innovation platforms.

In Russia, the term “technology platforms” is used more commonly, and encompasses a vast variety of platforms. Technology platforms are both transactions and innovation platforms in the sense that both types are based on high technology solutions. The term “technology platforms” is predominantly used in publications, strategies, and legal documents.

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In Russia, the specific issues of innovation platforms are discussed (Kartskhiya, 2019), but scarcely; on the other hand, the international academic discussion is quite vivid (Evans et al., 2006; Orly, 2016). Some issues of innovation platforms are discussed in the framework of the open innovations discourse.

The beginning of the 2020s seems to have become a period of important changes in the international relations and traditional supply chains around the world. There are novelties in Russian politics and economy as well (Verlaine et al., 2020). The world is supposed to have changed, and new technologies are announced to be vital for successful competition between and even the survival of different market players (Shashkova et al., 2020).

In this research, the authors seek to analyze the current development of the policy and regulation in Russia relevant to innovation platforms, as well as find out how far Russia advanced in setting the legal framework for innovation platforms.

## METHODOLOGY

The scope of this research is narrowed to the regulation of the platforms originated and developed in Russia, leaving aside the legal issues of Russian users' interaction with foreign and international innovation platforms. Otherwise, this discussion could go beyond the Russian legislation to the global issues.

The subject of the study is based on the regulatory legal acts of the Russian Federation. The legal basis of the research is in the norms of constitutional, financial, administrative, and civil law, including the Constitution of the Russian Federation, federal laws of the Russian Federation, regulations of the Russian Federation, regulatory legal acts of the Ministry of Finance of the Russian Federation, acts of other ministries and departments, and regulatory public contracts, among others.

In order to structure the present research and assess the advancement of legal regulation of innovation platforms in Russia, the authors shall refer to the concept of policy cycle. The initial ideas of the policy cycle concept could be traced back to 1950s, but in the beginning of the twenty-first century this concept became widely used (Howlett & Ramesh, 2003: 11–12), although certain criticism was already expressed. The checkpoints of the policy cycle are usually defined as follows: the starting point is the identification of the problem, then agenda-setting,

policy formulation (analysis and design), policy legitimization (or termination—if certain approach is rejected completely), policy implementation, evaluation, and policy change (Dye, 2008). The concept serves the building of the innovation-friendly regulatory environment. For example, the European Union, implementing the innovation principle, successfully employed the concept of policy cycle simplifying it into 3 phases: agenda-setting, legislation, and implementation.<sup>1</sup>

The theoretical basis of the research represents the scientific works of domestic legal scholars in the field of financial, constitutional, administrative, civil, and international law, as well as the theory of the state and the law, scientific and educational publications on public corporations, and law enforcement practice materials. The sources of the research were studied in the archives of the State Library of the Russian Federation, OECD Library, Law Library of Congress, funds of the National Library of the Russian Federation, Scientific library of the Moscow State University, and the President Library.

The following general scientific methods represent the methodological ground of the present research: analysis, synthesis, abstraction, and generalization, which give a cooperation effect. The research also uses a number of particular scientific methods: historical-legal, system-functional, formal logical, and statistical. The present research uses sectoral legal methods, such as the formal legal method, complex method, and doctrinal comparative legal method. It seems appropriate as well to use the concept of policy cycle to show how far Russia has progressed on the elaboration of sound legal regime for innovation platforms.

## RESULTS

Russia is currently setting the innovation platforms-friendly policy for technology. Referring to the EU policy-setting cycle, Russia has recently entered the legislation phase in respect of innovation platforms. The generic norms on innovations which cover the innovation platforms and certain strategic documents on technology platforms are already in place.

<sup>1</sup> [https://ec.europa.eu/info/research-and-innovation/law-and-regulations/innovation-friendly-legislation\\_en#innovation-principle-in-the-policy-making-cycle](https://ec.europa.eu/info/research-and-innovation/law-and-regulations/innovation-friendly-legislation_en#innovation-principle-in-the-policy-making-cycle). Accessed 1 May 2021.

The innovation platforms are not clearly defined, and in most cases are referred to as technology platforms. Technology platforms are predominantly elaborated within the top-down model with the governmental support and participation. However, there are already a few examples of technology platforms developed within the private initiative falling into the innovation platforms category according to the international approach.

## DISCUSSION

### *Technology and Innovation Platforms Development Trends in Russia*

Russia has developed many innovation platforms eligible for the needs of technology progress and advancement. Innovation platforms in Russia are developing within the broader class of technology platforms. The notion of technology platforms includes all types of platforms developed involving high technology.

Development of innovation platforms has mostly followed the top-down initiative patterns within the public–private partnership projects. However, there are already examples of private initiatives serving the needs of certain sectors of economy (Inozemtsev, 2020).

Technologies are becoming welcomed by the public authorities in Russia. There is a bulk of legal documents demonstrating the demand for innovation platform from the government. There are a few general regulative norms forming a technology-oriented and innovation-friendly legislative context in Russia. However, the substantial legal issues of the innovation platforms, including the actors' interaction, are still falling out from the focus of Russian legislators.

Based on the policy cycle concept, the authors would suggest that the general technology platforms' friendly approach in the policy design is already evolved and established in Russia. Therefore now, as with many other jurisdictions, Russia has just made early steps in the phase of policy legitimization (or legislation in terms of the EU). By now the innovation platforms have not spun off the technology platforms for economic and regulatory purposes. However, with further development of digital economy it can be expected.

Since the first decade of the twenty-first century, Russia has revealed an ambition to develop domestic platforms facilitating the innovative transformation of its economy. The Concept of long-term social-economic

development of Russian Federation till 2020 (approved by the Government of RF Resolution of 17.11.2008 No. 1662) mentioned the need of incentives for coordination between science, educational institutions, and business in the innovations field. The *technology platforms* were enumerated among the main drivers of this coordination revival in the Concept.

Later, in 2010, the Governmental commission on high technologies announced resolutions to draft innovation advancement programs for the entities with state participation. To a certain extent, these resolutions were inspired by the European Technology Platforms developed within the framework of Lisbon Strategy.<sup>2</sup> European Technology Platforms were a version of a public–private partnership tool in the research and development field, aligning research priorities with the needs of industry-led stakeholders, as well as coordinating and advisory structures defining the prospects of academic studies programs.

Technology platforms are mostly understood in Russia as an association pooling together the actors from science, education, industry, and relevant institutions of civil society. Nearly all the technology platforms are public–private partnership projects aimed to consolidate the efforts of business, science, and state on modernization and technological breakthrough of the Russian Federation. Technology platforms contribute to the dissemination of technologies, intersectoral cooperation, and building links between science and practice.

Governmental commission on the high technologies has approved a list of the technology platforms enumerating 30 platforms and coordinating them as entities (resolutions of April 1, 2011 and July 5, 2011). By 2018, 36 technology platforms in Russia were counted, falling within 13 priority directions of science and technology development. These self-organized unions count more than 3500 actors, including academic, education, and development institutions (Ministry of Economic Development of the Russian Federation, 2018).

Another category of innovation platforms currently finding wide implementation in Russia are platforms for digital certification. These platforms facilitate expert support for the development of new materials, technologies, etc., as well as digital modeling and virtual test environment implementation aimed to speed up the certification process of new

<sup>2</sup> [https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPR\\_S\\_ATA\(2017\)603935](https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPR_S_ATA(2017)603935). Accessed 1 May 2021.

materials and products. These innovation platforms are currently being created in Russia under the supervision of the Ministry of Industry and Trade. The Russian fintech market has been growing significantly for the past several years in terms of both the number of deals and the volume of investment. The Bank of Russia issued “The Main Directions of Financial Technology Development for the Period 2018–2020” (the “Main Directions”) and the roadmap naming the key technologies. In particular, a blockchain-based platform is envisaged, with the corresponding marketplace having been set up. Various projects have been launched, and several documents enacted accordingly.

It is notable that the creation of technological platforms is mostly a top-down initiative and process rather than purely private initiative. The technology platforms are functioning in the fields where the strategic goals were set by the presidential strategic documents or other strategic planning documents, and in most cases are related to state-owned, strategic, or large-scale businesses. The Federal Law No. 259-FZ of August 02, 2019 “On Raising Investments Using Investment Platforms and Amendments to Certain Legislative Acts of the Russian Federation,” regulating “blockchain,” new technology application, and use in the financial sector innovation platform, is in force in the Russia Federation from January 01, 2020 (The “*Crowdfunding Act*”).

Still, one can give an example of a truly innovative platform created on the basis of only a private initiative. In 2021, such an example was announced in the food-tech field. The PSC Rostelecom, Moskovsky zavod teplovoi avtomatiki (Moscow Factory of heating automatic control facilities), and OJSC Russky Product (the founder of the project) announced their pilot project—the IT innovative platform—which allows the production modeling and business modeling, including the creation of digital duplication of industrial process. The pilot project has not been completed and implemented yet; therefore no full description is available. On the basis of the available information, it is expected to become a true innovation platform with technology solution enabling the participants to advance their ideas and findings using the software available on the platform.

Above all, the authors would venture to allege that the innovative platforms form inherent parts of certain Internet of Things (IoT) technologies. This is especially the case once one speaks about projects pooling together industry and scientists. For example, the innovation platforms are used in the IoT solutions for the agriculture involving



agribusiness, telecommunication business, and academics. The platforms in the framework of IoT accumulate the information from different sensors and sources, analyze it with reference to science, and generate the tailor-made solutions. The platform both serves the users and advances the academic research in agriculture. In this respect, the authors shall add one more example of innovation platforms in Russia—the project in agribusiness sector called the Agrosignal project (Kudryashova & Casetti, 2021).

### *Legal Regulation of Innovation Platform*

Russian regulation landscape is just forming, and provisions (relevant for innovation platforms) are still under construction (Pobedinsky et al., 2019; Povetkina & Ledneva, 2018). The government has expanded the definition of technological platform in the Strategy of innovative development of Russian Federation for the period till 2020 (approved by the regulation of the Government of Russian Federation of 08.12.2011 No. 227-r). A *technology platform* is a communication instrument, aiming to facilitate the efforts set to creating the prospective commercial technologies and new products (services), involving supplementary resources for research and development by a pool of all the interested actors (business, science, state and civil society), and improving the legal environment for the science and technology as well as innovation development. The definition of “technology platform” is quite wide and covers the innovation platforms as well. It is not a legal definition in a strict sense, since regulation approving strategy is an individual act rather than a legal norm. However, this definition is widely used for legal purposes.

As regards operators of investment platforms, the Bank of Russia has already published Instruction No. 5342-U of December 04, 2019 “On the Way of Record Keeping for the Investment Platforms Operators”<sup>3</sup> and Instruction No. 5337-U of December 02, 2019 “On Requirements for the Internal Document(s) for Managing Conflicts of Interest of the

<sup>3</sup> Ukazaniye Banka Rossii No. 5342-U “O poryadke vedeniya reyestra operatorov investitsionnykh platform” [Bank of Russia Ordinance No. 5342-U “On the Procedure for Maintaining the Register of Investment Platform Operators”] (2019).

Investment Platform Operator.”<sup>4</sup> Though the theoretical base is there, many definitions and explanations are unclear.

As of now, no specific legislation regulating the legal aspects of interaction between the actors using the innovation or technology platforms and/or other stakeholders have been elaborated (Zyryanov & Kalmykova, 2019). The basic provisions on the information and information technologies, including software of the platforms, could be found in the Federal law of July 27, 2006 No. 149-FZ “On information, information technologies and information protection.” The legal aspects of software, information circulation, and other aspects of the information law fall within the scope of this law.

The article above mentioned the food-tech project launched by OJSC Russky Product. Among the other information on the project, it was announced that the platform’s software shall fit the requirements of the Federal law “On information, information technologies and information protection” for Russian-made software. The founders of this food-tech project aim to be included in the special registry of Russian-made software eligible for the preferences and state support.

Russia long ago adopted a special law regulating the academic and technology sphere: Federal law of August 23, 1996 “On the science and state science and technology policy.” Since 2011, this law has definitions of the terms “scientific and technical activity,” “innovation,” “innovative project,” and “innovation infrastructure,” which are relevant for the legal regulation of technology platforms. Innovation is a new or substantially improved product (service) or process, a new method of sales, or a new method of business organization, including arrangements for employment or external business relations.

Scientific and technical activity is aimed at new knowledge generation and implementation solving technology, engineering, economy, social, humanitarian, and other problems as well as maintaining together science, technology, and industry as an integral system.

An innovative product is a set of measures aimed at achieving the economic effect of the innovations, including the commercialization of

<sup>4</sup> Ukazaniye Banka Rossii No. 5337-U “O trebovaniyakh k vnutrennemu dokumentu (dokumentam) po upravleniyu konfliktami interesov operatora investitsionnoy platform” [Bank of Russia Ordinance No. 5337-U “On Requirements for an Internal Document (Documents) for Managing Conflicts of Interest of an Investment Platform Operator”] (2019).

scientific and/or scientific-technology results. One can note here a higher acceptable risk, as well as the possibility of no planned outcome, including no economic impact.

Innovation infrastructure is an array of entities which promote the implementation of the innovative products, including the management, technical, financial, information, career, consulting, and institutional services.

In general, for all the legal entities and individuals involved in the science-technology activity, the law in question (Article 3) ensures the following features: freedom of scientific and technology creativity, with a free choice of methods and orientation; protection from unfair competition; recognition of reasonable risk; free access to the science and science-technology information with legally justified exemptions; guarantees to train and teach human resources for academic institutions; guarantees to finance the projects in the public procurement framework.

The innovation platforms fall within the category of innovation and innovation infrastructure. Therefore, they are in general eligible for the state support of innovations proclaimed by the law (Article 16.1). The Federal law of August 23, 1996 "On the science and state science and technology policy" was amended with the definitions and other provisions on innovations were added in 2011.

There are quite important provisions in this law which are described in the body of the act as "principles for the state support and aid for innovative activity" (Part 3 of the Article 16.1) but seem to have a far broader meaning. These regulative provisions settle and guarantee the program approach and measurable goals in implementing the supportive measures for innovations; accessible state aid measures on all the phases of innovative activity, with special focus on small and medium-sized business; up-front elaboration of innovation infrastructure, public accessibility of the information on the Internet on state aid measures; prioritizing continued development of innovative results; protection of the private interests and promotion of private initiative; offering a priority position for the market instruments and public-private partnership for promotion of innovation activity; ensuring the efficiency of the innovation activity state support for the social-economic development of Russia and its constituencies; featuring performance budgeting and financing applicable to the state aid of innovation activity.

In general, for a while, the Russian legislator has tended to build the innovation-friendly legal climate. Recently, the innovation and technology welcoming approach is being shared by officials and authorities. Trust in technologies by the public authorities is a cornerstone for technology implementation along with the legislator efforts. The administrative barriers can slow down the technology implementations. This is the case for the innovative platforms as well. The authors stress here a positive example illustrating the regulation of the construction field.

Russian developers and construction companies already use the platforms software solutions which allow the construction teams to streamline their building projects. This innovative platform substitutes the traditional geodesists work with drone data (for example TraceAir). Starting from 2020, the construction modeling facilitated by innovative platforms shall be accepted and even shall be required for the public tenders in the public procurement process according to the legislation of Moscow (Chicherova, 2019).

## CONCLUSION

The term “technology platform,” as commonly used in Russia, covers the innovation platforms; in fact, quite a few innovation platforms are already developed and functioning. The legislation wording and the content of strategic documents have not yet referred to a more sophisticated classifications of platforms, like the UNCTAD’s transaction and innovation platforms.

Russia started to actively develop the innovation-friendly legal environment from the first decade of twenty-first century, although certain basic provisions had been already in force in the Federal law “On the science and state science and technology policy” since mid-90s. The general innovation-friendly legislative approach is successfully formed in Russia. It is now even shared and promoted by the officials and regulatory authority. Public authorities more and more entrust and rely on technologies and open the way for innovations in the interaction process between business and officials. However, in most of the legal and strategic documents, the top-down model is clearly seen and consistently promoted. Only sporadic examples of private initiative can be found.

The Federal law of August 23, 1996 “On the science and state science and technology policy” gives only broad and very general norms addressing the academic and technology sector which the authors have

summarized above. These general provisions cover the innovation platforms. However, no relevant specific provisions devoted to the technology or innovation platform could be identified in Russian legislation. The issues of the interested actors' interaction on the basis of the platforms, the network effects of innovation platforms, and other issues are not yet specifically addressed in Russian legislation. It seems that the platform features should be addressed in the law. These new investment platforms involving digital assets have a strong impact on the new regulation on the market development.

Locating the stage where Russia is now in the policy-setting cycle in respect of the innovation platform, one would suggest that Russia has started to legitimize the already formed technology platform-friendly policy or has entered the legislation phase if the EU approach is employed. The generic norms on innovations which cover the innovation platforms and certain strategic documents on technology platforms are already in place. At the same time, other legal developments relating to digitalization in the Russian Federation are said to be among the highest priorities of the State Duma and the Central Bank, together with other competence centers involved (like Skolkovo). Such directions as new financial instruments, information systems, information security, and transparency of process development are continuing further at full speed in Russia. The Presidential Decree No. 204 of May 7, 2018 “On the National Goals and Strategic Tasks of the Russian Federation Development for the Period until 2024”<sup>5</sup> stressed that the crisis inflated in 2020—as any other crisis—shall exacerbate the named trends with the facilitation of the Russian political will. Political will is expected for further developments. Further detailed regulation relevant for the features of innovation platforms is still pending in Russia.

## REFERENCES

Chicherova, L. (2019, November 12). What technologies will help the developers to build faster. *Vedomosti*. <https://www.vedomosti.ru/realty/articles/2019/11/12/816019-kakie-tehnologii>. Accessed 10 April 2021.

<sup>5</sup> Ukaz Prezidenta Rossiyskoy Federatsii № 204 [Presidential Decree No. 204] (2018).

- Chowdhury, S., Akesson, M., & Thomsen, M. (2021). Service innovation in digitalized product platforms: An illustration of the implications of generativity on remote diagnostics of public transport buses. *Technology in Society*, 65, 101589. <https://doi.org/10.1016/j.techsoc.2021.101589>
- Dye, T. R. (2008). *Understanding public policy* (12th ed.). Pearson Education Inc., Prentice Hall.
- Evans, D. S., Haigiu, A., & Schalensee, R. (2006). *Invisible engines: How software platforms drive innovation and transform industries*. MIT Press.
- Gutbrod, M. (2020). Digital transformation in economy and law. *Digital Law Journal*, 1(1):12–13. <https://doi.org/10.38044/DLJ-2020-1-1-12-23>
- Howlett, M., & Ramesh, M. (2003). *Studying public policy: Policy cycles and policy subsystems* (2nd ed.). Oxford University Press.
- Inozemtsev, M. I. (2020). *Modern approaches to the digitization of objects of civil rights: Review of the foreign experience*. Public International and Private International Law. <https://doi.org/10.18572/1812-3910-2020-2-21-25>. <https://publons.com/publon/44642183/>
- Kartskhiya, A. A. (2019). Digital technological (online) platforms: Russian and foreign experience. *Grazhdanskoye Pravo*, 3, 25–28.
- Kudryashova, E., & Casetti, M. (2021). Digital technologies in wine sector: Russian legislator preferences. *IOP Conference Series.: Earth and Environmental Science*. 699: 012002 <https://doi.org/10.1088/1755-1315/699/1/012002>
- Ministry of Economic Development of the Russian Federation. (2018). *Survey 2018 “Russian technology platforms”*. <https://nangs.org/docs/minekonom-razvitiya-rossii-obzor-rossijskie-tehnologicheskie-platformy-ot-11-01-2018-g-pdf>. Accessed 15 April 2021.
- Orly, L. (2016). The law of the platform. *Minnesota Law Review*, No. 16–212.
- Pobedinsky, V. N., Shestak, V. A., Truntsevsky, Y. V., Vorobuev, N. S., & Sevalnev, V. V. (2019). Cyberbullying: Legal regulations in Central Asia. *Utopia and Praxis Latinoamericana*, 24(5), 162–171.
- Povetkina, N., & Ledneva, Y. (2018). Fintekh and Regtekx: Boundaries of legal regulation. *Pravo. Zhurnal Vyshey Shkoly Ekonomiki*, 2, 46–67. <https://doi.org/10.17323/2072-8166.2018.2.46.67>
- Shashkova, A. V., Agranovskaya, M. A., & Kitsmarishvili, D. E. (2020). FinTech & New Digital Instruments. Post-crisis developments: Russia and Europe. *Digital Law Journal*, 4. <https://doi.org/10.38044/2686-9136-2020-1-4-25-37>
- Spacey, J. (2019, February 12). 16 types of technology platform. *Simplicable*. <https://simplicable.com/new/technology-platform>. Accessed 10 April 2021.
- UNCTAD. (2019). *UNCTAD digital economy report 2019. Value creation and Capture: Implications for developing countries*. [https://unctad.org/system/files/official-document/der2019\\_en.pdf](https://unctad.org/system/files/official-document/der2019_en.pdf)

- Verlaine, M., Shashkova, A. V., & Kudryashova, E. V. (2020). Amendments of Russian constitution concerning international law and the BRICS. *Revista De Investigações Constitucionais*, 7(2), 164–176.
- Zyryanov, S. M., & Kalmykova, A. V. (2019). Approaches to assessing the effectiveness of state control bodies (surveillance) to prevent violations of mandatory requirements. *Public Administration Issue*, 3, 31–66.



# Legal Regulation of Training Platforms

*Igor I. Bikeev and Pavel A. Kabanov*

## INTRODUCTION

Digitalization qualitatively changes society's established processes and the way of life, as is clear for all to see. Today, a new trend of platformization of digital processes is gaining momentum. Digital platforms are commonly understood as a programmable digital architecture designed to organize interaction between users (both ordinary users and corporate users and government agencies) and focused on the systematic collection, algorithmic processing, distribution, and monetization of user data (Decuyper et al., 2021). Such platforms have become integral intermediaries in public relations.

The progressive introduction of digital platforms into all spheres of society has not spared the field of education. In particular, the Covid-19 pandemic has played an important role in this issue. Educational organizations at all levels had to switch to e-learning or distance learning (Volchik & Shiriaev, 2020; Williamson et al., 2020).

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This monograph is directly devoted to a comprehensive study of the concept and types of digital platforms. Within the framework of this chapter, special attention is paid to legal regulation, legal status, and measures of legal regulation on the risks arising from the introduction of digital platforms in the educational sphere.

Educational and training platforms have been used to organize the educational process in schools, universities, professional training of specialists, and lectures and seminars by experts and scientists. In 2020, 83% of universities around the world had organized online education in one form or another. In other words, the entire educational process became digital overnight. The ongoing pandemic continues to support this trend. Thus, according to supplygem.com, the e-learning market has grown by 900% over the past 20 years (Griffith, 2021), while the market capitalization by 2022 reached 243 billion US dollars (Duffin, 2020), with a forecast of growth by 2027 to 370 billion US dollars (Global eLearning Market Report, 2020).

Of course, states around the world are actively monitoring the development of the EdTech sector, seeing both risks and advantages in this, and are undoubtedly looking for ways to minimize risks while simultaneously stimulating benefits. Currently, an active diversification and integration of educational processes can be observed (Korytsev et al., 2019). Digitalization has led to the transformation of curricula, the emergence of new forms of teaching, the introduction of new algorithms for self-learning and control, an increase in screen time, etc.

Among the main trends in the development of digital education, the following should be noted:

- increasing the market share occupied by digital platforms. As of 2018, the total revenue from the online courses industry was \$46 billion (McCue, 2019). The largest whale of the EdTech Coursera sphere is estimated at more than \$1 billion.
- an increase in the number of courses conducted under the guidance of niche experts, while reducing the share of independent courses by 6.4% or up to \$33.5 billion (Tamm, 2022).
- the active growth of corporate training. By 2026 it will amount to \$50 billion. With an annual growth of 15% in the period from 2020 to 2026, the corporate market will become one of the largest drivers of the e-learning industry (Business Wire, 2020). There is also an increase in the number of courses organized by companies for their

employees (almost 80% of companies in the United States in 2020 organized employee access to online courses; 40% of Fortune 500 companies regularly organize online training) (Tamm, 2022).

- access to online learning through mobile applications and the use of VR technologies. These are the key technological trends of EdTech for the next decade. Almost 70% of organizations offer e-learning through mobile portals and applications. Mobile e-learning revenue is expected to exceed \$38 billion by the end of 2020 (Lewis & Murphy, 2019).
- massive open online courses (MOOCs) have shown exponential growth since the beginning of the pandemic (+29% annually). By the end of 2020, 180 million students had undertaken one (UNESCO International Bureau of Education, 2021).

It should be noted that the platformization of education takes place in several directions:

- the creation of platforms with educational and methodical literature; As noted in a study by UNESCO, the digital textbook market is growing thanks to platforms that integrate data and increase the number of users and manufacturers on an interconnected basis (UNESCO International Bureau of Education, 2021). In publishing, the share of digital textbooks is currently prevailing. Among the most well-known platforms with digital textbooks are iBooks Author from Apple, interactive multimedia textbooks from Kno, LearnSmart from McGraw-Hill, and Yandex.Tutorial from Yandex.
- platformization of educational process management systems. Platforms such as Moodle, Canvas, Schoology, and Edmodo are leaders in the organization of the digital learning process today.
- the platformization of tutoring activities. Platforms such as My Tutor, Tutorhub, Skooli, or Tutor.com offer a service that could be called “Uber education”: the company centralizes the service, individual teachers conduct classes, students evaluate them, and algorithms recommend them. Some of these models are closely related to the examination systems of countries, such as Descomplica in Brazil and Megastudy in South Korea (UNESCO International Bureau of Education, 2021).

- the creation of platforms to simplify the control function of teachers. With the help of artificial intelligence technology on a digital platform, the implementation of controlling and verifying test tasks, as well as evaluating creative works such as essays, is provided. However, there may be risks of using artificial intelligence technology here as well (Bikeev et al., 2019; Bokovnya et al., 2020; Khisamova et al., 2019).

In other studies, the categorization of educational platforms is carried out in the following categories: content projects that present educational materials (electronic textbooks, electronic notes, video and animation videos, webinars, multimedia software); simulators that provide access to interactive tasks with automatic response verification; full-cycle distance schools that fully cover the educational program (Karlova et al., 2020).

## METHODOLOGY

This study is the result of the authors' research of general trends in the EdTech market, and an analysis of the key trend, which is the platformization of education, and the reaction of states around the world to its spread. Through comparative analysis, the main risks and problems associated with digital education in general and the platformization of the educational process in particular are identified. The research is based on a wide range of empirical sources on the topic under study, the works of other authors devoted to the digitalization of education, and the authors' own research.

## RESULTS

States around the world are taking an active position on the issue of regulating the EdTech sphere.

In 2008, the Higher Education Opportunity Act (HEAO) (USA, 2008) was adopted in the USA. This law can be called a key act at the federal level, fixing the requirements for educational platforms. The need for its adoption was due to the emergence of problems of certifying students in electronic form. Thus, the law notes that the attendance and mastering of an educational course by students is achieved not only by its regular authorization on the educational platform, but also by active involvement in the educational process. This can be achieved through a

wide range of online learning tools, including monitoring student activity, or assessment of academic performance (US Department of Education, 2022).

The State Authorization Reciprocity Agreement (SARA) should also be specified. SARA is an agreement between states, counties, and territories of the United States. It sets national standards for the interstate offering of distance learning courses and programs. This simplifies the process of online classes at a higher education institution located in another state. The SARA Agreement allows people to carry out educational activities in another state or state of the United States without obtaining an additional license. Membership is open to degree-granting institutions of higher education from all sectors (public colleges, universities, and independent institutions, both non-profit and for-profit), and is accredited by an agency recognized by the US Department of Education (2022).

Since 2011, the ARPA-Ed (Agency for Advanced Research Projects in Education) initiative has been used in the United States to implement projects and research that show new ways to use technology to improve education. This foundational vision focused on exploring the role of digital educators, online courses, and educational software in a video game format. In general, in the USA today, there is an active process underway of forming an educational policy to create networks of mixed educational programs, partly full-time and partly digital.

A number of countries are actively implementing digital education policies aimed at expanding access to user data for monitoring the education system. For example, the Insight platform in Scotland allows its users to track data on employment, income, health, access activity, and the trajectory and quality of education of students. The aim is to measure, inform, and change the teaching and learning decisions of each school (Scottish Government, 2016).

Estonia, which demonstrates high rates of universal digital transformation, is also a leader in creating a digital educational ecosystem. The Strategy of Continuing Education 2020 assumes a complete transformation into a digital format of infrastructure in schools and the formation of digital competencies in the field of teacher education and curriculum (Ministry of Education and Research of Estonia, 2014). During the COVID-19 pandemic, the use of digital platforms in Estonia increased significantly, including eSchool for school management, which is already used in 85% of the country's schools, and eSchoolbag, which hosts educational resources (OECD, 2020).

In the Russian Federation, the problem of the legal regulation of online education is also given due attention at the state level. A comprehensive basis for the legal regulation of educational digital platforms is formed by the provisions of Article 16 of Federal Law No. 273-FZ of 29.12.2012 “On Education.” The article reveals the concept of e-learning, and establishes the obligation for organizations engaged in educational activities online to create conditions for full-fledged e-learning. It is worth emphasizing that in the Federal Law, the concepts of “e-learning” and “distance learning” are not considered synonymous, but as independent types of training organization. Thus, e-learning refers to using information contained in databases and used in the implementation of educational programs for the organization of educational activities; this ensures its processing of information technologies, technical means, and information and telecommunication networks that ensure the transmission of this information over communication lines, as well as the interaction between students and teaching staff. Meanwhile, distance educational technologies are understood as educational technologies, implemented mainly with the use of information and telecommunication networks with indirect (at a distance) interaction of students and teaching staff.

The specified concepts are detailed in the order of the Ministry of Education and Science of the Russian Federation No. 816 dated August 23, 2017, which approved the procedure for the use of e-learning and distance learning technologies by organizations engaged in educational activities in the implementation of educational programs (Ministry of Education and Science of the Russian Federation, 2017).

Meanwhile, the first regulatory act aimed at organizing the work of an educational digital platform should be recognized as the Decree of the Government of the Russian Federation No. 1836 dated November 16, 2020 “On the state information system ‘Modern Digital Educational Environment.’” This decree reveals the concept of an educational platform for the first time at the legislative level. Thus, according to it, information platforms in the information and telecommunications network “Internet” are set forth, on which educational organizations host online courses, the development of which is carried out by students through the use of distance learning technologies and e-learning (Government of the Russian Federation, 2020).

However, the risks associated with the introduction of digital platforms were not resolved in the mentioned regulations. However, at the end of

2021, Federal Law No. 472-FZ of December 30, 2021 “On Amendments to the Federal Law ‘On Education in the Russian Federation’” laid the foundations for legal regulation of educational digital platforms (Russian Federation, 2021).

Thus, educational organizations are obliged to ensure the confidentiality of their students’ personal data. At the same time, it is permitted to use only licensed state educational platforms that have been created, modernized, and operated for the implementation of these educational programs. The mentioned platforms should be included in the Federal List of electronic educational resources approved for use, formed by the Ministry of Education. Inclusion in the register is planned to be carried out after the examination, the procedure and timing of which is planned to be established in the near future.

## DISCUSSIONS

The active spread of educational platforms has undoubtedly forced scientists around the world to turn to the study of the phenomenon of digital platforms, including educational ones. In the work of Salakhova et al. (2021), the following basic principles are highlighted as requirements for the system of legal regulation of digital platforms: the presence of a single management center; a strict hierarchy of responsibility of the entities managing the platform; classification into internal (national) and external (supranational) platforms; the existence of uniform transparent principles and internal regulations governing compliance with the relevance and reliability of the data provided; ensuring the protection of personal data; etc. (Shum & Smith, 2018).

According to the levels of regulation, the following are distinguished:

- The supranational level of legal regulation, which formulates the key principles of legal regulation and guidelines (OECD, 2010; UNESCO, 2019);
- State regulation on the basis of the current legislation, within the framework of which sectoral rulemaking can be allocated (Aleksandrov et al., 2015); and
- The expert level. The rapidly developing areas, which undoubtedly include the EdTech sphere, are characterized by the active development of ethical standards and the self-regulation regime by professional members (Salakhova et al., 2021).

- A detailed examination of the field of EdTech makes it obvious that there are a number of ethical risks that go hand in hand with digital educational platforms. This phenomenon was highlighted in studies by Shum and Smith (2018), Salakhova et al. (2021), and Khurshudyan and Solovyov (2020).

Under these conditions, the introduction of educational platforms has generated a number of key risks:

1. The problem of digital inequality and data ethics. The COVID-19 pandemic and the need to switch to online education have acutely demonstrated the situation of inequality globally, particularly digital inequality (Bokovnya et al., 2020). The lack of gadgets and uninterrupted Internet access actually made the education process impossible for a significant part of the world's population. As experts of the UNESCO International Bureau of Education astutely point out, "we do not know when and how this process will end. We know that we must act faster and develop policy responses that provide more educational opportunities for the most disadvantaged sectors" (UNESCO International Bureau of Education, 2021).
2. The problem of supervision in the field of education. Algorithm-based learning poses new equity dilemmas. The power will be in the hands of those who control the data on education, because these platforms and their owners will be able to direct the educational process.
3. As Rifkin (2014) rightly notes: "never in history have there been so many institutions that have had so much power over the lives of so many people."
4. The problem of ensuring the confidentiality of data and identification for students (Begishev et al., 2019; Bokovnya et al., 2020; Khisamova et al., 2019).
5. The problem of certification of trainees located in other countries and recognition of qualification documents.

## CONCLUSIONS

The conducted research indicates the continuous expansion of the EdTech sphere. The pandemic has made decisive adjustments to the

future of education around the world. The digital format of education, tested by many students and educational organizations, has occupied its niche in the educational sphere, which continues to expand. The trend toward the platformization of digital education, which is gaining momentum, will continue to strengthen. Thanks to digital platforms, a new educational dimension has emerged, and the boundaries for education have practically been erased.

Meanwhile, like any good, the EdTech sphere has not been spared a number of key risks inherent in both the entire process of digitalization and in the education sector in particular. Unequal access to technological and digital infrastructure obviously creates a situation of inequality and a growing difference between rich and poor countries. In these conditions, the issue of digital inequality in education is on the agenda of international organizations, being the first step to overcoming poverty in third world countries.

The issue of regulating the sphere of EdTech and digital platforms is being considered simultaneously in several planes today: at the international level, the issues of using digital platforms to overcome global challenges are being considered; at the state level, the issue of ensuring a system of certification, accounting, and supervision in education and solving problems of ensuring data confidentiality is being resolved; and at the expert level, internal standards and principles are being formed to ensure the quality of education.

## REFERENCES

- Aleksandrov, A. Y., Vereshchak, S. B., & Ivanova, O. A. (2015). Legal issues of correlation between state and public control in the sphere of higher education. *Actual Problems of Economics and Law*, 2, 140–146. (In Russian).
- Begishev, I. R., Khisamova, Z. I., & Mazitova, G. I. (2019). Information infrastructure of safe computer attack. *HELIX*, 9(5), 5639–5642. <https://doi.org/10.29042/2019-5639-5642>
- Bikeev, I., Kabanov, P., Begishev, I., & Khisamova, Z. (2019). Criminological risks and legal aspects of artificial intelligence implementation. *Pervasive-Health: Pervasive Computing Technologies for Healthcare*, a20. <https://doi.org/10.1145/3371425.3371476>
- Bokovnya, A. Y., Begishev, I. R., Khisamova, Z. I., Bikeev, I. I., Sidorenko, E. L., & Bersei, D. D. (2020). Pressing issues of unlawful application of artificial intelligence. *International Journal of Criminology and Sociology*, 9, 1054–1057. <https://doi.org/10.6000/1929-4409.2020.09.119>



- Business Wire. (2020). *Global academic e-learning market 2020–2024, increasing e-learning enrolments in higher education to boost market growth*. <https://www.businesswire.com/news/home/20200320005177/en/Global-Academic-E-Learning-Market-2020-2024-Increasing-E-Learning>
- Decuyperre, M., Grimaldi, E., & Landri, P. (2021). Introduction: Critical studies of digital education platforms. *Critical Studies in Education*, 62(1), 1–16. <https://doi.org/10.1080/17508487.2020.1866050>
- Duffin, E. (2020). *Topic: E-learning and digital education*. <https://www.statista.com/topics/3115/e-learning-and-digital-education/>
- Global eLearning Market Report. (2020). *History and forecast 2016–2027, breakdown data by companies, key regions, types and application*. <https://reports.valuates.com/market-reports/QYRE-Othe-0C243/global-elearning>
- Government of the Russian Federation. (2020). *Decree no. 1836 dated November 16, 2020 “On the state information system ‘Modern digital educational environment.’”* <https://www.garant.ru/products/ipo/prime/doc/74822854/>
- Griffith, N. (2021.). *50+ eLearning & digital education statistics*. <https://supplygem.com/elearning-digital-education-statistics/>
- Karlov, I. A., Kiyasov, N. M., Kovalev, V. O., Kozhevnikov, N. A., Patarakin, E. D., Frumin, I. D., Schwindt, A. N., & Shonov, D. O. (2020). Analysis of digital educational resources and services for the organization of the educational process of schools. *Series: Modern Analytics of Education*, 10(40).
- Hisamova, Z. I., Begishev, I. R., & Sidorenko, E. L. (2019). Artificial intelligence and problems of ensuring cyber security. *International Journal of Cyber Criminology*, 13(2), 564–577. <https://doi.org/10.5281/zenodo.3709267>
- Khurshudyan, A. L., & Solovyov, A. A. (2020). Legal nature of online courses and issues of their use in educational activities of universities. *Bulletin of St. Petersburg University. Law*, 11(4), 903–918. <https://doi.org/10.21638/spbu14.2020.405>. (In Russian).
- Korytsev, M. A., Ipatova, A. V., & Nikolaenko, I. O. (2019). Integration of universities in the context of reforms of higher education: European experience and Russian practice. *Actual Problems of Economics and Law*, 13(2), 1174–1183. <https://doi.org/10.21202/1993-047X.13.2019.2.1174-1183>
- Lewis, K., & Murphy, J. (2019). 79 Staggering online learning statistics. *SkillScouter*. <https://skillscouter.com/online-learning-statistics/>
- McCue, T. J. (2019). E-learning climbing To \$325 billion by 2025 UF canvas absorb schoology moodle. *Forbes Magazine*. <https://www.forbes.com/sites/tjmccue/2018/07/31/e-learning-climbing-to-325-billion-by-2025-uf-canvas-absorb-schoology-moodle/#26126b53b395>
- Ministry of Education and Research of Estonia. (2014). *Estonian lifelong learning strategy 2020*. <https://www.hm.ee/en/estonian-lifelong-learning-strategy-2020>

- Ministry of Education and Science of the Russian Federation. (2017, August 23). *Order no. 816*. <https://base.garant.ru/71770012/>
- OECD. (2020). *Education policy outlook: Estonia*. <https://www.oecd.org/education/policy-outlook/country-profile-Estonia-2020.pdf>
- Rifkin, J. (2014). *A zero marginal cost society*. Paidós Publishing House.
- Russian Federation. (2021, December 30). *Federal law no. 472-FZ "on amendments to the federal law 'On education in the Russian federation.'"* <https://sudact.ru/law/federalnyi-zakon-ot-30122021-n-472-fz-o/>
- Salakhova, V. B., Erofeeva, M. A., Pronina, E. V., Belyakova, E., Zaitseva, N. A., & Ishmuradova, I. I. (2021). State regulation and development of digital educational platforms. *World Journal on Educational Technology: Current Issues*, 13(4), 956–966. <https://doi.org/10.18844/wjet.v13i4.6282>
- Scottish Government. (2016). *Ensuring excellence and equity in Scottish education: A delivery plan for Scotland*. <http://www.gov.scot/Publications/2016/06/3853>
- Shum, H., & Smith, B. (2018). The future computed: Artificial intelligence and its role in society. *Microsoft*. [https://blogs.microsoft.com/uploads/2018/02/The-Future-Computed\\_2.8.18.pdf](https://blogs.microsoft.com/uploads/2018/02/The-Future-Computed_2.8.18.pdf)
- Tamm, S. (2022). *100 Essential e-Learning statistics for 2022*. <https://e-student.org/e-learning-statistics/>
- UNESCO International Bureau of Education. (2021). *In-progress reflection no. 46 on current and critical issues in curriculum, learning and assessment. The platformization of education: Framework to map the new directions of hybrid education systems*. <http://www.ibe.unesco.org/en/resources/progress-reflections>
- US Department of Education. (2008). *Higher education opportunity act (P. L. 110–315)*. <https://www2.ed.gov/policy/highered/leg/hea08/index.html>
- US Department of Education. (2022). *The state authorization reciprocity agreements: SARA*. <https://www2.ed.gov/policy/highered/reg/hearulemaking/2012/pii-ncsara-infosheet.pdf>
- Volchik, V. V., & Shiriaev, I. M. (2020). Distant higher education under self-isolation and the problem of institutional traps. *Actual Problems of Economics and Law*, 14(2), 235–248. <https://doi.org/10.21202/1993-047X.14.2020.2.235-248>
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>



# Legal Regulation of Social Platforms (Network)

*Alesya V. Demkina*

## INTRODUCTION

Modern lifestyles have led to social media becoming a part of many people's lives and having a significant impact on public relations, both positive and negative. A social network is a unique virtual world in which a person does not just spend their time, but comes into contact with other people, receives and transmits information, and carries out all the same social actions and contacts as in the real world. Moreover, on a social network, a user can, among other things, exercise their rights (the right to association, the right to freedom of thought and speech, the right to collect, store and distribute information, etc.)

Several authors also note the significant functional influence of social Internet networks on the organization of public law and order and socio-political development (Perchatkina et al., 2012). For example, with the help of social networks, it is possible to realize the right to participate in the management of state affairs (social networks provide opportunities

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for public discussions, stimulate individual activity, democratic processes actively use the options provided by social networks, etc.).

The state even encourages the development of sites of social or educational significance (see, for example, Decree of the Government of the Russian Federation No. 103 dated 02.02.2021 “On Approval of the Rules for Granting Subsidies from the Federal Budget to Organizations Engaged in the Production, Distribution, and Replication of Socially Significant programs in the field of electronic media, for the creation and maintenance of sites of Social or Educational Significance in the Internet information and telecommunications Network”).

However, users of social networks can also become easy prey for various kinds of scammers, since they get quick and easy access to information and an easy way to contact a potential victim of fraud. Offenses involving the use of social networks can be diverse (illegal use of information, defamation, disclosure of confidential information, copyright infringement, etc.). All this indicates the topic’s relevance related to the regulation of relations arising through or in a social network (“virtual world”). It is crucial to understand the issues of who becomes a participant in the relationship, which of these relationships fall under the regulation of law, the limits of legal regulation in this area, and the mechanisms of legal protection, taking into account the specifics of relations in social networks and the speed of information dissemination in them.

## METHODOLOGY

In the study, the author used dialectical, formal-logical, functional, and other general scientific research methods; the author also used special legal methods.

## RESULTS

The study formulates the definition of a social network, examines the status of a social network user, reviews regulatory legal acts regulating relations in this area, and reveals the specifics of ways to protect violated rights on the Internet.

## DISCUSSION

The phenomenon of social networks is studied by representatives of various branches of knowledge (psychology, sociology, economics, law, etc.). As rightly indicated in one of the studies, active information and communication processes occur within the Internet space between persons forming self-regulating Internet communities that exist without clearly defined national borders and maintaining various relationships about information circulating in the world infrastructure (Perchatkina et al., 2012). Such public relations need legal regulation. The issue of legal regulation is complicated because participants of social networks can be located on the territory of any state and fall under the jurisdiction of different countries.

Before proceeding to the issue of legal regulation of social networks, it is necessary to answer the question of what is meant by a social network, which points can be regulated by law, and which cannot, etc.

In the modern reality, there are new categories of “domain name,” “social network,” “social network participant,” “Internet page,” “IP address,” etc., There are also challenges arising regarding whether the relations arising in connection with or about these categories are subject to legal regulation. For example, a blogger’s page on a social network can bring substantial income; this raises questions of whether it is possible to buy and sell it, if it will be inherited, etc. The question of the personification of the participants in these relations is also important: how does a real person relate to a virtual one, whom will we recognize as a participant in legal relations?

First of all, the relationship between the content of the concepts of “social network” and its website requires consideration.

A social network is “an online platform that is used for communication, dating, creating social relationships between people who have similar interests or offline connections, as well as for entertainment (music, movies) and work” (Wikipedia, 2021).

There is no direct consolidation of the definition of “social network” in our legislation. However, the legislator actively uses this concept itself, and mutually dependent or interrelated concepts are legally defined, such as a website, a website page, or a website owner. In addition, to understand the concept of a “social network,” concepts will have to

be used such as a user of a social network and a technological platform that provides the opportunity for information exchange, business, communication, etc.

An attempt was made to settle issues related to social networks in a separate legislative act (see Draft Federal Law No. 145507-7 “On the Legal Regulation of Social Networks and Amendments to Certain Legislative Acts of the Russian Federation” (ed., introduced in the State Duma of the Federal Assembly of the Russian Federation, text as of 10.04.2017). However, this bill was returned to its authors to fulfill the requirements of the Constitution of the Russian Federation and the Regulations of the State Duma, since it was introduced in violation of their requirements. However, the bill managed to provoke a discussion on the most controversial issues. It can hardly be argued that this issue requires regulation by a separate law.

The concept of a social network can be derived from the provisions of Articles 2 and 10.6 of Federal Law No. 149-FZ of 27.07.2006 “On Information, Information Technologies and Information Protection” (after this the “Law on Information”), based on the legal definition of the site owner on the Internet and the legally established responsibilities of the site owner.

Based on the aforementioned norms of law, the legislator understands a social network as a website, a page of a website, or information system, and computer programs intended or used by their users to provide and disseminate information through personal pages created by them. At the same time, additional signs of social networks in the law are called:

- the presence of more than 500 thousand users in Russia per day;
- and dissemination of information in the state language of the Russian Federation, the state languages of the republics within Russia, or other languages of the peoples of the Russian Federation, in which advertising aimed at attracting the attention of consumers located in the country can be distributed.

The legislative definition of the concept of a website, a website page is contained in Article 2 of the Law on Information.

A website on the Internet is a set of programs for electronic computers and other information in an information system, access to which is provided via the Internet information and telecommunications network

by domain names and/or network addresses that allow identifying sites on the Internet. The website page on the Internet (Internet page) is a part of the website on the Internet, which is accessed by an index consisting of a domain name and characters defined by the website's owner on the Internet (Article 2 of the Information Law).

Several different sites fall under this definition of a “social network”: Instagram, Facebook, VKontakte, Odnoklassniki, Instagram, Yandex.Zen, and MoiMir sites with ads like Avito and Yula; YouTube and TikTok channels; and certain messengers (for example, Telegram, where users can create their own channels).

According to the rules of paragraph 11 of Article 10.6 of the Law on Information (the rules of this article entered into force on February 1, 2021), the federal executive authority exercising control and supervision functions in the field of mass media, mass communications, information technology, and communications (subsequently “Roskomnadzor”) is obliged to monitor information resources and, if social networks numbering more than 500 thousand users per day are detected, is obliged to include their special register of social networks. Inclusion in the named register obliges the social network owner to bring the rules of use of the social network following the requirements of Russian legislation within two months and to familiarize users with these rules.

If access to a social network for three months is less than 500 thousand Internet users during the day, this social network is excluded from the register of social networks at the request of its owner. Article 10.6 of the Law on Information also establishes obligations for owners of social networks (some of them were previously performed voluntarily; currently, the law establishes liability for non-fulfillment of obligations).

The owner of the social network is obliged to:

- ensure the social networks are not used for the dissemination of prohibited information;
- prohibit obscene language;
- prevent the dissemination of defamatory information to citizens; and
- respect the rights and legitimate interests of citizens and organizations, including the honor, dignity, and business reputation of citizens, as well as the business reputation of organizations, etc.

As for participants of social networks, there are many questions here. To become a social network user, a person needs to join it. When registering as a user, they agree to the rules of a particular social network and provides information about themselves.

As a rule, well-known social networks (for example, Facebook or LinkedIn) require reliable information about the user during registration. As a result, the user provides their personal data, phone number, e-mail address, etc. The issues of personal data and the competent court, to which disputes may be referred, are resolved in user agreements in different ways.

They also need to read and agree to the data usage policy (which describes the information collected and processed to support Facebook, Instagram, Messenger, and other products and functions offered by Facebook) (Meta Platforms and Inc., 2022).

The Law on Information itself does not contain requirements for users of social networks, including age. The bill defined that “a user is an individual, regardless of citizenship, who has reached the age of 14 and has concluded a user agreement with the owner of a social network by registering in this social network.” Regarding the age requirement, the bill’s provisions began to be actively criticized. Both the concept of “user” (a synonym for “consumer,” and the participant of the network does not receive services) and the requirement for a minimum age of 14 years have been criticized, since, according to the authors, modern children already have the opportunity to communicate through children’s social networks (for example, a children’s social network of category 0 + : “Luntik” (world.luntik.ru) (Zhiltsov et al., 2020).

It seems that since participants (users) of a social network join such a network by concluding a user agreement, it is necessary to talk about their transaction capacity, which are issues that are regulated by the provisions of the Civil Code of the Russian Federation (Articles 26 and 28 of the Civil Code of the Russian Federation). As for young children, their parents (legal representatives) act on their behalf: for example, if a mother maintains a page on a social network on behalf of her young child, or a parent who provides access to a social platform, including those for children, to his or her child, they may be registered as a user. For instance, the social media pages of young models are often run by their parents, and the personal page directly indicates this information.

It is necessary to recognize that civil law regulation in modern times is property or personal non-property relations and some organizational



relations. For example, the rules of Article 67.2 of the Civil Code of the Russian Federation on corporate contracts or Article 342.1 of the Civil Code of the Russian Federation on the order of satisfaction of the claims of pledgees provide for the possibility to regulate the “interrelationships” of participants, the procedure for the exercise of their rights, etc. (Demkina, 2020). The user agreement also regulates certain organizational relations, establishing the “rules of the game” for the social network participant, defining the rules regarding the collection, analysis of information, providing for the rights of users of social networks, etc. By their nature, some of these rights may be civil, and some derive from public law norms.

It is possible to distinguish the following rights of users of social networks, which are provided for in the Law on Information:

1. The right to information (the possibility of obtaining information and using it).
2. The right to receive a response. Consideration of requests from users of the social network must be carried out within a period not exceeding 30 calendar days from the date of their receipt (paragraph 2 of Article 10.6 of the Law on Information).
3. If the owner of a social network blocks the user’s information, they are obliged to notify the latter of the reasons for blocking the information.
4. The right to challenge the “blocking.” Each “blocked” user can challenge it by writing to the social network owner. Within three days from the date of receipt of the complaint, the site administration must consider it and give the user an answer on the merits (clause 8 of Article 10.6 of the Law on Information).

If the user is not satisfied with the answer, then they have the right to apply to Roskomnadzor with a request to cancel the blocking. Roskomnadzor, in turn, may send a request to the owner of the social network to restore access to the page.

Issues of responsibility will now be dealt with in more detail.

According to paragraph 1 of Article 17 of the Law on Information, violation of its requirements entails disciplinary, civil, administrative, or criminal liability under the legislation of the Russian Federation.

As for civil liability, after the reform of civil legislation in 2013, the ways to protect honor, dignity, business reputation, citizen image, and private life were expanded. The rules of the Civil Code of the Russian Federation have been supplemented with norms that provide, among other things, specifics for ways to protect rights that have been violated on the Internet.

Thus, in Article 152 of the Civil Code of the Russian Federation, a rule appeared on the “phased” application of protective measures when distributing false information discrediting a citizen (the principle of “prohibiting defamatory lies,” for example, when distributing information about non-existent criminal prosecution):

1. in the beginning, the citizen can demand a refutation or an answer (to choose from), or both at the same time;
2. if the refutation or answer cannot be brought to the public (and this is just typical for the rapid dissemination of information on a social network, copying information, reposts, etc.), they can request the deletion of relevant information (erase the file from the hard disk, block access to information on the site, delete a page on a social network, etc.); and
3. if it is impossible to delete false information without destroying material carriers, it is possible to demand the seizure and destruction of such carriers (advertising poster, newspaper circulation, etc.).

In 2013, for the first time, a rule was introduced to protect citizens in cases of dissemination of false, but not discreditable, information about them (the principle of “prohibition of neutral and kind lies,” for example, when distributing information about a citizen’s victory in a competition). In such cases, a citizen also has the right to use a phased system of protective measures, but does not have the right to demand compensation for moral damage. It is important to note that in paragraph 10 of Article 152 of the Civil Code of the Russian Federation, the burden of proof in this situation is placed on the person against whom such a “good lie” is spread and the limitation period for such claims is one year from the date of publication of false information.

In addition, as a result of the reform of civil legislation, a norm on the protection of a citizen’s private life was introduced (Article 152.2 of the Civil Code of the Russian Federation), which prohibits the collection, storage, dissemination, and use of any information about their private life:

in particular, information about their origin, place of stay or residence, or personal and family life.

Article 152.1 of the Civil Code of the Russian Federation may also be relevant for the Internet sphere. The rules of Article 152.1 of the Civil Code of the Russian Federation are aimed at protecting the image of a citizen. The ban on the use of a citizen's image without their consent is one of the manifestations of respect for their private life.

An image can exist in the form of a photograph, a video recording, or a work of fine art. The creators of the corresponding work have copyrights. A photographer or artist's exercise of these rights must not violate the model's rights depicted in work. Based on this, the distribution of such an image is possible only in compliance with the restrictions established by Article 152.1 of the Civil Code of the Russian Federation. The norms of this article of the Civil Code of the Russian Federation will be of particular importance for social networks since photos and videos are easy to get and distribute in them.

In this regard, the Resolution of the Plenum of the Supreme Court of the Russian Federation dated 23.06.2015 No. 25 "On the application by courts of certain provisions of Section I of Part One of the Civil Code of the Russian Federation" contains an essential explanation of what should be understood by the publication of the image of a citizen. Disclosure consists of implementing an action that makes this image available to the public for the first time by publishing it, publicly displaying it, or by any other means, including posting it on the Internet (Resolution of the Plenum, 2015).

In accordance with the explanation given in paragraph 48 of the Resolution, the fact of the publication and use of the image by a certain person is subject to proof by the person depicted in such an image and the obligation to prove the legality of the publication and use of the image of a citizen is assigned to the person who carried it out (Resolution of the Plenum, 2015). A citizen has the right to demand the application of appropriate measures of civil protection of their right to an image, not only in relation to the author of the image but also in relation to any other person who uses it illegally.

Article 152.1 of the Civil Code contains a closed list of cases in which the publication and use of an image of a citizen against their will are lawful. Without the consent of the citizen whose image is used, or other persons named in the law (Clause 1 of Article 152.1 of the Civil Code of

the Russian Federation), the publication and use of the image are allowed in cases where:

1. the use of the image is carried out in the state, public, or other public interests;
2. the image of a citizen was obtained when shooting, which is carried out in places open to the public, or at public events (meetings, congresses, conferences, concerts, performances, sports competitions, and similar events), except in cases when such an image is the main object of use; and
3. a citizen posed for a fee.

The first case refers to public figures—politicians, civil servants, personalities, and other citizens whose activities are attractive to society or are of some importance. The said Resolution uses the term “public figure”—a person who holds a state or municipal position, or who plays a significant role in public life in politics, economics, art, sports, or any other field (paragraph 44 of the Resolution). Subparagraph 2 of paragraph 1 of Article 152.1 of the Civil Code of the Russian Federation allows the publication and use of an image of a person that was obtained in places open to free access or at public events. If citizens are in public places, they should realize that they can get into photo or video shooting at any time, and if they continue to stay in a public place or at an event, it is considered that they agree to the use of possible images with their participation. The third case of the permitted publication and use of an image without a citizen’s consent is if a citizen poses for a fee. An agreement under which one party (the sitter) poses for the other party (the artist, the operator, or another person making an image on any material medium) is a paid transaction and contains not only elements of a contract for the provision of paid services (Chapter 39 of the Civil Code of the Russian Federation), but also conditions relating to the procedure for the publication and use of the image of a citizen. Having concluded such a contract, the model excludes for themselves the possibility of protecting the right to the image from now on, unless the other party to the contract violates the terms of use of this image.

In this case, the basis for the lawful use of the image is the consent of the model given in the specified agreement for the subsequent use of the work with their participation.

If the consent to the publication and use of the image was given verbally or by performing conclusive actions, then it covers the use of the image to the extent and for the purposes evident from the situation in which it was performed (paragraph 47 of the Resolution). Mikheeva gives the following example to this explanation of the Supreme Court of the Russian Federation: if a street photographer offers a citizen to take a picture of them against the background of a local landmark for a fee, then by default, it is assumed that only a citizen captured in the picture can use such an image in the future; they cannot use the photographer's remaining copy of the image, including digitally, without the model's consent (Mikheeva, 2015).

Now almost all citizens post their photos on the Internet, so the following explanation of the Supreme Court of the Russian Federation is also important: "The placement of an image by a citizen on the Internet and the public availability of such an image by themselves do not give other persons the right to freely use such an image without obtaining the consent of the depicted person." In other words, in support of the legality of using the plaintiff's image, the defendant does not have the right to refer to the fact that the plaintiff himself posted this image somewhere and thereby made it available.

The literature notes that in such cases, the defendant must prove one of the following circumstances:

- the plaintiff posted his image under such circumstances that may indicate the expression of such a person's consent to the further use of this image;
- the plaintiff has explicitly consented to the use of the image in oral or written form (including electronic); and
- the plaintiff posted their image on such an Internet resource, the terms of use that allow the unrestricted use of the image by third parties (Mikheeva, 2015).

In all disputable situations, it should not be forgotten that, since 2013, the principle of good faith has been enshrined in the Civil Code of the Russian Federation. According to Article 1 of the Civil Code of the Russian Federation, when establishing, exercising, and protecting civil rights and performing civil duties, participants in civil legal relations must act in good faith. No one has the right to take advantage of their illegal

or unscrupulous behavior. These rules apply entirely to relations arising in connection with the use of social networks and the Internet. In all cases, when a participant in civil legal relations abuses the right or otherwise acts in bad faith, the rights and interests of a bona fide participant will be subject to protection. Furthermore, if there is no special regulatory rule for a specific situation, or the application of this rule will lead to a distortion of the principle of good faith, then the court has the right to resolve the disputed issue by protecting the interests of a bona fide participant, based on the provisions of Articles 1 and 10 of the Civil Code of the Russian Federation.

One of the problematic issues regarding the protection of rights that have been violated on the Internet will be the question of the jurisdiction and competence of the court. In terms of the protection of violated rights, difficulties may arise with the determination of a competent court, since most modern social networks are created by foreign legal entities that do not have representative offices on the territory of the Russian Federation.

Therefore, as an example, four individuals filed a lawsuit against a foreign organization—the operator of a social network, of which they are users—about imposing on the defendant the obligation to perform certain actions; they asked to prohibit the defendant from unmotivated blocking and deleting accounts, obliging the defendant to return copyrighted materials, publications, and photos in case of their deletion, as well as to restore the accounts of the plaintiffs. The court of the first instance returned the statement of a claim based on paragraph 2 of Part 1 of Article 135 of the Civil Procedure Code of the Russian Federation on the grounds of its non-jurisdiction to this court. At the same time, the judge pointed out that the plaintiffs are not consumers in relation to the defendant; the defendant did not provide any services to the plaintiffs, which means that there were no legal relations between the parties in the case.

The Judicial Board for Civil Cases of the Supreme Court of the Russian Federation noted that the applicants' claim was justified by the fact that the defendant carried out the illegal collection of their personal data, as well as distributed advertising aimed at attracting the attention of users located in the Russian Federation. In addition, the dispute arises from the contract for the use of the social network, the execution of which must be carried out at the user's location on the territory of the Russian Federation.

Under such circumstances, the Supreme Court of the Russian Federation rightly concluded that the conclusions of the judicial instances on the absence of legal relations between the parties, on the lack of competence of the courts of the Russian Federation to resolve this dispute, and on the absence of applicable rules of domestic territorial jurisdiction, contradict the norms of the procedural law of Russia. Therefore, the case materials were sent to the court to resolve the issue of accepting the claim (Definition of the Judicial Board for Civil Cases, 2020).

Administrative sanctions have also been imposed for violations on the Internet. On January 1, 2021, Article 13.41 of the Administrative Code of the Russian Federation came into force, establishing liability for violating the procedure for restricting access to information and information resources, access to which is subject to restriction in accordance with the legislation of the Russian Federation on information, information technologies, information protection, and/or the procedure for deleting said information. There are several other examples in the Code of Administrative Offenses of the Russian Federation (Article 13.15 “Abuse of freedom of mass information,” Part 1.1 of Article 6.13 establishes an administrative responsibility for promoting narcotic drugs via the Internet, etc.).

Some acts may be qualified as crimes. For example, Article 205.2 of the Criminal Code of the Russian Federation refers to public calls to carry out terrorist activities, public justification of terrorism, propaganda of terrorism committed using mass media or electronic or information and telecommunication networks, including the Internet, or calls for extremist activity and actions aimed at violating the territorial integrity of the Russian Federation (Part 2 of Article 280 of the Criminal Code of the Russian Federation). Furthermore, driving a person to suicide on the Internet is considered an aggravating crime, increasing the maximum term of imprisonment from 6 to 15 years (Part 2 of Article 110 of the Criminal Code of the Russian Federation).

## CONCLUSION

Summing up, the following must be noted:

- legislative acts of different industry affiliation carry out legal regulation of relations related to social networks;

- the protection of violated rights in social networks is carried out in various ways, including civil protection measures, as well as administrative and criminal liability;
- due to the possibility of influencing significant masses of the population through the use of social networks and the increased public danger of offenses in this area, it is permissible to establish certain restrictions in the public and public interests;
- regulation in this area is dynamic, and changes are made quite often; and
- due to the heterogeneity of social relations related to social networks, the creation of a single act regulating relations in this area is hardly possible.

Domestic legislation does not contain a legal definition of the concept of a social network. However, based on the current legal regulation of relations in this area, the legislator understands a social network as a website, a page of a website, or an information system, and computer programs intended or used by their users to provide and disseminate information through personal pages created by them. At the same time, additional signs of such networks in the law are called:

- the presence of more than 500 thousand users in Russia per day; and
- dissemination of information in the state language of the Russian Federation, the state languages of the republics within Russia, or other languages of the peoples of the Russian Federation, in which advertising aimed at attracting the attention of consumers located in the country can be distributed.

## REFERENCES

- Definition of the Judicial Board for Civil Cases of the Supreme Court of the Russian Federation. (2020, June 9). *N 5-KG 20–49, M-10004763/19*. (In Russian).
- Demkina, A. V. (2020). *Pre-contractual legal relationship-obligation: Fundamentals of theory*. Prospekt. (In Russian).
- Meta Platforms, Inc. (2022, January 4). *Data policy* [Facebook page]. Facebook (in Russian). Retrieved from January 4, 2022, from, [https://m.facebook.com/about/privacy/update?locale2=ru\\_RU&crefid=42](https://m.facebook.com/about/privacy/update?locale2=ru_RU&crefid=42)



- Mikheeva, L. Y. (2015). Objects of civil rights: Legal positions contained in the Resolution of the Plenum of the Supreme Court of the Russian Federation. *Judge*, 10, 11–18. (In Russian).
- Perchatkina, S. A., Cheremisinova, M. E., Tsirin, A. M., Tsirina, M. A., & Tsomartova, F. V. (2012). Social internet networks: Legal aspects. *Journal of Russian Law*, 5, 14–24. (In Russian).
- Resolution of the Plenum of the Supreme Court of the Russian Federation. (2015, June 23). No. 25 “*On the application by courts of certain provisions of section I of part one of the civil code of the Russian Federation.*” (In Russian).
- Wikipedia. (2021). *Social networking service*. [https://ru.m.wikipedia.org/wiki/Социальная\\_сеть](https://ru.m.wikipedia.org/wiki/Социальная_сеть). Accessed 24 December 2021.
- Zhiltsov, N. A., Cherdakov, O. I., & Kulikov, S. B. (2020). Law within cyberspace. *The Lawyer*, 2, 58–65. (In Russian).



# Digital Platforms and Media-Regulatory Framework

*Olga A. Ruzakova*

## INTRODUCTION

The term “digital platform” is becoming increasingly important in various areas of legal regulation; at the same time, its definition is not given in the legislation. The mention of digital platforms in relation to certain spheres of life can be found in a number of legal acts. Thus, in the Public Declaration of Goals and Objectives of the Ministry of Science and Higher Education of the Russian Federation for 2020,<sup>1</sup> the digital platform for participants in scientific and technological development is considered as a set of tools and services based on digital technologies that should ensure effective scientific and scientific and technical interaction of participants in research projects. In the Order of the Board of the Eurasian Economic

<sup>1</sup> Public declaration of goals and objectives of the Ministry of Science and Higher Education of the Russian Federation for 2020 (approved by the Ministry of Education and Science of the Russian Federation)//SPS “ConsultantPlus.”

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Commission dated 30.10.2018 N 166,<sup>2</sup> the Eurasian digital platform is defined as a digital platform, which is a set of tools that support the possibility of using digital processes, resources, and services, including in the field of industrial cooperation, by a significant number of economic entities and provide the possibility of their “seamless” interaction.

In science, one can also find various definitions of the concept of “digital platform” both in general and in relation to certain types of legal relations, mostly based on the understanding of the digital platform as a system of algorithmized mutually beneficial relationships of a significant number of independent participants in the economic sector (or sphere of activity) carried out in a single information environment, leading to a reduction in transaction costs due to the use of a package of digital technologies for working with data and changes in the division of labor (Anisina et al., 2019).

The main qualifying feature of digital platforms is the digitalization of information exchange processes without human participation. Moreover, such an exchange is carried out between a very significant circle of people, both with and without state mechanisms.

The digital platform is characterized primarily by algorithmization, which, for example, for sales purposes is defined as the action of algorithms on a digital platform automatically without human interaction, contacting each other by exchanging information and forming an algorithmic chain, and at the same time setting a single price in order to maximize profits (Egorova et al., 2021).

The use of digital platforms is very diverse, as evidenced by numerous publications in the literature (Brykin, 2018; Kolotkina, 2019; Kostyan et al., 2017; Shmeleva, 2019) and an indication of application in a variety of activities: “from search and information systems (Google, Yandex, Bing), e-commerce platforms (eBay, AliExpress) and to social networks (Facebook, VK, Snapchat), from providers of ‘cloud’ services (services)

<sup>2</sup> Order of the Board of the Eurasian Economic Commission of October 30, 2018, No. 166 “On the draft recommendation of the Council of the Eurasian Economic Commission “On the Concept of creating conditions for the digital transformation of industrial Cooperation within the Framework of the Eurasian Economic Union and the digital transformation of the industry of the member States of the Union”” (Together with the draft “Concepts ...”, “Mechanisms...”) <http://caeunion.org/>, 2018, November 6.

IaaS and PaaS, industrial and business management systems (on the principle of intelligent, ‘smart’ object) to global digital technology (online) platforms (Google-Alphabet, Amazon) (Kartskhiya, 2019).”

The creation of digital platforms and the development of legal regulation of relations on their creation and functioning is fixed as a task in a number of by-laws, primarily Decrees of the President of the Russian Federation. So, in accordance with p. 13 of the Decree of the President of the Russian Federation dated 07.05.2018 N 204 “On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024,”<sup>3</sup> the Government of the Russian Federation, when implementing, together with the state authorities of the subjects of the Russian Federation, a national project in the field of development of small and medium-sized enterprises and support for individual entrepreneurial initiatives, to ensure in 2024 the creation of a digital platform focused on supporting the production and marketing activities of small and medium-sized enterprises, including individual entrepreneurs.

In paragraph 27 of the decree of the President of the Russian Federation dated 06.06.2019 N 254 “On the development Strategy of health care in the Russian Federation for the period till 2025”<sup>4</sup> in the priority directions of the primary tasks of development of health care in the Russian Federation highlighted the creation of a single digital circuit in health care on the basis of the unified state information system in the health sector, providing including the creation of centralized digital platforms for diagnosis of diseases, including using artificial intelligence.

The problems of digitalization and the media sphere, which include means of communication, ways of transmitting information, and information content, cannot be circumvented. The concept of “media sphere” is not defined in Russian legislation. Therefore it is sometimes identified with the mass media, etc., under which, in accordance with art. 2 of the Law of the Russian Federation of 27.12.1991 N 2124-1 “On Mass Media”<sup>5</sup> means periodicals, network publications, TV channels,

<sup>3</sup> Decree of the Government of the Russian Federation dated 17.12.2019 N 3074-r “The concept of creating a digital analytical platform” (together with the “Concept of creating a digital analytical platform for providing statistical data”)//Collection of Legislation of the Russian Federation. 2019, N 52 (part II), article 8054.

<sup>4</sup> Collection of legislation of the Russian Federation. 2019, N 23, article 2927.

<sup>5</sup> Vedomosti SND and the Armed Forces of the Russian Federation. 1992, N 7, art. 300.

radio channels, TV programs, radio programs, video programs, newsreel programs, other forms of periodic distribution of mass media under a permanent name (title). At the same time, the media sphere is not limited to the activities of the media but also covers the activities of other persons who publicly disseminate information in the information and communication environment, including objects of copyright and related rights, content used in this field, means of its use, etc.

The main activity of the mass media (hereinafter—the media) is the distribution of mass media products, which is the sale, subscription, delivery, distribution of periodicals, audio or video recordings of programs, broadcasting of a TV channel, radio channel (television broadcasting, radio broadcasting), broadcasting of a TV program, radio programs as part of a TV channel, radio channel, demonstration of a newsreel program, providing access to a network publication, as well as other distribution methods.

In connection with the above, it seems relevant to consider the use of digital technologies in relation to mass media in terms of ensuring their activities, in particular, the protection of rights to the results of intellectual activity used, the creation of a register of protected objects using blockchain technology, etc.

## METHODOLOGY

In the study, the author used dialectical, formal-logical, functional, and other general scientific research methods. They were employed to describe and systemize the current frame of different legal rules that are applicable to the cases of realization of copyright and related intellectual rights in the digital domain, focusing on the mass media platforms. In addition, the author has used special legal methods—comparative and formal legal methodology—to develop a legal prognosis of the changes in the legal regime of mass media platforms in the context of IP regulation and digitalization.

## DISCUSSION

The problems of mass media dissemination with the use of information technologies, including information platforms, acquire a modern sound in relation to the topics considered in this article. This is obvious since most of the information is currently distributed through Internet resources.

The Internet and other information technology platforms, combining various forms of information dissemination, make it possible to obtain the most diverse information fastest in the modern world.

In this regard, an online publication may also be registered as a mass media, a website in the information and telecommunications network “Internet,” registered as a mass media. In the absence of such registration, the website in the information and telecommunication network of the Internet is not recognized as a mass media. In accordance with paragraph 6 of the Plenum of the Supreme Court of the Russian Federation in the Resolution of June 15, 2010 No. 16 “On the practice of application by Courts of the Law of the Russian Federation “On Mass Media,”<sup>6</sup> periodic dissemination of mass information may be carried out through telecommunication networks (information and telecommunication networks), including the Internet.” When considering cases on the dissemination of mass media through such networks, it should be borne in mind that the Law on Mass Media provisions can be applied to these relations only considering the specifics of the dissemination of information through such networks. Under art. 8, 10, and 11 of the Law on Mass Media, the qualifying feature of media activity and, accordingly, their registration is distributing media products. Since there are no mass media products when distributing mass information through Internet sites, according to the current legislation, Internet sites are not subject to mandatory registration as mass media (Zakharova et al., 2018). So, Internet television, news aggregators, social networks, Internet sites, and messengers do not belong to the media.

The problem of legal regulation of media relations on the Internet is that “The Internet in relations with the media is a platform that provides a technological base for the implementation of new opportunities for the dissemination of mass information. However, technology makes it difficult to legally regulate the activities of mass media sources on the Internet. This is due to the fact that the global network contains both officially registered network resources or electronic media, as well as various information resources: blogs, ‘live’ magazines, forums, etc. (Zharova, 2016).”

The adoption of measures for the effective use of modern information platforms for the dissemination of reliable and high-quality information

<sup>6</sup> Bulletin of the Supreme Court of the Russian Federation. 2010, N 8.

of Russian production is designated as one of the measures within the framework of the formation of the information space of knowledge in accordance with the Strategy for the Development of the Information Society in the Russian Federation for 2017–2030.<sup>7</sup>

Special attention in the legislation should be paid to the so-called bloggers. Currently, there is no definition of the concept of “blogger.” Previously, Part 1 of Article 10.2 of Federal Law No. 149-FZ of 27.07.2006 “On Information, Information Technologies and Information Protection”<sup>8</sup> recognized the owner of the website and (or) the pages of the website on the Internet on which publicly available information is posted and access to which is more than 3000 network users during the day as a blogger. With the entry into force of Federal Law No. 276-FZ of 29.07.2017 “On Amendments to the Federal Law ‘On Information, Information Technologies and Information Protection’”<sup>9</sup> this definition was deleted, and the provisions regulating the dissemination of publicly available information by bloggers on the Internet were canceled as having revealed their inefficiency.<sup>10</sup>

Instead, the aforementioned federal law prohibited the use of information and telecommunication networks, information systems, and computer programs on the territory of the Russian Federation to gain access to information resources, including sites and (or) pages of sites on the Internet, access to which is restricted on the territory of the Russian Federation (Fliter, 2021).

In addition, the duties of bloggers, mass media, as well as other persons distributing information, including on information platforms and who can be defined as media subjects in general, include compliance with the general requirements established by law and restrictions on its dissemination, in particular, requirements for the reliability of information,

<sup>7</sup> Decree of the President of the Russian Federation dated 09.05.2017, N 203 “On the Strategy for the development of the information society in the Russian Federation for 2017–2030”// Collection of Legislation of the Russian Federation. 2017, N 20, article 2901.

<sup>8</sup> Collection of legislation of the Russian Federation. 2006, N 31 (1 part), art. 3448.

<sup>9</sup> Collection of legislation of the Russian Federation. 2017, N 31 (Part I), article 4825.

<sup>10</sup> Explanatory Note No. 195446-7 “To the draft Federal Law” On Amendments to the Federal Law “On Information, Information Technologies and Information Protection”// <http://asozd.duma.gov.ru/>.

compliance with intellectual rights, the inadmissibility of posting information, the dissemination of which in the Russian Federation is limited or prohibited, a ban on the dissemination of information about private life, as well as personal data of a person without his consent (paragraphs 6, 7 of Article 3, Part 1 of Article 5, Part 2 of Article 7, Part 2, 8, 9 of Article 9, part 1 of Article 10, part 5 of Article 15 of Law N 149-FZ; Article 7 of the Law of 27.07.2006 N 152-FZ) (What responsibilities are assigned to a blogger when posting publicly available information on a website on the Internet? 2021).

One of the conditions for carrying out activities in the media sphere is the need to respect the rights to the results of intellectual activity, which, in relation to this situation, primarily include objects of copyright and related rights. It should be noted that the basis of the activities of the mass media is protected objects of copyright and related rights, primarily works of science, literature, art, as well as messages on the air or via cable radio or television broadcasts (broadcasting of broadcasting or cable broadcasting organizations). Furthermore, in this regard, there are often problems of correlation between the right of citizens to information, which is mainly public-legal, and the right of authors and other copyright holders to protect results of intellectual activity.

Recently, digital technologies, including digital platforms, have become increasingly important in the protection of copyright and related rights. The need to use technological measures to ensure the legal protection of copyright and related rights was provided for in the WIPO Internet Treaties,<sup>11</sup> which require the contracting States to provide adequate legal protection of technological measures and the provision of legal remedies to copyright holders in case of circumvention of such measures (Article 18 of the WIPO Treaty on Performances and Phonograms, Article 11

<sup>11</sup> Decree of the Government of the Russian Federation of 21.07.2008 N 1052-r “On the accession of the Russian Federation to the World Intellectual Property Organization Copyright Agreement adopted by the Diplomatic Conference on Certain Issues of Copyright and Related Rights in Geneva on December 20, 1996”//Collection of Legislation of the Russian Federation. 2008, N 30 (part II), art. 3677, Decree of the Government of the Russian Federation of 14.07.2008 N 998-r “On accession to the Agreement of the World Intellectual Property Organization on Performances and Phonograms adopted by the Diplomatic Conference on Certain Issues of Copyright and Related Rights in Geneva on December 20, 1996”//Collection of Legislation of the Russian Federation. 2008, N 29 (part II), article 3554.



of the WIPO Copyright Treaty). As noted in the ICC Recommendations on Intellectual Property, “such measures are designed not only to provide protection from ‘digital pirates’, but also to increase consumer choice by allowing the distribution of content on various digital platforms providing for different ways of accessing content. As an example, technological measures can be cited that allow consumers to choose the ways and place of viewing copyrighted content independently, and consumers are provided with the security of such viewing and flexible tariffs are offered.”<sup>12</sup>

With regard to the protection of patent law objects and means of individualization subject to state registration with Rospatent, within the framework of the tasks set by Rospatent for 2021 in the Public Declaration of the Goals and Objectives of the Federal Service for Intellectual Property for 2021,<sup>13</sup> the launch of a single digital platform for the creation, protection, and turnover of intellectual property rights, as well as the “the launch in the IV quarter of 2021 of 15 information systems and digital services, including 11 state information systems (GIS), is indicated, creation of a distributed register of intellectual property rights and means of individualization in circulation” (GIS “Turnover of rights”) and a Unified Electronic State Register of the results of Intellectual Activity. In addition, as part of the development of tools to improve the effectiveness of budgetary research, development, and technological work in terms of the results of intellectual activity, the formation of a digital platform for information and analytical support and interdepartmental interaction in order to increase the effectiveness of control (supervision) carried out by Rospatent is indicated. All these elements of the formation of digital platforms are subject to application to those objects that are registered by Rospatent both in the form of mandatory registration, necessary for the emergence of an exclusive right (objects of patent law, trademarks, appellations of origin, geographical indications) and optional (computer programs, databases, topology of integrated circuits).

With regard to the objects of copyright and related rights, it should not be forgotten that the rights to these objects arise regardless of any registration or performance of any other formalities, which is provided for,

<sup>12</sup> ICC Recommendations on Intellectual Property. (2012). Overview of topical issues for entrepreneurs and authorities. Issue N 11//International Chamber of Commerce.

<sup>13</sup> SPS “ConsultantPlus.”

among other things, in international treaties, in particular, in the Berne Convention for the Protection of Literary and Artistic Property of 1886.

One of the most important issues of copyright and related rights protection is the problem of determining the author or other rightsholder, the individualization of the object, as well as the possibilities of use by other persons, in particular, concluding a contract in a simplified manner, determining the amount of remuneration. Digital platforms and blockchain technologies are crucial for solving these and other issues.

The problem of determining the author or other copyright holder is highly relevant, especially in connection with the use of works on the Internet, often anonymously or under a pseudonym, in connection with which the question periodically arises of creating a unified register of rights to objects of copyright and related rights. For example, the Strategy for the Development of the Information Society in the Russian Federation, approved by the President of the Russian Federation on 07.02.2008 N Pr-212,<sup>14</sup> the State Program of the Russian Federation “Information Society (2011–2020)”<sup>15</sup> provided for the creation of a national information and communication platform for digital content, which would include the maintenance of a register of rights to works, as well as the possibility of accounting and monitoring the use of the results of intellectual activity (primarily audiovisual works).

The need to create a unified information register in Russia containing information about authors and their works has been repeatedly raised in science over the past twenty years (Bliznets, 2009). However, “an analysis of a number of existing systems for registering copyright objects in Russia and abroad has shown that such systems are fragmented, have different, including public-legal, functionality; in its current form, none of them allows for the task of accessibility and increasing the turnover of copyrights. At the same time, some legal models can be used as elements of the new Russian intellectual property rights accounting infrastructure” (Novoselova & Ruzakova, 2017). For media systems, copyright registers are more critical, both for protecting the rights of authors and other

<sup>14</sup> Rossiyskaya Gazeta. (February 16, 2008). N 34.

<sup>15</sup> Decree of the Government of the Russian Federation of 20.10.2010 N 1815-r “On the state program of the Russian Federation “Information Society (2011–2020)”//Collection of Legislation of the Russian Federation. 15.11.2010, N 46, art. 6026.

copyright holders acting as media and for the exercise of rights to use protected objects to identify the copyright holder and obtain his consent to use the object.

## RESULTS

The study formulates the features of legal regulation of relations with the participation of mass media, defines the features of the concept of the media sphere in relation to the activities of the media, and bloggers and other persons who publicly disseminate information and create objects of copyright and related rights. The main directions of the use of digital technologies, including digital platforms, which are essential in this area, in particular, in determining copyright holders, ensuring their rights and disposing of them, are determined.

## CONCLUSIONS

Currently, it is possible to maintain a unified register of copyright and related rights objects using information platforms and blockchain mechanisms, which have recently received serious attention in science and within which users should be able to use the results of intellectual activity legally, and copyright holders should receive remuneration for such use. Furthermore, the creation of such registers is also necessary due to the rapid development of social networks (Instagram, VKontakte, Facebook, Odnoklassniki), in which files are constantly exchanged.

Blockchain, as a system of registers of intellectual property rights objects, can be a provision for storing, distributing, and transmitting information about these objects, copyright holders, the system for disposing of them, users, etc. Thus it will allow replacing the existing databases on intellectual property rights objects. The use of blockchain technologies in the creation of registers of copyright and related rights objects will make it possible to reduce the cost of registration and maintenance of registers carried out by organizations for the collective management of copyright and related rights, by other organizations, to unify this system, as well as eliminate unjustified mediation in this area (Ruzakova & Grin, 2017).

Blockchain technologies are quite diverse, including open, closed, etc. For the use of registers by media systems the technology of an open

exclusive blockchain (authorized blockchain) is optimal, in which information placement and transaction processing are carried out by entities conducting optional registration of copyright and related rights objects. Access to the exclusive blockchain should not be restricted only to the specified persons, such access should have elements of openness, which is extremely important for users, but with conditions for ensuring the protection of the exclusive right. At the same time, security is possible through the implementation of merged mining, a technology that allows the use of the same proof-of-work equipment to ensure the security of more than one blockchain, which is already used in the financial sector (An overview of outdoor & indoor pools from BitFury, 2015).

The use of the blockchain system to form a register of intellectual property rights is necessary not only to identify copyright holders and prove the existence of an exclusive right but also to identify violations of exclusive rights, as well as for the turnover of rights, expanding the rights holders' ability to dispose and manage rights to the results of creative activity on the Internet, as well as monitoring compliance with copyright and related rights on the Internet, including for the media.

One of the key drawbacks of most projects of accounting for RID on digital platforms is the lack of a well-developed mechanism for legal assessment and verification of information to be entered into the register. As already noted, the blockchain technology itself can provide technical reliability and relevance of information, but not the reliability of their content, which will depend solely on users' will (Novoselova & Ruzakova, 2017).

## REFERENCES

- An overview of outdoor and indoor pools from BitFury. (2015, October 22). *Outdoor and indoor pools. Part 1: Exclusive blockchains of White Paper*. BitFury Group in collaboration with Jeff Garzik (version 1.0-ru). <http://fork-log.com/issledovanie-bitfury-sochetanie-otkrytyh-i-eksklyuziv-nyh-blo-kchejnov-effektivnyj-put-razvitiya-kriptotehnologij>. Accessed May 30, 2017 (In Russian).
- Anisina, K. T., Bit-Shabo, I. V., Gorbunova, O. N., Proshunin, M. M., Selyukov, A. D., Tsindeliani, I. A., Vershilo, T. A., Kikavets, V. V., Kostikova, E. G., Kopina, A. A., Matyanova, E. S., Migacheva, E. V., Palozyan, O. A., Pisenko, K. A., Gasparyan, E. G., Rodygina, V. E., Tropkaya, S. S., Badmaev, B. G., & Sharandina, N. L. (2019). *Financial law in the conditions of digital economy*

- development*. In I. A. Tsindeliani (Ed.), Prospect, 320 p. [http://files.data-eco.Nomy.ru/digital\\_platforms.pdf](http://files.data-eco.Nomy.ru/digital_platforms.pdf)
- Bliznets, I. A. (2009). *The concept of creation and functioning of the unified register of objects of copyright and related rights* [Paper presentation]. The practice of legal protection of intellectual property objects in the conditions of administrative regulations, Moscow, Rospatent, 112–118.
- Brykin, K. I. (2018). Blockchain as a means of implementing the principle of transparency (openness) in the field of public finance. *Financial Law*, 4, 39–42.
- Egorova, M. A., Petrov, A. A., Kozhevina, O. V., & Mikheeva, I. E. (2021). Prerequisites of antimonopoly regulation of commodity markets in the conditions of expansion of digital pricing tools and transformation of business models. *Entrepreneurial Law*, 1, 43–52.
- Fliter, I. S. (2021). The realization of the right to freedom of speech on the Internet. *Digital Law Journal*, 2(3), 55–70. <https://doi.org/10.38044/2686-9136-2021-2-3-55-70>
- Kartskhiya, A. A. (2019). Digital technological (online) platforms: Russian and foreign experience of regulation. *Civil Law*, 3, 25–28.
- Kolotkina, O. A. (2019). The current state of legal support for the process of transformation of the agro-industrial complex in the conditions of digitalization. *Russian Justice*, 10, 47–49.
- Kostyan, I. A., Kurennoy, A. M., & Khnykin, G. V. (2017). Labor law and digital economy: Are they combined? *Labor Law in Russia and Abroad*, 4, 10–12.
- Novoselova, L. A., & Ruzakova, O. A. (2017). The meaning and functions of copyright registration in the Russian Federation and abroad. *Bulletin of Perm University. Legal Sciences*, 3, 334–349.
- Ruzakova, O. A., & Grin, E. S. (2017). Application of blockchain technology to systematization of intellectual activity results. *Bulletin of Perm University. Legal Sciences*, 4, 508–520.
- Shmeleva, M. V. (2019). Digital transformation of the system of state and municipal procurement. *The Lawyer*, 7, 15–22.
- What responsibilities are assigned to a blogger when posting publicly available information on a website on the Internet? (2021). *Azbuka prava*.
- Zakharova, N. A., Korzhov, V. Y., & Kail, A. N. (2018). *Commentary to the Law of the Russian Federation of December 27, 1991, N 2124-1 “On Mass media”* (article by article). SPS ConsultantPlus.
- Zharova, A. K. (2016). *Law and information conflicts in the information and telecommunications sphere* (p. 248). Janus-K.



# Toward Payment-Centric Model of Global Financial Regulation

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## METHODOLOGY

Methodology conducted in this study includes the comparative method, the formal legal method, the system-based approach, and the retrospective approach.

The comparative method was used with the intention of comparing key taxonomy in payments of main SSB documents.

The formal legal method made it possible to analyze political documents and acts of “soft law” enacted by the G20 and key standard-setting bodies.

The system-based approach made it possible to consider the policy of cross-border payment improvement in the context of global financial regulation system and in correlation to other related policies.

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The retrospective approach made it possible to follow the stages of development of the global regulation of the payment sphere.

## INTRODUCTION

Globalization, digitization, the pandemic (COVID-19) agenda, and the ESG agenda are among the key trends impacting the development of payment sphere.

The main goal to enhance the global regulation payments sphere is to achieve a balance between efficiency of payment innovations on the one hand, and security and the stable development of payments sphere, monetary system, and financial market on the other hand.

The G20 Roadmap for Enhancing Cross-border Payments is a basic regulatory path. The objective of the Roadmap is to provide cost, speed, transparency, and access faced by cross-border payments.

There are two important areas which are affected by the influence of cross-border payments reforms—impact on international trade, and financial integrity (in particular, via AML/CFT).

Since 2015, the Financial Stability Board, executing a four-point action plan, has pursued the work to address decline in correspondent banking (FSB, 2019a).

The action plan implementations are: (1) to further examine the dimensions and implications of the issue; (2) to clarify regulatory expectations, as a matter of priority, including more guidance by the FATF; (3) to see to domestic capacity-building in jurisdictions that are home to affected respondent banks; and (4) to strengthen tools for due diligence by correspondent banks.

Further work to improve cross-border payments is incorporated in three stages: Stage 1—an assessment of existing arrangements and challenges; Stage 2—the work on creating the building blocks of a response to improving the current global cross-border payment arrangements; Stage 3—the development of a roadmap.

The Financial Stability Board worked out its Roadmap for Enhancing Cross-border Payments at the request of the G20 in coordination with CPMI and other international organizations and SSB.

After the first stage, in April 2020, the Financial Stability Board (FSB) presented the report to the G20, where seven key elements were identified: cost, speed, transparency, and access faced by cross-border payments.

At the second stage, the Committee on Payments and Market Infrastructures (CPMI) led the work on creating building blocks to improve the current global cross-border payment arrangements (FSB, 2020).

The essential part of the Roadmap was publication of the specific quantitative targets (FSB, 2021b), by means of which the progress in addressing the problems with cost, speed, transparency, and access faced by cross-border payments can be assessed. The goals will be put into action in 2022 through the development of the implementation approach to monitoring progress toward them.

## RESULTS

Nineteen building blocks of the Roadmap are distributed to five focus areas. Primarily, it is important to pay attention upon the bulk of legal work set out in the focus area B: building blocks in this area aim to soften the problems which arise as a result of the multi-dimensional nature of cross-border payments by promoting consecutive international rules and standards without harm to particular jurisdictions.

Focus area E (Explore the potential role of new payment infrastructures and arrangements), which consists of building blocks 17–19 (multilateral platforms, stablecoins, and CBDC), will be the subject of this paper.

### *Considering the Feasibility of New Multilateral Platforms and Arrangements for Cross-border Payments (Building Block 17)*

Multilateral platforms can be characterized as payment systems of a multi-jurisdictional nature; typically (but not necessarily) they involve multiple currencies. CPMI, IMF, and WB believe multilateral platforms have the potential to mitigate certain cross-border payment frictions, including long transaction chains, legacy technology platforms, fragmented and truncated data formats, and depending on how they are designed, funding costs. However, multilateral platforms may also exacerbate other frictions or introduce new risks, including inconsistencies between regulatory frameworks across jurisdictions (FSB, 2021a).

BIS highlights the need to realize the full potential of CBDCs for more efficient cross-border payments; international collaboration will be paramount (BIS Annual Economic Report, 2021).



In addition, BIS studies in what way platformization of payment market and development of payment means can impact on the world monetary system as a whole (Brunnermeier et al., 2021). Traditional concepts of monetary theory are rethought under the influence of digitalization: the re-bundling of money, platform-based market, and digital currency areas. The issue to introduce synthetic international currency is highly debated. More to the point, the authors infer that nowadays the change from bank-centric to payment-centric model of financial market can be observed.

In another BIS work, the authors determine 3 models of interoperable multi-CBDC systems which give an idea of future cross-border payment platforms.

*Model 1* considers the interoperability of separate CBDC systems through adherence to common international standards and resembles traditional cross-border payment arrangements. Model 1 of enhancing compatibility among domestic CBDC systems is taken into account by many CPMI-member central banks.

*Model 2* incorporates additional interlinkages, through either a shared technical interface or a common clearing mechanism. Model 2 was the focus of the *Jasper-Ubin project* in 2019, with co-operation between the Monetary Authority of Singapore, the Bank of Canada, and the financial industry. Meanwhile, the Bank of France, Swiss National Bank, BIS Innovation Hub, and a private sector consortium have collaborated to explore the potential benefits and challenges of wholesale CBDC for settling cross-border transactions (*Project Jura*).

*Model 3* implies cooperation of a higher magnitude among central banks. It considers an arrangement where there exists a single mCBDC system across jurisdictions. Model 3 set by the unified mCBDC system is in the center of several projects: for example, *Project Inthanon-LionRock* (a joint initiative by the Bank of Thailand and the Hong Kong Monetary Authority), *mCBDC Bridge* (Hong Kong Monetary Authority, the Bank of Thailand, Digital Currency Institute of the People's Bank of China, and the Central Bank of the United Arab Emirates), *Project Aber* (led by the Saudi Central Bank and the Central Bank of the United Arab Emirates), and *Dunbar initiatives* (BIS Innovation Hub, Monetary Authority of Singapore, and other central banks, financial institutions, and technology partners).

*Fostering the Soundness of Global Stablecoin Arrangements (Building Block 18)*

The main standard-setting body in the part of stablecoins is the Financial Stability Board (FSB, 2019b).

The Board defines a “stablecoin” as a crypto-asset designed to maintain a stable value relative to another asset (typically a unit of currency or commodity) or a basket of assets. These may be collateralised by fiat currency or commodities, or supported by algorithms. The term “global stablecoins” refers to stablecoins with a potential global reach and the ability to rapidly scale in terms of users/holders of the crypto-asset (FSB, 2019c).

The Financial Stability Board designed ten high level recommendations which encourage coordinated effective regulation and control over stablecoin turnover aimed to minimize the risks of financial stability on national and international level as well.

Recommendations require regulation, supervision, and observation in accordance with risks. Diverse approaches to regulate a new instrument can cause regulatory arbitrage.

Taking into account the cross-border effects of stablecoin turnover, the importance of flexible, efficient, transparent, and multilateral mechanisms of cross-border cooperation, coordination, and information exchange between governance bodies.

*Factoring An International Dimension into CBDC Design (Building Block 19)*

The key actor in CBDC problem is BIS (represented by the Financial Stability Institute and CPMI); according to the definition, BIS is new form of digital central bank money that can be distinguished from reserves or settlement balances held by commercial banks at central banks (CPMI, & Markets Committee, 2018). Central bank digital currencies (CBDCs) offer in a digital form the unique advantages of central bank money: settlement finality, liquidity, and integrity (BIS Annual Economic Report, 2021).

BIS identifies 3 forms of CBDC in its taxonomy. Two forms are token-based, emitted by the central bank, while the third one is account-based. The two token-based versions are different mostly because of the access, which, in its turn, depends on the potential CBDC use. The first one is a

widely available payment tool that is intended to retail CBDC; the other one is limited in access and intended for wholesale CBDC.

Based on their analysis, the authors highlight the following much-discussed aspects of CBDC design: direct, indirect, or hybrid access to CBDC, wholesale or retail CBDC, reactive and proactive CBDC, account-based or DLT-based CBDC, CBDC remuneration, and the legal foundation of CBDC (Auer & Böhme, 2020; Hess, 2020; Nabilou, 2019).

The main ideas of the latest BIS documents are:

- Cash is being used less and less as a means of payment (the COVID-19 pandemic has accelerated this process);
- The private sector solves the tasks of KYC, AML, dispute resolution, and clearing better than central banks;
- The “minimally invasive” design of the CBDC is optimal; and
- It is important to minimize the risks of the implementation of the CBDC. Household investments in CBDC can significantly increase the balance of central banks and displace deposits from commercial banks (Auer, Boar et al., 2021; Auer, Haene et al., 2021; Auer & Böhme, 2021).

The last CPMI report on CBDC was presented in the Roadmap framework as an answer to the actions on building block 19; in the report, CPMI—in cooperation with Innovation center BIS, IMF, and the World Bank—offers to analyze national projects CBDC and study feasible macro-financial consequences connected with cross-border CBDC use (BIS et al., 2021).

These issues are scrutinized from the two perspectives: the first perspective is practical—how cross-border payment infrastructure with CBDC can be created; the second perspective is macro-financial—a study of the potential growth of cross-border flows, possible risks of financial stability and currency substitution, and a configuration of the reserve currency and support.

According to the report, cross-border payments with CBDCs can be envisioned in two fundamentally different ways. The first scenario assumes availability of a retail CBDC of a given jurisdiction to anybody inside and outside of that jurisdiction, with limited to no coordination between the issuing central banks. The second scenario assumes some

degree of interoperability between CBDCs based on access and settlement arrangements to facilitate the cross-border use of CBDCs from two or more jurisdictions. Such arrangements can connect both wholesale and retail CBDCs across borders, imply strong cooperation among central banks, and include technological, market structure, and legal aspects (BIS, 2021).

## DISCUSSIONS

Actual aspects of global regulation of cross-border payments include:

- the search for the balance between innovations and financial stability/security;
- competition between conventional and innovative payment systems;
- a reconsideration of the elements of the world monetary system in the light of the digitalization of payment;
- state-private partnership as a main factor of reform efficiency; and
- the incorporation of crypto-assets in the new payment design.

The development of payment techs required not only new regulation, but also demand for the conceptualization of new payment reality in strengthening the role of payment agenda in concepts of financial inclusion and financial integrity, its embedding in ESG-paradigm, a reconsideration of the world monetary policy under the influence of payment digitalization (CBDC, electronic money, stablecoins, and other payment tokens), and the development of payment digital platforms (fintech-platforms, crowdfunding platforms, multi-CBDC platforms).

The decentralization of global financial regulation (by means of broadening the circle of the regulatorsstandard-setting bodies) and development of “soft law” regulatory policy can be witnessed further (Salikhov, 2020).

It is essential to mention the expansion and increasing complexity of intermediaries types; in this case, CPMI and FATF should be chosen.

The large number of participants for CPMI and FATF is in the category of payment service providers (PSP) (BIS Annual Economic Report, 2021). Along with this, CPMI highlights the category of non-bank payment service providers (NBSP) (Ehrentraud et al., 2021). FATF, in its turn, apart from the basic category Virtual Asset Service

Providers (VASP) (FATF, 2021b), highlights some more intermediaries types: Money or Value Transfer Service (MVTs), Electronic Money Issuer (EMI), and Digital Wallet Provider (FATF, 2021a).

BIS pay special attention to NBSP in relation to the services of digital and electronic payments, to digital banks and to fintech platforms (fintech platform financing, fintech balance sheet lending, crowdfunding) in fintech financing (Ehrentraud et al., 2020), as well as the digitalization of RTGS (real-time gross settlement) systems (CPMI, 2021).

To sum up, it is important to acknowledge the contribution of FATF to reducing the risks of cross-border payments and the impact of the Roadmap on the development of international trade (on the way of digitalization). In this context, documents of sectoral trade associations are aimed at the digitalization of negotiable instruments and cross-border payments: ICC (2020), BAFT (2020), ITFA (2021), and others.

## CONCLUSIONS

Contemporary global regulation of cross-border payments confirms the leading role of “soft regulation” and “soft law” in international financial regulation. The efficiency of the distribution of the payment agenda among different SSB is obvious. The crucial aspect of global regulatory agenda in the achievement of balance between payment innovations and security/stability of payment domain is effective only at a high level of international cooperation.

In search of this balance, international and national regulators focus on such payments as CBDC and stablecoins.

Digitalization of cross-border payments is tightly related with the ESG agenda and the pandemic agenda. The separate track which makes a profound contribution to the development of cross-border settlements is international trade. At this point, the electronization and digitalization of payments synchronizes with digitalization of negotiable instruments.

The authors believe that global financial regulation is to become more payment-centric, since cross-border payments are the core of the main concepts of global regulatory policy: financial inclusion, international trade, and combating illicit financial flows.

## REFERENCES

- Auer, R., & Böhme, R. (2020). The technology of retail central bank digital currency. *BIS Quarterly Review*, 85–100. [https://www.bis.org/publ/qtrpdf/r\\_qt2003j.pdf](https://www.bis.org/publ/qtrpdf/r_qt2003j.pdf)
- Auer, R., & Böhme, R. (2021). *Central bank digital currency: The quest for minimally invasive technology* (BIS Working Papers No. 948). <https://www.bis.org/publ/work948.pdf>
- Auer, R., Boar, C., Cornelli, G., Frost, J., Holden, H., & Wehrli, A. (2021). *CBDCs beyond borders: results from a survey of central banks* (BIS Papers No. 116). <https://www.bis.org/publ/bppdf/bispap116.pdf>
- Auer, R., Haene, P., & Holden, H. (2021). *Multi-CBDC arrangements and the future of cross-border payments* (BIS Papers No. 115). <https://www.bis.org/publ/bppdf/bispap115.pdf>
- BAFT. (2020). Distributed Ledger Payment Commitment (DLPC). *Business Best Practices Initial Release Version 1.1*. <https://www.tradefinanceglobal.com/wp-content/uploads/2020/06/baft-dlpc-business-bps-final.pdf>
- BIS Annual Economic Report. (2021). III. CBDCs: An opportunity for the monetary system. <https://www.bis.org/publ/arpdf/ar2021e3.pdf>
- BIS, CPMI, WB, IMF, & Innovation Hub. (2021, July). *Central bank digital currencies for cross-border payments*. Report to the G20. <https://www.bis.org/publ/othp38.htm>
- Brunnermeier, M. K., James, H., & Landau, J.-P. (2021). *The digitalization of money* (BIS Working Papers No. 941). <https://www.bis.org/publ/work941.pdf>
- CPMI. (2021). *Consultative report extending and aligning payment system operating hours for cross-border payments*. <https://www.bis.org/cpmi/publ/d199.pdf>
- CPMI, & Markets Committee. (2018). *Central bank digital currencies*. <https://www.bis.org/cpmi/publ/d174.pdf>
- Ehrentraud, J., Garcia Ocampo, D., & Quevedo Vega, C. (2020). Regulating fintech financing: Digital banks and fintech platforms. *FSI Insights on policy implementation No. 27*. <https://www.bis.org/fsi/publ/insights27.pdf>
- Ehrentraud, J., Prenio, J., Boar, C., Janfils, M., & Lawson, A. (2021). Fintech and payments: Regulating digital payment services and e-money. *FSI Insights on policy implementation No. 33*. <https://www.bis.org/fsi/publ/insights33.pdf>
- FATF. (2021a). *Cross border payments – Survey results on implementation of the FATF standards*. <https://www.fatf-gafi.org/publications/fatfrecommendations/documents/cross-border-payments.html>
- FATF. (2021b). *Updated guidance for a risk-based approach to virtual assets and virtual asset service providers*. [www.fatf-gafi.org/publications/fatfrecommendations/documents/Updated-Guidance-RBA-VA-VASP.html](http://www.fatf-gafi.org/publications/fatfrecommendations/documents/Updated-Guidance-RBA-VA-VASP.html)

- FSB. (2019a). *Action plan to assess and address the decline in correspondent banking: Progress report*. <https://www.fsb.org/2015/11/fsb-releases-report-to-g20-on-the-decline-in-correspondent-banking/>
- FSB. (2019b). *Crypto-assets: Work underway, regulatory approaches and potential gaps*. <https://www.fsb.org/wp-content/uploads/P310519.pdf>
- FSB. (2019c). *Regulatory issues of stablecoins*. <https://www.fsb.org/wp-content/uploads/P181019.pdf>
- FSB. (2020). *Building blocks for a roadmap to enhance cross-border payments: Letter to the G20*. <https://www.fsb.org/2020/07/building-blocks-for-a-roadmap-to-enhance-cross-border-payments-letter-to-the-g20/>
- FSB. (2021a). *G20 Roadmap for enhancing cross-border payments: First consolidated progress report*. <https://www.fsb.org/2021/10/g20-roadmap-for-enhancing-cross-border-payments-first-consolidated-progress-report/>
- FSB. (2021b). *Targets for addressing the four challenges of cross-border payments: Final report*. <https://www.fsb.org/2021/10/targets-for-addressing-the-four-challenges-of-cross-border-payments-final-report/>
- Hess, S. (2020). *Regulating central bank digital currencies: Towards a conceptual framework*. <https://ssrn.com/abstract=3582501>
- ICC. (2020). *Memo to governments and central banks on essential steps to safeguard trade finance operations*. <https://iccwbo.org/content/uploads/sites/3/2020/04/icc-memo-on-essential-steps-to-safeguard-trade-finance-operations.pdf>
- ITFA. (2021). *Digital negotiable instruments initiative. Bringing negotiable instruments into the digital world*. <https://itfa.org/bringing-negotiable-instruments-into-the-digital-world/>
- Nabilou, H. (2019). Central bank digital currencies: Preliminary legal observations. *Journal of Banking Regulation*. Forthcoming. <https://ssrn.com/abstract=3329993>
- Salikhov D. R. (2020). “Regulatory sandboxes” in Russia: New horizons and challenges. *Digital Law Journal*, 1(2), 17–27. <https://doi.org/10.38044/2686-9136-2020-1-2-17-27>



# Platform Solutions for the Digital Justice: Models of Regulation

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## INTRODUCTION

Digital platforms for justice systems are becoming increasingly important in Germany, Europe, and Kyrgyzstan. The Covid-19 pandemic caused a rapid implementation of platform solutions in judicial systems. In the following, digital platforms will be presented that have been set up or are planned for the justice system in Germany, the European Union (EU), and Kyrgyzstan in recent decades.

In principle, laws are only necessary if state structures interfere with citizens' rights. This should be decided by parliament and not by the government alone. However, laws are also useful when the administration or the courts are to be forced to act in the interests of citizens. After all, personal data is often processed on digital platforms. In Europe,

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this is regulated by the European General Data Protection Regulation (GDPR) (European Union, 2016); however, these rules sometimes require concretization by national law. In Kyrgyzstan, personal data are regulated by the Law “On Personal Information” (2008).

Spagnoletti et al. defined a digital platform as “a building block that provides an essential function to a technological system and serves as a foundation upon which complementary products, technologies, or services can be developed” (Spagnoletti et al., 2015: 364). Government-dominated digital platforms are primarily used in justice systems (Klievink et al., 2016). E-justice platforms have an impact on the justice system as far as they could improve efficiency, accessibility, and the transparency of justice (Lupo, 2016; Lupo & Bailey, 2014; Velicogna, 2011). Nevertheless, they also create potential risks for data confidentiality and data handling (Rosa et al., 2013).

This chapter examines in which cases legal regulation is required for the establishment and operation of the platforms and what significance regulation has in Germany, the EU, and Kyrgyzstan.

## METHODOLOGY

This chapter examines the legal regulation of digital platforms for justice systems in Germany, the EU, and Kyrgyzstan. The authors analyzed the legislations and compared legal approaches to implementation of digital platforms in justice systems in Germany, the EU, and Kyrgyzstan.

## RESULTS

### *Digital Platforms for Justice Systems: The Cases of Germany and the European Union*

#### *Federal-State Justice Portal in Germany*

For more than 20 years, Germany has used a federal/state justice portal (Germany, 2005), the content of which has been gradually expanded, and which today offers citizens the opportunity to find the court (local, regional, and higher regional court) and the public prosecutor’s office responsible for legal proceedings for a location in the Federal Republic of Germany. It also provides a platform for information from the Federal Ministry of Justice on the options for transmitting electronic documents to the courts and for keeping, transmitting, and accessing electronic files.

This platform also contains information from the E-Justice Council, i.e., the federal and state coordinating body for electronic justice issues, which is staffed by state secretaries, the Federal-Länder Commission for Data Processing and Rationalization in the Judiciary, and on the state-specific regulations on electronic legal transactions. Furthermore, in addition to the possibility of online applications in dunning proceedings and the publication of insolvency notices via the Internet, the portal provides access to information procedures in the area of the land register and other judicial registers. Finally, there are links to resolutions of the German Conference of Justice Ministers from the federal and state governments and to the European Justice Portal. There was no need for a separate legal regulation for this portal, as it has so far mainly served to provide information for judicial applications, which in turn are often based on a legal foundation.

#### *Justice Registers in Germany*

For example, electronic judicial registers, such as the land register, the commercial register, or the company register, are based on their own special legal foundations. Although the management of these registers is the responsibility of the federal states, which in turn have interconnected their registers on a contractual basis to form a uniform digital platform for convenient cross-border information, federal laws regulate the content of the electronic registers and digital access to these registers.

The aim of the legislative amendments in recent years has been to adapt the registers to new developments in information technology. A year ago, the German Bundestag passed the so-called Register Modernization Act (Germany, 2021). On the basis of this law, the tax identification number, which already exists for all Germans, will now also serve as a uniform identification number for comparing the master data of the judicial registers, thus enabling those responsible for maintaining the registers to check the data for inconsistencies and update it.

The data from the judicial registers is also repeatedly required for judicial applications. Until now, the persons concerned have always had to enter their identification data and other data, such as address or marital status, in forms, or to present certain documents, such as birth certificates. This is cumbersome and takes up a lot of time. In the future, this data can be transferred directly from the registers to the relevant authorities and courts with the consent of the persons concerned. For the sake of transparency, a “data cockpit” is being set up to provide

data subjects with a simple and timely overview of data transfers carried out between authorities, thus contributing to data protection regulated uniformly under European law by the European General Data Protection Regulation. The legal basis was created specifically for the digital use of land register data—which is also held by the courts—in order to enable modern searches in the land register data, simple processing of applications received electronically, and nationwide standardization of access for external parties, including via electronic legal transactions. From a technical point of view, work is being done on a uniform nationwide retrieval procedure and on functions for the successive structuring of the land register data.

In addition to the registers administered by the state, there are other legally relevant registers that are made available on platforms operated by the Federal Chamber of Notaries: central register of wills for tracing wills in the event of the death of a testator (Germany, 2012), the central register of precautionary measures for the secure storage of living wills (Germany, 2003), and the electronic archive of deeds, in which notaries keep their electronic collection of deeds, their register of deeds, and their register of custody in digital form (Germany, 2022). These registers are based on federal legislation, which assigns corresponding tasks to the Federal Chamber of Notaries as a federal public corporation, i.e., as part of the state. It also follows from this that the keeping of registers may not serve any commercial purposes.

### *Legal Information Databases in Germany*

Information on the laws and ordinances in force in Germany, as well as on court decisions, can be accessed in Germany via central online platforms for which private-sector legal publishers (Beck-online, 2022; Juris, 2022) or the electronic Federal Gazette are responsible. Originally, these platforms were set up by the Federal Ministry of Justice. However, since the private sector is more capable of developing modern information technology tools, the state institutions were privatized. For example, use of the databases by scientists or lawyers, which involves more intensive research, is subject to a fee. On the basis of contracts with the federal government, there is an information service on applicable law and court decisions, which has been developed by Juris GmbH and made available on a digital platform by the federal ministries and the federal courts, and which can be used by citizens free of charge. Laws have not been necessary for these offerings because they are about services and do not

interfere with rights. In addition, the Federal Gazette is the central platform for official announcements and notices as well as for legally relevant corporate news. There are provisions for this in the constitution and in individual federal laws.

### *The European e-Justice Portal*

The European e-Justice portal, initially developed on the basis of German proposals since 2007, has now been expanded into an electronic one-stop store in the area of justice (European Union, 2010). It strives to make life easier by providing information for the European networked justice institutions and citizens seeking justice in the European Union on justice systems and improving access to justice throughout the EU, in 23 languages. The European Justice Portal not only provides information on the respective legal systems of the EU Member States and relevant information for legal professionals, but also on judicial decisions issued in the Member States on issues related to EU law. Furthermore, a number of national judicial registers are interconnected via the portal. Also, legal assistance in criminal matters between the Member States is also increasingly being organized via the e-Justice portal. Finally, certain claims can be filed across borders via the portal (e.g., European Payment Order procedure, Small Claims procedure). In parallel to the establishment of the portal, there were European projects of some Member States (“e-CODEX”), which created the transnational judicial communication structures and tools that are of great use for the e-Justice portal (E-CODEX, 2010). Initially, the portal was deliberately set up without amending or supplementing EU law, because such legal changes—which would have to be adopted in a complicated EU legislative procedure—cost a lot of time. However, EU law did not stand in the way of establishing a portal. Nevertheless, individual service components of the EU portal are based on an independent legal basis (such as the regulation for the European Payment Order procedure) (European Union, 2006). Now, however, it is planned to transfer responsibility for the operation of the aforementioned e-CODEX components to a central EU institution, the European Agency for the operational management of large-scale IT systems in the area of freedom, security, and justice (eu-LISA), in a separate EU legal regulation (European Union, 2011). The proposal for a corresponding EU regulation sets out the obligations of the future operator, but also of the EU member states (European Commission, 2018). Since eu-LISA has so far been responsible primarily for EU tasks in the

area of internal security, it is important that the legal act also defines the principles that safeguard the special constitutional role of the judiciary vis-à-vis police tasks.

### *Judicial Proceedings in Germany*

- a. Judicial proceedings are initiated in a decentralized manner rather than via central platforms. An e-Justice Act of 2013 regulated that lawsuits filed by lawyers are submitted to the courts via special electronic mailboxes using a secure transmission channel (Germany, 2013). However, these mailboxes are provided centrally by the Federal Bar Association for every lawyer admitted to practice in Germany (Germany, 1959). Since the beginning of 2022, lawyers have been required to send their documents to the courts electronically using this method (Germany, 1950). Lawyers will also receive replies from the courts via these mailboxes. Public authorities also have such special electronic (government) mailboxes for communicating with the courts, as do notaries, as in the future will tax advisors. Furthermore, citizens and companies will also be able to communicate digitally with the courts via secure electronic mailboxes, and the court decisions will then be sent to the connected citizens and companies via this channel (Germany, 1950). Finally, it was also provided by law that the federal-state portal network of the administration, which is currently to be fully set up by the end of 2022, can also be used so that citizens and companies can direct applications to the courts via their user account in this portal (Germany, 1950).
- b. The payment order procedure for the simplified judicial claiming of monetary debts is based on a digital platform for which the federal states are responsible, but which they have agreed on a joint digital payment order portal in the sense of a joint appearance of the payment order courts of the federal states (Germany, 2020). In principle, automated processing is carried out in all the federal states according to uniform rules, which are laid down by law in the Code of Civil Procedure. Creditors of claims can fill out electronic applications for the issuance of an order for payment on the platform and forward these applications electronically to the competent order for payment courts, which are usually centralized in the federal states. This procedure is governed by the German Code of Civil Procedure (Germany, 1950).

- c. Other central platforms have been set up in recent years on a statutory basis: the access to files portal, through which parties to judicial proceedings can realize their claim to access to files via a central office. The federal states also maintain a central, cross-state electronic register for protective writs (protective writ register). Writs of protection are preventive defense briefs against expected applications for arrest or temporary injunction (Germany, 1950, 2016).

*Court Videoconferencing Using Online Platforms Offered by International Companies*

During the pandemic, the need for virtual court hearings has grown considerably in Germany, giving litigants the opportunity to avoid going to the courthouse to exercise procedural rights, and thus to avoid the dangers of meeting people who may be infected with the coronavirus. It is true that there have been provisions in the German legal system for about 20 years that permit the court to allow participants in civil proceedings (litigants, witnesses, experts) to take part in the proceedings by means of a video conference. Nevertheless, these tools were rarely used. However, this has changed considerably since the beginning of the pandemic. Still, it has also become apparent that some legal and technical issues still need to be clarified. In particular, the use of videoconferencing by courts together with litigants often involves the processing of personal data, which is regulated by the European Data Protection Regulation. It follows from Art. 44 et seq. of the European General Data Protection Regulation that data transfers to third countries (i.e., outside the EU member states) are only permitted to a limited extent and require that these third countries legally safeguard a comparable level of data protection as the European Union (European Union, 2016). Since most video conferencing platforms used in Europe are the responsibility of US companies, these platforms cannot be used by the courts without difficulty. Therefore, alternative uses are preferred, such as on-premises solutions. This means that data is not routed through American servers. Discussions are taking place both at the EU level and at the national level of the member states as to whether new legal bases are needed for the use of video conferencing systems in judicial proceedings.

*Developing Digital Platforms for Justice System in Kyrgyzstan: From Case Management to “Digital Justice” Platform*

The regulatory framework for the implementation of digital platforms in judicial system includes National Development Program of the Kyrgyz Republic until 2026 (2021), Decrees of the President of the Kyrgyz Republic “On Urgent Measures to Enhance Implementation of Digital Technologies in the Public Administration of the Kyrgyz Republic” (2020) and “On Further Measures to Improve the Availability and Quality of Public and Municipal Services to the Population” (2021), Action Plan for Digitalization of Management and Development of Digital Infrastructure in the Kyrgyz Republic for 2022–2023 approved by the Order of the Cabinet of Ministers of the Kyrgyz Republic dated January 12, 2022 № 2-r, Strategic Plan for Development of IT in the judicial system of the Kyrgyz Republic 2019–2022, and State Target Program “Development of the Judicial System of the Kyrgyz Republic 2019–2022”. At present, several digital justice tools—such as AIS Sud, central register for debtors, audio-videorecording of trials, videoconferencing, electronic workflow, and digitization of court records—have been implemented (Civil Initiative on Internet Policy, 2021).

Since 2016, a platform of case management and electronic workflow called AIS Sud has been implemented by IT Agency “Adilet Sot” under the Judicial Department of the Supreme Court of the Kyrgyz Republic in partnership with the Rule of Law Programme funded by the EU (Sabyrova & Kudaiberdieva, 2019). AIS Sud is a central platform implemented in the Kyrgyz court system for the internal use for judges and court staff. In 2019, it was introduced in all 64 district courts for civil and criminal proceedings. Since 2020, it has been implemented in courts of second instance only for criminal proceedings (Presentation of Mr. Christoph Kopecky, 2021). The Regulation “On Automated Information System “Sud”” (2021) determines electronic case management, functions and liability of users, registration, distribution, and acceptance of criminal, civil, and administrative cases (Supreme Court of the Kyrgyz Republic, 2021). This platform ensures the transfer of cases between the courts of first and second instances. In addition, a special module has been developed for investigating judges, which allows judges to select, extend, and change the measure of restraint on request of prosecutors. At the moment, integration of the platform with Unified Register of Crimes is in progress (Civil Initiative on Internet Policy, 2021).

AIS Sud includes Automatic Case Allocation System, which is introduced in all chambers (*kollegias*) of the Supreme Court of the Kyrgyz Republic and all 64 district courts. It has an impact on the independence of judges from the chairperson of the courts. Previously, the cases were distributed to judges by chairpersons of the courts manually. The Automatic Case Allocation System is based on specific algorithms that take into account complexity of case, information about working calendar of judges, the judge's planned caseload, and other issues. The case is distributed to the judge who has the smallest caseload at that moment. It decreases the judges' overload.

According to the Law "On access to information held by state bodies and local self-government bodies of the Kyrgyz Republic" (2006), all judges must publish their decisions and other judicial acts at central online platform [act.sot.kg](http://act.sot.kg) administered by IT Agency "Adilet Sot" under the Judicial Department of the Supreme Court (Kyrgyz Republic, 2006). This promotes access to judicial information. At present, 318, 988 judicial acts on civil, criminal, constitutional, administrative, and economic cases are accessible online (Supreme Court of the Kyrgyz Republic, 2020, 2022).

In 2022, a new central portal "Digital Justice" is planned to be introduced. The platform will integrate audio-videorecording of trials, videoconferencing, and services such as "Subpoena", "Schedules of court hearings", "Consult with court documents", and "Personal account", and will provide opportunity to submit claims online (Kyrgyz Republic, 2022). This platform will be integrated with other state platforms via system of inter-agency interaction "Tunduk". Thus, the implementation of digital platforms has impact on transparency and accountability via visibility of case proceeding in digital format and court statistics.

### *The Eurasian Economic Union Legal Portals*

The Eurasian Economic Union (EAEU) Legal Portal provides information on EAEU law and judicial decisions of the Court of EAEU (Eurasian Economic Union, 2022a). In parallel, General Information Resources and Open Data Portal provides legal information on protection of consumers' rights (Eurasian Economic Union, 2022b). The Decision on Main Directions for the Implementation of EAEU Digital Agenda until 2025 requires the integration of information systems of Member States for data exchange via means of interstate electronic document



management, and adoption of an Agreement on personal data protection (Supreme Eurasian Economic Council, 2017). However, there is a lack of a digital justice platform that could strengthen legal integration and legal assistance on civil, family, and criminal matters provided within the framework of the Convention on Legal Aid and Legal Relations in Civil, Family, and Criminal Matters (2002).

### *Remote Hearings via Videoconferencing During the Covid-19 Pandemic*

The Covid-19 pandemic caused rapid implementation of IT-solutions in the judicial system in Kyrgyzstan. Since July 2020, the Kyrgyz Supreme Court allowed remote hearings via videoconferencing for criminal proceedings in order to ensure access to justice during the pandemic. According to new Criminal Procedural Code (2021), Civil Procedural Code (2017b), Administrative Procedural Code (2017a), and Regulation for Organizing and Application of Videoconferencing in Courts (2020), remote hearings are allowed if there is technical equipment in the court. However, there is lack of uniform procedural rules for identification of trial's participants via videoconferencing. Since July 2020, 15,905 remote hearings were organized (Judicial Department of the Supreme Court of the Kyrgyz Republic, 2022). The judge should book a remote hearing session on the online portal "Remote Court Hearings" in advance. The videoconferencing platform used in Kyrgyzstan was developed by the Russian company. All data are recorded on the Kyrgyz court's servers.

## DISCUSSIONS

This chapter described the legal framework for digital platforms in justice systems and their impact on access to justice, efficiency, and transparency in Germany, the EU, and Kyrgyzstan. In the times of the Covid-19 pandemic, digital justice platforms are providing access to justice. The data contribute to a clearer understanding of how digital platforms affect accessibility, efficiency, and transparency, and overcome potential risks for data confidentiality and data handling. The results can be used to identify strategies for improving the legal framework of digital platforms in the justice system. Based on the results, the following recommendations could be provided:

1. Germany: Not every provision of judicial services by a digital platform needs to be regulated by law. However, it is foreseeable that digital platforms will be the decisive instruments for citizens to exercise judicial legal protection in the future. In this case, the rights and obligations of citizens must be clarified by law, and procedural law must be reformed to enable fully digitized processes—including videoconferencing—unless German law and EU law already provides specifications for certain procedural issues.
2. EU: So far, the e-Justice portal has been developed without any specific legal authorization under EU law, as the participation of Member States in this EU project has been voluntary. However, for the portal to present its function as a central hub for cross-border justice, the obligations of the Member States to use the portal must be legally clarified by EU law in the future. Some principles (such as the safeguarding of data protection or the mutual recognition of authentication instruments) have already been laid down in European law and provide a framework for the use of justice.
3. Kyrgyzstan: successful implementation of the “Digital Justice” platform requires the following amendments to national legislation: (i) equivalence of electronic and paper documents; (ii) procedural rules for identification of litigants, witnesses, and experts participating via videoconferencing; (iii) protection of personal data of litigants, witnesses, and experts.
4. Based on a legal analysis of EU digital justice platforms, a similar approach could be introduced in the EAEU. Legal assistance on civil, family, and criminal matters during the Covid-19 pandemic could be strengthened by establishing EAEU Digital Justice Platform for transnational judicial communication and personal data protection within the framework of the EAEU Digital Agenda 2025 and the Convention on Legal Aid and Legal Relations in Civil, Family, and Criminal Matters (2002).

## CONCLUSIONS

This chapter showed that the German model of the regulation of digital platforms for its justice system presents an effective approach which promotes access to justice, transparency of data transmitted, and protection of personal data under GDPR, interconnection of judicial registers

via European E-Justice Portal, transnational judicial communication via e-CODEX, and internal security via eu-LISA on the European Union's level. The federal states are responsible for judicial registers, joint digital payment order portal, and a central, cross-state electronic register for protective writs. Meanwhile, the federal laws regulate the content of electronic registers and digital access to the registers. In addition, federal law regulates the responsibility of the Federal Chamber of Notaries for maintaining the central register of wills, the central register of provisions, the electronic archive of deeds, and the responsibility of the Federal Bar Association for secure electronic mailboxes for attorneys. Further development of digital federal-state portal network of the administration gives the opportunity to citizens and companies to submit direct applications to the courts via their user account in this portal.

In Kyrgyzstan, digital platforms in justice system are at an early stage of development. Nevertheless, they provided access to justice during the Covid-19 pandemic, transparency of case management and workflow, and access to information. Moreover, they had an impact on the independence of judges from chairpersons of the courts during the allocation of cases. Further successful development of digital justice platforms requires amendments to national legislation.

In Germany and Kyrgyzstan, Covid-19 caused a rapid transition to remote hearings via videoconferencing. However, both Germany and Kyrgyzstan faced the situation when the mostly used videoconferencing platforms are the responsibility of third countries. In Germany and Europe these are U.S. companies, and in Kyrgyzstan it is a Russian company. Therefore, alternative uses are preferred, such as on-premises solutions.

The EU regulation of digital justice platforms could be a good example for supranational legal framework of the EAEU Digital Justice Platform.

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## REFERENCES

- Beck-online. (2022). *Die Datenbank*. <https://beck-online.beck.de/Home>
- Civil Initiative on Internet Policy. (2021). *Analysis of legislation of the Kyrgyz Republic for availability of norms regulating the use of audio-videorecording of trials (Analiz zakonodatel'stva Kyrgyzskoj Respubliki na predmet nalichiya norm, reguliruyushchih ispol'zovanie audio, video fiksacii (AVF) sudebnyh zasedanij)*. [https://internetpolicy.kg/wp-content/uploads/2021/10/Анализ-законодательства-АВФ\\_ГИИП.pdf](https://internetpolicy.kg/wp-content/uploads/2021/10/Анализ-законодательства-АВФ_ГИИП.pdf)
- Commonwealth of Independent States. (2002). *Convention on legal aid and legal relations*. <https://cis-legislation.com/document.fwx?rgn=26119>
- E-CODEX. (2010). *e-Justice communication via online data exchange*. <https://www.e-codex.eu/>
- Eurasian Economic Union. (2022a). *Legal portal*. <https://docs.eaeunion.org/ru-ru>
- Eurasian Economic Union. (2022b). *Portal for general information resources and open data*. <https://opendata.eaeunion.org/ru-ru>
- European Commission. (2018). *Proposal for a regulation of the European Parliament and of the Council on a computerised system for communication in cross-border civil and criminal proceedings (e-CODEX system), and amending Regulation (EU) 2018/1726*. <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020PC0712&from=DE>
- European Union. (2006). *Regulation (EC) No 1896/2006 of the European Parliament and of the Council of 12 December 2006 creating a European order for payment procedure*. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32006R1896>
- European Union. (2011). *European agency for the operational management of large-scale IT systems in the area of freedom, security and justice (eu-LISA)*. [https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/european-agency-operational-management-large-scale-it-systems-area-freedom-security-and-justice-eu\\_en](https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/european-agency-operational-management-large-scale-it-systems-area-freedom-security-and-justice-eu_en)
- European Union. (2010). *European e-Justice portal*. <https://e-justice.europa.eu/home?init=true&action=home&plang=en>
- European Union. (2016). *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)*. <https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=CELEX%3A32016R0679>
- Germany. (1950). *Code of Civil Procedure (Zivilprozessordnung) in the version of 5.10.2021*.
- Germany. (1959). *The Federal Lawyers' Act (Bundesrechtsanwaltsordnung-BRAO) in the version of 5.10.2021*.

- Germany. (2003). *The Central Precautionary Register (Das Zentrale Vorsorgeregister)*. <https://www.vorsorgeregister.de/>
- Germany. (2005). *Federal/State Justice Portal (Justizportal des Bundes und der Länder)*. <https://justiz.de/>
- Germany. (2012). *The Central Register of Wills (Das Zentrale Testamentsregister)*. <https://www.testamentsregister.de/>
- Germany. (2013). *Act on the Enhancement of Electronic Legal Relations with the Courts (Gesetz zur Förderung des elektronischen Rechtsverkehrs mit den Gerichten)*, BGBl I 2013, 3786.
- Germany. (2016). *Register for protective writs (Schutzschriftenregister)*. <https://schutzschriftenregister.hessen.de/>
- Germany. (2020). *Dunning portal (Das gemeinsame Mahnportal der Bundesländer)*. <https://www.mahngerichte.de/>
- Germany. (2021). *Register Modernization Act (Registermodernisierungsgesetz)*.
- Germany. (2022). *Electronic archive of documents (Elektronisches Urkundenarchiv)*. <https://www.elektronisches-urkundenarchiv.de/>
- Judicial Department of the Supreme Court of the Kyrgyz Republic. (2022). *Information table of the portal "Remote court hearings" (Informacionnaya tablitsa Portala «Distantsionnyh sudebnyh zasedaniy»)*. <http://suddep.sot.kg/page/avf>
- Juris. (2022). <https://www.juris.de/jportal/nav/index.jsp>
- Klievink, B., Bharosa, N., & Tan, Y.-H. (2016). The collaborative realization of public values and business goals: Governance and infrastructure of public-private information platforms. *Government Information Quarterly*, 33, 67-79
- Kyrgyz Republic. (2006). *Law "On access to information held by state bodies and local self-government bodies of the Kyrgyz Republic" (Zakon Kyrgyzskoj Respubliki "O dostupe k informacii, nahodyashchejsya v vedenii gosudarstvennyh organov i organov mestnogo samoupravleniya Kyrgyzskoj Respubliki" ot 28 dekabrya 2006 goda № 213)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/202010>
- Kyrgyz Republic. (2008). *Law "On Personal Information" (Zakon Kyrgyzskoj Respubliki "Ob informacii personal'nogo haraktera" ot 14 aprelya 2008 goda № 58)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/202269>
- Kyrgyz Republic. (2017a). *Administrative Procedural Code of the Kyrgyz Republic (Administrativno-Processual'nyj Kodeks Kyrgyzskoj Respubliki ot 25 yanvarya 2017 goda № 13)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/111520?cl=ru-ru>
- Kyrgyz Republic. (2017b). *Civil Procedural Code of the Kyrgyz Republic (Grazhdanskij Processual'nyj Kodeks Kyrgyzskoj Respubliki ot 25 yanvarya 2017 goda № 14)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/111521?cl=ru-ru>

- Kyrgyz Republic. (2021). *Criminal Procedural Code of the Kyrgyz Republic (Ugolovno-Processual'nyj Kodeks Kyrgyzskoj Respubliki ot 28 oktyabrya 2021 goda № 129)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/112308?cl=ru-ru>
- Kyrgyz Republic. (2022). *Action plan for digitalization of management and development of digital infrastructure in the Kyrgyz Republic for 2022–2023 approved by the order of the Cabinet of Ministers of the Kyrgyz Republic dated January 12, 2022 № 2-r (Plan meropriyatij po cifrovizacii upravleniya i razvitiya cifrovoj infrastruktury v Kyrgyzskoj Respublike na 2022–2023 gody, utverzhdenyj Rasporyazheniem Kabineta Ministrov Kyrgyzskoj Respubliki ot 12 yanvarya 2022 goda № 2-r)*. <http://cbd.minjust.gov.kg/act/view/ru-ru/218797?cl=ru-ru>
- Lupo, G. (2016). *Evaluating e-justice: The design of an assessment framework for e-justice systems* (pp. 53–94). University of Ottawa Press.
- Lupo, G., & Bailey, J. (2014). Designing and implementing e-justice systems: Some lessons learned from EU and Canadian examples. *Laws*, 3(2), 353–387. <https://doi.org/10.3390/laws302035>
- Presentation of Mr. Christoph Kopecky. (2021, October 29–30). Expert for court management and e-justice. *EU rule of law programme in the Kyrgyz Republic – 2nd phase*. Implementation of the AIS «Sud» in local courts of the Kyrgyz Republic: Experience of the EU rule of law programme in the Kyrgyz Republic – 2nd phase, International legal expert workshop “Strengthening the rule of law through e-justice”, Bishkek.
- Rosa, J, Teixeira, C., & Pinto, J. S. (2013). Risk factors in e-justice information systems. *Government Information Quarterly*, 30(3), 241–256. <http://www.sciencedirect.com/science/article/pii/S0740624X13000385>
- Sabyrova, Zh., & Kudaberdieva, A. (2019). *Automated information system (AIS) Sud (Avtomatizirovannaya informacionnaya sistema (AIS) Sud. Metodicheskoe posobie dlya trenerov)* [manual for trainers].
- Spagnoletti, P., Resca, A., & Lee, G. (2015). A design theory for digital platforms supporting online communities: A multiple case study. *Journal of Information Technology*, 30(4), 364–380.
- Supreme Court of the Kyrgyz Republic. (2020). *Reference on ICT in the judicial system of the Kyrgyz Republic*.
- Supreme Court of the Kyrgyz Republic. (2021). *Regulation “On automated information system ‘Sud’” (Polozhenie ob Avtomatizirovannoj informacionnoj sisteme ‘Sud’)*. <http://sot.kg/post/polozhenie-ob-avtomatizirovannoj-informatsionnoj-sisteme-sud>
- Supreme Court of the Kyrgyz Republic. (2022). <http://act.sot.kg/ru>
- Supreme Eurasian Economic Council. (2017). *The decision on main directions for implementation of EAEU digital agenda until 2025*. <https://digital.eaeu.org/upload/medialibrary/9ed/%D1%80%D0%B5%D1%88+12+%D0%BA%D0%BE%D0%BF.pdf>

Velicogna, M. (2011). Electronic access to justice: From theory to practice and back. *Droit et cultures* [En ligne]. <http://journals.openedition.org/droitcultures/2447>

# Solutions to the Threats of Digital Monopolies





# Features of Sectoral Regulation in the Economy of Platforms

*Natalia G. Doronina, Natalia G. Semilyutina,  
and Madina A. Tsirina*

## INTRODUCTION

Computer technologies and vast databases (digital platforms) currently make knowledge available in various fields of activity. The information obtained by digital companies often turns out to be the beginning of a new direction in research activities and science in general, because information technologies have the property of integrating the knowledge obtained on specific issues into a unified system of natural and human sciences, which makes it possible to reveal the general regularity of occurring phenomena. This feature of the modern stage of science development must be taken into account in the legal regulation of economic activity based on the use of digital technology to protect human rights.

Currently, thanks to information technologies, the most notable successes have been achieved by natural sciences, among them physics,

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chemistry, and biology. Genetics is a field of knowledge that affects many aspects of human life, from the replication of cells in human bodies to the solution of complex social problems. Genetic engineering (i.e., the creation of genetically modified organisms) acquires the features of an independent branch of the economy,<sup>1</sup> which affects the social development of society as a whole. Taking into account the use of gene therapy technologies, the need to reform the system of medical services becomes obvious. Scientific activity in medicine requires a special approach to the problem of protecting human rights: not only the researcher themselves, but also the interests of other participants in legal relations (doctor, patient), as well as ensuring the safety of the entire society. This high role of science in the economic and social development of society is related to the advantage of market dominance provided by the exclusive right to information.

In international trade, the struggle for technological superiority becomes a struggle for competitive superiority in the global market. The WTO agreements contain a mechanism of “international legislation” on competition. It includes binding rules (international obligations of states), a dispute resolution body, and a mechanism for the enforcement of international obligations of states.<sup>2</sup> The mechanism laid down in the WTO agreements provided the regulation of new international economic markets. In addition to commodity markets, it provides legal regulation of the market of services (GATS) and intellectual property

<sup>1</sup> Advances in genetic engineering are increasing competition in agricultural markets. “In December 2020, SSC “Smena” registered a new domestic cross “Smena-9”, which was included in the register of breeding achievements of Russia. It is competitive with foreign meat crosses—“Cobb-500” (USA) and “Ross 308”—by its productive indicators (Great Britain)”.

<sup>2</sup> An example of the operation of this mechanism is the fact that, according to Natalia Efimova, “the European Union demanded from Russia €290 billion through an appeal to the World Trade Organization for import substitution. It turns out that Russia has put import producers in less favorable economic conditions by introducing discriminatory evaluation of applications for state procurement and deprived foreign suppliers of free competition in the Russian market. So they sue us in their court, as we know, the fairest court in the world, and ask us to compensate them for their losses. Import substitution policy is also seen in the US as an element of unfair competition. The Office of the US Trade Representative will continue to work with like-minded partners and use WTO tools to hold Russia accountable for its behavior in the multilateral trading system”. URL: [https://zen.yandex.ru/media/nataliaefimova\\_2905/po-povodu-trebovanii-zapada-zaplatit-za-nashe-importozamescenie-61c82a25823863352bd2805c](https://zen.yandex.ru/media/nataliaefimova_2905/po-povodu-trebovanii-zapada-zaplatit-za-nashe-importozamescenie-61c82a25823863352bd2805c).

rights (TRIPS). Thanks to the mechanism of regulation of international economic markets, the principles of regulation of information platforms equally extend their effect both to the field of information technology and to the relevant sectors of the economy where information technology is used—for example, to financial markets, markets for products produced with the help of genetic engineering, and other achievements of scientific research.

## METHODOLOGY

The peculiarity of the regulation of information platforms is that such regulation is in at least three dimensions, which can be conventionally labeled as:

- “information and digital dimension”, associated with the regulation of the use of information technologies (including digital) proper;
- “economic dimension”, related to the regulation of the use of information technologies in the relevant sector of the economy—special sectoral management; and
- “general macro-economic dimension”, associated with the comprehensive regulation of the state economy as a whole.

In essence, the regulation of information platforms is tied to “end-to-end” (i.e., economy-wide) regulation. An example of this type of regulation could be, for example, legislation on the protection of competition (antitrust regulation). As an example of “end-to-end action”, attention should be paid to the fact that information and digital regulation is associated with the development of special acts aimed at regulating information systems. This is in addition to the regulation in a particular sector of economic relations associated with the exchange of digitally “encoded” information. It is noteworthy that the first steps in the part concerning the generalization and systematization of the regulation of information exchange in the digital mode were taken already in the framework of UNCITRAL (Sakovich et al., 2019). As an organization specializing in dealing with the problem of the unification of civil law regulation of international turnover, comparative and conflict of laws methodology has been applied in UNCITRAL documents. As for solving

the problems of trade turnover management, including with the participation of information platforms, special importance is attached to the methodology and instruments of international law contained in the agreements of the World Trade Organization (WTO), established in 1995 (Vasiliev et al., 2001).

## RESULTS

In Russia, one of the main acts regulating digital information exchange is the Federal Law No. 149-FZ dated July 27, 2006 “On Information, Information Technology and Information Protection” (hereinafter—Federal Law “On Information”). Article 2 of the Federal Law “On Information” contains definitions of key “cross-cutting” concepts applicable to information exchange, such as:

- information, understood as information (messages, data) regardless of the form of its presentation;
- information technologies, understood as processes and methods of searching, collecting, storing, processing, distributing, and implementing such processes and methods; and
- information system, understood as a set of information contained in databases and information technology and technical means ensuring its processing.

These categories are basic and should be taken into account as a general norm (*lex generalis*) in relation to the special norms (*lex specialis*) regulating the process of exchange of information in certain sectors of the economy (Glushkov, 1986).<sup>3</sup>

In contrast to the cross-cutting regulation, the regulation of a special sector of the economy specifically related to the cross-border exchange of information is becoming increasingly important. In this special sector of the economy, the platform is presented as a special business model.

<sup>3</sup> This approach was formulated by Victor Glushkov, the founder of both Russian and global cybernetics, who defined information as “a measure of heterogeneity of matter and energy distribution in space and time, a measure of changes that accompany all processes occurring in the world. It is not necessary to link information with the notion of meaningfulness... Not only letters in a book or human speech, but also sunlight, masonry of a mountain range, noise of a waterfall, rustling of leaves, etc., carry information”.

Being at the same time a form of organization of this business, the platform becomes a subject of scientific research as a new category as well as the “most important economic and social phenomenon of our time” (Parker et al., 2017). This business has been put at the service of individual companies, classified as MNCs or cross-border corporations (Apple, Google, Amazon, Microsoft, Uber, Airbnb, Alibaba, etc.). Using technologies of unifying people and resources in an interactive ecosystem, these companies have managed to monopolize cross-border markets for goods and services. “The dominant market position of digital giants from Silicon Valley is hardly a secret for anyone—there are quite few devices or programs in the world created and working without their participation. This state of affairs, as in the case of any monopolies, causes a lot of problems: competition ceases to be fair, and a breakdown at one giant leads to global failures” (Sakovich, 2019; Timofeev, 2020).

It should be noted that the formation of the legal regulation of information support in the sectors of the economy is not spontaneous at all. The development of information technology in different areas of economic and social development rather followed the need to solve problems in the relevant industry. The solution of technical problems (development of necessary equipment (hard)) and corresponding software (so-called soft) followed the setting of tasks about the development of the corresponding sector of economy. Initially, allocation of the relevant sector of the economy corresponded to the directions of integration interaction—the formation of a triad of freedoms, and the movement of goods and services, labor and capital (Sakovich et al., 2019: 129–194).<sup>4</sup> As the accumulated regulatory experience has shown, the most innovative market has become the capital market, which represents the financial sector of the economy. Historically, it was the financial sector that began to make maximum use of technological advances, including telephone and telegraphic communications to transmit information containing details about securities traded on the market or customer instructions.

Currently, the legal regulation in the financial market is also developing very dynamically. This is reflected in the Russian legislation as well. Thus,

<sup>4</sup> To regulate the problems of movement of goods and services, the problem of consumer protection in the market is of particular importance. For features of regulation in relation to the sector of movement of goods and services in detail, see Sakovich et al. (2019: 129–194, 272), and in relation to the capital market, see Sakovich et al. (2019: 195–241).

the latest changes in the Russian Civil Code concerned the regulation of relations in terms of credit transactions: in particular, this includes the changes made to Chapter 42 of the Civil Code of the Russian Federation (Civil Code of the Russian Federation) “Loan and Credit” in accordance with the Federal Law that came into force on June 1, 2018, Federal Law of 26.07.2017 № 212-FZ “On amendments to parts one and two of the Civil Code of the Russian Federation and certain legislative acts of the Russian Federation” (hereinafter—Law No. 212-FZ). Along with this law, the legislation was updated due to the use of new information technologies, including for transactions on financial markets. Among the acts of this direction, in particular it is important to mention:

- Federal Law dated August 2, 2019 N 259-FZ “On attracting investments using investment platforms and on amendments to certain legislative acts of the Russian Federation” (hereinafter—Federal Law “On Investment Platforms”);
- Federal Law of July 20, 2020 N 211-FZ “On the execution of financial transactions with the use of a financial platform”;
- Federal Law of July 20, 2020 N 212-FZ “On Amendments to Certain Legislative Acts of the Russian Federation on the issues of making financial transactions using a financial platform”; and
- Federal Law of July 31, 2020 N 259-FZ “On Digital Financial Assets, Digital Currency and on Amendments to Certain Legislative Acts of the Russian Federation”.

In addition to the use of information technology to facilitate the movement of goods and services, labor, and capital, the use of information technology has contributed to the development of new areas of information interaction, such as the field of information dissemination in addition to mass media in the traditional sense—social networks and networks that provide information interaction between public authorities and citizens.

Among the general principles of regulating the exchange of information (which should be extended to all forms of information exchange in any sector of the economy), the principle of personal data protection should in particular be included. This principle is undoubtedly part of the general system of human rights protection—the right to privacy, including consumer preferences and restrictions on the “advertising activity” of advertisers.

## DISCUSSION

A new way of applying information technologies in modern conditions is using it to organize the process of scientific activity. This is essentially about the formation of an information environment that ensures the dissemination, accounting, and provision of information about ongoing research and its results. Such an information environment makes it possible to maintain contacts between scientists and scientific institutions. At the same time, one of the consequences of the formation, development, and expansion of such an environment is the increase of competition both between individual scientists-researchers, research centers, and states supervising the corresponding centers.

In this regard, it is impossible not to pay attention to the relative inaccuracy of the understanding of the category of “platform” (information platform) in the economic literature, according to which “a platform is an enterprise that provides a mutually beneficial interaction between the parties producers and consumers. It provides an open infrastructure for participants and establishes the rules for participation. The main purpose of a platform is to create connections between users and facilitate the exchange of goods or social currency, thereby facilitating the creation of value by all participants” (Parker et al., 2017: 21).

An inaccurate definition of the category of “information platform” consists in defining the task of a platform as bringing together suppliers and consumers. The tasks of information platforms are much broader, including ensuring interaction between, for example, authorities and citizens.

The assumption that the number of participants contributes to the value of the object seems inaccurate. In fact, it is a matter of wishful thinking or the justification of an artificially inflated value of the property that constitutes, for example, the database of the platform. Often, such “property” or value is formed in violation of at least legislation on the use of personal data, which is the most obvious fact. Less obvious, but damaging to society as a whole or to the state, are actions taken by IT companies in violation of monopoly market regulation laws.

The interpretation of the concepts used in the literature shows that the main violation in the use of information platforms in a particular sector of the economy should be considered a violation of the conditions of fair

competition in the market prescribed by antitrust legislation (Doronina, 2020: 98). Leaving the field of economic relations to economists, this paper will now touch upon the legal foundations of the proposed definition of an information platform. In order to find a legal solution to the problem of legal regulation of digital companies in the global markets for goods and services, it is necessary to understand what is meant by “enterprise”.

The definition of the platform, through the category of “enterprise”, means the development of the general trend of the “desubjectivization” of legal relations occurring in the conditions of digitalization of the economy (Doronina & Semilyutina, 2022). An analysis of the literature on the deconstruction of legal personality and the search for a place in law for artificial intelligence showed that the definition of the subject of law requires knowledge regarding the legal basis, not the information, platform (Stepanov, 2021).

Within the boundaries of the legal language, a working or information platform can be regarded as a kind of association of persons and resources that corresponds to either a contractual structure or to the structure of a legal entity (following the example of the constructions of the corresponding types of investment funds).

The main mechanism of legal regulation of these constructions is the antimonopoly legislation, which has a universalism in its application, due to its effect in relation equally to both foreign and domestic violators of the conditions of good faith behavior in the market. This is also recognized by the media. “It is obvious that normal competition in the Internet industry is impossible without the introduction of adequate norms for search services and digital platforms that are not directly related to the conclusion of transactions between buyers and sellers, but are the main source of traffic for most online companies and thereby affect competition in the relevant markets”.<sup>5</sup> Therefore, when improving Russian antimonopoly legislation, it is necessary to define the Internet search market, its boundaries, and criteria for determining the dominant market position of its participant in its so-called “fifth package”.

<sup>5</sup> <https://www.vedomosti.ru/opinion/articles/2020/11/13/846793-it-industriya>.



## CONCLUSIONS

The use of computer technologies opens up access to new technologies and methods of working with information and, accordingly, of scientific research, processing of results, and data obtained as a result of research. In this case, it is appropriate to talk about digital technologies as an element of a wide range of tools used in ongoing scientific research. For example, when using software for statistical data analysis, or when using software to work with optical equipment when studying the structure of the human genome or something similar, the choice of equipment and the software in each case is determined by the researcher themselves. The choice of the legal form of organization of a particular activity depends on the objectives of the research being conducted and the methodology of the research activity chosen for the situation. In this case, digital technologies are equally used for research in both humanities and natural sciences. The differences are in the functionality of the equipment and software used, but what is common to all cases is that information technology is part of the scientific tools of a particular study (Glushkov, 1986: 27).<sup>6</sup>

## REFERENCES

- Doronina, N. G. (Ed.). (2020). *Methodology of legal regulation of science and scientific research: International and national approaches* [Monograph]. Institute of Legislation and Comparative Law under the Government of the Russian Federation.
- Doronina, N. G., & Semilyutina, N. G. (2022). *Desubjectivization of legal relations in digital economy*. Infotropic Media.
- Glushkov, V. M. (1986). *Cybernetics: Theory and practice*. Nauka. (In Russian).
- Parker, G., van Alstyne, M., & Choudary, S. S. (2017). *How networked markets are changing the economy and how to make them work for you*. W.W. Norton & Company.
- Sakovich, O. M., Solovieva, S. V., & Scherbak, S. S. (2019). *Legal regulation of electronic commerce in foreign countries*. Law Firm Kontrakt.
- Stepanov, S. K. (2021). Deconstruction of legal personality or the place of artificial intelligence in law. *Digital Law Journal*, 2(2), 14–30.

<sup>6</sup> In this case, referring to the creator of computer technology in Russia Victor Glushkov, it is helpful to talk about the use of information technology in the process of “realizing the task of scientific creativity”.

- Timofeev, A. (2020). How dangerous is the power of digital giants. Masters of the world: How to overcome the dominance of Apple, Facebook and Google. *Gazeta*. (In Russian).
- Vasiliev, N. M., Vasyanin, Y. A., Davylov, Y. O., & Davalov, O. O. (Eds.). (2001). *World Trade Organization: Documents and comments*. ANO Publishing House NP.



# Difficult Choice of a Rational Approach to Regulating the Activities of Digital Platforms

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and Sergey O. Korogod*

## INTRODUCTION

Digital platforms have become the cornerstone of the modern global computer network. Most active internet users are their customers; they control a considerable part of contemporary daily internet services, they have become gatekeepers, and they own basic or unique resources that the majority cannot avoid using.

However, up until recently, the online markets and global market players were not regulated in terms of protection of competition. This led the global markets to come under control of a few US corporations that now set rules for both commercial sellers and their customers (OECD, 2020).

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The reasons, outcomes, and possible ways to regulate the digital platforms to restore some competition on the market and introduce better protection of rivals and consumers are the subject of this research.

## METHODOLOGY

The methodology is based on confronting two approaches: the commercial approach of a large corporation that seeks to monopolize and manipulate the market (Meehan, 2015) in order to increase its profits; and the legal approach of securing competition on the market through mandatory legislation and enforcement by designated antitrust legal authorities.

A commercial company always seeks to increase its profits, and after passing a certain threshold in terms of size or market share, it will try not only to compete, but also to change market conditions to make them more favorable. In order to do so, it must either collude with competitors, or gain dominance through buying them out or driving them off the market. When one of the competitors becomes dominant, other competitors are likely to stop (or at least diminish to a large degree) their competitive activities and start to follow (i.e., to align their market strategies with what the dominating company is doing on the market). Therefore, the competition on any dominated market will always be distorted. The degree of distortion depends largely on market power of smaller competitors: the bigger their market power is, the less this distortion will be. This is the basics of economics of competition law, and online business is still a business, so it will follow the same patterns.

However, there are many features inherent to online markets and market players only: for example, constant and rapid changes forcing even recognized market leaders to frantically innovate, or huge role of economies of scale and network effects, making userbase sometimes much more important than profits. Therefore, in many instances, a good strategy would be to provide basic services free of charge to attract more users, and then charge those of them who want extended functionality (or a similar bonus).

Traditional competition law is unable to correctly account for that strategy as well as many other particularities of online markets. Therefore, it is crucial to gain a good knowledge of how these markets work and what balance of benefits and additional costs would the current market structure offer to participants and consumers before trying to regulate them.

The aim of the analysis is to understand how this situation arrived at the monopoly of digital platforms, and what can be done to improve the situation from the competition point of view, while not losing economic benefits, which digital platforms are offering to consumers around the globe.

## RESULTS

The online information services—offering a connected world with almost zero costs to deal—seemed to be ideal base to achieve perfect competition market. The basic checklist of the perfect market criteria, and how they benefit from an online world, is as follows:

- **A large number of buyers and sellers:** using online trading platforms, any producer from around the world can offer its goods or services to an infinite number of consumers.
- **Every participant is a price taker:** any consumer can check prices around the world, making it impossible to arbitrarily set prices on common goods.
- **Homogeneous products:** interestingly, the availability of detailed information on product and its properties would likely cause producers to undergo some kind of standardization where they would match specific sets of features to a specific price. Customers would likely choose lower price if they did not understand the difference in properties or do not need additional features. Moreover, standardization is a good thing when selling to large groups of consumers, as new clients better understand what to expect.
- **Rational buyers:** more information means better choices. Some consumer bias would still be there, but with wider choice and full information about the product and the market, the consumer tends to act rationally even where subjective preferences are usually involved.
- **No barriers to entry or exit:** new online trading platforms did just that—ensured a very low-cost access to enormous pools of consumers.
- **No externalities:** one way of minimizing externalities is raising awareness about them through spreading of information. That will make it possible to either minimize them or at least account for them, thus bringing the market closer to perfect competition.

- **Perfect factor mobility:** online platforms ensure exactly that—making it possible to assess and allocate efficiency almost in real time and make an informed choice.
- **Perfect information:** that is exactly what Internet is about—information, reviews, and opinions on any product or service out there (if, of course, this information is true and correct).
- **Profit maximization of sellers:** information exchange makes it possible to assess and quantify costs and revenues, making it easier to create an accurate business plan accounting for possible risk factor and market conditions.
- **Zero transaction costs:** it is impossible to bring transaction costs to zero; however, online trading platforms brought transaction costs down to a small fraction of what they used to be. The costs of logistics also dropped significantly due to increased efficiency and online logistics platforms matching carriers with shippers allowing for more efficient use of cargo capacity.

Under the perfect competition model, the best would be to have a single marketplace. Several marketplaces will only take the situation away from the perfect competition, because either sellers and buyers will be split between several independent platforms, thus narrowing the choice, or they will have to participate in several platforms, thus increasing the costs. Therefore, the lowest costs will be achieved with a single marketplace, thus pushing the market to a monopoly. However, the marketplace would have a purely technical role, being simply a place to meet, not affecting negotiating and making deals. Real-life physical marketplaces would usually do exactly that: they provide place to offer goods, security, and basic infrastructure at a transparent price, but wouldn't interfere in the trading itself. Therefore, it is important to understand why it is so different with digital markets and their gatekeepers.

There are economic factors, making dominance as the optimal strategy for a digital platform (Australian competition and consumer commission, 2019):

- **extreme economies of scale**, i.e., once the infrastructure is up and running, new customers bring new revenue at virtually no new costs;

- **very strong networking effect**, i.e., the more customers the platform already has, the more popular it is, and the more users will choose it just to get access to that audience;
- **benefits from expansion**, i.e., expanding to adjacent or similar market, a digital platform will be able to offer its customers more services and opportunities, and at the same time will get more data and insights that can be integrated, thus offering new opportunities.

Subsequently, there are non-economic factors coming into play. Trust is a crucial factor for the success of a digital platform; therefore, to win trust of their customers, the platforms have to assume a more active role in ruling the market. The crucial areas would be the following:

- **Fraud.** Online fraud is simple and lucrative, so all digital platforms are plagued with fraud. If left unattended, fraud will quickly scare all the customers away.
- **Imbalance of information.** Sellers always have more information about their goods and the market than buyers do, so they can manipulate customers and their choices (Thaler et al., 2010). To compensate that, there is a need for independent sources of information, or at least some kind of feedback.
- **Need for moderation.** The aforementioned and many other reasons lead to the absolute necessity of a moderation system that would protect both buyers and sellers.

Therefore, moderation is an indispensable service (Talking Tech, 2020). However, the digital platform has to make binding rules specifying desired and undesired behavior, and enforce them, thus assuming administrative power over both sellers and buyers on the market. These rules must be determined, including whether they will include the legal requirements or not, and if so, of what jurisdiction.

All major digital platforms are US corporations operating globally. They have to obey the US legislation, but their rise occurred at the period when the concept “The less regulation is better for the market” again reigned in the USA thanks to the Chicago school works and similar doctrines (Kovacic, 2018). New rising stars of the digital economy were protected by extremely favorable legislation, like the US Sect. 230 (Communications decency act), relieving content hosting entity of any

responsibility for user content, and the courts that set very high standards of proof for antitrust enforcement, thus effectively cutting it out. US digital platforms tended to ignore the legal requirements of other countries, always demanding that US jurisdiction, legislation, and court to be used. Other jurisdictions were much less powerful to oppose major US corporations, and were reluctant to act as well (Stigler Committee on Digital Platforms, 2019).

Therefore, for more than a decade, online corporations were writing rules to their liking with no one to control them. Firstly, software corporations invented their “user license”, where they refused any liability for their software whatsoever and completely shifted all responsibilities and risks to users. Then, Google took it a step further by allowing itself to collect and process any user data it was getting its hands onto. After this, blog platforms and social networks made another step, proclaiming all user-generated content their property and making profits off it, while all responsibility for this content was still borne by users. Then, Uber and other platforms used the pretext that they “are simply an informational service” to circumvent legal requirements in more traditional industries like taxi services or accommodation. Finally, the whole “startup culture” started to look like a system, designed to supply new concepts and products to monopolies for buy-out instead of going to market to compete with them and thus eliminating even remote possibilities of future competition.

Unlike the US, European Union tried to limit the new monopolies. However, the EU competition control system turned out to be very slow, and therefore completely useless for dynamic digital markets. The three investigations against Google (Google shopping preferences, Android, and Ad services) opened in 2010–2011 took 7 years to complete, the fines were set only in 2017–2018, and the court procedures are still under way. The Intel investigation was opened in 2006, the fine was imposed in 2009, the General court upheld the decision in 2014, this court decision was struck down by the ECJ in 2017 and sent back for reconsideration, and now in 2022 the fine was annulled due to errors in Commission’s economic assessment. As another example, the Commission investigated the CRT monitors tubes cartel that apparently functioned in 2000–2003, but the fines were set around 2015; by that time the CRT monitors have long become extinct, completely replaced by LCD monitors. For fast-evolving digital markets, a justice served long after the market itself ceases



to exist would have no deterrent effect, and would be perceived just as some kind of levy at best.

The situation started to change in the mid-2010s. By 2018–2021, many countries such as Germany, France, Japan, Britain, USA, Portugal, Mexico, and Canada (Lancieri & Sakowski, 2020), international organizations including BRICS, other stakeholders like the Stigler institute, and many other private institutions published research and analytical papers on the topic of digital platforms dominance and illegal benefits from such dominance (Lancieri & Sakowski, 2021), as well as prospects for regulations and specific measures that can be applied. Among the typical violations, they site (Crémer et al., 2019):

- self-preferencing practices where one business division promotes another to its users;
- bundling, tying practices and predatory practices, including “killer acquisitions”; and
- data-related practices.

In addition to scientific research, several major competition cases were opened and investigated in the USA, the European Union, and other jurisdictions. In the EU, the 13-year-long cases against Google nevertheless led to fines amounting to EUR 8 bln (Antitrust, 2017), and new cases against Google, Apple, and others were open.

Multiple antitrust probes and lawsuits are currently underway in the USA. The biggest action was brought by Department of Justice and 10 states regarding a strategic alliance between Google and Facebook in the area of programmatic ad buying (automated dynamic auctions, conducted during the page loading process). According to it, Facebook canceled the development of its own ad-serving system and instead joined the Google alliance, allegedly on far more preferential terms than other participants. Preferences from Google included extended timings, direct settlements with target sites, and additional feedback that was not available to other participants, effectively giving Facebook a considerable advantage within Google’s system.

In December 2020, the FTC filed a suit against Facebook to require the divestiture of Instagram and WhatsApp. Another lawsuit was again brought by the DoJ concerning the Google-Apple deal to set Google as default search engine on iPhones. According to internal documents,

Google attached great value to this deal, saying that loosing Apple would be a huge loss. According to the lawsuit, Apple could be getting between \$8 bln and \$12 bln under that deal.

The USA, the EU, and other jurisdictions also presented new legislation proposals, aimed at limiting the power of major digital platforms (so-called gatekeepers), ensuring access to their facilities by smaller rivals, and restoring competition on digital markets to a certain extent.

### *European Union*

For two decades, the online services sector in the EU was mainly regulated by the e-Commerce Directive (Directive 2000/31/EC). The directive aimed to create a common space for the provision of online services in the EU by setting a base standard of provision of services while limiting liability for intermediary service providers and prohibiting imposing any general obligation to monitor information such providers transmit or store. The two latter principles are similar to the US Section 230 (Communication Decency act), providing immunity for websites and platforms regarding third party content they host. These priorities were aimed at ensuring the fast and unrestricted growth of the online sector. However, now that this sector is dominated by digital platforms, the old legislation is no longer fit for purpose.

The new EU digital strategy explains—while admitting tremendous role of digital platforms in boosting efficiency and creating new opportunities for digital business—that the primary need for regulation arises from “trade and exchange of illegal goods, services, and content online” and using online services “by manipulative algorithmic systems to amplify the spread of disinformation, and for other harmful purposes”. The economic problems are mentioned as well: “the accelerating digitalization of society and the economy has created a situation where a few large platforms control important ecosystems in the digital economy. They have emerged as gatekeepers in digital markets, with the power to act as private rule-makers. These rules sometimes result in unfair conditions for businesses using these platforms and less choice for consumers”.

The stated general aims are similar to other initiatives: to protect consumers and their rights, to ensure the accountability of online platforms, and to foster innovation and competitiveness. Other aims include the harmonization of rules and the creation of a level playing field in such areas as control over illegal content, democratic supervision over

systemic platforms, mitigating manipulation and disinformation risks, etc. (Andriychuk, 2022).

The proposal shifts toward an ex-ante regulatory approach and moving from common principles (like art. 101/102) to more directly defined formal rules and obligations with direct effect (Coyle, 2018). It is divided into two legislative acts:

- **Digital Services Act (DSA)** is aimed at online intermediaries and platforms: for example, online marketplaces, social networks, content-sharing platforms, app stores, and online travel and accommodation platforms.
- **Digital Markets Act (DMA)** is aimed at gatekeeper online platforms that play a systemic role in the internal market and serve as hubs between businesses and consumers for important digital services.

These acts are to be made in the form of regulations, therefore introducing uniform mandatory rules throughout the EU territory.

The gatekeeper platform must fulfil certain criteria. It should:

- have a strong economic position and a significant impact on the internal market, and be active in multiple EU countries;
- have a strong intermediation position, meaning that it links a large user base to a large number of businesses; and
- have (or be about to have) an entrenched and durable position in the market, meaning that it is stable over time.

Gatekeepers will be subject to additional obligations that include ensuring access to their services, the ability for business users to review data generated by them with the gatekeeper, the ability to control advertising efficiently independently from the gatekeeper, and the ability to make deals with customers outside the platform. DMA also requires greater transparency in online advertising, including providing more information to ad-placing market players about market and campaign effectiveness.

DMA does not aim to regulate existing monopolies (which is more the US case), but rather to foster competition on the market by helping smaller market players (G'Sell, 2021). Traditionally, the definition for the

term “gatekeepers” is rather vague and can be construed later to reflect changing market situation. The specific list of obligations is also very general and needs to be detailed in future.

Surprisingly, DMA also does not specifically address mergers (except for “obligation to inform” authorities). This is an important area, as the mergers play a great role in helping monopolies to keep their position on the digital market. Both the UK and the USA pay much more attention to merger regulation.

According to some lawyers, the specific criteria and obligations seem to be the generalized versions of criteria/obligations formulated in major EU court cases against tech companies in recent years (Caffarra & Morton, 2021). On the one hand, this is a simple way to codify the regulation scheme that already passed its judicial review. On the other hand, such a generalization would not probably be enough to make the legal framework work. Situations differ and the markets tend to change, so the norm, formulated by the court for a specific case and its specific circumstances, will hardly be suitable for general use.

Besides new rules for gatekeepers and digital platforms in general, the proposal also includes provisions regulating illegal, illicit, and questionable content, its reporting, and its removal. Other proposed rules include the demand to have a local representation office. The proposed scheme may lead to suspicions that state structures or supranational bodies may use DMA/DSA obligations for political censorship purposes and harm freedom of speech and pluralism of opinion in media due to excessive reporting and content removing requirements.

### *United States*

The US regulation proposal concentrates more on mergers and acquisitions. Buying out competitors—sometimes even before they gain any considerable market share—is the best way for dominant market players to strengthen their advantages and get rid of a rising competitor, as well as also to get access to all intellectual property it developed.

Senator Klobuchar’s project calls for a review of the merger test that will be changed from “substantially lessen competition”, with “more than a de minimis amount” criterion to “create an appreciable risk of materially lessening competition”. The wider test will allow competition authorities to capture acquisitions of small competitors by the Big Tech platforms before any substantial competition could have emerged, and also to better

plead in courts which will be no more in position to demand detailed substantiation of inevitable and provable harm to market and competition. For some types of mergers that are likely to cause harm to the market, the burden of proof will be transferred from the authorities to the parties to a merger that will have to prove that the merger does not create an appreciable risk of materially lessening competition or tend to create a monopoly or monopsony. The type of mergers captured will be mergers significantly increasing market concentration, acquisitions of competitors by the dominant market player (with 50%+ market share or possessing significant market power), or mergers with more than \$5 bln of value involved.

Another aim would be to prevent harmful conduct from dominating entities: new provision is introduced into the Clayton act, prohibiting “exclusionary conduct” (materially disadvantaging competitors or limiting their opportunities to compete) presenting “appreciable risk of harming competition”.

A new FTC division will be established to conduct market studies and analyses of markets and mergers. The bill also calls for increasing competition authorities’ budgets and enhancing enforcement through civil fines for antitrust violations.

The competition reform package invoked vivid discussions, and while some argue that it is excessive, others would suggest that more action is needed. The spectrum of opinion is very wide—from free market theories stating that digital markets have successfully got out from monopolization loops several times in the past and will self-regulate again in future, to spilt-up theory adepts, proposing to break digital platforms to several independent entities based on the functional or market approach to restore free competition.

The European Union and the United States are not the only jurisdictions developing new regulation schemes for digital platforms. Similar proposals are made and submitted in many jurisdictions worldwide. For example, in England, following analytical work (HM Treasury, 2019), the CMA (Competition and market authority) is elaborating a mandatory code of conduct for dominating digital platforms and has already created a special Digital Market Unit within its structure that will oversee compliance with this code. The code aims to limit restrictive practices, provide access to information to rivals, and better control anticompetitive mergers.

## DISCUSSION

The need for regulation is long overdue. Global digital platforms have become so rich and powerful that they can easily suppress any possible competition on unregulated markets. The only way they can lose their market power is through their own mistakes; for example, the chip giant Intel, in 2006, left the ARM mobile market and sold the respective division, failing to see its market perspectives. However, such examples are scarce and almost non-existent on software market where a powerful company can easily buy out the competitor with better product, technology or functionality and then use it or just abort developments and sales thus depriving the market of effective tools and solutions. Sometimes it even happens involuntarily when a big company buys a start-up with rising product or technology, but huge monopolist turns out to be hulky to realize the potential and offer the market new interesting product or technology. In both cases the results are the same: the market development is slowing down, customers are not getting the products they need or want and overall harm is done.

So, how the digital markets can be regulated?

The extreme approach of some US free market advocates (as referred to earlier) would be to leave the market without any regulation at all. The central point in the concept is that the free market will regulate itself back to the competition, one way or another, sooner or later. Indeed, the high-tech market has already demonstrated several times that, after arriving at a monopoly, it would then take a sharp twist thanks to new technology, new products or something else, and fierce competition will erupt again. However, this concept is clearly wrong. Firstly, possible future demopolization is just an option, not the inevitable development of events. Secondly, it is not a sufficient remedy for years—or even decades—of a monopoly sucking resources from consumers and rivals and crippling the market. Thirdly, the overall harm to the economy, slowing down of the market, etc. will evidently surpass any possible good from unregulated market environment. .

Then, there is a more traditional approach. The idea is that the market structure should be defined by free competition and reflect the balance between abilities and efficiencies of market participants, and if the domination is on the merits, it should not be fined *ipso facto* (Hovenkamp, 2021). State intervention should be careful and limited with the aim to ensure some level of competition or basic protection for consumers and

smaller competitors, while trying to preserve the free functioning of the market to the fullest degree possible that should ensure the benefits that free unrestrained market usually bring.

Other approaches would envisage a more regulated market where the state creates a framework for the digital platforms to fit in. However, the more regulation an approach provides for, the more questions regarding quality of regulation will emerge (Strowel & Vergot, 2016). Common principles require proper and timely enforcement, and detailed formalized terms will never keep pace to an ever-changing digital market. The detailed regulation would be very difficult to implement, as the digital platforms are global multimarket corporations with a very complex interconnected structure and sophisticated data exchanges (for the most part hidden from general public and even state regulators). It is impossible to make a quick but full-scale economic assessment of their activities, competition landscape, and possible abuse. Even if the abuse seems obvious, it is impossible to economically justify it, as the prices almost never reflect real costs of the specific service. Therefore, it is impossible to fine-tune the market or to calculate the fines reflecting illegal benefits for the digital monopolist or harm to the market and competition within an acceptable timeframe.

The sound response here would be to ensure some basic level of protection for customers and market players who need access to the digital platform's facilities, sacrificing accuracy in order to set clear and easily enforceable formalized rules of the game. This is because it is more important to take quick action than to make an accurate analysis outlining the possible abuse. That is what the EU seems to be trying to do, although to a limited degree.

Another approach, also represented in the US, could be to split up the gatekeeper digital platforms into several independent entities, each having its own separate market. Such a move would likely strip digital platforms of some of their market power. It could also restore some competition by relatively strengthening market position of actual and potential competitors. However, splitting up will also take away economies of scale and networking effects, and will hinder inter- and intra-market data exchanges thus driving up the costs. As a result, the additional costs can easily surpass the alleged monopoly markup that the digital platforms previously enjoyed.

As opposed to the traditional approach of controlled competition, there is also an approach of controlled monopoly. The concept would be

to identify the essential facilities within the multimarket digital corporations and to make some kind of “natural monopoly” out of them: that is, to create an independent entity or division, responsible for, for example, accumulating and processing market data from all market players and then providing all of them with access to these data and insights.

The main advantage would be that the single unified infrastructure, universal access to all market data by that entity, and the availability of data and insights to all market players could drive down the costs and ensure a level playing field for all market participants.

Unfortunately, this approach has many inherent drawbacks too. Let’s take an example. The EU has been trying to liberalize its electricity and gas markets for more than two decades already. The idea was to unbundle the infrastructure element from marketable components and to introduce competition where it is feasible, while keeping costly infrastructure as a monopoly offering universal transparent access to its resources. In 2021–2022, the discouraging results of gas market unbundling can be seen in real time. Even the much less speculative electricity market still encounters many unforeseen difficulties. For example, the infrastructure component (that was taken out and reorganized as an infrastructure-operating monopoly) showed no interest in seizing new market opportunities, expanding its own networks, optimizing costs, etc. Without going into unnecessary further details, it should be noted that complex infrastructure systems are affected by various internal and external factors that are difficult to fully account for or forecast. And if they are operated as natural monopolies, they would naturally tend to stabilize their functioning and minimize their efforts, refusing to adapt to any changes in the market and strongly opposing to any attempts to impose any changes. This behavior is very manifest even on ultrastable with guaranteed demand like energy market. Digital markets are very dynamic and have to constantly adapt to the changing situation and customers’ requests. Thus any natural monopoly would quickly become a major deterrent factor, crippling the market and eliminating many opportunities for change and growth.

Given evident natural monopoly flaws like a lack of will to evolve, state intervention is likely to be required to force a monopoly to react to the evolving demands of the market, but administrative and market approach do not co-exist well together, and administrative pressure can distort the market and make it even more ineffective (Amenta et al., 2021).



## CONCLUSIONS

The digital marketplaces that promised to create a more competitive environment than ever turned into powerful monopolies, controlling both sides of the market, and manipulating consumers' choice using the data they extracted from these very consumers. Social networks turned into oppressing, data-stealing factories, using its power to manipulate ad business and to otherwise control their customers' behavior. Google, from the "freedom corporation", as it used to call itself when fighting for a market share with Microsoft, other well-known monopolist, became itself the symbol of grim monopoly, data appropriation, and manipulation. Google has become more a "Corporation of evil" than Microsoft once was.

All "let the market be free and it will regulate itself to the best of competition and fair play" concepts have again been proven wrong. Unless the market participants get beaten with the regulatory stick, they will always strive for eliminating competition, and gain market power only to then use it to increase their profits through manipulating the market. Therefore, the question is not whether to regulate or not, it is what regulation scheme to choose.

However, the digital platforms did bring enormous drops in costs, increased efficiencies, and instant free access to virtually any information. Therefore, despite all the bad things like market control, monopoly markups, and manipulations, from the point of view of an economically wise attitude, they are still more beneficial for markets, rivals, and consumers than traditional old models. Moreover, while accurate quantified assessment is impossible because platforms hide all information regarding their internal activities, it is still safe to assume that braking or even considerably limiting existing digital platforms from collecting, processing, and exchanging data would lead to a considerable rise of costs, leading to additional losses of all market players and consumers instead of benefitting any of them.

As a result, the markets continue to undergo monopolization and suffer from severely distorted competition, but trying to brake the current system could be even worse. This is why the new regulation must be implemented carefully: not only to restore some competition and protect consumers, but also to preserve the current high efficiency level so that the costs stay low and economic benefits for markets and consumers are not lost.

## REFERENCES

- Amenta, C., Boldrin, M., & Stagnaro, C. (2021, January 26). Digital platforms may be monopolistic providers, but they are not infrastructure. *George J. Stigler Center for the study of the economy and the state*. <https://promarket.org/2021/01/26/digital-platforms-monopolistic-infrastructure-free-speech/>
- Andriychuk, O. (2022, January 25). *The digital markets act: A comparative analysis of the commission's, IMCO-parliament's and council's drafts of the DMA*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3976158](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3976158)
- Antitrust. (2017, June 27). *Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service*. [https://ec.europa.eu/commission/presscorner/detail/en/memo\\_17\\_1785](https://ec.europa.eu/commission/presscorner/detail/en/memo_17_1785)
- Australian competition and consumer commission. (2019, June). *Digital platforms inquiry—final report*. <https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>
- Caffarra, C., & Morton, F. S. (2021, January). *How will the digital Markets act regulate big tech?* <https://promarket.org/2021/01/11/digital-markets-act-obligations-big-tech-uk-dmu/>
- Coyle, D. (2018, March). *Practical competition policy implications of digital platforms*. *Bennett institute for public policy* (Working paper No. 01/2018). Cambridge. [https://www.bennettinstitute.cam.ac.uk/media/uploads/files/Practical\\_competition\\_policy\\_tools\\_for\\_digital\\_platforms.pdf](https://www.bennettinstitute.cam.ac.uk/media/uploads/files/Practical_competition_policy_tools_for_digital_platforms.pdf)
- Crémer, J., De Montjoye, Y. A., & Schweitzer, H. (2019, May 20). *Competition policy for the digital era*. European Commission Directorate-General for competition report. <https://op.europa.eu/en/publication-detail/-/publication/21dc175c-7b76-11e9-9f05-01aa75ed71a1>
- G'Sell, F. (2021, January 25). The digital markets act represents a change in Europe's approach to digital gatekeepers. *George J. Stigler Center for the study of the economy and the state*. <https://promarket.org/2021/01/25/europe-digital-markets-act-new-approach-gatekeepers/>
- Hovenkamp, E. (2021, October 28). Tech platforms and the antitrust duty to deal. *George J. Stigler Center for the study of the economy and the state*. <https://promarket.org/2021/10/28/tech-platforms-and-the-antitrust-duty-to-deal/>
- HM Treasury. (2019, March 13). *Unlocking digital competition, Report of the digital competition expert panel*. <https://www.gov.uk/government/publications/unlocking-digital-competition-report-of-the-digital-competition-expert-panel>
- Kovacic, W. (2018, April 9). Two views of exclusion: Why the European Union and the United States diverged on Google. *George J. Stigler Center for the study of the economy and the state*. <https://promarket.org/2018/04/09/two-views-exclusion-european-union-united-states-diverged-google/>

- Lancieri, F., & Sakowski, P. (2020, August 31). Competition in digital markets: What have we learned so far? *George J. Stigler Center for the study of the economy and the state*. <https://promarket.org/2020/08/31/competition-in-digital-markets-what-have-we-learned-so-far/>
- Lancieri, F., & Sakowski, P. (2021, December 10). *Competition in digital markets: A review of expert reports* (pp. 65–170). [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3681322](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681322)
- Meehan, C. (2015, August 25). Digital platforms: Competition and government oversight. *Euractiv*. <https://www.euractiv.com/section/digital/opinion/digital-platforms-competition-and-government-oversight/>
- OECD. (2020). *Competition on digital advertising markets*. <https://www.oecd.org/daf/competition/competition-in-digital-advertising-markets-2020.pdf>
- Stigler Committee on Digital Platforms. (2019, September 16). *Final report*. <https://www.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf>
- Strowel, A., & Vergot, W. (2016). *Digital platforms: To regulate or not to regulate? Message to regulators: Fix the economics first, then focus on the right regulation*. [https://ec.europa.eu/information\\_society/newsroom/image/document/2016-7/uclouvain\\_et\\_universit\\_saint\\_louis\\_14044.pdf](https://ec.europa.eu/information_society/newsroom/image/document/2016-7/uclouvain_et_universit_saint_louis_14044.pdf)
- Talking Tech. (2020, July 21). *Content moderation and online platforms: An impossible problem? Regulators and legislators look to new laws*. <https://talkintech.cliffordchance.com/en/industries/e-commerce/content-moderation-and-online-platforms--an-impossible-problem--.html>
- Thaler, R., Sunstein, C., & Balz, J. (2010, April 2). *Choice architecture*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1583509](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1583509)



# Sector-Specific Regulation: Policy Proposals

*Galina S. Panova and Istvan Lengyel*

## INTRODUCTION

The modern economy is characterized by the rapid development of digital platforms and ecosystems, which gave grounds to call it a platform economy, meaning an economy based on the use of technological innovations in the exchange of information and resources. In the platform economy, intermediaries between suppliers and consumers of goods and services are eliminated; traditional business models of companies are transformed, forcing them to use innovations.

Regulation of the platform economy is a complex set of principles, techniques, and methods of organizing market relations that determine the digital platforms' functioning. In this regard, the policy of sector-specific regulation for the platform economy is only one of the directions

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of policy considered as the strategy and tactics of economic entities, states, and governments at the national and global levels.

The definition of politics is usually interpreted as a specific form of social activity (Philosophical Encyclopedic Dictionary, 1983), which is considered both as practical relations (activity), and as an ideology, program of actions, and a concept. A similar approach in the perception of politics can be found in Western literature (for example, *Webster's Dictionary*).

Industrial policy is usually considered in the economic literature in a broad sense as “ensuring economic growth by the state” (Polterovich & Popov, 2006), as “directing efforts to individual sectors” (Abalkin, 1997), or as “creating unequal operating conditions for enterprises of different sectors” (Kuznetsov & Simachev, 2014). An empirical analysis of traditional and new business models of companies mainly focuses on the study of the characteristics of e-business (Teece, 2010; Timmers, 1998) and opportunities to link and harmonize industrial policy with corporate strategies (Kondratyev, 2015). It is this point of view that the authors consider the main one in the process of analyzing approaches to regulating the activities of platform economy entities, believing that the development and implementation of policy means the consolidation of strategy and tactics in this direction.

## METHODOLOGY

The methodological basis of the study was the methods of scientific abstraction, system and factor analysis, methods of grouping, detailing, synthesis, comparison methods, benchmarking of market practices, and recommendations of international consultants and other theoretical and empirical studies.

The basis for the analysis were reports and other materials of international institutions and national regulators, as well as scientific works by Russian and foreign scientists, and legislative and regulatory acts of the USA, China, the European Union, and the Russian Federation on the formation and development of the platform economy.

## RESULTS

The modern world economy is developing under the influence of scientific and technological progress that determines the formation of a fundamentally new type of economy—the digital economy, the basic element of which is technological platforms and ecosystems. The new scientific and technological paradigm dictates the need for a large-scale transformation of the economy. Platform technologies are becoming the basis of new sectors of the economy and a radical change in traditional industries. The dynamics of the introduction of modern technologies and the formation of digital platforms and ecosystems predetermined the need for the formation of a new regulatory policy.

The risks arising from the development of the digital economy have their own characteristics (cyber risks, technological risks, and risks regarding the security of personal data, etc.), which implies the development of policies in the field of regulating the functioning of digital platforms and ecosystems, and the formation of a secure digital environment at the national and international level.

In recent years, the world has been actively searching for new approaches in this area, and digitizing the relationship between the state, the population, and business. New business models of platform-type companies and ecosystems are being formed. More and more states are entering into competition in the digital technology market, adapting their legislation to new digital realities, and creating a fundamentally new regulation. The coronavirus pandemic has caused great damage to the global economy, forcing market participants to look for new approaches to the sectoral regulation of the platform economy.

Analysis of foreign experience showed that in the countries of origin of global ecosystems (the USA and China), the issue of regulating their activities in national and global markets is a priority for regulators and antimonopoly authorities. According to the Bank of Russia, ecosystems of the USA and China jointly occupy 30% of the global e-commerce market. These countries account for 75% of patents related to block chain technologies, 50% of the Internet of Things market, and 75% of the cloud computing market. In most other countries, such as the European Union, national ecosystems have not been formed, and their markets are dominated by those of the USA and China. Russia can become a third country with large-scale national ecosystems (Bank of Russia, 2021).

The leading countries use similar approaches in their policy of regulating the platform economy. **The USA** uses:

- *antitrust regulation* (the U.S. Federal Trade Commission [FTC] analyzes mergers and acquisitions and issues regulations to big tech companies);
- *protection of competition in the market* (Clayton Antitrust Act, 1914; FTC Act, 1914; Bank Holdings Act of 1956; Sherman Act, 1980);
- *regulation of data processing by big tech companies* (the Supreme Court or states and industry acts, because there is no unified federal law in the field of personal data in the USA); and
- *regulation of ecosystems and big tech companies that provide financial services* (regulatory framework for the activities of financial intermediaries). Big tech companies operate in the USA in partnership with traditional financial institutions. However, GAFAs companies, which dominate the U.S. ecosystem market, do not have traditional financial licenses (banking, insurance, and brokerage). The exception is payment services, for the provision of which platform-type companies receive permits from state regulators. Also, the formation of ecosystems by banks in the USA is difficult due to the ban on investments in non-financial companies.

**The European Union** uses:

- *antitrust regulation* (Regulation 1/2003, Regulation [EC] No 139/2004 and the Treaty establishing the EU, 2007);
- *regulation of big tech companies data processing* (GDPR—General Data Protection Regulation, 2018); and
- *draft laws regulating the activities of digital platforms and marketplaces in the EU, 2020* (the “Digital Services Act” and “Digital Markets Act”, which regulate the issues of consumer protection, stimulation of innovation, protection of competition, support for small and medium-sized businesses, and relations between users and suppliers of goods and services and ecosystems. The draft law “On Digital Markets” defines the criteria for classifying a digital platform as large or systemically important, and sanctions (fines, suspension, or termination of the company’s activities) are established for violation of the requirements of the law.

To improve control and supervision in the EU, it is planned to create a special regulator—the European Council for Digital Services, which will include representatives of the EU member states. The activities of systemically important digital platforms will be supervised by the European Commission, whose arsenal of supervisory response measures includes special powers to conduct investigations and direct administrative sanctions.

The State Council of the **People’s Republic of China** adopted the “Basic Principles for the Development of the Platform Economy” (2019).

In 2020, the People’s Bank of China approved the “Experimental Measures for the Supervision and Regulation of Financial Holdings (FHCs)”, and the State Administration for Market Regulation issued the “Guidelines for Combating Monopoly in the Platform Economy”, as well as introducing a data protection bill (an analogue of the European GDPR).

In 2021, the People’s Bank of China drafted a bill tightening antitrust measures against companies in the non-bank payment market, including new approaches to the identification and regulation of systemically important non-banking payment organizations.

**China** uses:

- *regulation of big tech companies’ data processing;*
- *the Cyber Security Law (2017);*
- *the “Rules for depositing and managing customer reserve funds for non-bank payment organizations”;* and
- *macro prudential policy and regulatory measures in relation to big tech companies.*

In **Russia**, digital markets are at the development stage and demonstrate high growth rates. The peculiarity of Russia in the formation of ecosystems is that large banks are the leaders of this process. Several ecosystems and platforms are being formed simultaneously, the basis of which are not only technological products and services (social networks, search, e-commerce), but also finance and telecommunications.

The state policy in terms of regulation of the platform economy is based on the document “Procedure for compiling a list of technological platforms” (2010), adopted by the RF Government Commission on High Technologies and Innovations.



The development of an innovative economy is carried out using public-private partnership mechanisms in accordance with the National Program “Digital Economy of the Russian Federation”.

At the sectoral level the RF Ministry of Industry and Trade adopted a basic document “*Strategy for the digital transformation of manufacturing industries in order to achieve their ‘digital maturity’ until 2024 and for the period up to 2030*”. The Strategy emphasizes that “the digital transformation of industry is a priority of the domestic economy, ensuring high adaptability in the formation of business models and the operation of production processes through the integration of end-to-end digital technologies”. This document defines the directions of state policy on the digital transformation of industry, the main purpose of which is to achieve the indicator of companies’ “digital maturity”. To analyze a company’s level of digital maturity, a methodology has been developed, which enables assessing the level of their financial and economic activities, their readiness to function using the digital tools of the platform economy, the reduction of costs, and increasing the efficiency of their work.

To implement the state regulation of the digital transformation of industry, the state information system of industry has been created. This is a technological platform that ensures that digital interaction between the state and business provides services for public authorities, companies, and individual entrepreneurs. It unites more than 140 thousand participants of industrial cooperation, 58 thousand suppliers and manufacturers of products, and more than 1 thousand representatives of state authorities. It collects companies’ data across all industries.

The Strategy notes that, in order for manufacturing industries to achieve the level of “digital maturity” by 2024 and subsequently for the period up to 2030, it is planned to implement a number of projects to create ecosystems. Control over the implementation of the adopted decisions is carried out by the RF Government.

The regulation of platform companies’ activities also involves the analysis of the *service sector*. As noted above, the peculiarity of Russia is the leading role played by financial institutions in ecosystems creation. Large banks are actively working in this direction, and technology companies are building financial services into the product line of their ecosystems.

If until now fintech was mainly focused on the development of the sectors of payments, money transfers, direct (P2P) lending, and crowd-funding, then in recent years there has been an increase in activity in the

capital markets, and new fintech solutions are emerging, which are faced by financial intermediaries around the world. In these conditions, banks compete with fintech companies on the one hand, and develop cooperation with them on the other. Large banks open up huge opportunities for fintech companies, providing them with access to global financial markets, while transforming their own business processes, using new approaches and financial tools.

Amid the Covid-19 pandemic, when the artificial intelligence capabilities of banks have allowed customers to use financial services remotely, the share of contactless payments has increased, and fintech solutions have helped to expand and accelerate access to credit, while the understanding of financial services and the availability of services for the consumer has changed dramatically. In these circumstances, the Bank of Russia pays special attention to regulating the use of breakthrough technologies and their implementation in the financial markets of Russia and the EAEU countries. Its objectives in terms of implementing the “*Main Directions for the Development of Financial Technologies*” include: promoting competition in the financial market; increasing the availability, quality, and expansion of the range of financial services; reducing risks and cost; and increasing the level of competitiveness of Russian technologies. The fulfillment of these goals is carried out by financial intermediaries and the Bank of Russia together with state bodies.

The active use of financial technologies has become an important direction in *changing the business model of traditional banks* and the development of the financial market as a whole for the Bank of Russia and market participants. Successful models of hybrid and neobanks are promising, since they offer low tariffs alongside flexible and personalized customer service, which allows them to attract new customers. New business models are also: a provider of infrastructure for fintech companies and/or banks; aggregator banks; and business models of platform-type companies (including fast payment platforms, remote customer identification platforms, marketplace platforms for financial products and services, and new platforms based on distributed ledger technologies and cloud technologies). Most successful Russian banks are creating ecosystems. The largest Russian ecosystem is being built by Sberbank; it unites more than 50 companies and services for corporate clients and individuals, as well as for the state.

The Bank of Russia plans to strengthen regulation of banks that form ecosystems and platforms of non-financial services. In the near future

(3–5 years), the requirements for capital adequacy and disclosure of statements will be increased to them.

However, the Bank of Russia has actually made the transition to electronic interaction with government agencies, financial intermediaries, and their customers, created a regulatory platform for testing technologies and developing ways to regulate them, and increased the safety of using new products and services for consumers.

## DISCUSSIONS

In the absence of a uniform conceptual apparatus of the digital economy, scientists and practitioners argue about the essence of financial instruments, discussing the advantages and disadvantages of new business models of platform-type companies and ecosystems. The prevailing opinion is that the last are the most progressive form of the business model. This position is usually supported by the fact that, currently, seven companies from the top eight companies in the world by market capitalization are implementing an ecosystem model. At the same time, the development of ecosystems implies the need to assess the consequences and possible risks, which, in fact, determine the approaches to regulating their activities in the market.

Innovations in the regulatory sphere in relation to these companies, in addition to stimulating their stable optimal development, also involves limiting risks and possible negative consequences from their implementation in the conditions of regulatory arbitrage and blurring the concept of market boundaries. However, it is necessary to develop new national and international norms and rules for platform companies. It is important to define competitive rules for national ecosystems so that they are not disadvantaged compared to global companies in the national market.

Currently, there are no international principles for the regulation of ecosystems. Regulators only develop policy and determine their attitude to this topic. Therefore, in order to avoid negative arbitration, it is important to take into account the experience and practices implemented by different jurisdictions.

At the national level, each sector of the economy operates in the conditions of a specific set of risks that heterogeneously affect the digital transformation of sectors and the economy as a whole. The existing regulatory legal acts do not fully ensure the application of a systematic integrated approach to the analysis, assessment, and regulation of

the activities of digital economy entities. The basis of modern industrial policy in most countries is a sectoral approach to the process of regulating markets, which does not take into account the risks of adjacent markets. However, modern practice shows that companies using digital technologies often go to the limits of their market or sector of the economy, seeking to obtain additional bonuses through synergy, regulatory arbitrage, etc. The activities of a platform-type company or ecosystem lead to a blurring of the concepts of “industry” or “sector” of the economy, complicating the identification of markets by field of activity or geographical characteristics. The merger of companies takes place according to the technological principle, not according to the sectoral or territorial principle. In these conditions, the role and importance of regulating their activities is significantly increasing.

The task of finding a balance in regulation between freedom of entrepreneurship on the one hand, and restrictions on the other, is solved by regulators in every country. States have accumulated experience in protecting competition and consumer rights in the traditional economy, which can be applied in the digital economy. Still, the specifics of ecosystems impose new requirements for regulation. Traditional tools are not always effective in new realities. New challenges arise for regulators when, on the one hand, it is important to develop the leadership of national companies and platforms, and on the other hand, there is the need to carefully weigh and assess the level of potential risks that a new business model can carry for competition in the market and the economy as a whole. Regulators around the world are actively discussing these issues, developing appropriate proposals for changing existing rules and regulations.

## CONCLUSIONS

Policy transformation to improve the competitiveness of platform-type companies and ecosystems is possible: firstly, on the basis of its focus on the application of multisectoral approaches while maintaining selectivity in determining priorities; secondly, regulatory decisions should be primarily preventive in nature, providing companies with predictability of development; thirdly, improving the quality of the institutional environment is an important policy area.

The fundamental issues of the formation and implementation of the policy of regulation of the platform economy suggest the following.

*I. Russia.* In order to achieve the goals of an optimal policy of regulation for the platform economy and to minimize risks, it seems necessary to implement a set of measures:

- selection of technological standards for creating platform-type companies and ecosystems;
- development and enhancement of the competitiveness of national platforms and ecosystems in relation to international ones;
- updating antimonopoly measures and maintaining fair competition in the market, taking into account the peculiarities of the digital economy;
- promoting an open ecosystem model, protecting suppliers of goods and services;
- ensuring information security and rotating fraud in ecosystem activities;
- regulating data management, including data protection;
- state regulation of the use of monetary surrogates or internal accounting units of the ecosystem;
- regulation of ecosystem participants' activities on a consolidated and integrated basis; and
- application of the principle of proportional regulation.

*II. EAEU countries.* Increasing the technological level of companies can be implemented by creating a platform for intersectoral and inter-country coordination of research and development, and transfer of the results obtained, which will serve to establish stronger business contacts and partnerships in the participating states.

To work on joint projects, temporary creative teams and working groups can be created to monitor and analyze the market, as well as to assess the level of digital maturity and problems of a specific sector of the economy in the EAEU countries.

Training and retraining of personnel is of particular importance, since the digital transformation of the economy has revealed the real need for specialists in engineering professions (virtual reality engineers, robotics, neuroinformatics, nanoengineers, designers of neural interfaces, specialists in the use of artificial intelligence, robot designers, etc.).

*III.* It is advisable to hold an *international conference on the regulation of the platform economy*. The main issues of the conference could be:

- development of common approaches to the definition of the conceptual apparatus of the digital economy;
- coordination of positions on the interpretation of the main characteristics, elements, and features of the business models of digital economy companies; and
- coordination of approaches to regulation (control, supervision, benefits, and sanctions) of the activities of platform-type companies and ecosystems.

IV. Given that life constantly makes its own adjustments to the activities of economic entities and states, it would be advisable *to create a permanent coordinating body at the UN* to develop policy framework (in the form of a concept, principles, strategy, and tactics) and recommendations for its implementation in practice.

## REFERENCES

- Abalkin, L. I. (1997). Conceptual issues of industrial policy in the conditions of modern Russian economy. *Russia's industrial policy at the turn of the 21st century* (pp. 28–33). Izdat Publishing. (In Russian).
- Bank of Russia. (May, 2021). *The concept of general regulation of the activities of groups of companies developing various digital services based on one "ecosystem."* Bank of Russia.
- European Commission. (2020). *Digital finance package.* [https://ec.europa.eu/info/publications/200924-digital-finance-proposals\\_en](https://ec.europa.eu/info/publications/200924-digital-finance-proposals_en)
- European Commission. (2021). *Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the regions on a digital finance strategy for the EU, 23 September 2020, COM(2020)591.* <https://ec.europa.eu/transparency/regdoc/rep/1/2021/EN/COM-2021-32-F1-EN-MAIN-PART-1.PDF>
- Digital Transformation. (2020, July 21). Approved by the decree of the President of the Russian Federation “*On national development goals of the Russian Federation for the period up to 2030*” (N 474).
- FSB. (2020, October). *BigTech Firms in finance in emerging market and developing economies: Market developments and potential financial stability implications.* <https://www.fsb.org/2020/10/bigtech-firms-in-finance-in-emerging-market-and-developing-economies/>

- Kondratyev, V. B. (2015). *Industries and sectors of the global economy: Characteristics and development trends*. Mezhdunarodnye Otnosheniya Publishing. (In Russian).
- Kuznetsov, B. V., & Simachev, Y. V. (2014). Evolution of the state industrial policy in Russia. *The Journal of the New Economic Association*, 2(22), 152–178. (In Russian).
- Nikitaeva, A. Y. (2016). Activization of the industrial development on the platform of partnership: Measures of state regulation. *Journal of Economic Regulation*, 7(4), 20–31. (In Russian).
- Panova, G. (2021a). Banking business strategies in the paradigm of digital solutions and sustainable development goals. In I. Stepnov (Ed.), *Technology and business strategy. digital uncertainty and digital solutions*. Palgrave Macmillan. ISBN 978–3–030–63973–0
- Panova, G. (Ed.). (2021b). *From the classical model to the ecosystem. challengers, risks and new features..* Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-71337-9>
- Polterovich, V. M., & Popov, V. V. (2006). An evolutionary theory of economic policy. Part I. The experience of fast development. *Voprosy ekonomiki – The Issues of Economics*, 7, 4–23. (In Russian).
- RF Government Commission on High Technologies and Innovations. (2010). *Procedure for compiling a list of technological platforms*. RF Government. (In Russian).
- Russian Government. (2020, July 31). *On experimental legal regimes in the field of digital innovations in the Russian Federation..* Russian Government.
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2), 172–194.
- The Economist. (2021, February). *Tech's big dust-up*. <https://www.economist.com/weeklyedition/2021-02-27>
- Timmers, P. (1998). Business models for electronic markets. *Electronic Markets*, 8(2), 3–8.
- Winson and Strawn LLP. (2019). *The second coming of fintech—regulatory and antitrust considerations with artificial intelligence and blockchain*. <https://www.winston.com/en/thought-leadership/the-second-coming-of-fintech-regulatory-and-antitrust-considerations-with-artificial-intelligence-and-blockchain.html>



# A Regulatory Toolkit for Competition

*Vladimir S. Ossipov and Liu Dun*

## INTRODUCTION

There are certain threats that digital companies can monopolize in some markets. Like any other monopoly, a digital company will not necessarily be a bad thing for the market, but the potential for abuse of monopoly power will certainly arise. It is necessary to formalize not only the possible risks and threats of digital companies when they achieve a monopoly position in the market, but also to develop a toolkit to prevent or suppress any abuse of the monopoly position of a digital company. The purpose of the article is to describe the toolkit for regulating digital platforms and

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their competitive behavior, as well as to assess the prospects for the development of such a toolkit in connection with the global nature and activity of digital platforms.

In our opinion, digital platforms are prone to opportunistic behavior due to their market power and activities outside the national borders of one state (in other words, the global scale of their presence in the markets). The international character of digital platforms' economic activity forces states to negotiate with each other and coordinate the policy (e.g., tax policy, technological conditions, servers and clouds lending, collection of personal data under national law, etc.). Another way to regulate the activities of digital platforms is to block their activities within the borders of nation-states. This method is used, in particular, by China, Russia, USA, and some other states. States turned out to be interested both in filtering information disseminated through digital platforms and in the complete blocking of certain resources that cause risks for political stability, economic security, and maintaining the moral principles of society.

## METHODOLOGY

According to the chosen problem of research, we use institutional and structural analysis (Eggertsson, 2005; Furubotn & Richter, 2000; North, 1996; Uzzi, 1996), market architecture theory, and socioeconomic approach (Crouch, 2019; Fligstein, 2001; Granovetter, 1985, 1994; Munger, 2018; Srnicek, 2017; White, 2002), theory of opportunistic behavior and antitrust (Rockefeller, 2007; Teece, 1976; Williamson, 1975), and some aspects of behavioral economics (Kahneman, 2011; Thaler, 2015).

There are some different directions of regulating digitalization. Some authors take an industry or branch approach—for example, the problem of industrial change under influence of platform is on the focus of Kenney et al. (2019), Osipov, Lunqu, et al. (2021), Osipov, Tutaeva, et al. (2021). Innovation and competitiveness are described by Gardner and Bryson (2021), Teece (2020), and Ozili (2020). Market approach is on the focus of Qin and Qi (2021), Yukhno and Osipov (2021), Dun et al. (2020), Pichkov and Ulanov (2021), and Xu and Liu (2021). The regional approach is on the focus of Buckley et al. (2020), Botta and Wiedemann

(2019), and Signoret (2020). Some authors look at the problem of regulation from global or state positions: Larionova and Shelepov (2021), and Osipov (2020, 2021a, 2021b).

## RESULTS

According to the OECD, the digital economy includes digital-based markets that stimulate and facilitate the trade in goods and services, but this concept is not limited to these markets, as digitalization affects the entire society and the global economy.<sup>1</sup> The features of the digital economy are that there is indeed a significant change in the reproduction process of goods and services, interaction with the consumer, obtaining raw materials and materials, dissemination of information, knowledge, and know-how.

Obviously, inequality in the distribution of market power entails inequality in economic development, including in high-tech sectors of the economy and the digital economy in particular. This digital inequality arose along with the digital economy and accompanies it in its development. The power of digital companies extends far beyond the national borders of headquarters, which can be seen as a non-competitive advantage in cases of obvious abuse of their position. Since antimonopoly policy and tools for suppressing anti-competitive behavior are the sphere of activity of state bodies, then the attitude of the state to digital platforms and their activities should be considered first of all. Antitrust authorities consider situations of discriminatory access to the resources of global digital platforms as a violation of antitrust laws in cases where inequality in access to technology exacerbates the situation of those who are connected to the global network but do not have access to its resources. On the other hand, digital platforms are prone to opportunistic behavior due to their market power and activities outside the national borders of one state—that is, the global scale of their presence in the markets. The lack of control over the anti-competitive behavior of digital platforms pushes them to infringe on the interests of less protected businesses and consumers. As is known, opportunistic behavior consists in the unscrupulous behavior of an economic actor in order to obtain unilateral benefits

<sup>1</sup> OECD. (2012). *The Digital Economy. Competition Law and Policy*. Competition Committee of Organisation for Economic Cooperation and Development. URL: <https://www.oecd.org/daf/competition/The-Digital-Economy-2012.pdf>.

to the detriment of a partner, as, for example, in a zero-sum game. A more informed digital platform, in an effort to maximize its own profit, performs an activity in negotiations that negatively affect the well-being of its consumers. Adverse selection is a consequence of the presence of hidden characteristics or the significant costs of measuring these characteristics (such as log in conditions, collection of private information for selling it to third parties, etc.). Other one kind of opportunistic behavior consists of access to the resources of the digital platform only with the consent to the collection of personal data and their transfer to third parties (Ekbia & Nardi, 2017).

At the same time, the sale of data gives additional income to digital platforms at the expense of consumers, since it is the data of consumers that become the object of sale and purchase, often without the knowledge of the consumers themselves. This type of opportunistic behavior opened up the possibility of sending contextual advertising to consumers, which is far from always convenient for the consumer himself. On the other hand, the digital platform has the ability, due to the contextual selection of information for the interests of the consumer, to give them information only within the framework of the context, which narrows the consumer's views not only on the market, goods, services, but also on political risks of the concrete country. On the basis of the countered submission of information, the consumer may be involved in illegal activities against the existing state order. States turned out to be interested both in filtering information disseminated through digital platforms and in the complete blocking of certain resources that cause risks for political stability, economic security, and maintaining the moral principles of society. There is widespread information that the color revolutions and other social upheavals were possible precisely through the dissemination of information through digital platforms, since it was on their basis, using various channels, that the activities of persons encroaching on the state order were coordinated (this was typical for Syria, Egypt, Georgia, Armenia, Kyrgyzstan, Kazakhstan, Belarus, USA, Libya, Ukraine, France, Belgium, and others).

The uncontrolled activity of digital platforms is not evil in itself, but it causes a sense of impunity for violating national legislation, hence the negative manifestations of digital platforms within national jurisdictions; however, this does not negate the positive impact of digital platforms on the global economy: since this work, services and goods that were previously inaccessible became possible. Delivery of goods has become faster

and more convenient for consumers. In the context of the coronavirus pandemic, it was especially important to provide consumers with food and everyday goods outside of stores, which was made possible thanks to digital platforms. Digital platforms have enabled economic activity to continue by moving jobs to online regime (Osipov, 2021, 2022).

Whatever the benefits or drawbacks, monopolies and the high concentration of capital due to digitalization of economy is today's situation. As such, society internationally needs a new regulatory toolkit to coordinate competition and fight against the abuse of monopoly power.<sup>2</sup> We agree with Ekbia and Nardi (2017) that digital platforms earn their money from the control power on consumer behavior. Therefore, it is necessary to notice main directions of antitrust policy in digital age nowadays:

- reducing barriers for startups to access the digital markets by providing access to information, databases, and non-discriminatory access to information dissemination channels;
- the creation and application of an advanced toolkit for breaking cartels created using digital technologies;
- the creation of a toolkit for assessing the degree of concentration of market power in digital markets;
- the more active extension of antitrust regulation to the sphere of circulation of intellectual property and databases;
- the creation of a pricing toolkit for assessing the public danger of anti-competitive agreements.

The digitalization of markets and the expansion of digital platforms are raising the quality of public administration to a new level, in which authorities become more open to society, interacting with citizens and businesses in order to achieve social harmony and well-being (Osipov, 2021c).

Figure 1 shows the goals, interested persons, main directions of antitrust policy in digital market, and institutions to reach the goals. We note that the goal of state security dictates the necessity to use formal institutions such as legal acts. In our opinion, the scale of this goal is so huge that informal institutions such as customs, habits, or consuetudes do not lead to the creation of a sustainable secure system. There

<sup>2</sup> The Economist. (2018, January). *How to Tame the Tech Titans*.

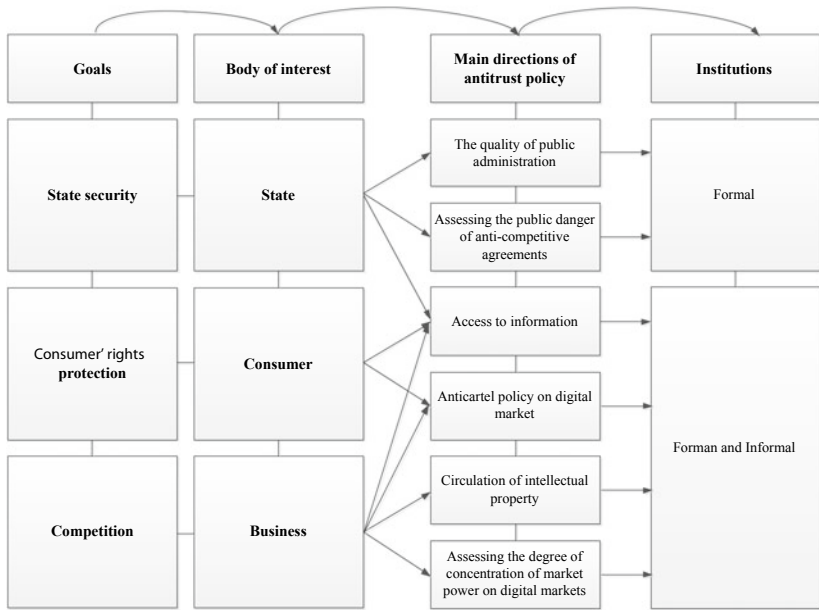


Fig. 1 The Regulatory Toolkit for Competition (created by author)

are formal (legal acts) and informal (customs, habits, consuetudes) goals of consumer rights protection and competition.

## DISCUSSIONS

There are different directions to reach these goals. There is the case of the EU, which describes the most characteristic options for achieving the goals of regulating competition in digital markets.

The case of European Union consists of the project of the EU-law on digital services,<sup>3</sup> which is in discussions in the European Parliament. This law will be the first frame law to control the digital market and services, as well as the Internet.

<sup>3</sup> Digital Services Act. 2020/0361 (COD). [https://oeil.secure.europarl.europa.eu/oil/popups/ficheprocedure.do?reference=2020/0361\(COD\)&l=en](https://oeil.secure.europarl.europa.eu/oil/popups/ficheprocedure.do?reference=2020/0361(COD)&l=en).

EU-authorities propose clear rules as formal institution for the removing of illegal items in the digital area, whether it be goods, services, or content, according to a simple principle: “what is prohibited offline should be prohibited online too”.

There are new kind of obligations based on risk assessment on digital platforms quite similar to prudential regulations for financial organizations. The Digital Services Act consists of new supervisory and sanctioning powers of the European Commission with the right to fine digital platforms up to 6% of annual turnover or even temporary exclusion from the internal market in case of grave and prolonged violations.

The EU plans to open “the black box of the algorithms” to increase the transparency measures on digital platforms to clear the mechanisms that target a user to certain content or ads.

These rules must be the same for all EU-member states and for third states too. The new Internet and digital platform control structure is planned to be a benchmark for all countries around the world.

The natural step for the European Union as a supranational integration body was the implementation of the model of digital market, which has become one of the most important priorities of the European Commission. The model of a single digital market is designed to adequately respond to the challenges of the digital revolution in order to use the digitalization opportunities of the real sector to ensure economic growth. This Digital Single Market strategy that the European Commission has announced—with a set of measures to improve access to digital goods and services across Europe for consumers and producers, emphasizing that the lack of common European regulatory criteria create barriers to market entry—hinders competition and reduces predictability for investors throughout Europe.<sup>4</sup>

The harmonization of European private law is a task of increased attention; therefore, the European Commission on December 9, 2015 issued three pieces of legislation as part of the digital single market strategy:

- Directive on certain aspects concerning contracts for the supply of digital products (COM [2015] 634 final);
- Directive on certain aspects relating to the online and other means of distance selling of goods (COM [2015] 635 final); and

<sup>4</sup> [https://ec.europa.eu/commission/priorities/digital-single-market\\_en](https://ec.europa.eu/commission/priorities/digital-single-market_en).

- Directive on the regulation of cross-border trade and movement of online content services in the internal market (COM [2015] 627 final).

On April 27, 2016, EU regulation 2016/679 was adopted on the protection of natural persons with regard to the processing of personal data and on the free movement of such data ([2016] OJ L119). In June 2016, the European Commission launched another series of acts and proposals (Prevention of discrimination against customers by traders in the customer's territory when accessing websites or ordering goods or services (COM [2016] 289 final)), and the Cross-border Parcel Delivery Services Directive (COM [2016] 285 final). In addition, a number of consultations have been held on the development of the legal environment for Internet and digital platforms, online services, data and cloud services, and the economics of collaboration, to evaluate how the digital revolution is taking place; this influences the development of law and provides appropriate answers to the new problems that arise as a result, particularly including: the impact of digital technologies on private law relations; the status of information as a commodity unit; new tools for its protection; models of a single digital market; consumer and user rights when purchasing goods, services, or digital content; and new, online opportunities for standard contracts in the digital market, as well as platforms for resolving online disputes.

Technological developments are having an increasingly significant impact on private law relations. New business opportunities and information technologies are changing the balance of established paradigms that create the basis of many legal norms. In particular, as a result, several problems have arisen due to these changes that go beyond the national level, which has necessitated supranational regulation at the European and international levels. Digitalization dictates rejecting national regulation of EU-member states and moving the regulation on the subnational level of the EU-authorities.

An institutional analysis of the digital revolution's impact on contract law, as well as the positive and negative points of the creation of new rules in this area of regulation, is most important for the implementation of the digital single market model. Some problems can be solved by forming a body of precedents for the application of existing European and national rules in accordance with the new needs of the digital economy. In this case, the European Union, despite the fact that most countries use the

continental system of law, provides for case-based regulation, probably due to the complexity of the object of regulation and the unwillingness to damage the rapidly developing sector of the economy. However, situations may arise in which the need to change existing laws to a greater or lesser extent becomes urgent. A conclusion about the simplification of some regulatory norms is also possible. The adoption of new acts, as well as norms for new situations that are not regulated by existing rules, is not denied by the digital single market model.

However, there comes a point when situations become so out of line with the existing system of legal regulation that it is no longer possible to adapt existing legal norms to new circumstances; therefore, it is necessary to change them. At the same time, there is a real risk that the legislator will not have time to quickly respond to new events, for which they will form new rules without proper consideration of all elements of new economic relations. Hence, it is possible that, in a hurry, a decision made can create more problems than solve existing ones. In addition, the tightening of regulations and restrictive measures can have a devastating effect on the level of hi-tech progress and adversely affect economic development.

The regulation of digital products can have a dual meaning, since the digital product itself can be purchased, or there can be a situation where the digital product accompanies the physical product as its part. Therefore, first of all, it is necessary to classify digital content and draw up a general framework for properly dealing with situations where digital content is of inadequate quality or damages other digital content, physical devices, or reveals data belonging to the user.

In addition, it is necessary to consider whether existing legislation satisfies the needs of the digital economy, because in many cases the supplier of goods and services is not a seller as it is. In this case, it is possible to define criteria for distinguishing between different categories of market participants in the digital environment. In this regard, the European Commission singles out a special category of “prosumers” as consumers. Such consumers—offering not only goods, but also services such as transportation, accommodation, and cleaning—form a special combined product. Such situations often occur, for example, in the context of the conclusion of contracts through online platforms.

As a result of the digital revolution, the Internet of Things has emerged, which is associated with the concept of objects that can interact with each other through Internet connections. A typical application for



the Internet of Things is the use of robotics in smart factories, home appliances, or self-driving cars. This field offers great potential for development, but also raises a number of questions, especially in connection with the emerging responsibility of the manufacturer for the consequences of the use of smart technology in production and everyday life.

It is important to consider how the European Union is responding to the challenges of the new era of digital transformation. The European Commission has included the single digital market among the priorities of its activities, with a strategy for the gradual transformation and digitalization of the European single market. A number of initiatives have been put forward in the context of the digital single market model, with initial proposals for consumer contract law directives. In 2016, the European Commission submitted another wave of proposals for the development of a single digital market. Given the need for careful planning before any new legal regulation is adopted, it is encouraging that the European Commission does not intend to rush into regulatory measures for online platforms. In a recent post on the subject, the European Commission stated that: “The need to strengthen the role of platforms to facilitate innovation requires that any future regulatory measures proposed at the EU level address only well-defined issues related to a specific type or activity of online platforms, in in line with the principles of better regulation. Such a problem-solving approach must begin with an assessment of whether the current system is truly acceptable”.<sup>5</sup>

There are two important conclusions that follow from this:

1. The start point will be a clear definition of the problem so that any action taken is reactive rather than predictive;
2. Before new rules are created, the application of existing rules to newly identified problems will be considered.

However, it is also acknowledged that this is not always possible: “The collaborative economy is a good example where rules designed around traditional and often local service delivery can hinder online platform

<sup>5</sup> European Commission, Communication on Online Platforms and the Digital Single Market-Opportunities and Challenges for Europe, COM (2016) 288/2, p. 5.

business models”.<sup>6</sup> The European Commission has recognized the importance of this approach to the challenges posed by the digital revolution. This approach is reasonable and it will be interesting to see how it is applied in practice. It seems that the new norms may not always be able to answer identified problems. However, it is necessary to first analyze whether special legislation is necessary, or perhaps it should be clarified how existing rules should be applied in the problem that has arisen in terms of regulating online platforms. However, this does not preclude new regulatory measures should this prove necessary.

Proposals on some aspects of contract law are the most relevant for rooting legal relationships in the network. Noteworthy here are two proposals put forward by the European Commission in December 2015, one of which fully harmonizes the rules for the distance sale of consumer goods,<sup>7</sup> and the second of which attempts to introduce new rules for consumers.<sup>8</sup>

The proposal for distance selling goods overlaps with the Consumer Rights Directive (2011/83/EU) and the Consumer Selling Directive (99/44/EC), and primarily appears to have the more mundane goal of updating the legal provisions that is currently a fairly common way to sell goods. Whether this proposal contains any significant improvements that would actually facilitate the online/remote sale of goods throughout the single market is up for debate in the expert community. The main challenge is to introduce a set of fully harmonized rules, not necessarily a set of rules that are clearly focused on the specific features of such treaties. In other words, the introduced institutions should regulate a wider range of issues than a narrow momentary problem.

Secondly, it is important to understand that many of the rules are taken from the Common European Sales Law (CESL)<sup>9</sup> provision, which was found to be ineffective as a trade regulator and was eventually withdrawn. The CESL provision is the culmination of a decade-long process of developing European contract law, which resulted in the so-called Draft

<sup>6</sup> Ibid.

<sup>7</sup> Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the online and other distance sales of goods, COM (2015) 635 final.

<sup>8</sup> Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the supply of digital content, COM (2015) 634 final.

<sup>9</sup> COM (2011) 635 final.

Common Body of Recommendations (DCFR).<sup>10</sup> Thus, in a certain sense, the two proposals put forward in December 2015 are an attempt to pass legislation based on many years of work. On the one hand, the use of previous initiatives is quite understandable, but on the other hand, the task must be stated to what extent the DCFR model rules or its modified provisions in CESL are really suitable for dealing with specific features of digital content sales contracts. The proposed requirement of conformity with the Treaty establishes the priority of the subjective agreement of the parties to the contract and provides for the criterion of suitability for normal use only.

Thus, the protection of the rights of the consumer of digital content comes from the premise that the content is suitable for use for the purposes and needs of the consumer. There is a clear bias toward the rights of the consumer here, since, in fact, they have the right to determine the suitability of digital content for their needs. The question remains how to resolve a dispute, should it arise, between a seller of digital content and its buyer. How the buyer will prove the unsuitability, while for the seller the suitability of the content is at the mercy of the practice of application. This raises two questions. Firstly, the purpose of the digital content compliance requirement should be determined in modern consumer protection law: whether it is simply to implement the intent of the parties, or whether it is deeper and seeks to establish a clear standard of quality that any digital content delivered to consumers must comply with. Given the goal of creating a digital single market across the EU, it seems that a clear objective quality standard is better suited to this. Secondly (and this follows from the previous paragraph), the use of the concept of compliance with the contract and the priority given to the agreement of the parties can be challenged for the simple task of the acquisition of digital content: of course, in most cases, the process of acquiring digital content is completely automated, without negotiations between the parties and, therefore, without an agreement reflected in the contract. Thus, the subjective requirement of compliance seems not only a step backwards, but also simply unsuitable for the nature of the transaction, since the objective nature and equality of the parties to

<sup>10</sup> Study Group on a European Civil Code/Research Group on the Existing EC Private Law (Acquis Group). *Principles, Definitions and Model Rules on European Private Law—Draft Common of Reference*. Oxford University Press. Oxford. 2010.

the transaction are violated. A new solution is needed that reflects the characteristics of digital content and its delivery.

The regulation of the “geo-blocking”<sup>11</sup> mechanism is intended to prevent merchants from discriminating against customers based on the customer’s place of residence when accessing websites or ordering goods or services. This is, in fact, a specific application of the EU non-discrimination principle, which is already a limitation on the scope of the general principle of freedom of contract. Another provision concerns cross-border parcel delivery services<sup>12</sup>; however, this only strengthens the oversight of the relevant regulators and requires service providers to advertise their rates, which are then assessed for affordability, and deal with cross-border access. This provision is not providing for specific norms of contract law.

## CONCLUSIONS

The ubiquity of connected devices using the Internet of Things technology, as well as the large amount of data created and exchanged as a result of the use of this technology, as well as the legal consequences of fully automated contracting, provide important grounds for case-based regulation of this area of the digital economy. The key approach that the European Commission is seeking to implement is that decisions must be made with care not to be too hastily, and that any fear of filling gaps in legislation quickly should not prompt the EU legislature to adopt rules that may simply be good enough—this is not an area of law where rules for the sake of rules are necessary. Instead, the issues and legal implications of these changes and their devastating implications for the law and the digital economy, as well as possible responses to them, need to be clearly defined and carefully considered before further legislative initiatives are taken. There can be no doubt that the digital revolution has become a disruptive technology for business, but its disruptive effect on law (especially contract law) is not necessarily so extensive; nevertheless, the cautious approach outlined in the commission’s briefing note on

<sup>11</sup> Proposal for a Regulation on addressing geo-blocking and other forms of discrimination based on customers’ nationality, place of residence or place of establishment within the internal market, COM (2016) 289 final.

<sup>12</sup> Proposal for a Regulation on Cross-border parcel delivery services, COM (2016) 285 final.

online platforms, discussed above, seems right at the moment. The ability of the new legal regulation to harm the development of the industry is well understood in the European Commission.

Generally speaking, it is important to carefully consider the implications for the law of the disruptive effects of the digital revolution and determine where the true disruptive impact on the law exists, which will require the development of new legal rules. Along with seeking solutions to such specific issues, the broader implications for the affected areas of law as a whole need to be considered before new rules are adopted. Disruptive technology creates problems for the law and can lead to violations of it; it is the task of legal scholars and policymakers to come up with appropriate solutions. One of the factors affecting a business's ability to adapt to disruptive technologies, as identified by Clayton Christensen (1997) in his book's conclusions, is that an organization's competencies are often highly specialized and context-specific. All these capabilities and skills of organizations and individuals depend on what problems have been solved in the past, the nature of which is influenced by the characteristics of the markets in which these organizations and individuals have previously operated. New markets created by disruptive technologies often require very different skills (Christensen, 1997). A similar observation could be made with regard to law: its norms and principles were determined and refined by problems that arose in the past, and this formed the system of values on which legal norms are based. However, the violated right requires new norms and principles to solve new problems that have arisen as a result of the use of destructive technologies such as digital platforms. The challenge for legal scholars, policy makers, and legislators is to define what these new rules, principles and concepts should be, and new capabilities will need to be created to meet this challenge.

## REFERENCES

- Botta, M., & Wiedemann, K. (2019). The interaction of EU competition, consumer, and data protection law in the digital economy: The regulatory dilemma in the facebook odyssey. *Antitrust Bulletin*, 64(3), 428–446.
- Buckley, R. P., Arner, D. W., Zetzsche, D. A., & Weber, R. H. (2020). The road to RegTech: The (astonishing) example of the European Union. *Journal of Banking Regulation*, 21(1), 26–36.

- Christensen, C. M. (1997). *The innovator's dilemma. When new technologies cause great firms to fail*. Harvard Business School Press.
- Crouch, C. (2019). *Will the gig economy prevail?* Polity Press Ltd.
- Dun, L., Geng, Y., & Lunqu, Y. (2020). The age of digitalization: Tendencies of the labor market. *Digital Law Journal*, 1(3), 14–20.
- Eggertsson, T. (2005). *Imperfect institutions. Possibilities and limits of reform*. The University of Michigan Press.
- Ekbia, H., & Nardi, B. (2017). *Heteromation, and other stories of computing and capitalism*. MIT Press.
- Fligstein, N. (2001). *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*. Princeton University Press.
- Furubotn, E. G., & Richter, R. (2000). *Institutions and economic theory: The contribution of the new institutional economics*. The University of Michigan Press.
- Gardner, E. C., & Bryson, J. R. (2021). The dark side of the industrialisation of accountancy: Innovation, commoditization, colonization and competitiveness. *Industry and Innovation*, 28(1), 42–57.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- Granovetter, M. (1994). Business groups. In N. Smelser & R. Swedberg (Eds.), *The handbook of economic sociology* (pp. 453–475). Princeton University Press.
- Hart, O. (1995). *Firms, contracts, and financial structure*. Oxford University Press.
- Kahneman, D. (2011). Thinking, fast and slow. *Statistical Papers*, 55, 915.
- Kennedy, M., Rouvinen, P., Seppälä, T., & Zysman, J. (2019). Platforms and industrial change. *Industry and Innovation*, 26(8), 871–879.
- Larionova, M., & Shelepov, A. (2021). Emerging regulation for the digital economy: Challenges and opportunities for multilateral global governance. *International Organisations Research Journal*, 16(1), 1–32.
- Munger, M. (2018). *Tomorrow 3.0. transaction costs and the sharing economy*. Cambridge University Press.
- North, D. (1996). *Institutions, institutional change and economic performance*. Cambridge University Press.
- Osipov, V. S., Tutaeva, D. R., Diakonova, O. S., Krupnov, Y. A., & Khrunova, A. L. (2021b). Digital society as the basic institution of the digital economy of the 21st century. In E. G. Popkova & B. S. Sergi (Eds.), *Modern global economic system: Evolutional development vs. revolutionary leap* (pp. 1133–1141). Springer.
- Osipov, V. S. (2020). Yellow brick road to digital state. *Digital Law Journal*, 1(2), 28–40.

- Osipov, V. S. (2021a). Digital State: Creation through project-functional structure of public administration. In J. Kovalchuk (Ed.), *Post-industrial society: The choice between innovation and tradition* (pp. 53–62). Palgrave Macmillan.
- Osipov, V. S. (2021b). “Who Will Rule?”: Institution of state in the transformation process of the twentieth and twenty-first centuries. In J. Kovalchuk (Ed.), *Post-industrial society: The choice between innovation and tradition* (pp. 99–108). Palgrave Macmillan.
- Osipov, V. S. (2021c). Post-COVID statehood. In V. S. Osipov (Ed.), *Post-COVID economic revival: Sectors, institutions, and policy* (pp. 377–393). Palgrave Macmillan.
- Osipov, V. S. (Ed.). (2021d). *Post-COVID economic revival: Sectors, institutions, and policy*. Palgrave Macmillan.
- Osipov, V., Lunqu, Y., Dun, L., & Geng, Y. (2021). Digitalization as objective factor of the substitution of the labor by the capital. In I. Stepnov (Ed.), *Technology and business strategy: Digital uncertainty and digital solutions* (pp. 165–176). Palgrave Macmillan.
- Ozili, P. K. (2020). Banking sector earnings management using loan loss provisions in the Fintech era. *International Journal of Managerial Finance*, 16, 677–693.
- Pichkov, O. B., & Ulanov, A. A. (2021). Regulation of robotics: Analysis of the leading countries’ experience. *Digital Law Journal*, 2(2), 31–44.
- Qin, B., & Qi, S. (2021). Digital transformation of urban governance in China: The emergence and evolution of smart cities. *Digital Law Journal*, 2(1), 29–47.
- Rockefeller, E. S. (2007). *The antitrust religion*. Cato Institute.
- Signoret, L. (2020). Code of competitive conduct: A new way to supplement EU competition law in addressing abuses of market power by digital giants. *European Competition Journal*, 16(2–3), 221–263. <https://doi.org/10.1080/17441056.2020.1787625>
- Srnicek, N. (2017). *Platform Capitalism*. Polity Press Ltd.
- Teece, D. J. (1976). *Vertical Integration and Divestiture in the U.S. Oil Industry* (Working Paper No. 300). Stanford University.
- Teece, D. J. (2020). Innovation, governance, and capabilities: Implications for competition policy. *Industrial and Corporate Change*, 29(5), 1075–1099.
- Thaler, R. H. (2015). *Misbehaving: The making of behavioral economics*. W.W. Norton & Company.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 61(4), 674–698.
- White, H. C. (2002). *Markets from networks: Socioeconomic models of production*. Princeton University Press.

- Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust implications: A study in the economics of internal organization*. The Free Press.
- Xu, Y., & Liu, D. (2021). Decent work for the digital platform workers: A preliminary survey in Beijing. *Digital Law Journal*, 2(1), 48–63.
- Yukhno, A. S., & Osipov, V. S. (2021). Smart contracts and corporate governance: Prospects and risks of business digitalization. In I. Stepnov (Ed.), *Technology and business strategy: Digital uncertainty and digital solutions* (pp. 235–244). Palgrave Macmillan.





# Antitrust Law on Digital Platforms: Some Remarks on Innovation and Competition in Digital Platforms of the European Union

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## INTRODUCTION

The aim of antitrust regulation is to improve the efficiency of the market economy by overcoming those constraints to economic development that are imposed by companies with significant market power in order to maintain their leadership by inhibiting others (Brodley, 1987). This basis of antitrust law has become the subject of a number of controversies in the scientific community, which have arisen in connection with the advent of the Internet and other information technologies into economic life. This criticism is based on the premise that applying traditional industry

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antitrust approaches regarding market analysis to relations in the new economy can do more harm than good. Various states and associations of states at the regional level are trying to update their legislation in such a way that it could resist the monopolization of digital markets by the largest technology companies.

Currently, digital technologies cover all spheres of social life, and global digitalization of social processes is a new challenge for legal regulation. One of the most important directions for the successful development of any modern state is the regulation of the digital economy. The terms cryptocurrency, token, big data, cloud computing, etc. have already become firmly in use. The products of intellectual labor become the basis of the economy of states, as well as the construction of big business. Possession of information technologies allows subjects to occupy a particular niche and dominate it.

Similar phenomena of the new era include the emergence of so-called digital platforms. Their appearance is due not only to changes in the economic situation and market needs, but also to technological innovations that have allowed a large number of users to get involved in information processes.

At the same time, the law is faced with new phenomena that cannot be regulated by legislation that was developed to regulate absolutely different relations.

This applies to both private and public law. Private law should regulate relations between subjects arising in the digital space. Public law should ensure public and state interest, effectively regulating relations in the field of public administration, public order protection, authoritative dispute resolution, defense, and public security in the new information environment, where the boundaries of personal and public are blurred.

Antimonopoly legislation is also facing new challenges. In conditions of increasing concentration of capital in the hands of large technology corporations, it is necessary to develop new methods of solution, a system of regulatory legal acts that will fundamentally regulate relations arising in the digital space.

Digital platforms are in many ways a boon for the consumer, but it is also necessary to note the fact that competition is decreasing in its scale, remaining only in the relationship between digital platforms. Other players in the market do not have such powerful resources and simply cannot compete with IT giants.

Also, the influence of digital platforms on human (consumer) behavior should be subjected to special analysis, since they can intentionally hinder their user's access to the product of other service providers.

## METHODOLOGY

The digital platform environment should be considered on the basis of existing empirical experience using a comprehensive methodology. Only in this way can an effective antimonopoly policy be developed, which in the new conditions will allow protecting competition as a phenomenon and a person as a consumer of services.

In this study, we will consider the relevant approaches to the development of antimonopoly legislation in the USA, the EU, and the CIS, as well as examples of their struggle in the courts with monopoly companies.

## RESULTS

### *Antimonopoly Legislation in Relation to Digital Platforms*

There is currently no legally fixed definition for a “digital platform”. Therefore, the researchers provide the following definitions.

A digital platform is a complex information system that provides the functions of interconnection between market participants, open for use by customers and partners, application developers, service providers, and agents (Skrupskaya et al., 2022).

A digital platform is a disruptive innovation, which is an integrated information system that provides multi-sided user interactions for the exchange of information and values, leading to a reduction in overall transaction costs, optimization of business processes, and increased efficiency of the supply chain of goods and services (Mesropyan, 2020).

From these definitions, it becomes clear that, first of all, digital platforms are designed to ensure the interaction of various economic entities, minimizing the costs inherent in the usual “offline” interaction. Intermediaries are no longer needed, building complex logistics links, etc. The business model becomes completely different, as does the structure of markets.

In scientific research devoted to the study of digital platforms, a certain typology has already developed:

1. instrumental digital platform;
2. infrastructure digital platform; and
3. applied digital platform.<sup>1</sup>

Instrumental digital platforms are based on software or hardware-software complexes. Such platforms are not intended for the masses, as their main task is to develop software solutions. Such platforms are of interest to developers of application programs and software tools. Software product developers need to interact with the specific digital platform to create applications that will be supported by the operating system concerned.

Infrastructure digital platforms are designed for decision-making by economic entities. Such platforms work with big data and have access to various sources of information. They unite information providers, developers, and operators of platforms with developers and consumers of IT services. For example, General Electric Predix collects and transmits data to the cloud using direct connection software or Predix Edge, a local software product that also supports local analytics and application processing (General Electric Digital, n.d.).

Applied digital platforms are designed for the widest range of participants. These are applied digital platforms that involve the exchange of economic values between market participants. Transactions are carried out in a single information environment. As a rule, access to such information platforms is free, as it is necessary to attract as many users as possible. This group includes, for example, Uber, Aliexpress, Booking.com, Avito, Apple AppStore, AviaSales, Facebook, Alibaba, Yandex Taxi, etc.

### *The EU: Innovation and Competition in the Digital Platforms of the European Union*

The ongoing pandemic is not slowing down European Union advancing toward its goals. Among them, digitalization and the green deal are the most urgent and comprehensive efforts for the EU and its member states.

Digitalization includes both digital infrastructures and, thus, European and national investments (public and private) to be made on them, and

<sup>1</sup> The classification was developed by the participants of the implementation of the program “Digital Economy of the Russian Federation” under the leadership of B.M. Glazkov.

management of the use of digital networks for the content transferred across them. Each range is determined by high-technology activities, which are very expensive and entail top level know-how that can lead to some monopolistic stance of investors and digital operators. If digitalization is the proper space for almost every bargain, consumer's choice, job opportunities, trade and services offer, and deals, it is also the context within which the development for public and private sphere emerges. Digitalization and the green deal are the basic pillars of EU 2019–2024 and its Single Market in the century: on the digital platforms environment, it is a time to determine what is at stake. Sometimes, competition can even be overcome by strategic mergers, the most powerful company acquiring the minors. It is hard to enhancing competition without restricting innovation. The Vestager Report –so called from the Commissioner for Competition, Margrethe Vestager, requesting some experts to investigate on how European competition policy should evolve to match innovation and consumers' rights in the digital age—is the legal milestone in the matter and it approaches both technically and legally the operational framework of digital platforms, clarifying their pros and cons (Crémer et al., 2019).

The basis of EU legislation in the form of regulations and directives providing for a mechanism for the implementation of regulatory principles is in the Articles 85 and 86 of the Treaty of Rome, signed in 1957. The first Regulation, adopted to implement the principles of EU competition law, dealt with the investigation procedure, was Council Regulation 17/62/EEC implementing Articles 85 and 86 of the Treaty (Hartley, 1998), then supplemented by Regulation (EEC) No. 2821/71 of the Council of 20 December 1971.

A large group of regulations related to competition law is made that establish exceptions to the general rule of prohibition provided for in the Article 85 p. 1 of the Treaty of Rome—“block of exceptions”. In the first of this group of Regulation No. 19/65/EEC of 2 March of the Council on the application of Article 85 (3) of the Treaty to certain categories of agreements and concerted practices norms were formulated concerning two types of agreements, in respect of which the provision of paragraph 1 of Article 85 of the Treaty of Rome should not apply. These are agreements in the field of distribution and marketing of goods and agreements concerning the acquisition and use of exclusive rights to industrial property (patents, utility models, drawing, and

trademarks). Council Regulations 2821/71<sup>2</sup> and 2822/71<sup>3</sup> deal with specialization agreements (Hartley, 1998, p. 322). Commission Regulation 4087/88<sup>4</sup> regulates franchising agreements, Commission Regulation 556/89<sup>5</sup> regulates licensing agreements concerning the transfer of know-how, Regulation 240/96<sup>6</sup> regulates technology transfer agreements, and Council Regulations 4064/89<sup>7</sup> and 1310/97<sup>8</sup> regulate concentration agreements.

In order to ensure that markets in Europe serve people and to create higher degrees of transparency and fairness, new EU rules on transparency for business users on platforms were adopted in July 2019.<sup>9</sup> Further to competition enforcement, such complementary regulatory tools, will equally serve consumers and create higher degrees of transparency and fairness.<sup>10</sup> According to the document, providers of online intermediation services should ensure that the terms and conditions are easily available at all stages of the commercial relationship, including to prospective business users at the pre-contractual phase, and that any changes to those terms are notified on a durable medium to business users concerned within a

<sup>2</sup> Regulation (EEC) No. 2821/71 of the Council of 20 December 1971 on application of Article 85 (3) of the Treaty to categories of agreements, decisions and concerted practices.

<sup>3</sup> Regulation (EEC) No. 2822/71 of the Council of 20 December 1971 supplementing the provisions of Regulation No. 17 implementing Articles 85 and 86 of the Treaty.

<sup>4</sup> Commission Regulation (EEC) No. 4087/88 of 30 November 1988 on the application of Article 85 (3) of the Treaty to categories of franchise agreements.

<sup>5</sup> Commission Regulation (EEC) No. 556/89 of 30 November 1988 on the application of Article 85 (3) of the Treaty to certain categories of know-how licensing agreements.

<sup>6</sup> Commission Regulation (EC) No. 240/96 of 31 January 1996 on the application of Article 85 (3) of the Treaty to certain categories of technology transfer agreements.

<sup>7</sup> Council Regulation (EEC) No. 4064/89 of 21 December 1989 on the control of concentrations between undertakings.

<sup>8</sup> Council Regulation (EC) No. 1310/97 of 30 June 1997 amending Regulation (EEC) No 4064/89 on the control of concentrations between undertakings.

<sup>9</sup> Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services (Text with EEA relevance).

<sup>10</sup> European Commission. (2019). Report on Competition Policy 2019. Brussels, 9.7.2020. COM (2020) 302 final, p. 7.

set notice period which is reasonable and proportionate in light of the specific circumstances and which is at least 15 days.<sup>11</sup>

Under the Vestager Report, the digital market has three main characteristics:

- a. extreme returns to scale: the higher the number of customers, the lower the cost of production of digital services. Hence, digital companies' best interest is to raise as much as possible the public of users: it involves a huge amount of first investments and then, to reinforce their role on online trade and services, but it is largely counterbalanced by trade-off;
- b. network externalities: a technology system is increasingly convenient if the number of users grows up. Thus, the company coming first has the "incumbent advantage", and for the single competitor is not enough trying to improve the quality and/or lowering the costs, as the most difficult outcome is to shift users from the incumbent's existing platform or service to the new entrant's ones; and
- c. the role of data: currently, "data" are the most important resource for public and private entities. Data can be requested, collected, pooled, and exchanged for many different reasons. Following our personal data, delivered both intentionally and unintendedly, each user can be profiled and later addressed by customized advertising or tailor-made specific offer to purchase goods and/or services.

Another challenge to competition comes up from mergers and acquisition practices, governed by EU Merger Regulation (EUMR) 139/2004. Its provisions seem to fit digital platforms too, although the theory of harm should be revised in order to give a more reliable substantive assessment to threats at competition asset. Instead of facing competition from smaller companies, they are often taken over by the incumbent, finding it profitable to acquire them and their skills, to reinforce a strategic asset already established. A specific feature of digital platforms, regarding network externalities, is "two-sidedness": the platform connects two different groups of users, and each of them is linked to the other through the benefits each group derives from the other. Two such examples are

<sup>11</sup> Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services (Text with EEA relevance), OJ L 186, 11.7.2019, p. 57.

Airbnb and eBay: the former connects owners of properties with renters, while the second opens communication between sellers and buyers, to make their deals. Social media platforms are different: users are mainly attracted by the presence of other users, thus by the desire to be part of a community shaped by some common targets, to which each user is sensitive.

### *The CIS*

There is no unified antitrust legislation in the Commonwealth of Independent States.<sup>12</sup> The leader in the region is the Russian Federation. The national law of the rest of the countries, the former republics of the USSR, is focused on Russian law, and in many ways becomes its analogue with minor deviations. In this regard, according to Article 28 of the Federal Law of the Russian Federation “On Protection of Competition”<sup>13</sup>—in the event that the total value of assets according to the latest balance sheets of the person acquiring shares, rights, and/or property, and their group of persons, a person who is an object of economic concentration, and their group of persons exceeds seven billion rubles, or if their total revenue from the sale of goods for the last calendar year exceeds ten billion rubles, and at the same time, the total value of assets according to the last balance sheet of a person being an object of economic concentration and its group of persons exceeds four hundred million rubles—a transaction with shares, property of commercial organizations, rights in relation to commercial organizations requires the prior consent of the antitrust authority.

In 2020, the Federal Antimonopoly Service of the Russian Federation (hereinafter—the FAS Russia) examined the petition of MLU B.V. (controls Yandex.Taxi, is under the control of Yandex’s parent company Yandex N.V.) on the consideration of the transaction on the acquisition of the taxi aggregator “Lucky”, and on June 11, 2020 made a decision to refuse the application. This deal could lead to limited competition in the

<sup>12</sup> CIS includes the Republic of Azerbaijan, the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Moldova, the Russian Federation, the Republic of Tajikistan, the Republic of Uzbekistan; Ukraine and Turkmenistan on the rights of associate membership.

<sup>13</sup> Federal Law “On Protection of Competition” of July 26, 2006 N 135-FZ, [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_61763/](http://www.consultant.ru/document/cons_doc_LAW_61763/) (reference date: 11.01.2022).



taxi aggregator market. Nevertheless, in May 2021, the media reported that Yandex. Taxi announced the purchase of part of the assets of the Vezet group for US \$178 million, in connection with which the FAS Russia announced its intention to check the deal between Yandex and taxi aggregator “Vezet” for compliance with the requirements of anti-monopoly legislation and the need for its approval with the department (FAS RF, 2021).

In accordance with part 2 of Article 14.31 of the Code of Administrative Offenses of the Russian Federation,<sup>14</sup> an offense constitutes the commission by an economic entity occupying a dominant position in the commodity market of actions recognized as an abuse of a dominant position and unacceptable in accordance with the antimonopoly legislation of the Russian Federation, if the result of such actions is or may be the prevention, restriction, or elimination of competition or the commission by a natural monopoly entity of actions recognized as abuse dominant position and unacceptable in accordance with the antimonopoly legislation of the Russian Federation (except for the cases provided for by Article 9.21 of the Administrative Code of the Russian Federation).

Part 1 of Article 10 of the Law on the Protection of Competition prohibits actions (including inaction) of a dominant economic entity, the result of which is or may be the prevention, restriction, or elimination of competition and/or infringement of the interests of other persons (business entities) in the field of entrepreneurial activity or an indefinite circle consumers.

It can be concluded that the current antimonopoly legislation, in principle, contains a mechanism that allows for the implementation of measures aimed at preventing the monopolization of the digital market. In this case, there is a need to assess the need for changes in the current legislation.

The imperfection of the current legislation in this part leads not only to the practice of patent trolling both on the part of Western companies in relation to Russian manufacturers of high-tech products, and to its domestic version of “patent raiding”, but also to the destruction of the competitive environment by imposing discriminatory terms of licensing agreements by rightsholders. Abroad, there is a compromise practice of

<sup>14</sup> Code of the Russian Federation on Administrative Offenses dated 30.12.2001 N 195-FZ [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_34661/](http://www.consultant.ru/document/cons_doc_LAW_34661/) (reference date: 08.01.2022).

FRAND (Fair, Reasonable, and Non-Discriminatory) obligations, that are to issue licenses to all interested parties on fair, reasonable, and non-discriminatory conditions. Violation by copyright holders of such obligations—for example, refusal to issue a license or the establishment of unfair and unreasonable conditions—is the basis for issuing a compulsory license or for refusing to protect an exclusive right (when the copyright holder files a claim against a potential licensee) (Vorozhevich & Tretyakov, 2017). In Russia, in this part, there is an obvious gap, which can be eliminated by the norm projected by the FAS in 2020.

The CIS countries act on the basis of the Agreement on the Establishment of the CIS of December 08, 1991 and carry out cooperation in the following areas: humanitarian, inter-parliamentary, interregional and cross-border, general political, economic, legal, security cooperation, interstate exchange of scientific and technical information, and finance. Antimonopoly legislation is also the sphere of interest of the CIS members. In 2000, the Regulations of the Interstate Council on Antimonopoly Policy (hereinafter referred to as the ICAP), which is the body of sectoral cooperation of the CIS, were adopted.

In 2019, ICAP presented a Report “On the main activities of the antimonopoly authorities of the CIS member States and the Interstate Council for Antimonopoly Policy” (hereinafter—the Report). It is declarative, so no specific proposals were put forward for discussion, but it includes digital platforms. In foreign countries, the development of antimonopoly legislation in the digital sphere is proceeding at a fairly active pace.

This Report draws attention to the peculiarities of the economy of the modern world:

- increasing the influence of multinational corporations (which own the basic platforms) on competition in national markets;
- Big Data as the main value of the digital economy;
- direct and indirect network effects;
- the emergence of information intermediaries (aggregators); and
- telecommunication infrastructure as the basis of digitalization.

All these factors have a negative impact on competition. It is important for antimonopoly authorities to pay attention to the creation of distributed infrastructures and ensure their creation and functioning in

a competitive environment, based on the principles of non-discrimination and on technological and network neutrality.

In conclusion, the Report notes that the basic aspects of competition protection are mainly applicable to new relations in the digital economy. However, the tools should be different, since the consequences of the activities of uncontrolled monopolies in the digital environment are unpredictable. To date, no fundamental changes have taken place in the field of antimonopoly regulation of the CIS member states. On November 6, 2020, the Council of Heads of Government of CIS adopted an Agreement on information cooperation of the CIS member states in the field of digital development of society, as well as a Plan of main measures to implement the Concept of Further Development of the Commonwealth of Independent States in terms of cooperation in the main areas of the digital economy for the introduction of end-to-end information technologies, improving digital skills, building an integrated digital infrastructure, and ensuring the security of common digital processes for the period up to 2030. The Plan assumes several areas of development of competition policy and consumer protection.

The CIS member countries have an increasing understanding of the urgent need for prompt amendments to domestic legislation (including antimonopoly) to meet the requirements dictated by modern reality. However, the main major players in the digital platform market are companies from the United States and China. Companies that would operate in the CIS member countries are not among the market leaders. The issue of providing citizens with access to digital goods is quite acute—the widespread creation of high-quality infrastructure.

As noted in the Recommendations on Cooperation of the CIS member states in the field of digital development, an urgent problem is the formation of a comprehensive legislative regulation of relations arising from the development of the digital economy (including ensuring the security of the information environment), for example, in the form of the Code of Digital Development of the Information Society of the CIS countries.

## CONCLUSIONS

The use of digital technologies in one way or another has become an everyday reality for more than half of the world's inhabitants, which is radically changing the global economy, in which supply and demand are realized on digital platforms that have become important intermediaries

between the manufacturer and the consumer. Technology companies that have shaped the new economic reality have turned into Big Tech. Their degree of economic concentration is so great that they compete only with each other, which allows us to speak of such a predominant form of competition in the global digital market as oligopoly, and in the situation with stores Apple and Google apps, it is already possible to talk about a duopoly. The consequence of the described processes is growing inequality, depriving most of the world's population of opportunities to realize their creative ambitions, including the creation of start-ups and launching their developments to the market, as well as a decrease in innovative activity in the economy as a whole. What is happening raises the question of the need for stricter pro-competitive regulation in the digital sector of the economy of different countries. In fact, the United States, the EU, and the CIS countries today face the same problems of legislative antimonopoly regulation and law enforcement practice. However, our research has shown that the fight against monopolies in the United States and the EU is more effective, since they are the homelands of modern digital giants and historically have a longer tradition of antitrust legal regulation. In the EU, *ex ante* regulation and *ex post* sanctions and fines are envisaged by the new legal framework to be adopted from Commission's proposal of December 2020 on Digital Markets Act and on Digital Services Act.

The CIS countries only turned to the market economy in the 1990s, and many norms of law were borrowed from Western countries, without properly adapting them to the national legal systems. Moreover, the United States has a case law that allows the government to respond more quickly to the situation with the monopolization of markets by digital giants. It is advisable for the states in the post-Soviet space to adopt general antimonopoly legislation—not within the framework of the CIS, but within the framework of the Eurasian Economic Union.

## REFERENCES

- Brodley, J. F. (1987). The economic goals of antitrust: Efficiency, consumer welfare, and technological progress. *New York University Law Review*, 62, 1020–1053.
- Crémer, J., de Montjoye, Y.-A., Schweitzer, H. (2019). *Competition policy for the digital era*. European Commission. <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>

- FAS RF. (2021). *FAS Russia will check the information about the purchase by Yandex.Taxi*. <https://fas.gov.ru/news/31105> (In Russian).
- General Electric Digital. (n.d.). *What is predix platform?* <https://www.ge.com/digital/iiot-platform>.
- Hartley, T. C. (1998). *Fundamentals of European community law*. Oxford University Press.
- Kirkwood, J. B., & Lande, R. H. (2008). The fundamental goal of antitrust: Protecting consumers, not increasing efficiency. *Notre Dame Law Review*, 84(1).
- Mesropyan, V. R. (2020). *Digital platforms: New market power*. Digital Knowledge Platform Agroecommission. <https://agriecommission.com/base/cifrovye-platformy-novaya-rynochnaya-vlast> (In Russian).
- Skrupskaya, Y., Skibina, V., Taratukhin, V., & Kozlova, E. (2022). *Digital platforms, competence development center in business informatics of the higher school of business*. Springer.
- Vorozhevich, A. S., & Tretyakov, S. V. (2017). On the utility of intellectual rights, compulsory licenses and bureaucratic rents. *Law*, 8, 155.



# Cost of Exclusion, a New Measure of Platform Dominance

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## INTRODUCTION

One of the fundamental elements in the formation of the modern information economy is digital platforms. The end of the twentieth and the beginning of the twenty-first century are characterized by a platform revolution (Choudary et al., 2016). A digital platform generally refers to a space which provides the basis of services on the Internet. Companies that provide digital platform services are called digital platformers. Typical of these are the gigantic IT companies such as Google (Alphabet), Amazon, Facebook (Meta), and Apple (collectively known as GAF A) in the United States, or Baidu, Alibaba, and Tencent (BAT) in China. On 1 March,

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2021, Yahoo Japan Corporation and LINE Corporation were merged into Z Holdings Corporation, which is referred to as the coming of a “Japanese GAFA” company (Nakashima, 2022). Other platform companies are also world-famous: Uber, Airbnb, BlaBlaCar, etc. There is a versatile penetration of platforms into all aspects of the activity of each person, which is related to work, life, and leisure.

According to the MIT Sloan School of Management, as early as 2013, 14 of the top 30 global brands by market capitalization were sub-platform companies already established and now dominating the arena that buyers, sellers, and a host of third parties connect to in “real-time mode” (Schwab, 2016). Recently, this trend has only intensified.

Thus, the strengthening of the role of digital platforms on a global scale—turning them into a socially significant good and at the same time an influential economic and social force that dominates the national, regional, or even global market—forms the problem of access to these platforms by the population; in other words, there is a problem of inclusion or exclusion from them (exclusion), and therefore a problem its significance and cost both for society as a whole and for the individual.

## METHODOLOGY

The methodological basis of the research is a system of philosophical approaches, general scientific, special-scientific, and proper legal methods. The interdisciplinary approach provided multidimensionality and versatility in the study of the development and operation of digital platforms, their dominance in the modern digital market, and interaction with users. The dialectical method of studying supranational legal phenomena made it possible to connect them with the dynamic development of digital platforms and their dominance in the market. The synergetic approach played a significant role, since the law in the information society is designed to provide a mechanism for the legal regulation of a complex of social relations related to the activities of digital platforms. The system method made it possible to study various aspects of the functioning of digital platforms, their interaction with users, and the impact on the national economies of various states in their unity and interconnection.

The concrete sociological method allowed the authors to analyze the jurisprudence of the EU Court of Justice. The formal legal method contributed to the analysis of the legal framework of the European Union, making it possible to clarify the content and meaning of provisions, terms,

and categories that are important for this study. The predictive method made it possible to determine priority areas for regulating information relations and developing certain aspects of regulating the issues of the functioning of digital platforms in the context of their dominant position.

## RESULTS

Leading researchers of the “platform revolution” define a digital platform as “a business based on the creation of value through interaction between external producers and consumers. It provides an open infrastructure for participants in interactions and establishes for them the institutional “rules of the game”, that is, certain regulatory regimes. The main purpose of the platform is to connect users and facilitate the exchange of products or social currency between them, contributing to the creation of value for all participants” (Choudary et al., 2016).

However, this definition is not perfect as it only focuses on the business side and external aspects, whereas the platforms are more universal.

The digital platform should be considered not only a technical tool but also a carrier of standards (rules) that form uniform norms and organization architecture for all social and economic agents. The purpose of the platforms is to create as many social networks as possible by removing existing (physical) obstacles and creating conditions for establishing new social ties and ensuring the development of creative cooperation.

Any activity related to the creation and distribution of information has the potential to become the basis for the formation of a digital platform. First of all, these are areas of activity where information is produced (education and the media), analyzed (demand assessment, trend identification), aggregated, etc. This, to some extent, makes up almost every aspect of human activity.

The platform as a model (excluding the digital component) is a very ancient invention of mankind. Back in the days of primitive society, there was an effective platform model in the form of subsistence farming, when everything needed was produced within the economic unit and satisfied the needs of the participants in this platform.

In the transition from natural to commodity production, a “market” arises as a set of relations for the exchange between buyers (consumers) and sellers (suppliers) of goods and services. The market functioning model also fully complies with the definition of a platform without taking into account the digital component. The division of labor, as one of the



main drivers of progress, contains the logic of both platform and linear models. Platform logic can be traced in the spatial coordination of various operations in the production of the final product, or linear coordination in the sequential order of their execution. Only during the heyday of industrialism (Fordism and Taylorism) does a linear (conveyor) model of production begin to dominate to a certain extent, aimed at meeting the needs of the mass consumer. The post-industrial era is primarily characterized by the emergence of pre-digital networks (for example, Walmart), and then by digital platforms.

When analyzing the model of interaction within the digital platform, the question arises regarding its completeness and redundancy. Based on the essence of the phenomenon, the presence of “participants” and “value units” is indisputable. Maximizing the volume of value of key interactions on the platform occurs through three main functions: attraction, stimulation, and combination. Firstly, the platform needs to involve producers and consumers even before the interaction between them begins. Secondly, the platform should encourage interaction between producers and consumers; rules and instruments should create the necessary conditions for an accelerated exchange and circulation of values. Thirdly, after attracting and stimulating, there should be a combination of producers and consumers for the mutually beneficial use of information about each other, which also provides for the creation of appropriate conditions on the platform.

Also, from the standpoint of the evolutionary theory of economic changes, an important aspect is not only the attraction but also the exclusion of producers and consumers from the platform; that is, the existence of norms and restrictions on the use of the platform, in some cases, a manifestation of their dominant position, and sometimes its abuse (Nelson & Winter, 1982).

The network becomes more valuable to everyone on it when more people use it. The inverse is equally true. The larger the network, the greater the cost of exclusion from the network (Feld, 2018). When certain potential participants are excluded from the platform or their access to use the platform is terminated, a number of questions immediately arise: “Who benefits from their exclusion?”, “How fair is this decision?”, “What will its impact be on the market in the long term?”, “Who should play the role of an arbitration organization in resolving disputes?”.

For example, if the conditional “Global Uber” controls 100% of the taxi transportation market, then discrimination is possible due to blocking

access to the platform either for carriers or for consumers of transport services. More questions arise: “How can a person who does not have access to the platform use the taxi transportation service?”, “What should a potential carrier do, if it for certain reasons does not meet the conditions of the platform?”. Also, the issue of responsibility of the digital platform for the personal data of platform users, as well as events in the physical space that are the result of agreements on the digital platform, has not been fundamentally resolved. These issues are not abstract.

These problems are further exacerbated by the monopolization of leading digital marketplace platforms (Hermes et al., 2020). Google and Facebook have actually held a monopoly position in their market segments for more than 10 years. Due to their size (both in terms of the number of users and financial power), they can manipulate individual users and influence markets and governments. The issue of ensuring free competition within the digital space requires a thorough study and the formation of a consensus at the supranational level.

At the moment, there is no generally accepted definition of the terms “digital economy”, “digital sector”, or “digital markets”. Digital markets can be defined narrowly—identifying with digital platforms and those activities that exist as a result of their functioning—or broadly—for example, all activities that use digitized data or are conducted via the Internet (Crémer et al., 2019). Digital markets, even in the broadest sense, cannot operate in isolation from non-digital equivalents. Therefore, competition authorities should consider whether digital markets are properly defined, whether they only include digital substitutes, or whether physical substitutes should also be considered. While the specific provisions of many competition laws are similar, such as *the Sherman Act* (Federal Trade Commission, 2021), or *the Treaty on the Functioning of the European Union* (hereinafter—TFEU) (European Union, 2012), their application can differ significantly. These disagreements may arise due to several reasons: in particular, due to differences in the priorities and goals of the activities of the antimonopoly authorities, significant differences in interpretation by the courts, or due to various historical, legal, and state theories. Art. 102 prohibits the abuse of a monopoly position. The procedure for the application and the details of this provision are set out in Council Regulation (EC) No. 1/2003 of 16 December 2002 on the implementation of the competition rules laid down in Art. 81 and 82 of the Treaty, which may also be applied by national competition authorities (Council of the European Union, 2003).

The European Commission has historically defined markets narrowly; for example, in the *Microsoft/LinkedIn case*, it assessed the professional social media market to value the narrowest perceived product market (European Commission, 2017). The European Commission considers that product/service functionality and quantitative pricing tests are central to market definition analysis. However, these methods can be difficult to apply in the context of digital markets due to the ubiquity of multilateral platforms and zero-cost services. For example, the hypothetical monopolist test does not take into account the interdependence of pricing found in multilateral markets, or the importance of other elements of competition such as quality. Although the European Commission has previously considered multilateral digital platforms (Google/DoubleClick, Microsoft/Yahoo!, Microsoft/Skype, Facebook/Whatsapp, Verizon/Yahoo), the exact definition of the relevant market has not yet been established (OECD Competition Committee, 2020). In general, the multilateral platforms that are prevalent in digital markets pose several additional market definition issues to antitrust authorities that need to be addressed.

According to the antitrust law and the doctrine of the European Union, abuse of dominance is also not insufficient during the study of digital issues related to the economy. Antitrust authorities have applied traditional anti-competitive practices to many digital business practices. For example, the concept of linking and bundling goods/services (Art. 102(d) TFEU) was originally designed to apply to cases where more than one product is sold together; it has since been expanded and is now being applied to business practices in digital markets, including the integration of the software into the operating system of the computer and the priority display of its own services in the ranking of search engines.

The European Commission is now increasingly researching and investigating technology business models and ecosystems. In the *Google AdSense case*, the Commission examined Google's intermediary role in online advertising, whereby website owners sell advertising space to Google (and other advertising intermediaries) on the website owner's search results pages (European Commission, 2019). They are intermediaries and sold to advertisers so that the site owner can monetize ads based on search results. Google has agreed with the website owner which web properties or locations on those web properties will be made available to Google for brokering and selling to advertisers. The Commission argued that these terms prevented competing advertising intermediaries from accessing the

web property and, in turn, protected Google's overall search position. However, these limitations can be considered integral to the business model. Without knowing which websites were available (or which places on the site were available) for sale by Google, it could not promise advertisers attractive resources for their ads. Advertisers value ad space less if other intermediaries place multiple ads in the same space, which in turn devalues the inventory of website owners. Consequently, the mediation process will be less effective in monetizing the results of the website owner. If the site owner can choose from time to time whether the intermediary will sell its goods/services, then this is unlikely to affect competition.

In the *Google Android case*, the commission explored another two-sided market (European Commission, 2018). Google licensed the Android operating system free of charge to mobile phone manufacturers in exchange for pre-installation on mobile phones of the most cost-effective Google applications, including Google Play and Google search. Google has invested heavily in Android to match technical innovation in smartphones that compete primarily with Apple, and its operating system has generally been seen as one that expanded the production of affordable high-spec phones. The European Commission has concluded that Google has a monopoly position in the market for mobile operating systems, and that general searches and the requirement to pre-install Google Play and other Google applications amount to illegal linking. This was allegedly intended to limit access to the mobile search market for competitors, excluding some players. Furthermore, Google's stipulations that phone makers not develop premium (fragmented) versions of Android in exchange for pre-installed Google apps were found to limit competition from extended versions of Android.

It may also be questioned whether the benefits of "anti-fragmentation" in the Android ecosystem—which encourages developers to create many attractive programs for non-fragmented versions of the Android operating system—outweigh any potential competition between extended versions of Android that do not meet fragmentation requirements. In addition, it can be questioned whether such behavior was an integral part of the business model. Previous installs of revenue-generating apps on mobile phones were a reward for Google's significant investment in Android, which appears to have driven prices down and increased demand for mobile phones with the latest technology. Google has allowed mobile

phone manufacturers to compete aggressively against the innovation of proprietary mobile phone manufacturers like Apple (Graef, 2019a).

In the context of this decision, the question arises as to whether the pre-installation has any effect of restricting access to the relevant market. The Commission cites the *Microsoft case* as a precedent for prohibiting the pre-installation of programs (European Commission, 2004). However, this approach belongs to a different era, when operating systems were the main route to the relevant market and preloading over broadband was slow and unreliable (Graef, 2019b).

Conversely, in modern precedents, there is no restriction on access to the corresponding market, when the transition from one product to another is easy, and hardware platforms and application stores with multiple connections exist precisely to ensure smooth loading in seconds. The Court of General Jurisdiction saw no threat that preinstalling Skype on a Microsoft desktop computer would limit the ability to use competing voice applications in the *Microsoft/Skype case* (General Court of the European Union, 2013). Similarly, in the *Facebook/WhatsApp case*, the European Commission found that switching from one messaging app to another was free, easy, and low cost in terms of the power of smartphones (European Commission, 2014). Therefore, this is in line with the traditional approach, where decision-making practice assumes that there is no effect of restricting competition if competitors have ample opportunity to enter the relevant market.

In addition, in the summer of 2020, the European Commission launched a formal antitrust investigation to assess whether Apple violates Apple's rules for app developers distributing them through the App Store against the European Union antitrust law (European Commission, 2020a). The investigation concerns, in particular, the mandatory use of Apple's in-app purchase system and restrictions on developers' ability to inform iPhone and iPad users about cheaper alternatives to non-app purchases. The subject of the investigation is, among other things, the application of these rules to all programs that compete with Apple programs and services in the European Economic Area. Investigations are ongoing on separate allegations by Spotify and e-book/audiobook distributors regarding the impact of App Store rules on music and e-book/audiobook streaming competition. iPhone and iPad users can only download original apps (not available online) through the App Store.

Therefore, the commission is investigating, in particular, two restrictions applied by Apple in its agreements with companies that want to distribute programs to users of Apple devices:

- mandatory use of the system of purchases integrated into the Apple Application System (In-App Purchase—IAP) for the distribution of paid digital content. Apple charges app developers a 30% commission on all subscription fees through the IAP; and
- a limitation on the ability of developers to inform users about alternative options for making purchases outside of applications. While Apple allows users to consume content like music, e-books, and audiobooks purchased elsewhere (such as the program developer’s website) also in the app, its policies prevent developers from informing users about purchases that are usually cheaper (European Commission, 2020b).

Even more, on 11 March 2019, music streaming provider and Apple Music competitor Spotify filed for two provisions in Apple’s Developer License Agreements and related App Store Review Guidelines and their impact on competition in the music streaming market. After a preliminary investigation, the commission expressed concerns that Apple’s restrictions could prevent music streaming services on Apple devices from competing. Apple’s competitors have decided to either disable the in-app subscription feature altogether or raise the price of the in-app subscription. In both cases, they were not allowed to inform users about alternative subscription options outside of the apps. It follows that Apple’s IAP commitments give full control over its competitor’s customer relationships that subscribe to apps, thereby depriving its competitors of important customer data, while Apple can obtain valuable activity data and offers from its competitors.

In addition, the company “Epic Games”—the developer of the game “Fortnite”—also filed a statement about Apple’s activities to the European Commission. Epic Games argued that Apple’s carefully crafted anti-competitive restrictions completely eliminated competition in-app distribution and payment processes. The statement noted, in part, that this causes consumers to pay higher prices, it gives Apple too much control over developers on its platform (Reuters, 2021). In view of the foregoing, it is likely that the Commission will qualify the aforementioned

activities of Apple as an abuse of a dominant position, under Art. 102 TFEU.

In addition, one of the main points of the digital platform's dominance, and consequently the cost of exclusion, is the European Commission's combatting unreasonable geo-blocking (i.e., commercial practices that prevent online shoppers from accessing and purchasing a product or service on a website located in another Member State, or that automatically redirect them to a local site). Geo-blocking may also occur if an attempt is made to access or purchase copyrighted online content in another Member State (Reda, 2020).

In 2018, the geo-blocking Regulation (Council of the European Union, 2018) was adopted, according to which three specific situations of unjustified geo-blocking are defined, namely:

- the sale of goods without physical delivery (for example, a client from France intends to buy a refrigerator and finds the best offer on a Czech website. The buyer has the right to order the goods and pick them up at the seller's premises or independently organize delivery to their home);
- sale of services provided electronically (for example, a Croatian consumer wants to purchase hosting services for his website from an Austrian company. Now they will have access to the service, and they will be able to register and buy this service at no additional cost compared to the Croatian consumer); and
- the sale of services provided in a specific physical location (for example, a Belgian family visits a Dutch theme park and wants to take advantage of a family discount on the cost of admission. The discounted price will be available to the Belgian family).

It is also necessary to pay attention to the legislative initiatives of the European Union, which in one way or another will have an impact on the implementation of business entities in digital markets. The European Commission has proposed two legislative initiatives: the Digital Services Act (DSA) (European Commission, 2020c) and the Digital Markets Act (DMA) (European Commission, 2020d). The DMA was adopted by the European Parliament in a plenary vote on 15 December, 2021 (Euractiv, 2021). Later, on 20 January, 2022, the European Parliament adopted the proposed DSA with a big majority, paving the way for talks between the

Commission and Member States (Heldt, 2022). Thus, the EU took a big step toward its goal to become a “global role model for the digital economy” (European Commission, 2019).

The main objectives of these sister laws are:

- creating a safer digital space in which the fundamental rights of all users of digital services will be protected;
- creating equivalent conditions for stimulating innovation, growth, and competitiveness both in the European single market and worldwide.

Digital services include a large category of online services, from simple websites to Internet infrastructure services and online platforms. The rules specified in the DSA primarily apply to online intermediaries and platforms: for example, online marketplaces, social media, content sharing platforms, app stores, and the online travel and rental marketplaces. The DMA includes rules governing online gatekeeper platforms. Intermediary platforms are digital platforms that play a systemic role in the domestic market, which act as so-called “gateways” between businesses and consumers for essential digital services. Some of these services are also covered by the DSA, but for different reasons and with different types of provisions (Euractiv, 2022).

It should be noted that Russia, China, and the USA, along with international integration actors like Eurasian Economic Union are not far behind the EU’s initiatives, especially in the conditions of the new trade and economic regionalism (Entin et al., 2021). Moreover, the Chinese have already adopted their version of the EU sister laws, sending a clear message to the online platforms that antitrust enforcement in the sector could be activated to counter anti-competitive practices and the resulting harm to the consumers’ interests (Svetlicinii, 2021).

## DISCUSSIONS

The problem of regulating the functioning of digital platforms—in particular, their interaction with users—remains an issue under discussion (Strowel & Vergote, 2017). On the one hand, the less regulation, the more natural the development of platforms, and on the other hand, the higher the risks of the unpredictable impact of platforms on existing



markets and existing socio-economic institutions. The element of regulation specific to digital platforms is inclusiveness (rules for user access to digital platforms), security of personal data, collection of large amounts of data, and their dominant position in the market.

The digital economy has changed the competitive conditions in the markets where digital platforms operate (Van Dijck et al., 2019). The above indicates the topicality of this problem; at the same time, this issue remains relevant to this day, with no solution having been found or finalized due to its complexity, permanent changes due to the emergence of new digital technologies, and their impact on the state of the markets, as well as due to various approaches to determining the best ways to regulate economic competition in the digital era (Zavjalov et al., 2019).

It can be argued that the development and current dominance of digital platforms has contributed to the digital divide at the macro level. In order to analyze the implications of global platforms for emerging inequalities, it is necessary to understand how information begins to acquire economic value. Weber distinguishes, firstly, raw data received by their suppliers; secondly, information products produced by companies have added value; thirdly, consumers of these information products (Weber, 2017). In particular, Facebook (Meta) acts as both a provider of data and a producer of information products, and can also return these products to users in the social interaction system and sell them to companies as advertising space.

A kind of fundamentally new “Global Data Value Chain” (GDVC) is being formed, in which most countries are data providers, and only large platforms can receive value-added information products from them (and monetize them). Such unequal participation of countries in the new international division of labor leads to previously unknown market distortions since platforms in this context provide absolute dominance. Traditional companies, in turn, will be forced to share their data with global platforms in exchange for access to the latest applications and technologies. Despite the well-known comparative cheapness of labor in developing countries, it will still be prone to automation, the gap in the data economy between platforms and these countries will raise, and their dependence will increase, which will subsequently impact their interaction with consumers, boosting the cost of exclusion and the need to develop the regulatory framework. At the same time, the experience of such a developed integration entity as the European Union will be of particular value.

## CONCLUSIONS

In general, digital platforms have the potential to transform global markets and increase competition while improving the well-being of consumers and society at large. However, they may be perceived as unfair competitors by traditional businesses, as the platforms usually do not meet the same regulatory requirements. In general, there are several risks that developing countries will further lag behind in the digital economy. As the innovation capacity of global platforms increases, developing countries may lose the ability to develop local innovation ecosystems as developer resources and capacity become increasingly concentrated on technologies for other regions, thus being excluded from their use.

Digital platforms are also important for economic and social resilience (Entin & Galushko, 2021) to events such as the Covid-19 pandemic, as they enable economic activity to be sustained by reducing the need for physical interaction, thereby further raising the cost of exclusion.

Despite many targeted interventions in specific sectors at the European Union level, there are currently significant legal gaps that need to be addressed. The accelerated digitalization of society and the economy has created a situation where several large platforms control important ecosystems in the digital economy. They have become so-called “entrance points” or “intermediaries” in digital markets and can act as private lawmakers. However, these rules sometimes lead to unfair conditions for users of these platforms, as well as less choice for consumers, raising the cost of exclusion from access to them. With these developments in mind, the European Single Market requires a modern legal framework that guarantees the safety of users on the Web, puts fundamental rights governance at the forefront, maintains a fair and open environment for online platforms, and eliminates any manifestations of discrimination and the use of dominant market position.

## REFERENCES

- Choudary, S. P., Van Alstyne, M. W., & Parker, G. G. (2016). *Platform revolution: How networked markets are transforming the economy — And how to make them work for you*. W. W. Norton & Company Inc.
- Council of the European Union. (2003). *Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty*. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32003R0001>

- Council of the European Union. (2018). *Regulation (EU) 2018/302 of the European Parliament and of the Council of 28 February 2018 on addressing unjustified geo-blocking and other forms of discrimination based on customers' nationality, place of residence or place of establishment within the internal market and amending Regulations (EC) No 2006/2004 and (EU) 2017/2394 and Directive 2009/22/EC*. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32018R0302>
- Crémer, J., de Montjoye, Y., & Schweitzer, H. (2019). *A report: Competition Policy for the digital era*. Brussels. <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>
- Entin, M., & Galushko, D. (2021). Resilience of the European Union as a determinant of its post-pandemic development. *Eastern Journal of European Studies*, 12, SI, 212–230. <https://doi.org/10.47743/EJES-2021-SI10>
- Entin, M., Galushko, D., & Kovalev, V. (2021). New trade and economic regionalism: a space of opportunities in greater Eurasia. *InterEULawEast*, 8(2), 161–174. <https://doi.org/10.22598/iele.2021.8.2.8>
- Euractiv. (2021). *EU parliament adopts regulation targeting internet giants*. <https://www.euractiv.com/section/digital/news/eu-parliament-adopts-regulation-targeting-internet-giants/>
- Euractiv. (2022). *Access to platform data key to DSA, says Nobel Peace Prize winner*. [https://www.euractiv.com/section/digital/news/access-to-platform-data-key-to-dsa-says-nobel-peace-prize-winner/?utm\\_source=piano&utm\\_medium=email&utm\\_campaign=I8624&pnspid=t7ZpDz1IbKMe2PKYrC2ISoKD4xulVpBqMLGmLRisBlmv4giIEfcWgLM5MXzln2\\_IbUCEM](https://www.euractiv.com/section/digital/news/access-to-platform-data-key-to-dsa-says-nobel-peace-prize-winner/?utm_source=piano&utm_medium=email&utm_campaign=I8624&pnspid=t7ZpDz1IbKMe2PKYrC2ISoKD4xulVpBqMLGmLRisBlmv4giIEfcWgLM5MXzln2_IbUCEM)
- European Commission. (2004). *Commission Decision of 24.03.2004 relating to a proceeding under Article 82 of the EC Treaty (Case COMP/C-3/37.792 Microsoft)*. [https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=1\\_37792](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_37792)
- European Commission. (2014). *Case M.7217 – Facebook/ WhatsApp Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004*. [https://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp\\_result&policy\\_area\\_id=2&case\\_number=7217](https://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp_result&policy_area_id=2&case_number=7217)
- European Commission. (2017). *Case M.8124 – Microsoft / LinkedIn Commission decision pursuant to Article 6(1)(b) in conjunction with Article 6(2) of Council Regulation No 139/2004 and Article 57 of the Agreement on the European Economic Area*. [https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=2\\_M\\_8124](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=2_M_8124)
- European Commission. (2018). *Commission Decision of 18.7.2018 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union (the Treaty) and Article 54 of the EEA Agreement (AT.40099 – Google Android)*. [https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=1\\_40099](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_40099)

- European Commission. (2019). *Summary of Commission Decision of 20 March 2019 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement (Case AT.40411 – Google Search (AdSense))*. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52020AT40411%2803%29>
- European Commission. (2020a). *Commission opens investigations into Apple's App Store rules*. [https://ec.europa.eu/competition/elojade/isef/case\\_details.cfm?proc\\_code=1\\_AT\\_40437](https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_AT_40437)
- European Commission. (2020b). *Antitrust Commission opens investigations into Apple's App Store rules*. [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_1073](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1073)
- European Commission. (2020c). *Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC. COM/2020/825 final*. <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2020%3A825%3AFIN>
- European Commission. (2020d). *Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act). COM/2020/842 final*. <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2020%3A842%3AFIN>
- European Union. (2012). *Consolidated version of the Treaty on the Functioning of the European Union*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>
- Federal Trade Commission. (2021). *The Antitrust Laws*. <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws>
- Feld, H. (2018, July 19). Part III: Cost of Exclusion as a Proxy for Dominance in Digital Platform Regulation [Blog post]. *Public Knowledge*. <https://www.publicknowledge.org/blog/part-iii-cost-of-exclusion-as-a-proxy-for-dominance-in-digital-platform-regulation/>
- General Court of the European Union. (2013). *Press Release No 156/13 Luxembourg, 11 December*. <https://curia.europa.eu/jcms/upload/docs/application/pdf/2013-12/cp130156en.pdf>
- Graef, I. (2019a). Differentiated treatment in platform-to-business relations: EU competition law and economic dependence. *Yearbook of European Law*, 38, 448–499. <https://doi.org/10.1093/yel/yez008>
- Graef, I. (2019b). Rethinking the essential facilities doctrine for the EU digital economy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3371457>.
- Heldt, A. (2022). *Gearing up for the Digital Decade? Assessing the enforcement mechanisms of the EU's platform regulation bills*. <https://eu.boell.org/en/2022/01/06/gearing-digital-decade-assessing-enforcement-mechanisms-eus-platform-regulation-bills>

- Hermes, S., Pfab, S., Hein, A., Weking, J., Böhm, M., & Krcmar, H. (2020). *Digital Platforms and Market Dominance: Insights from a Systematic Literature Review and Avenues for Future Research*. PACIS 2020 Proceedings, 42. <https://aisel.aisnet.org/pacis2020/42>
- Nakashima, M. (2022). *Digital Platforms and the Law*. <http://global.chuo-u.ac.jp/english/features/2022/01/12546/>
- Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Belknap Press of Harvard University Press.
- OECD Competition Committee. (2020). *Comments by the Business at OECD Competition Committee to the OECD Global Forum on Competition Abuse of Dominance in Digital Markets*. [https://biac.org/wp-content/uploads/2020/11/GFC\\_Abuse-of-Dominance-in-Digital-Markets\\_2020-11-23\\_FINAL-1.pdf](https://biac.org/wp-content/uploads/2020/11/GFC_Abuse-of-Dominance-in-Digital-Markets_2020-11-23_FINAL-1.pdf)
- Reda, J. (2020). Geoblocking: At odds with the EU single market and consumer expectations. In P. Szczepanik, P. Zahrádka, J. Macek, & P. Stepan (Eds.), *Digital Peripheries*. Springer. [https://doi.org/10.1007/978-3-030-44850-9\\_5](https://doi.org/10.1007/978-3-030-44850-9_5)
- Reuters. (2021). *Epic games steps up Apple fight with EU antitrust complaint*. <https://www.reuters.com/article/us-eu-apple-epic-games-antitrust-idUSKBN2AH0MO>
- Schwab, K. (2016). *The fourth industrial revolution*. World Economic Forum.
- Strowel, A., & Vergote, W. (2017). *Digital platforms: To regulate or not to regulate? Message to regulators: Fix the economics first, then focus on the right regulation*. [https://ec.europa.eu/information\\_society/newsroom/image/document/2016-7/uclouvain\\_et\\_universit\\_saint\\_louis\\_14044.pdf](https://ec.europa.eu/information_society/newsroom/image/document/2016-7/uclouvain_et_universit_saint_louis_14044.pdf)
- Svetlicinii, A. (2021). *China to discipline online platforms with antitrust enforcement?* <http://competitionlawblog.kluwercompetitionlaw.com/2021/02/17/china-to-discipline-online-platforms-with-antitrust-enforcement/>
- Van Dijck, J., Nieborg, D., & Poell, T. (2019). Reframing platform power. *Internet Policy: Journal on internet regulation*, 8(2). <https://policyreview.info/node/1414/pdf>
- Weber, S. (2017). Data, development, and growth. *Business and Politics*, 19(3), 397–423.
- Zavjalov, D. V., Zavjalova, N. B., & Kiseleva, E. V. (2019). Cifrovye platformy kak instrument i uslovie konkurentosposobnosti strany na mirovom rynke tovarov i uslug. *Jekonomicheskie Otnoshenija*, 9–2, 443–454. <https://doi.org/10.18334/eo.9.2.40608>



# Platforms and Related Market Competition

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## INTRODUCTION

In order to give the most complete description of the market, it is necessary to analyze its structure, infrastructure, and system. An effectively functioning market structure is the key to the successful development of the market economy as a whole. The structure of the market is the internal structure, location, and order of individual elements of the market, as well as their share in the total volume of the market (Sazhina, 2007). Depending on the number of sellers and buyers, their market share, the degree of uniformity of the product, the presence and

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magnitude of barriers to market entry, the symmetry (asymmetry) of information in the market, or the impact of sellers and buyers on the market price, there are types of market structures: the market of perfect competition, the market of working competition, the market of monopolistic competition, oligopoly, or pure monopoly (Rozanova, 2022). The market of perfect competition is a kind of ideal model, characterized by achieving stability and benefits for all market participants (Magretta, 2013). With this model, there is no dominant firm that would occupy a large market share (Mokronosov & Mavrina, 2014). The subjects of market relations are highly mobile, there are no obstacles to entering the market, and there is full awareness of pricing. There is no shortage or surplus of goods (Porter, 2005b).

The market of working competition differs from the market of perfect competition by the presence of a competitive environment. The mobility of resources between markets is also high, but there are also potential competitors, as well as a small number of large firms-sellers or buyers. At the same time, it cannot be said that any firm occupies a dominant position. Market information is characterized by acceptable accessibility, and new markets are developing. In order to prevent a negative scenario of the development of competition, it is necessary to create uniform rules of the game for all subjects, to introduce a mechanism for monitoring the actions of owners of digital platforms, to enable users of the digital platform to switch to another platform with the possibility of transferring their data (eliminate barriers to transition), to ensure a high degree of protection of trade secrets and personal data of users from dissemination and use for selfish purposes (Ivanov, 2018), and, of course, to develop and then improve the antimonopoly regulation of the digital environment as a whole (OECD, 2018).

A comparison with the European Union legal framework on digital platforms, freedom to provide services, anticompetitive behaviors, and threat of monopolies is helpful to develop an overall analysis on these contemporary issues.

## METHODOLOGY

Some theories of competition will be explored for their application to digital technology. Competition will be highlighted through the pros and cons of technological options, both under Russian and EU relevant law. Digitalization of the markets, rapidly sped up by the Covid-19

pandemic, was already on the move before this shift, triggered by globalized relations. While Russia relies on authoritative rules adopted at the national level, the European digital package is an output of European digital strategy, remarking the prompt effort to cutting-edge legislation accessible to all its member states. If the digital package aims to rule on the substantive aspects of online activities, including some contents too, the EU pays broad attention to Internet as network infrastructure, added to trans-European networks (TENs)—transports, energy, telecommunications—entailing huge investments.

## RESULTS

### *Russia*

Exploring the structure of commodity markets, it is worth turning to the theories of perfect competition proposed by Bain and Mason, who argued that competition and the market are interrelated and complementary phenomena. From their point of view, such elements of production as technology, the scale of output, the presence or absence of differentiation of production (product line, which can be estimated on the basis of the BCG matrix), the spectrum of sellers and buyers of different groups (differentiation in terms of sales volumes, large and small wholesale, retail, e-commerce channels), and the location of sellers and buyers are key and form the fundamental market conditions under which companies operate. These factors also reflect the industry situation and dynamics—for example, the degree of stochasticity, variability, and uncertainty (Robinson, 1986). The Beynon-Mason approach is used to describe the basic features of a competitive market, and monopoly in the market reduces the efficiency of the market economy, significantly complicates the entry of new companies into the market, and limits the development of the commodity market as a whole. Stigler and Demsetz criticized the static theory described above (Stigler, 2000); in this case, we agree with Stigler and Demsetz, especially since the modern concepts of strategic marketing by Aaker and the theory of competition and the empirical school of Porter argue that the market is in many ways both a self-organized structure of seller-buyer relations-market development institutions, and has the need for organized tools in the form of regulators. Regarding the presented research topic, the regulators are, first of all, the antimonopoly authorities (Porter, 2005a).



The market of monopolistic competition is characterized by a large number of buyers and sellers, along with the absence of barriers to entry and exit to the market. Such a market combines competition and monopoly. By offering a differentiated product, each seller forms his own micro-market, in which he acts as a monopolist, but at the same time his product is subject to competition from more advanced products that could replace it. Therefore, the role of advertising and its impact on consumer behavior is increasing.

An oligopoly is characterized by a small number of market entities, and they are large economic agents that set significant barriers to entry or exit from the market. Moreover, they have a great influence on price setting and consumer behavior. Small sellers act “in the shadow” of dominant entities, looking for small unoccupied niches. This is a type of market structure with imperfect competition.

A pure monopoly is a market structure characterized by the presence of only one seller of a given type of product or service. The characteristic features of this situation are: the uniqueness of the product, ownership of the main types of raw materials, low average costs, patent rights, and special privileges (licenses). Pure monopolies usually arise where there are no alternatives to this product or service, so there are no close substitutes. A vivid example of a pure monopoly is a monopoly on natural resources. A monopoly allows a firm to set a high price and make a big profit.

It is impossible to imagine a situation of perfect competition in the market of digital platforms, since there are several major players (in each segment) that influence the setting of prices and consumers. Developing, digital platforms are likely to create a monopoly situation in the market. Firstly, a digital environment is formed for the development and implementation of applied software and hardware solutions; then a communication infrastructure is provided, on the basis of which it is already possible to build business models for the interaction of sellers and buyers based on digital platforms. Digital platforms that form the digital infrastructure of the market and manage users based on the results of big data processing form a monopoly on the digital infrastructure of the market (Zhukova, 2018).

On the one hand, digital platforms give people more comfort and improve the quality of life. For businesses, the digital environment provides opportunities for growth and expansion. However, the lack of effective regulatory instruments and the underdevelopment of national and international legislation poses a threat of monopolization of the

digital environment and loss of control over the actions of owners of digital platforms. Thus, digital platforms can be a tool for the development of the state's economy. However, penetrating into all spheres of life, digital platforms strengthen their influence and begin to control business, pricing, the ratio of supply and demand, etc. Therefore, the state should not allow monopolization of the market in this area, on the one hand, and develop digital platforms for the benefit of society, on the other. Digital platforms are also dangerous for traditional business, as they are gradually replacing it. In view of this, the role of antimonopoly legislation is now increasing—it is not possible to avoid anticompetitive behavior without interference and regulation by the state. Indeed, the law is faced with new phenomena that cannot be regulated by legislation that was developed to regulate absolutely different relations. For example, pricing now depends little on the actual costs incurred. Intellectual labor does not have a basic material component, based on which it is possible to determine the cost. Therefore, the revenues of digital platforms are disproportionately high in relation to the labor and investment spent (Tsarikovsky et al., 2019: 15). At the same time, the price of the “product” does not necessarily have to be high (it can tend to zero), while nevertheless providing advantages. Neither from the point of view of profit, nor from the point of view of social security, is any reason why the prices charged to users reflect the corresponding costs of providing them with services. The party that is the most “valuable” will be “subsidized”. For example, access to a digital platform can be free, which will attract more users, and thus the platform will be able to attract more advertisers. There may also be a diametrically opposite situation, when, for example, a student cannot have access to a scientific database due to its high cost. The big problem is that digitalization contributes to the globalization of monopolies (BEUC, 2019). Such a global space is the Internet (Broadbent, 2020). Monopolies seek to extract profits by artificially restricting competition. At the same time, using artificial intelligence (for example, the creation of targeted advertising), monopolies can refer to the fact that artificial intelligence uses an autonomous scenario that does not depend on the will of a person, for example, to optimize pricing. In this regard, the issue of responsibility for the actions of artificial intelligence is particularly acute, which has also not yet been settled. Although the Decree of the President of the Russian Federation dated October 10, 2019 No. 490 “On the development of artificial intelligence in the Russian Federation” emphasizes that the development of artificial intelligence technologies should not limit

competition, but, on the contrary, should stimulate it. It is obvious that in the context of globalization, it is becoming increasingly difficult to control and monitor compliance with the requirements of antimonopoly legislation (Artemyev, 2018; Ivanov, 2018).

That is why the proper legal framework for the “digitalization” of antimonopoly legislation is currently being widely discussed. The question arises: does the legislation need to be completely reworked, or is it necessary to establish special regulatory regimes? It seems that there is not and cannot be a correct answer to this question, but it is necessary to approach this topic consciously in connection with specific problems in practice.

Legislative regulation is based on typical conflicts of interest that have often arisen in the past. Digitalization has fundamentally changed the information basis of the economy, as well as the dynamics of markets and competition. Therefore, the current legal regimes cannot give proper results in cases where the balance of interests changes significantly. On the other hand, antimonopoly legislation has been developed in such a way as to respond to constantly changing market conditions and take into account the specifics of different markets. Flexibility is a special strength of the antimonopoly legislation with its open and general rules, through which special attention can be paid to the new phenomena of the digital age and new positions of power. However, numerous laws and regulations may unduly restrict competition in the market. Governments can reduce unnecessary restrictions by applying the methods described in the OECD 4.0 Competition Assessment Toolkit 2019 (OECD, 2019). The toolkit provides a general methodology for identifying unnecessary constraints and developing alternative, less restrictive policies that still allow the government to achieve its goals. A key element of the Toolkit is the “Competition Checklist”, which asks a number of questions to identify laws and regulations that may restrict competition.

In addition to economic regulation, governments regulate the behavior of enterprises to achieve important goals in areas such as health, safety, and environmental quality.

It is important to balance the interests of society, the state, and individual citizens. It should be noted that the current antimonopoly regulation does not take into account the specifics of the development of digital technologies and the functioning of the economy in modern conditions. Obviously, it is necessary to implement a comprehensive restructuring of antimonopoly legislation in the field of regulation of the digital environment in general, and of digital platforms in particular.

In the EU, the same balance must be ensured between *innovation* and *European citizens' rights*; the second part of this contribution is devoted to this.

### *European Union*

Among the most important priorities of the European Commission chaired by Ursula von der Leyen (in charge since December 2019), a 'Europe fit for the Digital Age' is one of the most compelling (Bassot, 2020). On 15 December, 2020, the Commission proposed a digital package, composed of a Digital Markets Act and a Digital Services Act. Under the Commission's digital strategy (European Commission, 2020a, 2020b) and taken together, they develop new guidelines for any user of digital networks in the EU internal market. Many issues are at stake which do not only affect competition rules. A crucial concern is on large online platforms acting as digital gatekeepers between businesses and citizens, having a strong impact on the latter's choice and behavior and introducing a lack of transparency and loss of competition in the digital environment. Whereas it is rather utopian to aspire to a neutral digital context, a purpose for every legal order is to manage innovative trends. Consumers of goods and services available by online platforms are now more empowered than offline customers, without ever making aware choices; it is not only tailor-made advertising influence decisions, but all digital space accessed is shaped by customized business proposals. Personal data need to be protected against both third parties' interference and theft following hackers' attacks. On online platforms, many illicit activities flourish, encountering very low obstacles, since any control is not effective wherever technology helps to hide more than to unveil.

The Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (COM, 2020b) and the Proposal for a Regulation of the European Parliament and of the Council on a Single Market for Digital Services (COM, 2020a) and amending Directive, 2000/31/EC, (DSA) are autonomous but complementary. They deal separately with two different sides of online platforms activities, and together they focus comprehensively on European digital internal market. Both acts refer to large digital platforms, defined as *gatekeepers* (Meyers, 2021). Under Art. 3, para. 1 DMA, a provider of core platform services can be designated as gatekeeper if: "(a) it has a

significant impact on the internal market; (b) it operates a core platform service which serves as an important gateway for business users to reach end users; and (c) it enjoys an entrenched and durable position in its operations or it is foreseeable that it will enjoy such a position in the near future” (Mariniello & Martins, 2021). Gatekeepers are often vertically integrated: they are digital platforms influencing the internal market by performing a systemic role creating bottlenecks between businesses and consumers for major digital services (Madiega, 2020). Some thresholds to be attained by providers of core platform services are clarified by Art. 3, para. 2 and, if the three of them are met, it starts a procedure of information exchange with the Commission. Under Art. 3, para. 2 (b), the provider performs core platform services if “...it provides a core platform service that has more than 45 million [10% of EU population, to be periodically recalculated] monthly active end users established or located in the Union and more than 10,000 yearly active business users established in the Union in the last financial year”. DMA aims to prevent unfair business practices, likely to occur for the big size of some online platforms, such as “online intermediation services, online search engines, operating systems, online social networking, video sharing platform services, number-independent interpersonal communication services, cloud computing services and online advertising services”,<sup>1</sup> and it provides for sanctions and fines for non-compliance,<sup>2</sup> while Art. 7 rules on compliance with obligations for gatekeepers, required to “ensure that these measures are implemented in compliance with Regulation (EU) 2016/679 and Directive, 2002/58/EC, and with legislation on cyber security, consumer protection and product safety”.<sup>3</sup> DMA is deemed consistent with EU law relevant on the matter, like P2B Regulation 2019/1150 on fairness and transparency for business users’ activities in online intermediation services, as well as the EU Charter on Fundamental Rights, the European Convention of Human Rights, the EU’s consumer law acquis, all EU law on data protection, EU law on copyright, and European law on payment services.

DMA is aware that large online companies can control the entire platform ecosystems, thus playing a monopolistic role, restricting access

<sup>1</sup> Preamble (13) and Art. 2, para. 2.

<sup>2</sup> Articles 25 and 26.

<sup>3</sup> Article 7.

to online networks from smaller companies and distorting relationship between business and end users (Petrányi et al., 2021b). It tries to “minimise(s) the detrimental structural effects of unfair practices ex ante, without limiting the ability to intervene ex post under EU and national competition rules”.<sup>4</sup> The Commission has investigative, enforcement, and monitoring powers<sup>5</sup> toward digital platforms qualified as gatekeepers, and it makes use of them in the time span of their activities, by a broad market investigation.<sup>6</sup> The Commission’s proposal attempts to avoid both over-regulation and lack of intervention, envisaging a targeted manner to impact on online companies designated as gatekeepers, in order to limiting their capacity to adversely affect European internal market.

DSA comes out from enhanced cross-border services, a trend already sped up for services at large, but mostly relevant for online services. Aware that national provisions ruling on them could only stress legal fragmentation and that online services are prominent for innovative interactions on the Internet (Barata et al., 2021)—which is transboundary in its true nature—by subsidiarity principle, the proposal’s purpose is that “harmonising the conditions for innovative cross-border digital services to develop in the Union, while maintaining a safe online environment, can only be served at Union level”.<sup>7</sup> Both businesses and citizens’ rights deserve to be guaranteed “by ensuring that action against illegal content online by providers of intermediary services is consistent, regardless of their place of establishment” (COM, 2020a: 6).

DSA was anticipated by two resolutions of the European Parliament, both adopted on 20 October, 2020. The first, on improving the functioning of the single market, calls upon a reform of EU law on electronic commerce, not disregarding the core principles of existing liability regime, envisaging DSA as a standard-setter at the global level, while boosting competition for digital services. The second, on adapting commercial and civil law rules for commercial entities operating online, claims for transparency, fairness, and accountability for digital services, while ensuring the protection of human rights, often at risk for outrageous content of activities carried out on online platforms and through them. Holding the

<sup>4</sup> DMA, 4.

<sup>5</sup> Chapter V.

<sup>6</sup> Chapter IV.

<sup>7</sup> DSA, 6.

key principles of e-Commerce Directive, the proposal aims to promote innovation in digital services, to guarantee fundamental rights often infringed by illicit online content, and to improve online safety and to set a legal regime to effective monitoring of providers of intermediary services, notably online platforms, like social media and marketplaces (Petrányi et al., 2021a). These platforms must be compelled to check and moderate content introduced on them, on advertising, and on algorithmic processes, since the largest platforms are able to have a deep impact on the economy and society. The operational threshold for these service providers has the same percentage than in DMA: 45 million recipients of the service, corresponding to 10% of the population in EU. Under DSA, member states where these service providers are established bear the responsibility to supervise their compliance with DSA obligations and to issue penalties for infringements if they are under their jurisdiction.<sup>8</sup> The proposal is a comprehensive framework for any categories of content, products, services, and activities on intermediary services. The Regulation does not define the illegal nature of such content, products, or services, but it stems from EU law or from national law consistent with Union law. Moreover, DSA is complementary to some specific European legal regimes, not affected by the Regulation and applied as *lex specialis* whenever rules on information society services are provided. The proposal remarks how ruling on specific sectors will not be involved by the Regulation,<sup>9</sup> being somewhat reminiscent of the Bolkestein Directive, 2006/123 on services.

The Regulation is also framed into Sustainable Development Goals achievement, as well as the European Democracy Action Plan.<sup>10</sup> The mechanism envisaged by DSA is based on cooperation between member states and the EU, because the former are ruling on due diligence requirements for providers of intermediary services, but these rules need to be coordinated under European legal harmonization,<sup>11</sup> lest both business and end users be hampered by bottlenecks in the chain of services provided through online platforms: “By using requirements that are

<sup>8</sup> Art. 42.

<sup>9</sup> See Art. 1, para. 5.

<sup>10</sup> It also considers the Commission Recommendation of 2018 on illegal content online, the EU Code of conduct of 2016 on countering illegal hate speech online, the Memorandum of Understanding of 2011 on the sale of counterfeit goods on the internet.

<sup>11</sup> Chapter III.

technology neutral, innovation should not be hampered but instead be stimulated”,<sup>12</sup> and “those rules should apply to providers of intermediary services irrespective of their place of establishment or residence, in so far as they provide services in the Union, as evidenced by a substantial connection to the Union” (COM, 2020a: Preamble 7). Accordingly, harmonized rules on due diligence obligations for providers of intermediary services must be set, but additional obligations will not be imposed on micro and small enterprises,<sup>13</sup> while online companies affected by these rules “should make reasonable efforts to verify the reliability of the information provided by the traders concerned” (COM, 2020a: [50] & Article 22). They are called to manage systemic risks entailed by their activities and to mitigate them.<sup>14</sup> Every member state nominates a Digital Service Coordinator to cooperate mutually<sup>15</sup> and with the Commission,<sup>16</sup> while administrative and judicial national authorities may issue orders against providers of intermediary services to act to removing illegal content.<sup>17</sup> The proposal provides also an independent advisory board of Digital Services Coordinators<sup>18</sup> chaired by the Commission, for the supervision of providers of intermediary services.

## DISCUSSIONS

Rules and regulations can change incentives for market participants, and an important aspect of assessing competition is understanding what impact regulations can have on the behavior of market participants and their possible impact on competition. In general, it is important to understand that competition and the benefits that can be obtained as a result are dynamic in nature. The benefits associated with greater efficiency and innovation, lower prices, and a greater variety of goods and services, as a rule, are not achieved instantly, but become more obvious over time. Nevertheless, this strong side of competition law—its specifics in specific

<sup>12</sup> Preamble (4).

<sup>13</sup> Art. 16.

<sup>14</sup> Section 4.

<sup>15</sup> Art. 45.

<sup>16</sup> Art. 38 and ff.

<sup>17</sup> Art. 5.

<sup>18</sup> Art. 47.



cases—has a downside. Determining the appropriate competitive forces in each specific case requires a lot of time and costs; its implementation, as a rule, is a complex process. Large corporations, possessing technologies that allow them to own huge resources, move the development of technologies forward, introducing innovations. On the other hand, intentionally or not, small producers are deprived of the opportunity to enter the market, or they have to accept the rules of the game dictated by tech giants.

Of particular concern is that it is impossible for any other entities to compete with digital platforms. Only another digital platform can compete with a digital platform. First of all, the accumulation of huge technological resources allows the digital platform to form both obviously low and inflated prices, monopolizing one or another sphere. It becomes simply unprofitable for other turnover participants to occupy a certain niche. It is also necessary to remember that a digital platform can not only suppress competition among entrepreneurs and suppliers, but also “subjugate” the user of services. An individual, first of all, transmits their data to the digital platform, accumulating certain information. The user does not always have the opportunity to freely and quickly stop using the services of a particular digital platform. One can imagine that, for one reason or another, the user can be put in obviously difficult conditions.

Large online platforms are used in a way that heavily hits transparency and safety online, the shaping of public opinion and discourse, and online trade.

The European digital package responds to new online processes and features by preventing and prohibiting unfair practices, mainly triggered by big companies operating as online gatekeepers, so defined by quantitative thresholds. A foremost purpose is the removal of online illegal content, goods, and services. It aims to increase safeguards for all users of online networks, enhancing wide-ranging transparency measures, and introducing new rules on the traceability of business users in online marketplaces, as well as member states; this is firstly to monitor responsibility and then to sanction such big companies or leading actors in collecting data, supplying services, managing and orienting business interactions, thus being able to restrict the forthcoming access of new companies.

## CONCLUSIONS

Online networks provide everywhere new business opportunities and facilitate cross-border communication and trading, but the line between lawful and outlawed behavior is blurred in online interactions. Russian and European law both aim to adapt competition law already in force to new digital interactions, at the same time supplementing general provisions by a more detailed legal framework.

In the EU, DSA and DMA pursue two main goals: to build a safer digital environment ensuring adequate protection for fundamental rights of all users of the digital space; to hold the European internal market as a level playing field uplifting innovation, growth, and competitiveness, making EU a global driver for them. European Union actively promotes innovation all over its territory, supporting member states initiatives and development plans, to increase European overall capacity. A key action of the two acts of the digital package is the *ex ante* prevention combined with *ex post* sanctions and fines following non-compliance to the new rules, within an attitude toward true cooperation between the Union and its member states.

Moreover, the line between lawful and outlawed behavior isn't so clear in online interactions, either because legal rules are lacking or ineffective, or because legal regimes are fragmented, due to their domestic origin.

EU 2020 digital package tries to tackle multiple issues entrenched in the online environment by preventing to slow down innovation technology and to guarantee the enjoyment of rights and freedoms both to business and to end users, as they are the core of the European internal market still in the twenty-first century.

## REFERENCES

- Artemyev, I. Y. (2018). Challenges of the digital economy and priorities of the new Russian competition policy. *Intellectual Property Law*, 3, 14–16.
- Barata, J., Budzinski, O., Cole, M., de Streel, A., Ledger, M., McGonagle, T., Pentney, K., & Rosati, E. (2021). *Unravelling the Digital Services Act package*. European Audiovisual Observatory (Council of Europe). <https://rm.coe.int/iris-special-2021-01en-dsa-package/1680a43e45>
- Bassot, É. (2020, January). *The von der Leyen Commission's priorities for 2019–2024*. European Parliamentary Research Service (EPRS). [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646148/EPRS\\_BRI\(2020\)646148\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646148/EPRS_BRI(2020)646148_EN.pdf)

- BEUC. (2019). *The Role of Competition Policy in Protecting Consumers' Well-being in the Digital Era*. The European Consumer Organization. [https://www.beuc.eu/publications/beuc-x-2019-054\\_competition\\_policy\\_in\\_digital\\_markets.pdf](https://www.beuc.eu/publications/beuc-x-2019-054_competition_policy_in_digital_markets.pdf)
- Broadbent, M. (2020). *The Digital Services Act, the Digital Markets Act, and the New Competition Tool*. <https://www.csis.org/analysis/digital-services-act-digital-markets-act-and-new-competition-tool>
- COM. (2020a). *Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC, 825 final, 15 December 2020*.
- COM. (2020b). *Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), 842 final, 15 December 2020*.
- Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce), *Official Journal of the European Communities (OJEC)*, L 178, 17 July 2000, pp. 1–16.
- Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications), *Official Journal of the European Communities (OJEC)*, L 201, 31 July 2002, pp. 37–47.
- Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market, *Official Journal of the European Union (OJEU)*, L 376, 27 December 2006, pp. 36–68.
- European Commission. (2020a). *Shaping Europe's digital future*. Luxembourg Publ. Office of the European Union. [https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020\\_en\\_4.pdf](https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf)
- European Commission. (2020b). *Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, On the European Democracy Action Plan, COM(2020)790, 3rd December 2020*.
- Ivanov, A. Y. (2018). Control of monopolization in the digital economy: The first part of the discussion on the fifth antimonopoly package. *Law*, 2, 106–119.
- Madiega, T. (2020). *Regulating digital gatekeepers – Background on the future digital markets act*. EPRS, December 2020. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659397/EPRS\\_BRI\(2020\)659397\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659397/EPRS_BRI(2020)659397_EN.pdf)
- Magretta, J. (2013). *Key ideas. Michael Porter. Strategy development guide*. Mann, Ivanov & Ferber.

- Mariniello, M., & Martins, C. (2021). Which platforms will be caught by the Digital Markets Act? The ‘gatekeeper’ dilemma. *Bruegel*, 14 December 2021. <https://www.bruegel.org>
- Meyers, Z. (2021). Taming ‘Big Tech’: How the Digital Markets Act should identify gatekeepers. *Centre for European Reform (CER) Insight*, 4 May 2021. <https://www.cer.eu/>
- Mokronosov, A. G., & Mavrina, I. N. (2014). *Competition and competitiveness. Proc. allowance*. Publishing House of the Ural State University named after B.N. Yeltsin.
- OECD. (2018). Rethinking Antitrust Tools for Multi-Sided Platforms. <http://www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm>
- OECD. (2019). *Competition Assessment Toolkit. 4.0*. <https://www.oecd.org/daf/competition/45544507.pdf>
- Petrányi, D., Horváth, K., & Domokos, M. (2021a). Digital Services Act (DSA): A new legal framework for the platform economy. *CMS*, 14 April 2021a. <https://cms.law/en/int/publication/digital-services-act>
- Petrányi, D., Horváth, K., Domokos, M., & Szendrő, S. (2021b). Digital Markets Act: a new and fair business framework for large platforms. *CMS*, 1st April 2021b. <https://cms.law/en/int/publication/digital-markets-act>
- Porter, M. (2005a). *Competition*. Williams.
- Porter, M. (2005b). *Competitive strategy. Methods of analysis of industries and competitors*. Alpina Business Books.
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), *OJEU*, L 119, 4 May 2016, pp. 1–88.
- Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services, *OJEU*, L 186, 11 July 2019, pp. 57–79.
- Robinson, J. (1986). *Economic theory of imperfect competition*. Progress Publishing House.
- Rozanova, N. M. (2022). *Theory of industry markets*. Part 1. Yurant.
- Sazhina, M. A. (2007). *Economic theory*. Norma. <https://be5.biz/ekonomika/e018/4.html>. (In Russian).
- Stigler, J. (2000). *Perfect competition: a historical perspective. Milestones of economic thought: the theory of the firm. In 3 volumes. V. 2*. SPb.
- Tsarikovskiy, A. Y., Ivanova, A. Y., & Voinikanis, E. A. (Eds.). (2019). *Antitrust regulation in the digital age: How to protect competition in the context of globalization and the fourth industrial revolution*. Higher School of Economics; FAS Russia.
- Zhukova, M. A. (2018). Digital technologies and platforms as a tool for digital transformation. *Financial Bulletin*, 43(4), 84–89.

# Cyber Threats Related to Digital Platforms



# Addressing Emerging Harm from Scams and Other New Technologies

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## INTRODUCTION

The era of Covid-19, digital platforms, cryptocurrencies, darknet, and bots have qualitatively transformed the formerly familiar concept of cybercrime. When training, going to the store, work, leisure, treatment, entertainment, financial activities, and all other communication went online, it was quite a logical step for criminals to go online. Moreover, attackers use the latest technologies much faster than law enforcement agencies. According to Interpol, the behavior of criminals has become more flexible, they use new technologies at lightning speed, and adapt their attacks using new methods and cooperate with each other in ways not seen before (Interpol, 2022).

Today, digital crimes occupy the lion's share of the entire crime statistics in Russia, as well as in most developing and developed countries of the world. Cybercrime as a whole has increased by 600% since the beginning of the global pandemic (Firch, 2021). Global damage from cybercrime in 2020 exceeded \$2 trillion (Juniper Research, 2021).

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The Group-IB company estimated global monthly losses of users from targeted fraud in the form of surveys and sweepstakes at \$80 million (5.9 billion rubles) (Group-IB, 2021).

A digital platform is a business model that allows consumers and suppliers to communicate online to exchange products, services, and information (digital services), including the provision of products/services/information of their own production (Ministry of Economic Development of the Russian Federation, 2021). Digital platforms, being the main element of the digital ecosystem, are certainly the key elements of digital crimes. Like any type of activity (especially implemented in a digital form), the activity of digital ecosystems is fraught with risks for both the state and the economy as a whole—the risk of committing cybercrimes, theft of personal data of users, a decrease in the competitiveness of the national economy, taking into account the cross-border specifics of the development of ecosystems/platforms—as well as for individual citizens (committing criminal encroachments, especially embezzlement of funds, infringement of consumer rights, etc.), and business (theft of confidential information, dissemination of unfair competition practices) (Ministry of Economic Development of the Russian Federation, 2021).

## METHODOLOGY

The present study is the result of the author's comprehensive understanding of trends and ongoing changes in digital crime both in Russia and abroad.

The materials of this study are based on a broad foundation of theoretical and practical developments on cybercrime by scientists from various countries. Close attention is paid to criminal encroachments, referred to as “platform crimes”. In the course of the research, the author widely used the general scientific method of dialectical cognition, methods of synthesis, analysis, comparative legal, and doctrinal methods.

## RESULTS

The wide functionality and popularity of digital platforms make them particularly attractive to cybercriminals. There are two main qualities of digital platforms that determine the concentration of intruders on them—a global transnational audience of millions of users, and building on the basis of a “trust” architecture.

It is much easier to carry out a DDoS attack or distribute phishing messages and spam during mass mailing through platforms, which increases their economic effect. In turn, it is much easier to steal the personal data of an individual, engage in extortion, engage in cyberbullying, and commit sexual crimes against minors through social networks, where the presence of common “friends” or “groups” significantly brings the potential victim and the fraudster closer. Subconsciously, people also tend to trust people with similar interests. This is also actively used by “love scammers” acting on behalf of famous or fictional persons to create the illusion of a romantic relationship and subsequent extortion.

As noted, most of the people who do not have a wide audience coverage believe that their pages are of no interest to intruders. Meanwhile, even a page with 100 subscribers is a storehouse of genuine personal data (DQINDIA, 2019). Social engineering methods were used in 50% of attacks, followed by hacking (about 25%) and exploitation of web vulnerabilities (17%) (Positive Technologies, 2021b).

In the Europol report on the assessment of threats to organized crime on the Internet, special attention is paid to another active way of using digital platforms for criminal purposes—the “crimes as services” model, when specialized providers offer cyber services to organized criminal groups. The darknet and its stores, which are an Amazon-type platform, have long been actively used by criminals. In the darknet, users can buy databases with personal information hacked by hackers, as well as buy drugs, pornographic materials, and weapons, or order a kidnapping or even murder.

Digital crime will continue to grow and the use of online platforms and cyber tools in the context of existing organized crime markets will expand. In addition, autonomous organized crime networks will become increasingly interconnected, and digital tools—from encryption technology to masking communications to cryptocurrencies—will be used to facilitate anonymous transfers, thereby blurring the boundaries between online and traditional crime (Bird et al., 2020). Russia has become the absolute leader in the turnover of funds in the darknet. In 2020, the total criminal turnover of cryptocurrencies exceeded \$288 million (Cryptofans, 2020).

It is worth noting that law enforcement agencies are also adopting a “platform approach” to combat crime. Recently, platforms have also been actively used for the administration of justice. On December 2, the



Ontario government announced the expansion of eIntake, “a digital platform that allows police officers to file criminal charges electronically” in Toronto ([thelawyersdaily.ca](http://thelawyersdaily.ca), 2021).

The commission of attacks on the ecosystems of digital platforms, as well as with their use, poses the task for the owners of digital platforms to create and implement a Digital Security Strategy (Ramsey, 2014). It is noted that digital giants are currently making active efforts to minimize cybercrime using digital platforms, but these measures are not always sufficient (Hamilton, 2021).

Digital platforms actively respond to messages about the placement of illegal content on their resources. The motives for such cooperation are largely dictated by the desire of digital giants to preserve their reputation and not to acquire a “label” that does not comply with legal requirements. Digital giants sort threats, while terrorist content and scams are part of their scope of activity. However, widespread criminal online markets, such as markets for counterfeit goods or people smuggling, are not considered a priority (Meta Platforms Inc., 2021).

At the same time, these efforts can be broadly divided into three groups of measures: training users, including self-defense measures; contacting the judicial authorities on a private initiative to file lawsuits; and cooperation with law enforcement agencies.

Regulatory authorities are making attempts to streamline relations involving digital platforms in order to minimize cyber risks and the use of digital platforms for criminal purposes. Meanwhile, a number of researchers are still puzzled by the question of the expediency of creating special regulation and special supervisory bodies. However, the opinion should be supported that regulation at the EU level within the framework of framework declarations and conventions is much “easier” in cases where the application of national legal norms is necessary (Strowel & Vergote, 2021).

The EU Recommendations emphasize the expediency of the prompt response of the moderators of digital platforms to the facts of the use of platforms for the distribution of illegal content (EU, 2018). This is critical to prevent widespread dissemination and harm. These recommendations also emphasize the expediency of using existing regulatory tools to prevent crimes using digital platforms: the possibility of deleting web pages containing or distributing child pornography and blocking access to such web pages (EU, 2011), and similar actions in relation to online

content that constitutes a public provocation to commit a terrorist crime (EU, 2017), as well as in relation to intermediaries whose services are used by a third party to violate intellectual property rights (EU, 2004).

## DISCUSSION

Today, it is appropriate to talk not just about computer crimes and crimes related to the use of computers—since now absolutely any crime can be attributed to this, starting with bullying, ending with murder—but about a new cluster of high-tech digital crime.

It should be emphasized that a number of scientists identify the concepts of digital crime and cybercrime, noting also the synonymy of these concepts with the concepts of “electronic crime” and “computer crime” (Mohammed, 2015).

We agree with the opinion of scientists that the concept of “digital crime” today does not and cannot have a universal definition due to its constant transformation. Meanwhile, some scientists define the concept of “crimes using the platform” as those in which the usual business activity of an online intermediary (manifested in its policies and practices) generates inaction and/or the commission of actions that allow direct perpetrators to commit their crimes (Hamilton, 2021).

Among the characteristics of digital crimes, it is customary to single out their transnational nature, and the absence of “traces of crime” in the traditional sense (Mohammed, 2015).

The issue of the content side of digital crime is also being actively discussed today. We emphasize that in the recent past, all the proposed classifications were based on the degree and nature of computer use in criminal activities. For example, Parker proposes to distinguish four categories:

1. a computer as an object of a crime (when it is directly stolen);
2. a computer as a “means” of a crime (where a computer is an integral element of the corpus delicti);
3. a computer as an “instrument” of a crime (gaining access to another computer to commit a crime); and
4. using the computer symbol to commit illegal actions (Casey, 2011).

Other scientists propose a classification based on criminal acts against using threats, distribution of child pornography, money laundering cyber means, or cyberrage (Nabat & Shalini, 2013).

In our opinion, crimes with the use of digital platforms are essentially mirror those of the processes of digital transformation that is underway in the economy, in society, and in the minds of people.

The analysis of various empirical sources and publications of researchers indicates that the following groups of criminal attacks can be distinguished, which are most often committed using digital platforms:

1. *Incidents in the field of information security for the theft of personal data and digital identity.*

In 2020, there were almost 30 thousand Statista cybersecurity incidents around the world (2020). According to the information security market research in Russia for 2021, malware accounts for the lion's share of all incidents (74%), cryptographers and vipers occupy the second place (39%), DDoS attacks are in third place (33%), and hacking of websites and data loss (excluding the actions of cryptographers and other malware) represent 16% and 17%, respectively (Shabanov, 2021). As a rule, companies deal with the consequences of information security incidents with internal resources. The main purpose of using cryptographers and viruses is to gain access to confidential information. In 2020, the average costs of enterprises affected by data leakage in the United States amounted to US\$8.64 million, compared with US\$8.19 million in the previous year. The global average cost per data breach was US\$3.86 million (Statista, 2021).

2. *Embezzlement and various fraudulent schemes aimed at embezzlement of funds and other property.*

Over the past few years, there has been an active increase in embezzlement of funds through DBO systems. According to the Bank of Russia, the volume of transactions without the client's consent exceeded 120% in 2020 (CBR, 2020). At the same time, there is an active increase in cases of targeted fraud. According to Group-IB, such cases have been recorded in 91 countries, and attackers have illegally exploited more than 120 world brands (Group-IB, 2021).

Phishing has remained a key way for attackers to withdraw funds over the past decade. According to Positive Technologies (2021a,

2021b), the average for phishing among digital attacks increased from 67 to 83% over the year 2021. Phishing is considered the second most important cause of data leakage (after the human factor), and costs companies an average of \$4.65 million. Financial damage increased by 10% compared to last year (IBM, 2021).

Traditionally, the main interest for phishing is user data for accessing bank accounts. The share of phishing attacks on the banking infrastructure, despite the measures taken by credit institutions, continues to grow. For example, in 2021, the Russian bank VTB blocked more than 6 thousand different phishing sites imitating the bank's website (VTB, 2021).

It is noteworthy that phishing scammers also take into account "seasonal interest": for example, during the holidays information is sent out with fake promotions from hotels and inns (Nemtseva, 2021) or attractive information about promotions held during tournaments or championships (Fowler, 2021). According to experts, the volume of online fraud in the field of rental housing and hotel reservations is growing annually during the high season (RiaNovosti, 2021). Kaspersky Lab specialists recorded about 11 thousand phishing emails per month in the year before the start of the World Cup in Russia in 2018 (Fowler, 2021).

In the online era, the release of new TV series on streaming digital platforms is getting a special boost, and users, wanting to pay for a subscription to streaming services, turn to phishing sites that imitate the original ones and get access to users' personal data and their bank card details. For example, "Squid Game", the popular South Korean series on Netflix, was actively used by attackers to install virus programs under the guise of screensavers on the screen based on the series, placing ads for the sale of costumes from the series leading to phishing sites (Bunina, 2021). Access to streaming services is also used when sending phishing messages about the end of the trial period and the need to enter personal data for its preferential extension.

It is particularly worth emphasizing the trends of economic crime that gained popularity during the pandemic; these may be called "phishing trends during the second year of the pandemic". Accordingly, phishing emails on the topic of vaccination and its consequences have become widespread:

- containing vaccination surveys; According to the results of 2021, an average of 65% of employees clicked on the link from such a letter, and 48% entered their corporate credentials into a fake authentication form (Positive Technologies, 2021a, 2021b);
  - containing links to websites with fake vaccination certificates. In the Russian Federation in October 2021, fraudsters created almost 50 sites imitating the portal “Public Services”, against the background of the introduction of non-working days due to the deterioration of the situation with COVID-19 (ComNews, 2021); and
  - containing information about corporate payments or bonuses, as well as changes in the social package. According to Positive Technologies, on average, 28% of employees launched files containing information about bonuses and payments; on average, 54% of employees opened a file attached to a letter about updating a social package; in 59% of cases, they opened attachments to letters about changes in tariffs and prices for banking services (Positive Technologies, 2021a, 2021b).
3. *The spread of terrorist and other destructive ideologies, as well as the use of digital technologies to prepare terrorist acts and incite mass riots.*

The use of digital platforms for incitement has become a real headache for many states around the world. Spontaneous and mass riots, as a rule provoked by some social incident, are coordinated and gain supporters precisely on social networks. A vivid example of this is the events in Myanmar (Human Rights Council, 2018).

Meanwhile, the question of what to recognize as incitement to mass riots or participation in rallies is very debatable: a difficult task is understanding that a post that has been published expressing a civic position on some socially significant event is not a call to disorder or acts of terrorism. Incitement can be understood as persuasion or inducement of someone through any means of communication to commit a crime (Sewell, 2021).

At the same time, in cases where statements or posts are persecuted, it is important to maintain balance and avoid excesses. Very appropriate in this case is the use of indicators that help to evaluate a particular phenomenon. For example, the Council of Europe Convention on the Prevention of Terrorism contains a threshold of

“danger”, which draws a watershed between the legally protected right to freedom of expression and incitement to violence (CoE, 2021).

#### 4. *Pseudo-investment activity*

In the era of digital financial assets and cryptocurrencies, this activity has acquired a new life. Scam projects of 2018, such as Mt.Gox and Cashberry, have gained infamy; however, their number, despite the measures taken by law enforcement, continues to grow and they gain supporters.

A study conducted by the blockchain analytics firm Elliptic showed that fraud and theft on decentralized financial platforms led to losses of \$10.5 billion this year. According to the report, DeFi allows users to borrow and save (usually in cryptocurrency), bypassing banks and payment systems. The amount of working capital in decentralized finance has increased threefold over the year. However, as noted, the explosive growth of DeFi was accompanied by an increase in crime in the largely unregulated sector. Users have suffered losses of more than \$12 billion as a result of crimes in DeFi applications, credit platforms, and exchanges since 2020, with most of the losses occurring in 2021 (RT, 2021).

#### 5. *Distribution of fakes*

Last year, the social network Facebook was overwhelmed by a new wave of criticism. An accusation was made against Facebook that its algorithm for forming a news feed (feeding on user data) led to the radicalization of users and the spread of fake news, and thereby helped Trump become president.

During the Covid-19 pandemic, the number of sites distributing fakes about the victims of the pandemic and measures taken by states to combat the virus increased. Deepfake technology was also actively used.

#### 6. *Drug trafficking*

According to the Global Initiative to Combat Transnational Organized Crime, the darknet and its resources—despite the fact that the most famous drug-selling site Silk Road was closed back in 2013—continue to be actively used for these purposes. According to various sources, the revenue of drug traffickers in the world is estimated from US\$425 to 625 billion.

Today, there are two main ways of “platform” distribution of illicit drug trafficking: through online darknet platforms, and

through social networks such as Telegram (Bird et al., 2020). Drug dealers distribute their products through social media, communicate through encrypted messenger channels, and carry out transactions through decentralized finance platforms. The structure of the drug trafficking market has changed significantly over the past few years: whereas in 2018 the main traffic fell on the USA, Great Britain, Australia, Germany, and the Netherlands, according to 2021, Russia and Iran were the leaders (Soshnikov, 2019).

7. *Cyberbullying (through mobbing) and stalking*

The phenomenon of Internet harassment includes cyberbullying and cyberstalking. These concepts are derived from the concept of “intimidation” or harassment, which is a continuous psychological violence committed by an individual or a group of persons directed against a person who cannot defend themselves in a real situation (Roland, 1989). There are a significant number of definitions in the scientific community; however, they all boil down to the sign of aggressiveness, the regular nature of harassment, causing moral, mental, and mental suffering to the object of intimidation, and the malicious actions of the persecutor. According to a study by the US Cyberbullying Center, about 27% of teenagers surveyed by the Center reported that they had been subjected to cyberbullying at some point in their lives, with 10% having been subjected to cyberbullying during the 30 days preceding the survey. Similarly, about 16% of respondents admitted that at some point in their lives they had subjected others to cyberbullying (about 6% in the last 30 days).

This takes place on a number of sites: Facebook, Instagram, Snapchat, and Tik Tok, messaging apps on mobile devices or tablets, online chats, online forums, chat rooms, and bulletin boards, such as Reddit emails, and online gaming communities (Stopbullying, 2022).

8. *Sexual crimes, including against minors (grooming).*

Communication through online platforms is the main way of engaging in sexual crimes, including minors (grooming). According to a British charity, Facebook apps have been used in more than 5000 child molestation crimes (Cnet, 2021).

To eliminate such threats, states are taking restrictive requirements for the activities of digital platforms. In the UK, almost all digital platforms (social media platforms, online messaging or voice telephony platforms over the Internet, marketplaces, streaming

services, gaming platforms, news aggregators) are subject to the regulation of the Code of Ethics of Online Services. The Code contains 15 standards, compliance with which guarantees compliance by digital platforms with their obligations under the Data Protection Act on the protection of children's data on the Internet (preventing the use of personal data collection against children, establishing maximum privacy requirements, and collecting the minimum necessary information, refusing to use technologies that encourage children to share their information) (GOV.UK, 2020).

A number of international organizations are concerned about the problem of countering cases of sexual exploitation and abuse of children on the Internet. In particular, Interpol adopted a Resolution AG-2021-89-RES-09 in order to counter the use of end-to-end encryption (E2EE) to conceal illegal online crimes against children online.

## CONCLUSIONS

The conducted research indicates that digital platforms are actively involved in both crime commission and prevention activities. Digital crimes that have been successfully tested—such as fraud, extortion, phishing, malware distribution, and personal data theft—are being actively transformed, taking the most advanced social agendas and social engineering methods on the agenda.

Such advantages of digital platforms as a wide audience and voluntary posting of personal data by users are also actively used to commit crimes. Financial platforms and trading platforms will also gain wide popularity among scammers. The Phishing-as-a-Service model is also expected to be more developed and distributed. This model is based on the cooperation of attackers, the purchase and sale of ready-made solutions, such as fraudulent sites or malicious scripts.

## REFERENCES

- Bird, L., Hoang, T., Stanyard, J., Walker, S., & Haysom, S. (2020, June). How digital is changing the landscape of organized crime. *Global Initiative Against Transnational Organized Crime*. <https://globalinitiative.net/wp-content/uploads/2020/06/Transformative-Technologies-WEB.pdf>



- Bunina, V. (2021). Wallpapers, costumes and tokens: How scammers breed fans of the “Squid Game.” *Gazeta*. [https://www.gazeta.ru/tech/2021/10/20/14112925/squidgame\\_scams.shtml](https://www.gazeta.ru/tech/2021/10/20/14112925/squidgame_scams.shtml)
- Casey, E. (2011). *Digital evidence and computer crime* (3rd ed.). Elsevier Inc Publisher. <https://www.elsevier.com/books/digital-evidence-and-computer-crime/casey/978-0-08-092148-8>
- CBR. (2020). *Overview of reporting on information security incidents when transferring funds*. [https://cbr.ru/analytics/ib/review\\_1q\\_2q\\_2020/](https://cbr.ru/analytics/ib/review_1q_2q_2020/)
- Cnet. (2021). *Facebook apps used in more than 5,000 child grooming crimes, says UK charity*. <https://www.cnet.com/tech/services-and-software/facebook-apps-used-in-more-than-5000-child-grooming-crimes-says-uk-charity/>
- ComNews. (2021). *48 imitations of “public services” appeared on the network against the background of the decree on non-working days*. <https://www.comnews.ru/content/217033/2021-10-22/2021-w42/seti-poyavilos-48-imitaciy-gosuslug-fone-ukaza-o-nerabochikh-dnyakh>
- Cryptofans. (2020). *Russia is the leader in the volume of transactions on the Darknet*. [https://cryptofans.ru/news/instrukcii\\_i\\_obzori/issledovanie\\_rossija\\_lidiruet\\_po\\_ob`emu\\_tranzakcij\\_v\\_darknete.html](https://cryptofans.ru/news/instrukcii_i_obzori/issledovanie_rossija_lidiruet_po_ob`emu_tranzakcij_v_darknete.html)
- DQINDIA. (2019). *How social media platforms are being used to fuel crimes*. <https://www.dqindia.com/social-media-platforms-used-fuel-crimes/>
- EU. (2004). *Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the protection of intellectual property rights*. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr7-L\\_2018063EN.01005001-E0007](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr7-L_2018063EN.01005001-E0007)
- EU. (2011). *Directive 2011/93/EC of the European Parliament and of the Council of 13 December 2011 on combating sexual violence and sexual exploitation of children and child pornography, replacing Council Framework Decision 2004/68/LDPE*. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr5-L\\_2018063EN.01005001-E0005](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr5-L_2018063EN.01005001-E0005)
- EU. (2017). *Directive (EU) 2017/541 of the European Parliament and of the Council of 15 March 2017 on combating terrorism and replacing Council Framework Decision 2002/475/LDPE and amending Council Decision 2005/671/LDPE*. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr6-L\\_2018063EN.01005001-E0006](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr6-L_2018063EN.01005001-E0006)
- EU. (2018). *Commission Recommendation (EU) 2018/334 of 1 March 2018 On measures to effectively combat illegal content on the Internet*. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr6-L\\_2018063EN.01005001-E0006](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0334&qid=1633966011528ntr6-L_2018063EN.01005001-E0006)
- Firch, D. (2021). *10 cybersecurity trends that cannot be ignored in 2021*. <https://purplesec.us/cyber-security-trends-2021/>

- Fowler, B. (2021). World Cup phishing scams spotted a year ahead of the event. *CNET*. <https://www.cnet.com/tech/services-and-software/world-cup-phishing-scams-spotted-a-year-ahead-of-the-event/>
- GOV.UK. (2020). *The audiovisual media services regulations 2020*. <https://www.legislation.gov.uk/uksi/2020/1062/made>
- Group IB. (2021). *Hi-tech crime trends 2021/2022 scam and phishing: The epidemic of online fraud*. <https://www.group-ib.com/resources/threat-research/2021-reports.html>
- Hamilton, R. J. (2021). *Platform-enabled crimes*. *B.C. L. rev (forthcoming 2022)*. <https://doi.org/10.2139/ssrn.3905351>
- Human Rights Council. (2018). *Report of the detail findings of the independent international fact-finding mission on Myanmar*. U.N. Doc. A/HRC/39/CRP.2. DOI:<https://doi.org/10.13140/RG.2.2.28214.14400>
- IBM. (2021). *Cost of a data breach report*. <https://www.ibm.com/security/data-breach>
- Interpol. (2022). *Cybercrime*. <https://www.interpol.int/Crimes/Cybercrime>
- Juniper Research. (2021). *Online payment fraud: New threats, segment analysis and market forecasts for 2021–2025*. <https://www.juniperresearch.com/researchstore/fintech-payments/online-payment-fraud-research-report>
- Meta Platforms Inc. (2021). Community standards [Facebook page]. *Facebook*. [https://www.facebook.com/communitystandards/dangerous\\_individuals\\_organizations](https://www.facebook.com/communitystandards/dangerous_individuals_organizations). (In Russian).
- Ministry of Economic Development of the Russian Federation. (2021). *The concept of general regulation of the activities of groups of companies developing various digital services based on one “ecosystem.”* [https://www.economy.gov.ru/material/departments/d31/koncepciya\\_gos\\_regulirovaniya\\_cifrovyh\\_platform\\_i\\_ekosistem/](https://www.economy.gov.ru/material/departments/d31/koncepciya_gos_regulirovaniya_cifrovyh_platform_i_ekosistem/)
- Mohammed, S. (2015). An introduction to digital crimes. *International Journal in Foundations of Computer Science & Technology*, 5(3), 13–24.
- Nabat, A., & Shalini, A. (2013). Assessment of types of cyber crime faced by elderly across residence. *The International Journal of Engineering and Science (IJES)*, 2(6), 1–3.
- Nemtseva, M. (2021). Rules of removal: Turkey has warned about fraud with hotels. Vacationers become victims of phishing and deception in advertising. *IZ*. <https://iz.ru/1183155/mariia-nemtceva/pravila-sema-turtciia-predupredila-o-moshennichestve-s-oteliami>. (In Russian).
- Positive Technologies. (2021a). *10 popular “phishing” topics in 2021 according to Positive Technologies*. <https://www.ptsecurity.com/ru-ru/research/analitics/10-populyarnyh-fishingovyh-tem-v-2021a-godu-po-versii-positive-technologies/>

- Positive Technologies. (2021b). *The whole cybersecurity in an hour: The results of 2021 and forecasts for 2022 in the field of cybersecurity according to Positive Technologies*.
- Ramsey, G. (2014). *Cybercrime strategy for online platforms*. [https://www.researchgate.net/publication/308111719\\_Cybercrime\\_Strategy\\_For\\_Online\\_Platforms](https://www.researchgate.net/publication/308111719_Cybercrime_Strategy_For_Online_Platforms)
- RiaNovosti. (2021). *Group-IB has revealed a new fraud scheme*. <https://ria.ru/20210114/moshennichestvo-1593019315.html>
- Roland, E. (1989). Bullying: The Scandinavian research tradition. In D. P. Tattum & D. A. Lane (Eds.), *Bullying in schools* (pp. 21–32). Stoke-on-Trent.
- RT. (2021). *Billions have been lost due to the hacking of crypto-lending platforms*. <https://www.rt.com/business/540634-crypto-lending-platforms-crime-losses/>
- Sewell, M. (2021). *The use and abuse of online platforms: What happens to freedom of expression when the internet is used as a tool to incite violence?* <https://www.humanrightspulse.com/mastercontentblog/the-use-and-abuse-of-online-platforms-what-happens-to-freedom-of-expression-when-the-internet-is-used-as-a-tool-to-incite-violence>
- Shabanov, I. (2021). *Analysis of the information security market in Russia. Part 4*. [https://www.anti-malware.ru/analytics/Market\\_Analysis/analysis-information-security-market-russia-part-4](https://www.anti-malware.ru/analytics/Market_Analysis/analysis-information-security-market-russia-part-4)
- Soshnikov, A. (2019, July 16). Russia is breaking record after record in the darknet. What's happening? *BBC News*. <https://www.bbc.com/russian/news-49007476>
- Statista. (2020). *Cybercrime incidents worldwide in 2020, by industry and size of victims*. <https://www.statista.com/statistics/194246/cyber-crime-incidents-victim-industry-size/>
- Statista. (2021). *Average organizational cost to a business in the United States after a data breach from 2006 to 2020*. <https://www.statista.com/statistics/273575/average-organizational-cost-incurred-by-a-data-breach/>
- Stopbullying. (2022). *Social networks, apps and websites commonly used by children and teenagers*. <https://www.stopbullying.gov/>
- Strowel, A., & Vergote, W. (2021). *Digital platforms: To regulate or not to regulate? Message to regulators: Fix the economics first, then focus on the right regulation*. [https://ec.europa.eu/information\\_society/newsroom/image/document/2016-7/uclouvain\\_et\\_universit\\_saint\\_louis\\_14044.pdf](https://ec.europa.eu/information_society/newsroom/image/document/2016-7/uclouvain_et_universit_saint_louis_14044.pdf)
- Thelawyersdaily.ca. (2021). *The digital platform for filing criminal charges has been expanded to Toronto courthouses*. <https://www.thelawyersdaily.ca/articles/31842>

VTB. (2021). *The share of phishing in fraudulent attacks has doubled*. <https://www.vtb.ru/o-banke/press-centr/novosti-i-press-relizy/2021/09/2021-09-15-vtb-dolya-fishinga-v-moshennicheskikh-atakakh-vyroslo-vdvoe/>



# Data Gathering and the Problem of Data Privacy

*Maria I. Mironova*

## INTRODUCTION

Habitual social relations in the modern world, the place of a person in society, and the provision of human and civil rights guaranteed by the Constitution of the Russian Federation (hereinafter—Constitution of the Russian Federation) and enshrined in legislation in the conditions of digitalization penetration into almost all spheres of public relations are issues that require not only an understanding of the level of rights achieved in society (including the benefits assigned to a person, and the establishment of understandable rules for working in the digital space), but also ensuring adequate both technical and legal protection against malicious and criminal encroachments.

It is not by chance that the Chairman of the Constitutional Court of the Russian Federation draws attention to prioritizing the tasks of the “substantial modernization” of legislation. In particular, Zorkin notes: “The development of information technologies over the past two decades

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has led to the formation of a new, so-called digital reality, Digital technologies penetrate existing relationships and institutions ... Moreover, we are talking about creating a new reality that has no analogues in the old world—the Internet of things, digital economy, cryptocurrencies, etc. (2018)” In this regard, it seems extremely important to acknowledge Zorkin’s thesis that “obviously, the time has come to concretize the rights and freedoms of man and citizen in relation to digital reality”.

Of course, the introduction of new technologies into public life, their development, and ensuring their functioning in the system of the global digital community is a crucial aspect that affects the sustainable economic development of any state. However, another equally important task is the timely development of legal regulations for digital institutions that have become an integral part of the daily life of citizens and society; without solving this, it is impossible to ensure the stability of the legal regime of the array of data collected in the digital environment and the confidentiality regime of such data. Digital technologies bring comfort and convenience, and significantly accelerate any processes, but such technologies make it possible for digitized data arrays to be quickly processed for purposes that are not only “good”. Although there is a whole set of useful properties for the collected digital data, the other side of this coin is the temptation to use them for criminal purposes.

The digital platforms being created must fully ensure the human and civil rights and freedoms guaranteed by the Constitution of the Russian Federation. The personal data collected in such platforms should not just be protected from unauthorized access; the entire algorithm of their work should ensure a habitual way of life with the protection of constitutional values. The scale of the necessary legal regulation of digital platforms is vast. It depends on the purpose of using personal data collected and structured according to algorithms defined in the system.

## METHODOLOGY

This study analyzes the development of international legal regulations regarding the collection of personal data of users of digital platforms and ensuring the confidentiality of such data. Applying the comparative legal method, the author studied international and Russian legal acts on the use of personalized data and the protection of privacy in the digital environment. Furthermore, using the example of a more detailed review of the General Data Protection Regulation (GDPR), which is subject

to application in all member states of the European Union, the author compared the trends in the development of legal regulation in this area. Also, historical, system-structural, and formal-legal methods were used to study the formation and development of personal data protection in the digital environment.

## RESULTS

The functioning of any digital platform is based on the constant collection, updating, and storage of personal data. At the initial stage of data collection, the question arises about the depth of penetration into the personal data of any person. Of course, in the case in question, the problems of confidentiality that arise in practice are secondary. They depend on the nature and breadth of the data collected about the person.

When creating a digital platform, it is necessary to answer how much various different personalized information about a person is necessary for the sustainable functioning of a particular digital platform. At the same time, it should be borne in mind that the volume of disparate information about a particular person collected together may violate the permissible limit of immersion in personal information if certain life circumstances arise.

First of all, attention should be paid to the guarantees of human and civil rights enshrined in Articles 19, 22–24, 29, and 44 of the Constitution of the Russian Federation. First and foremost, data collection should provide the following guarantees:

- equality of all before the law and the court;
- equality of human and civil rights and freedoms regardless of gender, race, nationality, language, origin, property and official status, place of residence, attitude to religion, beliefs, membership in public associations, and other circumstances;
- prohibition of any form of restriction of citizens' rights on the grounds of social, racial, national, linguistic, or religious affiliation;
- the right of everyone to freedom and personal inviolability;
- everyone's right to privacy, personal and family secrets, and protection of their honor and good name; and
- the right of everyone to the secrecy of correspondence, telephone conversations, postal, telegraphic, and other messages.

At the same time, a special place in data collection is occupied by the thesis enshrined in Article 24 of the Constitution of the Russian Federation, whereby the collection, storage, use, and dissemination of information about a person's private life is not allowed without their consent. Furthermore, the Constitution of the Russian Federation also protects other values related to personality: for example, inviolability of the home, freedom of thought and speech, choice of language of communication, upbringing, education, and creativity.

Of course, the collection and processing of personal and other data of personalized significance—such as commercial, property, tax, and any other—must ensure that the balance of public and private interests is maintained. Since the beginning of the noughties, international acts, namely the Charter of the Global Information Society (G8, 2000), have noted undoubted positive factors that provide information and communication technologies (I.T.) to citizens, society, and states. On the one hand, the Charter notes the revolutionary impact of digitalization on people's lifestyle, education, and changes in working conditions, but, on the other hand, it also notes the ongoing changes in the interaction of government and civil society. At the same time proclaiming the continuous movement toward universal access for all to be a key strategy, the task is to develop an effective and meaningful mechanism for protecting consumer privacy, as well as protecting privacy when processing personal data. The Charter essentially lays down the conditions for the creation and functioning of a global interstate information environment that erases in its development the traditional state and interstate institutions of trade, payments, verification of documents, the procedure and methods of decision-making in various fields of activity, the procedure for paying taxes, receiving income, fixing and confirming property rights, and much more. Such a large-scale reformatting of economic and social relations requires not only the creation of understandable and consistent legislation, but also, as noted in the Charter, the efforts of the international community aimed at developing a global information society, which should be accompanied by coordinated actions to create safe and crime-free cyberspace, including transnational organized crime.

The Resolution of the U.N. General Assembly of December 18, 2013 No. 68/167 "The right to privacy in the digital age" is of great importance in regulating data collection for digital platforms. It notes the rapid pace of technological development that allows people in all regions globally to use new information and communication technologies, and



at the same time increases the ability of governments, companies, and individuals to track, intercept, and collect information that may violate or infringe upon human rights. In this regard, the Resolution explicitly emphasizes the human right to inviolability of the home and personal life, which means, first of all, the inadmissibility of arbitrary interference in personal and family life, and notes the need to ensure the right to express one's opinion freely. At the same time, the guarantees of strict observance of these rights, as provided for in Article 12 of the Universal Declaration of Human Rights (U.N. General Assembly, 1948) and Article 17 of the International Covenant on Civil and Political Rights (U.N. General Assembly, 1966), must be fully respected, including if the interests of public security cannot be ensured without collecting some confidential information. In this case, this refers to an authorized deviation in the state's interests from the "unshakable" list of human and civil rights. Of course, such penetration into personal life should be strictly limited, and the temptation to use it not in the interests of ensuring public safety should be compensated by effective control over persons admitted to the authorized collection of confidential information. Of course, it is impossible to draw a line indicating the limit of the collection of confidential information and, ultimately, this will be determined by the court individually, but in any case, even the authorized collection of confidential information should ensure the aforementioned human and civil rights as much as possible.

The massive spread and introduction of digital platforms into the economy required states to pay attention not only to the study of ongoing processes but also to the regulation of their activities and, of course, to threats to society as a result of the penetration of cyberspace into the daily lives of virtually all citizens, government agencies, any commercial activity, and virtually all sectors of the economy.

In the USA, in 2003, the National Cyberspace Security Strategy (National Strategy to Secure Cyberspace) was adopted, which for the first time pays attention to the protection of the material carrier of cyberspace, which includes "hundreds of thousands of interconnected computers, servers, routers, switches, fiber-optic cables that allow this infrastructure to function ... critically important for the economy and national security" (White House, 2003). Of course, the digital platform itself is valuable as a tool and a system of established stable relationships between its participants. By its significance, such a system of relationships can be compared with the well-known meaning and use of the "clients" concept

in commercial circulation. Nevertheless, given the cross-border nature of modern digital platforms, as well as the weight and importance of mutual interpersonal connections formed in the digital environment provided by them, the volume of constantly updated and replenished structured information is disproportionately higher. In this matter, Shakhrai quite succinctly and clearly noted: “There is a kind of race between the online and offline worlds in matters related to understanding what is happening, restoring control over digital reality and the formation of new legal, political, economic instruments (social regulators) capable of effectively managing it. And this is a real challenge for the social sciences, including legal sciences, since we are discussing the need to create effective social (primarily legal) regulators in conditions when the existing mechanisms are also in the process of transformation” (Shakhrai, 2018).

A historical retrospective of the formation and development of digital technologies is helpful in this regard. It should be noted that more than 40 years ago, namely on January 28, 1981, the Council of Europe adopted Convention No. 108 on the protection of Individuals with Automated processing of personal data, subsequently supplemented by a protocol on the powers of supervisory authorities and cross-border data transfer. This document served as the basis for the implementation of the provisions regulating the collection and protection of personal data into the national legislation of European countries. Later, in the development of this Convention, EU directives were adopted, which directly address personal data collection issues and ensure their protection; of particular note is Directive 95/46/E.C. of October 24, 1995, on the protection of the rights of individuals concerning data processing and on the free movement of such data.<sup>1</sup> Later, this document became invalid, and its provisions served as the basis for the adoption of the European Union Resolution 2016/679 of the General Data Protection Regulation (GDPR). This document entered into force on May 27, 2018, and is subject to application in all Member States of the European Union. At the same time, also worth highlighting is Directive 2002/58/E.C. of July 12, 2002, published in the official journal on July 31, 2002 (Directive 2002/58/E.C. of the European Parliament and of the Council of July 12, 2002, concerning the processing of personal data and the protection of privacy in the electronic communications sector [Directive on privacy

<sup>1</sup> OJ N L 281 (1995, November 23), p. 31.

and electronic communications]),<sup>2</sup> which regulates the use of personal data and the protection of privacy in the digital environment.

In relation to our research topic, we consider it necessary to dwell in more detail on the analysis of the General Regulations on the Protection of Personal Data. First of all, this document has an extraterritorial principle and extends its effect to operators of foreign digital platforms if they offer goods or services on the territory of the EU.

Chapter 2 of the GDPR legislatively establishes the following seven basic principles that are mandatory for the operator to comply with the processing of personal data:

- legality, fairness, and transparency;
- limited purpose;
- minimization of the data to be processed;
- correctness (reliability) of the data;
- limited data storage; and
- accountability to the regulator.

Separately, it is worth noting the requirement for constant and continuous monitoring of the processing of personal data if it concerns criminal sentences and crimes or appropriate security measures.

The requirement of “transparency” of data, presented for the first time in the GDPR, seems to be quite important, which is considered in relation to their fairness. This principle was not mentioned in the previously adopted documents. The essence of this principle is that personal data related to individuals were easily accessible, understandable, and compiled in a clear and simple language and, if necessary, using visualization. In this case, Krylova quite rightly points out that the understanding (before the adoption of the GDPR) of the principle of fairness previously adopted in legislation in connection with the introduction of the term “transparency” along with it has become somewhat blurred (Krylova, 2017).

The GDPR establishes a wide range of rights of personal data subjects. In particular, a requirement has been introduced for mandatory notification of platform users about their rights, the legal basis for processing personal data, data retention periods, data transfer to a third party and

<sup>2</sup> OJ N L 201 (2002, July 31), p. 37.

(or) outside the E.U., and about any automated decision-making. In addition, users should be given access to their personal information, alongside being given the right to give and withdraw consent to the processing of personal data, erase their data under certain circumstances, to challenge any automated decision-making, and to file complaints with the authorized data protection authority.

Personal data, according to the GDPR, includes any information that makes it possible to identify the data subject. This includes the name, location, I.P. address, online identifier, and data on physical, physiological, genetic, mental, economic, cultural, or social identities.

The expert community highly appreciates the content and regulatory impact of GDPR in relation to modern conditions of digitalization development. In particular, Sokolova draws attention to the fact that “the appearance of such a regulatory act indicates the firm determination of European legislators and regulators to continue the current strict course of “privacy by default” when the necessary technical and organizational measures must be taken in advance by all persons processing user data” (Sokolova, 2020).

Any provision of data is based on the implementation of the principle of voluntary consent to the provision of a specific amount of personalized information. However, as a rule, the requirements established by law to provide the subject of the right with detailed information about the purposes of their use, processing methods, and storage periods are perceived in reality as a formality necessary for access to the digital platform. The so-called “privacy policy” implemented by platform operators is highly confusing and difficult for informed decision-making at the stage of providing personal data. GDPR provides, first of all, penalties that are sensitive for violators for violations in data processing; these are both monetary fines (up to 200 thousand euros) and fines as a percentage of the company’s annual turnover (up to 4%). Violations include those related to the processing of personal data and insufficient measures to protect the storage of such data. Citizens have been granted the right to appeal to the national regulator to conduct an investigation. It should be noted that the GDPR establishes a requirement for exclusively active expression of consent to the processing of personal data.

GDPR enshrines a fundamental principle that confidentiality in data collection and processing is above all. Therefore, if the regulator concludes that the measures taken by the operator for organizational and

technical support of data protection are insufficient, such an operator will be subjected to relatively severe penalties.

The basic principles of GDPR are incorporated into the legislation of many countries: USA, U.K., China, Canada, India, Australia, Brazil, and Argentina, as well as in all CIS member countries (Russia, Kazakhstan, Azerbaijan, Armenia, Kyrgyzstan, Ukraine, Belarus, Moldova, Tajikistan, Uzbekistan, Turkmenistan).

In the CIS countries, model Law No. 14-19 “On Personal Data” was adopted on October 16, 1999, and later in 2018, a new version of the law was adopted (2018).

It was only in 2005 that Russia ratified the 1981 Council of Europe Convention on the Protection of Individuals with Automated Processing of Personal Data. This served as an impetus to the development of national legislation in the field of activity under consideration, and already the following year after the ratification of the said Convention, the following were adopted: Federal Law No. 149-FZ of July 27, 2006 “On Information, Information Technologies and Information Protection” and Federal Law No. 152-FZ of July 27, 2006 “On Personal Data” (after this referred to as the Personal Data Law).

The main document regulating actions with personal data in Russia is the Law on Personal Data. In Article 5, the basic principles of personal data processing are named:

- legality and justice;
- limiting processing to strictly defined (legitimate) purposes;
- the inadmissibility of extending processing to pre-set goals;
- prohibition on combining independent databases containing personal data, except in cases where the purposes of data processing coincide;
- restriction of processing only with specific personal data corresponding to the purposes of such processing, the inadmissibility of their redundancy;
- ensuring reliability and sufficiency of data processing by the operator; and
- limitation of the storage period of data that allows them to identify their belonging to a specific person.

As can be seen, the principles of personal data collection and processing set out in the law on personal data are sufficiently consistent with the principles of GDPR.

## DISCUSSIONS

At first glance, Russian legislation establishes significant barriers in data collection and processing activities; however, as Saveliev accurately notes, “the existing legal restrictions on the processing of personal data ..., as well as the inadmissibility of combining various databases with the originally stated and incompatible processing purposes, contradicts existing technology and business practices, since it levels the advantages that technology provides... In addition, taking into account the modern development of technology, the actual fulfillment of these requirements will be very difficult to trace”. Indeed, processing data according to a certain algorithm will require high financial costs to administer algorithms for monitoring digital platforms. At the same time, the establishment of highly effective state control over the functioning of the digital platform algorithm in terms of ensuring legislative restrictions on data collection and processing for obvious reasons (lack of qualified personnel, underfunding of control functions, duration of decision-making) will significantly slow down the development of both digital platforms and the digitalization of the economy.

According to the author, digital platforms’ activities in ensuring legislative restrictions on data collection and processing should have a certain degree of freedom, and the state’s sanctions mechanisms should have the necessary variability in the application of punishment to violators.

Just like the European legislation, Russian legislation focuses primarily on protecting personal data. At the same time, the appeal to digital platforms left by users as a result of their daily activities leaves a so-called “digital footprint” for a long time. In this regard, breaking the binding to a certain person is a key task of the algorithm of any digital platform. As already noted above, analytical and other use in processing only depersonalized data is permissible. It is necessary to agree with the opinion of Sokolova that “in modern law, it is customary to separate the idea of confidentiality as the protection of inviolability, privacy from intrusion and the concept of control over personal data and the prevention of their illegal use”. Also, this author suggests “to return to a person the opportunity to control information about what happens to his personal data,

to decide when and to what extent information about a person becomes known or is communicated to others” (Sokolova, 2020).

Turning to the legislation of the CIS countries in terms of national legislation ensuring the right of a subject to control the use of their personal data and, above all, the right to demand the erasure of relevant data (the GDPR provides for such a right), then there is a lack of unity of approaches in the implementation of this principle.

For example, the law of the Republic of Azerbaijan establishes the right of a personal data subject to demand the modification and the destruction of any personal data collected by the digital platform.<sup>3</sup> In this matter, a similar approach is chosen in the legislation of the Republic of Kazakhstan. According to Article 24 of the Law of the Republic of Kazakhstan dated May 21, 2013 No. 94-V “On personal data and their protection”, a personal data subject also has the right to demand from the owner of the platform or operator, as well as a third party, the destruction of their personal data, the collection and processing of which was carried out in violation of the law. In addition, the legal entity is entitled to withdraw consent to the processing of its data, except in cases where the withdrawal of consent is contrary to the law (Personal data and their protection law, 2013).

Unlike the aforementioned CIS countries, in the legislation of the Republic of Armenia, the right of a subject to removal should be recognized as declarative, since the legislation provides for broad discretion in the implementation of this right. In particular, part 2 of Article 15 of the Law of the Republic of Armenia “On the Protection of Personal Data” stipulates the right of the subject of personal data to require the operator to block, correct, or destroy their data in the following cases (2015, June 13):

- personal data is incomplete, inaccurate, or outdated;
- personal data is obtained illegally; and
- personal data are not necessary to achieve the processing objectives.

The last criterion for assessing the sufficiency of certain personal data (i.e. their necessity) seems extremely vague and allows the operator to

<sup>3</sup> Exceptions are cases provided for by national legislation—for example, information from state digital platforms.

manipulate the data depending on his own discretion. At the same time, the right to delete personal data at the will of the subject of such data is not directly provided for by this law.

It should also be noted that the Law “On Personal Data” (2002, November 7), previously in force in the Republic of Armenia, provided for the right of a personal data subject who had previously consented to their processing to demand the destruction of such data. In this case, it is quite obvious that there is a decrease in personal data protection.

Considering the above, it should be noted that the principles of personal data processing are more clearly fixed in the CIS model law. According to article 20 of this model law, the subject of personal data has the right to withdraw their consent to the circulation, processing, and exchange of personal data, as well as the access to them at any time after its provision. However, the right of personal data subject to revoke consent may be limited by national legislation in strictly defined cases; for example, if personal data was collected to ensure state secrets, defense, and security of the state, or for the purposes provided for by national legislation on the operational search and other law enforcement activities, before the expiration of the terms established by national legislation for the storage of such personal data (Personal data law, 2018).

Often the operator asks to provide so-called optional information about the subject of personal data. In this case, there is authorized access to personal data that is not directly related to the functioning of this platform. This approach to data collection essentially saves the operator from using them correctly, since they are not needed to implement the algorithm of a particular digital platform. This can be compared to providing data in a “friendly” conversation. As a rule, the platform operator reserves the right to “provide generalized depersonalized data to all users and partners, such as publishers, advertisers or related sites” (Google privacy policy, n.d.). This thesis is inherent in almost all operators of digital platforms; it is aimed exclusively at business development and provides complete freedom to process the collected data, which, of course, does not comply with the legally established requirements for the limited use of information. Here, it is very easy to cross the line from “light” abuse to using an array of data for criminal purposes.



## CONCLUSIONS

In the modern world, technologies are moving forward in such spurts that legislative restrictions become archaic and no longer provide the meaning inherent in them, including forming a condescending attitude toward them by users. In foreign literature, the ongoing processes are designated by the term “Transparency paradox”, the meaning of which boils down to the fact that the simplicity and clarity of presentation is inevitably associated with simplifications and the loss of important details, and therefore with a lack of information. In particular, Nissenbaum refers to the digital environment as “a place where every step is tracked, and every click is recorded by data-hungry private and government organizations and where every answer is desired by attention-seekers and greedy merchants” (Nissenbaum, 2011).

It seems that it would be “useful” to introduce strict rules on the “friendly” exchange of information in relation to digital platforms. Personal data provided for participation in a specific digital platform should only work in a specific segment. Of course, the data collected on the digital platform should not be a “dead” information load, but their provision to other persons with the aim of improving the services of the platform itself should occur exclusively in an impersonal form. In addition, the author believes that a sufficiently broad discretion in Russian legislation regarding the operator’s right to determine the list and composition of personal data does not contribute to compliance with the principles of their processing enshrined in the legislation. This, in turn, contributes to the excessive accumulation by digital platforms of information about the subject that is not related to the purposes of its processing.

In conclusion, it should be noted that the further development of digitalization, alongside the involvement of digital platforms in the global information space, significantly blurs the limits of the regulatory impact of national legislation, and sooner or later will require the development of uniform international rules regarding the collection and confidentiality of data of users of digital platforms.

## REFERENCES

- G8. (2000). *Okinawa charter on global information society. Adopted at the Kyushu-Okinawa Summit of the G-8 on July 22, 2000.* [www.g8.gc.ca/2000/Okinawa\\_Charter\\_Gis0722-e.asp](http://www.g8.gc.ca/2000/Okinawa_Charter_Gis0722-e.asp)
- Google. (n.d.). *Privacy policy.* <https://policies.google.com>
- Krylova, M. S. (2017). Principles of personal data processing in the law of the European Union. *Actual problems of Russian law*, 10(83), 176–177.
- Nissenbaum, H. A. (2011). Contextual approach to privacy online. *Daedalus*, 4, 32–48.
- OJ N L 201. (2002, July 31). *Directive 2002/58/E.C. of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (directive on privacy and electronic communications)*, p. 37.
- OJ N L 281. (1995, November 23). *Directive 95/46/E.C. of the European Parliament and of the Council of 24 October 1995 on the protection of individuals regarding the personal data processing and the free movement of such data*, p. 31.
- Personal data and their protection law of May 21, 2013, No. 94-V. *The Republic of Kazakhstan.* <http://adilet.zan.kz>. Accessed 12 May 2021.
- Personal data law of November 29, 2018, No. 48-9. *Interparliamentary assembly of CIS member states.* <http://iacis.ru/>. Accessed 12 May 2021.
- Personal data law of November 7, 2002, No. ZR-422-N. *The Republic of Armenia.* <http://www.parliament.am>. Accessed 12 May 2021.
- Personal data protection law of June 13, 2015, No. ZR-49. *The Republic of Armenia.* <http://www.parliament.am>. Accessed 12 May 2021.
- Shakhray, S. M. (2018). Digital constitution. The individual's fundamental rights and freedoms in a total information society. *Bulletin of the Russian Academy of Sciences*, 88(12), 1075–1076.
- Sokolova, M. E. (2020). *Modern Europe* (vol. 2, 63 p).
- U.N. General Assembly. (1948, December 12). *Universal declaration of human rights* (217 [III] A).
- U.N. General Assembly. (1966, December 16). *International Covenant on Civil and Political Rights* (2200 A).
- White House. (2003). *The national strategy to secure cyberspace.* [https://www.cisa.gov/uscert/sites/default/files/publications/cyberspace\\_strategy.pdf](https://www.cisa.gov/uscert/sites/default/files/publications/cyberspace_strategy.pdf)
- Zorkin, V. D. (2018, May 30). Law in the digital world. *Rossiyskaya Gazeta*, 115, 1–4.



# Globalization Using Network Effects

*Vyacheslav V. Sevalnev and Artem M. Tsirin*

## INTRODUCTION

The development of information and telecommunication networks has accelerated the global economy, as it has made it possible to build and synchronize complex financial, production, and logistics flows as well as business processes. The advent of the global Internet has led to the creation of the most powerful distribution channel in the history of human civilization. Today, all Internet users are potential customers, manufacturers of goods, and sellers who have their stores on the Internet.

Using the Internet to buy and sell goods allows users to minimize costs by choosing the most favorable price, packaging, and transportation conditions. An interactive format for the presentation of goods and services, the availability of comprehensive information about their characteristics can reduce financial and time costs associated with travel to the place of purchase, its selection, and its delivery.

A kind of trigger for globalization was gadgetization, which provided many users with access to the Internet. Along with information and

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communication technology, mobile devices have been developed that provide access to the global Internet. It is believed that the first mobile gadget—a smartphone—was developed in 1994 by IBM. After 27 years, there were already about 3.95 billion users of mobile devices that provide access to the Internet used around the world; there are also 4.28 billion unique mobile Internet users globally, about 54.6% of the world's population (Statista, 2020).<sup>1</sup>

Mobile phones have become the most popular device with which users access the Internet (50.2% of all web traffic comes through mobile phones).

The Covid-19 pandemic contributed to a new shift in global trade toward network trading. However, even before this pandemic, the e-commerce market was growing dynamically.

According to the authors of the report “The Russian e-commerce market: results of 2019, trends in 2020” prepared by the Higher School of Economics, sales grew in 2019 by 18% y/y, exceeding RUB 2 trillion. The main growth driver was the increase in orders (+21%). Consumers began to buy online more often, and the average check became smaller (−3%).

Along with trade indicators, for this study, it is also essential that widespread gadgetization leads to the simplification of the search and purchase of goods and the intensification of the exchange of information, knowledge, and cultural values. A citizen does not have to go to the library to get acquainted with interesting work; it is enough to issue an electronic library card and get access to any work of interest to them by working with a mobile application installed in the gadget.

Thanks to gadgetization, people can access any information they are interested in the political, social, cultural, economic, medical, recreational, and other fields. Now it is unnecessary to go to the kiosk and buy a newspaper to keep abreast of world news; it is enough to use the relevant news resource.

Gadgets have become an essential attribute of the work and leisure of a modern person, providing access to the modern urban environment. With the help of a gadget, a person can navigate in an unfamiliar area, gaining access to everything necessary to ensure their livelihoods. Usually, the gadget user does not need to be far from home because everything

<sup>1</sup> <https://logotip.online/blog/statistika-interneta-10-pokazatelej/>.

needed is available anyway. Virtual walks and excursions allow users to discover new places and not spend money on expensive travel.

Memes (symbols, ideas, mannerisms, or ways of doing things) have become widespread on the web. Through a gadget, a person can track a large data stream, administer their business, manage finances, monitor the safety of property, keep abreast of important events, and even express emotions. According to Emojitracker, a program that counts the use of emoji on the social network Twitter, more than 2 billion users supplement their text messages with graphic images. It can be assumed that memes play a role similar to non-verbal interaction in the network environment. Within the framework of non-verbal interaction, information is transmitted influence on each other through images, intonations, gestures, facial expressions, pantomime, or a change in the mise-en-scene of communication—that is, without speech and language.

Today, smartphones not only perform communication functions, but also serve to demonstrate the status of the owner. In addition, through gadgetization, social differentiation and self-identification are carried out. Thus, the absence of a gadget in the school environment can serve as a factor in the social exclusion and even give rise to outbreaks of aggression toward them from other students.

## METHODOLOGY

An exciting trend that determines the peculiarity of using the network effects of globalization is the aggregation of news, information, navigation, entertainment, financial, and trade resources within the framework of single Internet sites and portals. This allows resources not only to channel the information flow but also to adapt it to a specific user. This approach allows hypercompetitive companies to maximize their profits and capture new areas. The value of these companies increases dramatically with the increase in users. Under these conditions, creating innovative services and content that attracts new users comes to the fore. It should be noted that the information and innovation rent can be part of the innovative hypercompetitive profit, but cannot be reduced only to it, since it also includes an integral monetary and non-monetary benefit distributed in time and space, as well as network effects obtained based on the use of new knowledge, intellectual property, and advanced innovations appropriated by the owner-innovator, as well as global network structures and institutions (Dyatlov, 2014).

The peculiarity of the regulation of network effects is that such regulation is in at least four dimensions, which can be conventionally labeled as:

- “the information and digital dimension”, associated with the regulation of the use of information (including digital) technologies proper;
- “the economic dimension”, related to the regulation of the use of information technologies in the relevant sector of the economy—special sectoral management;
- “the general macro-economic dimension”, associated with the comprehensive regulation of the state economy as a whole; and
- “the provision of state and public security”, associated with the regulation of the digital profile, digital footprint, and digital shadow.

## RESULTS

Thus, network effects are the triggers of the globalization process. Thanks to them, at the universal level, along with significant traditional players such as states and their unions, IT giants and corporations seek to expand their influence and implement relatively independent strategies, thereby creating new modes of global development.

The concept of a network society is often identified with the idea of a network state. The network is usually viewed as open, flexible, and indefinitely expandable; each node can leave the network or join it, and each time the network is reorganized anew. This paradigm implies a view of society as an open, multi-level, decentralized system of interactions.

In legal studies, it is noted that the same idea of a network state involves the decentralization of power. Still, this decentralization can lead to the privatization of power, the loss of its public nature, and “going into the shadows” (Lipen, 2020). It seems that under the ideal model, the network state has another important characteristic—extraterritoriality, since there will be no borders for it. At the same time, it is appropriate to assume a hybrid nature of the network state, the features of which can be acquired by any technologically advanced state. In addition, network technologies can be used for different concentrations of power, as evidenced by the experience of the PRC.

## DISCUSSION

Rising unemployment has led to growing fears of social instability, and the various branches of government are increasingly working together to prevent “mass incidents”. Chen Yixin, secretary of the Political and Legal Affairs Commission of the Communist Party of China, which deals with domestic security issues, said “Police and local governments need to step up the use of big data, artificial intelligence and networked security cameras to prevent potential social unrest in times of increasing uncertainty”.<sup>2</sup> He urged law enforcement to “lay a solid foundation for social governance and security now”.

Chen said at a conference in Shenzhen that there are still “blind spots” in intelligent video surveillance systems in some places, and called for more cameras to be added to Golden Shield’s nationwide network security system to eliminate them and use big data to monitor potential risks.

China is not only one of the few countries that entirely use the potential of new technologies to control society and prevent harmful incidents, but also a country that exports IT solutions in state and public security, including 5G infrastructure components.

Russian security services are increasingly wary of Chinese equipment in Russian 5G networks.<sup>3</sup> This is partly driven by fears that Chinese telcos companies could build backdoors into their network equipment, giving their government the ability to spy on Russian users. For this reason, the Russian authorities agreed to build infrastructure for 5G only if they use domestic telecommunications equipment. However, there is no such equipment in Russia, and the development of 5G networks has stopped.

The experience of Kazakhstan shows that video surveillance systems were purposefully disabled during the riots in January 2022. In the period from January 4 to 7, during the riots, 75 “Sergek” complexes were put out of action: these are 304 video cameras, as well as a central communication center, an antenna, and network equipment located in the building of the republican television and radio corporation (as indicated in the Ministry of Internal Affairs).<sup>4</sup>

<sup>2</sup> <https://rossaprimavera.ru/news/cf286c0c>.

<sup>3</sup> <https://ria.ru/20210712/sotrudnichestvo-1740943472.html>.

<sup>4</sup> <https://tass.ru/obschestvo/13498559>.

Thus, recently there has been a qualitative transition in developing high-tech state security systems. This transition is due to objective social phenomena (urbanization continues, the concentration of the population in large cities, the formation of aggregations, the associated conflicts and crisis phenomena are aggravated). Thus, in the territory of cities, a high level remains of threats of emergencies of a natural and artificial nature, a tendency toward an increase in the number and scale of their consequences, and the threat of their transition to the realm of emergencies. This makes it necessary to look for new solutions and methods for protecting the population and urban areas, anticipating future threats, risks, and dangers, and developing methods for forecasting and prevention.

At the same time, the legislative consolidation of the use of network technologies to ensure state and public security lags far behind their rapid development. Modern states are currently concentrating on creating national information systems for ensuring law and order and the safety of the living environment. Unified information platforms in the field of security make it possible to collect, generate, process, transmit, or receive information about the state of public safety, law and order, and the safety of the living environment. To do this, it is necessary to solve a challenging task—to carry out an end-to-end “seamless” digital transformation of anti-crisis management processes based on the interface of interacting specialized systems that automate individual private functions of such management (from collecting situation data to making managerial decisions and bringing tasks to the performers), as well as automatic exchange of necessary information between them.

Social media also uses digital footprint data to understand the personal interests of Internet users. These are habits and preferences, membership in public organizations, behavior, and location. Such data may be obtained, collected, and analyzed without the user’s knowledge, and may also be available to authorities.

The use of data that forms the digital footprint of the user in the activities of human resources not only makes it possible to speed up the selection and evaluation of potential candidates for employment, but also to motivate employees to develop creatively as part of their activities to ensure compliance with evaluation criteria. HR departments often analyze employees’ social media profiles to determine their loyalty and attitude toward their job duties.



Processing and replicating information posted by a user on the Internet can cause moral and material harm. For example, information about a user's addiction to alcohol or gambling can serve as a denial of employment, a loan, or the establishment of personal relationships. In this case, the proof of the unreliability of this information will lie with the victim.

According to paragraph 2 of Article 12 of the Convention "For the Protection of Individuals concerning Automatic Processing of Personal Data" No. 108 "Cross-border flows of personal data and domestic legislation", a party should not prohibit or condition on a special permit cross-border flows of personal data going to the territory of another Party, for the sole purpose privacy protection. Thus, information essential for an individual may be available to foreign companies under certain conditions.

In 2021, there were 4.66 billion active Internet users globally (DataReportal, 2021), which is 316 million more than in 2020. Considering the total population of the planet, which is about 7.83 billion people, Internet penetration is approximately 59.5% of the world's population.<sup>5</sup>

The increase in the number of Internet users, and the subsequent increase in the time spent by users in this information and communication environment, contributes to the emergence of easily accessible information about each user, which is of actual or potential commercial value. The user can leave such information when using social networks, instant messengers, filling out registration forms on various sites, and using government websites.

A digital shadow is an information that is accumulated implicitly: travel routes, purchases, video recordings of surveillance cameras, etc. Along with the digital footprint, the concept of the "digital shadow" is used. Regarding the amount of information, the "digital shadow" already exceeds the "digital footprint" in terms of the amount of space occupied, which actualizes the problem of information storage.

The networked society requires large and regular expenditures of energy and hundreds of exabytes of memory required to store information. As of 2018, Amazon hosted 1,000,000,000 gigabytes of data on over 1,400,000 servers. It is assumed that Google and Microsoft have about 1,000,000 servers each, but neither company has released exact numbers.<sup>6</sup>

<sup>5</sup> <https://logotip.online/blog/statistika-interneta-10-pokazatelej/>

<sup>6</sup> <https://nag.ru/material/32857>.

Another equally important issue is the enforceability of the rules of law, which will be called upon to regulate social relations related to the digital footprint and its use. How will violations related to the unauthorized use of digital footprint data be detected? Which government agency should detect such violations? When formulating proposals for improving the current legislation, it is necessary to assess the possibility of implementing the proposed norms. Assigning any additional responsibilities to the persons providing the storage and processing of information constituting an active digital footprint will inevitably entail severe costs.

Public relations arising from the use of a digital footprint are related to:

- the legally significant identification of a person in the virtual space;
- the implementation of human rights in the virtual space (the right to access the Internet, the right to be forgotten, the right to “digital death”, etc.);
- the protection of storage, processing, and dissemination of information constituting a digital footprint, including for security purposes; and
- ensuring the rational use of energy and other resources, as well as the placement and disposal of equipment necessary for storing and working with data that make up the digital footprint.

In many countries, it is planned to create a centralized information resource containing basic information about the population and providing authorities and organizations with the opportunity to obtain complete and reliable information about individuals.

Possession of access to the Internet, skills in using gadgets, shopping, and social networks, and entry into various online communities are becoming important attributes of belonging to a network society. At the same time, networking skills become the key to success and the criteria for differentiating such a society.

Network civil communities are gaining more and more influence, and the state authorities are beginning to consider their positions on issues of local importance. Given the dynamics of the development of the network society, one can predict that in the future, based on associations of network civil communities, larger political organizations (both national and supranational) will be formed. At the same time, such associations can

be either stable or temporary due to the current political and economic situation.

In the works of world-famous scientists, it is noted that network effects have a strong influence on the operation of traditional social regulators, such as law.

In a speech at the International School-Practicum for Young Scientific Lawyers in 2018,<sup>7</sup> Academician of the Russian Academy of Sciences Vyacheslav Stepin “... drew attention to the fact that the coming change in rationality, determined by the technological factor, will lead to a rethinking of law as a social regulator, and the new era serves as the basis for the revision of human rights” (Khabrieva & Chernogor, 2020).

Even now, the most common form of familiarization with legal acts is to refer to reference information systems that provide options for tracking, searching, visualizing, and copying legal information. Reference legal systems—for example, “Garant” and “Consultant Plus”—contain information about the legal acts themselves and the practice of their application, comments by leading lawyers, explanations and methodological recommendations from authorities, and representatives of the expert community. Well-known consulting companies and law firms also offer their services online.

Under the influence of modern technologies, almost all developed countries (Indonesia, Canada, Germany, USA, South Korea, Japan, etc.) are transforming their dispute resolution systems by introducing appropriate online mechanisms. At the same time, innovative technologies related to artificial intelligence are increasingly being used, which are already in solid competition with state arbitration institutions introducing remote communication systems (Tsirin & Tsirina, 2020).

Academician of the Russian Academy of Sciences Taliya Khabrieva concludes the formation of a new “paradigm” of the evolution of law, which predetermines its hybridization due to convergence with technological innovations and practices. She notes new trends in its transformation from a normative into an automated normative-cognitive system: these include the convergence of the content and form of law, normative and individual legal regulation (Khabrieva, 2021).

Thus, the law is gradually adapting to rapidly changing social relations; however, the speed of this adaptation is still insufficient. At the same time,

<sup>7</sup> <https://izak.ru/science/shkola-molodykh-uchenykh/shkola-molodykh-uchenykh-yuristov-2018-god/>.

legal regulation in a network society risks losing its monopoly position, yielding to local network self-regulation. To preserve the role and importance of legal regulation in a network society, a closer convergence of legal, ethical, and technical norms based on modern information systems is needed.

## CONCLUSIONS

Summing up, due to the influence of global informatization, the sphere of electronic commerce in various states is constantly developing and improving; therefore, the sphere of electronic commerce is gradually becoming the center of competition between states and large companies.

Network civil communities are gaining more and more influence, and the state authorities are beginning to consider their positions on issues of local importance. Given the dynamics of the development of the network society, one can predict that in the future, based on associations of network civil communities, larger political organizations (both national and supranational) will be formed.

Through gadgetization, social differentiation and self-identification are carried out. Appropriate technical capabilities and skills in using the gadget become the key to entering the network society and building new, more effective relationships with government agencies.

The modern trend of interaction between the state and society is using network technologies to strengthen state control. Network effects strongly influence the operation of traditional social regulators such as law. To preserve the role and importance of legal regulation in a network society, a closer convergence of legal, ethical, and technical norms based on modern information systems is needed.

## REFERENCES

- Dyatlov, S. A. (2014). Network effects and increasing returns in the information and innovation economy. *Proceedings of the St. Petersburg State University of Economics*, 2(86), 7–11.
- Khabrieva, T. Y. (2021). Identification of law in modern social regulation. *Questions of Philosophy*, 12, 5.
- Khabrieva, T. Y., & Chernogor, N. N. (2020). *The future of law: The legacy of academician V. S. Stepin and legal science*. Infra-M.

- Lipen, S. V. (2020). The network paradigm and the modern state in legal studies at the beginning of the 21<sup>st</sup> century. *Actual Problems of Russian Law*, 15(10), 11–19.
- Tsirin, A. M., & Tsirina, M. A. (2020). Online dispute resolution in the field of e-commerce. *International Public and Private Law*, 6, 14–17.
- Zakharkina, T. N., & Isakova, I. A. (2019). Gadgetization: Effects of influence on social processes. *Bulletin of the Nizhny Novgorod University. N.I. Lobachevsky. Series: Social Sciences*, 3(55), 115–121.



# Digitalizing the Fuel and Energy Complex in the Post-Soviet Space

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## INTRODUCTION

Digital transformation of all aspects of public life is a current trend, which has proved to be essential for the development of the society and the state. It is thus apparent that all states have a stake in the digital transition. The faster and more overarching the digital transition is in a particular state, the better positioned this state will be in the global digital rally, building momentum for its economic growth. Swift and large-scale digital transformation requires, at least, sufficient financial resources. States and the private sector usually face quite limited resources, which was brought into sharp focus by the Covid-19 pandemic, with governments forced to

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address its implications. Thus, the success in the realm of digitalization largely depends on how quickly the financial resources spent on digitalization will pay off, and how rapidly the implemented reforms will generate profit. The fuel and energy complex perfectly meets the two conditions. Fuel and energy companies accumulate significant resources, while the return on costs of digitalization in this area is among the highest. According to a study conducted in 2017 by the International Energy Agency, the oil and gas sector has significant digitalization potential for further enhancement of the operational efficiency. Increased use of the existing digital technologies could reduce production costs by 10–20%. The use of the existing and emerging technologies will allow the increase of approximately 5% in the technically recoverable oil and gas resources worldwide. The most tangible effect of digitalisation is likely to be exerted on the tight oil and shale gas resources. Digitalisation in the energy sector could save about \$80 billion a year, or about 5% of the total annual cost of electricity generation (IEA, 2017).

Currently, various digital technologies are already being applied in the Russian oil and gas sector, including: (1) blockchain technology (enables faster and lower-cost production operations with contractors and partners, which is of particular importance for the Russian oil and gas industry, given its extensive and geographically dispersed nature); (2) artificial intelligence, including Smart Well or Smart Field capable of diagnosing the system, which enables timely repair of the process equipment and enhanced capacity utilization; (3) smart contracts based on the algorithm by which contracts are concluded and executed; and (4) Big Data, which is a technology enabling the storage, processing, and use of large amounts of information, which is important for the oil and gas industry, since fuel and energy companies are engaged not only in the production but also in the transportation of energy resources to the consumers. Experts estimate that the increased use of digital technologies will allow such companies to:

- (1) increase the oil recovery factor by 5–10% at digital fields;
- (2) reduce operating costs at digital fields by 10%; and
- (3) reduce the capital outlay for digital fields by up to 15% (Dzhafarov & Kharitonova, 2020).

In 2019, an academic paper was published. It examined forty-seven of the best research papers on the digitalization in the Russian fuel and energy complex. The papers are published in Russian academic journals and are distributed mainly through closed national library systems. For this reason, these papers are not available for foreign researchers interested in studying the energy policy of the Russian Federation. The paper concludes that no research on public administration systems in the realm of the digitalization of the fuel and energy complex is published in Russian academic journals. Thus, this important issue is overlooked and not addressed by researchers (Alekseev et al., 2019).

In this regard, this paper aims to address the gap and provide the broadest possible perspective on the issue, offering more information to the readership, including foreign researchers. To achieve this goal, the paper has the following objectives:

- (1) to examine the contemporary experience of the government regulation of the fuel and energy complex digitalization in the Russian Federation;
- (2) to examine the experience of the government regulation of the fuel and energy complex digitalization in the Republic of Kazakhstan, since it plays a major role in the post-Soviet space energy industry; and
- (3) to observe the public policy evolution of Russia and Kazakhstan (with these states also having greater potential in terms of fuel and energy industry compared to the other EAEU member states); this is important in the context of the adopted Union programs on the digitalization in the fuel and energy complex.

## METHODOLOGY

This paper examines the evolution and major trends in the legal regulation of the fuel and energy complex digitalization at the national (Russia and Kazakhstan) and integration (the EAEU) levels. This paper addresses a major gap resulting from the lack of research on national and supranational regulation systems in the realm of the fuel and energy complex digitalization. The absence of doctrinal sources on the subject predetermined the peculiarities of the research methodology based on, first,



the thorough analysis of the existing legal instruments and other documentary sources, and, secondly, on the in-depth study of the regulation in this field, since the best practises of the business community may, in some instances, affect the further evolution of the government regulation. Given the extremely dynamic nature of the digitization process, the paper outlines the main trends in the further evolution of national and supranational regulation of the digitization process of the fuel and energy complex in the post-Soviet space.

## RESULTS

### *Government Regulation in the Realm of Digitalization in the Fuel and Energy Complex in the Russian Federation*

The two landmark legal instruments that underlie the digital transformation of the Russian economy in general and its fuel and energy complex in particular were adopted with an interval of five years. The Decree of the President of the Russian Federation No. 642 on the Strategy for Scientific and Technological Development of the Russian Federation was adopted on December 1, 2016. It outlines the following priorities for the next 10–15 years: firstly, the transition to advanced digital, intelligent production technologies, robotic systems, new materials and design methods, the establishment of systems for processing large amounts of data, machine learning, and artificial intelligence; and, secondly, the transition to the green and resource-efficient energy, increased efficiency of the hydrocarbon raw material production and deep processing, development of new energy sources, and modes of transportation and storage. The two priorities precede the overall list of the medium-term priorities of the Russian Federation in the field of scientific and technological development, which highlights their particular importance for the development goals in the years ahead. On December 28, 2021, the Chairman of the Government of the Russian Federation signed the Executive Order of the Government of the Russian Federation No. 3924-r, by which he passed the Strategic Direction in the Field of Digital Transformation of the Fuel and Energy Complex (hereinafter referred to as the Digital Transformation Strategy for the Fuel and Energy Complex). The goal of the Digital Transformation Strategy for the Fuel and Energy Complex is to accelerate the transition of the Russian energy sector to a new managerial and technological level that provides enabling conditions for the development

of the fuel and energy complex and the long-term sustainable economic and social development of Russia by streamlining and transforming business processes (models) via the use of digital technologies and platform solutions.

In the years between the adoption of the two documents, Russia passed some major legal acts aimed at achieving the goals of digital transformation: the Decree of the President of the Russian Federation of May 7, 2018, No. 204 on the National Goals and Strategic Objectives of the Development of the Russian Federation for the Period up to 2024; the Decree of the President of the Russian Federation No. 474 of July 21, 2020, on the National Development Goals of the Russian Federation for the Period up to 2030; and the Decree of the President of the Russian Federation of October 10, 2021, No. 490 on the Development of Artificial Intelligence in the Russian Federation. The list of instructions following the AI Conference approved by the President of the Russian Federation on December 31, 2020, (No. Pr-2242) deserves special mention here. The following legal acts were adopted at the level of the Government of the Russian Federation: the Order of the Government of the Russian Federation of April 15, 2014, No. 321 on the Approval of the State Program of the Russian Federation “Energy Development”; the Order of the Government of the Russian Federation of June 9, 2020, No. 1523-r on the Energy Strategy of the Russian Federation for the Period up to 2035; and the Order of the Government of the Russian Federation of February 4, 2021, No. DCh-P10-1369 on the Development of a Digital Transformation Strategy for the Industry in order to Achieve “Digital Maturity”, which provides for the implementation of competitive domestic software and hardware-software suites, created on the basis of artificial intelligence among other things. The National Program Digital Economy of the Russian Federation Minutes No. 7 of the meeting of the Presidium of the Council under the President of the Russian Federation for Strategic Development and National Projects of June 4, 2019, deserves special mention. Thus, the Digital Transformation Strategy for the Fuel and Energy Complex adopted at the end of December 2021 builds on significant preparatory work. It represents the most relevant instrument on the digital transformation of the Russian fuel and energy complex. The value of this document lies in the fact that it defines the main technologies and projects to be implemented until 2030, since the strategy is supposed to be fulfilled by that year.

The Digital Transformation Strategy for the Fuel and Energy Complex provides for the introduction of the following technologies:

- Big Data;
- neurotechnologies and artificial intelligence (artificial intelligence is to be used to analyze big data in the industry, as well as within the framework of the decision support systems);
- robotics and sensorics components are to be used to ensure increased productivity, develop and operate hard-to-reach deposits in order to ensure the safety of life and health of the employees of energy companies; and
- wireless technologies will be used to monitor and diagnose facilities and employees of the fuel and energy complex to ensure their safety and reduce occupational injury and the number of emergency situations.

The main objectives of The Digital Transformation Strategy for the Fuel and Energy Complex include the following:

- the implementation of a pilot project to manage consumer demand in the retail electricity market;
- the implementation of a new relationship system in the wholesale electricity and capacity market, and retail markets via the creation of procedures and technical solutions that ensure access and participation of demand management resources in the electricity and capacity markets;
- the development of microgeneration technologies;
- the creation of a unified information service in the constituent entities of the Russian Federation for the services of energy resources suppliers in the housing and utility sector;
- the creation of a Single Window for communication with customers and access to all energy resources and services;
- cost reduction in the sectors of the fuel and energy complex;
- ensuring the availability (legislative and technical) of the industrial data for organizations of the fuel and energy complex;
- the adoption of uniform standards for the exchange and use of data by companies in the fuel and energy complex;
- increased productivity;

- the development of domestic products and solutions;
- accident risk and occupational injury reduction at fuel and energy enterprises; and
- cybersecurity and infrastructure security risks reduction.

The key digital transformation projects of the Russian fuel and energy complex are presented in Table 1.

Another significant advantage of the Digital Transformation Strategy for the Fuel and Energy Complex lies in the fact that it also provides specific digital transformation indicators for the projects (see Table 2) with a view to assess the preliminary results of implementation and, if necessary, make annual adjustments, since the document specifically provides this opportunity. It should also be emphasized that the document indicates possible risks associated with the implementation of the Digital Transformation Strategy for the Fuel and Energy Complex. Thus, it provides room for additional efforts in specific areas aimed at risk minimization and the achievement of targets.

It should also be emphasized that the document indicates possible risks associated with the implementation of the Digital Transformation Strategy for the Fuel and Energy Complex. Thus, it provides room for additional efforts in specific areas aimed at risk minimization and the achievement of targets (Table 3).

A common risk is the failure to achieve the target indicators of strategic projects in the absence of budget funding for 2022–2030. The federal executive body responsible for the implementation of the strategic direction is the Ministry of Energy of the Russian Federation together with the following co-executors:

- The Ministry of Digital Development, Communications, and Mass Media of the Russian Federation;
- The Ministry of Industry and Trade of the Russian Federation; and
- The Ministry of Economic Development of the Russian Federation.

The implementation of the Digital Transformation Strategy for the Fuel and Energy Complex will be carried out with the full participation of the actors of the fuel and energy complex. In this regard, it is worth emphasizing that the major companies representing the Russian fuel and energy complex have successfully contributed to the implementation of the policy adopted by the President of the Russian Federation and the

**Table 1** Projects of digital transformation

<i>Name of the project</i>	<i>Objective of the project</i>	<i>Project duration</i>	<i>Brief description of the project</i>	<i>Stakeholders</i>
1 Active consumer	Reduction of electricity costs for consumers participating in new market sectors up to 10 percent; increase in the volume of the electricity market—2500 consumption management facilities (up to 5 GW) by 2030; increase in the volume of the microgeneration market—103.7 thousand consumer facilities (more than 1 GW) by 2030	2030	Development of tools to reduce electricity costs for consumers and expansion of the microgeneration market; introduction of a new relationship system in the wholesale electricity and capacity market and retail markets; creation of a target market for demand management	Electricity consumers; energy companies; the Russian Federation
2 Digital Assistant “My Energy”	Cost reduction of the software, equipment, integration mechanisms and information security measures for the fuel and energy complex entities in the transition to a digital format of the provision of services on the basis of the Digital Assistant	2030	Drafting and adopting the consumer service quality standards; creation of a single information and clearing centre as a single window for communications with customers and access to the all suppliers of resources and housing and utility services in the constituent entities of the Russian Federation; creation of new demand management sectors and microgeneration markets	Electricity consumers; energy companies; the Russian Federation

<i>Name of the project</i>	<i>Objective of the project</i>	<i>Project duration</i>	<i>Brief description of the project</i>	<i>Stakeholders</i>
3 Data for Growth—Artificial Intelligence	Establishing legal framework for industrial data; the reduction of cost and time expenditures of the end-to-end communication process between the actors of the fuel and energy complex will lead to a cost reduction in all sectors of the fuel and energy complex; production process optimisation and production cost reduction; increased efficiency of companies due to the end-to-end business and process digitalizing	2030	Establishing the legal framework for the industrial data market and addressing the problem of the data transmission, exchange, dissemination and processing, faced by industry actors and public authorities; ensuring the competitiveness of the Russian fuel and energy organisations in the world market due to, inter alia, cost reduction and business process optimisation on the basis of artificial intelligence, for the training of which the data is needed	Energy companies; industrial enterprises; the Russian Federation
4 Robotics in the Oil and Gas Complex	Increased productivity in the industry; occupational injury reduction	2030	Implementation of robotic solutions in the industry, including pilots of fully autonomous assets to reduce occupational injury at “hazardous” facilities; ensuring the development and operation of hard-to-reach deposits; increased productivity	Energy companies; industrial enterprises; citizens

(continued)

Table 1 (continued)

<i>Name of the project</i>	<i>Objective of the project</i>	<i>Project duration</i>	<i>Brief description of the project</i>	<i>Stakeholders</i>
5 Digital Industrial Security	Mortality and occupational injury reduction in the fuel and energy complex	2030	Promoting the platform solution for collecting and analysing data on the maintenance condition of the infrastructure and the state of the staff: monitoring and diagnosing the facilities and staff of energy enterprises to ensure their safety and security, reduce occupational injury and the number of emergency situations; the system will enable receiving real-time data on the safety at energy facilities and the health of the employees of the energy enterprises by 2030	

*Source* Appendix No. 2 of the digital transformation strategy for the fuel and energy complex

**Table 2** Digital transformation indicators

<i>Name of the project</i>	<i>Executive in charge</i>	<i>Indicator</i>	<i>Indicator unit</i>	<i>Indicator value by project year</i>		
				2022	2023	2024
1	Active Consumer	The Ministry of Energy of the Russian Federation, JSC System Operator of the Unified Energy System, Open Joint Stock Company Administrator of the Trading System of the Wholesale Electricity Market, Association "Nonprofit Partnership Council for Organising Efficient System of Trading at Wholesale and Retail Electricity and Capacity Market", Association of Guaranteed Suppliers and Power Supply Companies	MW	1050	2000	3000
		The volume of the energy management market—average monthly volume of demand management (contracts)				
		The volume of the energy management market—the number of facilities	Pieces	525	1000	1500

(continued)



**Table 2** (continued)

<i>Name of the project</i>	<i>Executive in charge</i>	<i>Indicator</i>	<i>Indicator unit</i>	<i>Indicator value by project year</i>		
				2022	2023	2024
		The microgeneration market volume—the number of facilities	Pieces	2100	2940	4116
		Electricity cost reduction for consumers participating in new market sectors	Percent	3	8	10
2	Digital Assistant “My Energy”	The Ministry of Energy of the Russian Federation, organisations concerned	Pieces Hours	5 193.29	20 193.29	50 96.64
		the Digital Assistant “My Energy”, the processing time of the consumer requests related to the energy supply (per 1 request)				

<i>Name of the project</i>	<i>Executive in charge</i>	<i>Indicator</i>	<i>Indicator unit</i>	<i>Indicator value by project year</i>			
				2022	2023	2024	
3	Data for Growth—Artificial Intelligence	The Ministry of Energy of the Russian Federation, the Ministry of Digital Development, Communications and Mass Media of the Russian Federation, The Ministry of Industry and Trade of the Russian Federation, organisations concerned	The number of adopted legal instruments and technical standards required to create an industrial data market	Units	1	3	2
			Cost reduction of the oil production and processing in comparable categories	Percent	0	0	5
4	Robotics in the Oil and Gas Complex	The Ministry of Energy of the Russian Federation, the Ministry of Digital Development, Communications and Mass Media of the Russian Federation, The Ministry of Industry and Trade of the Russian Federation, Economic Development of the Russian Federation, organisations concerned	The share of robotic solutions produced in the Russian Federation for the oil and gas industry	Percent	0	5	10
			Increased production in the oil and gas industry	Percent	0	5	8

(continued)

Table 2 (continued)

Name of the project	Executive in charge	Indicator	Indicator unit	Indicator value by project year		
				2022	2023	2024
5 Digital Industrial Security	The Ministry of Energy of the Russian Federation, the Ministry of Digital Development, Communications and Mass Media of the Russian Federation, The Ministry of Industry and Trade of the Russian Federation, organisations concerned	The number of personal protective equipment (PPE) units and IoT sensors put in place at hazardous facilities The coverage of intelligent monitoring systems the share of “smart” PPE units produced in Russia and put in place at the fuel and energy facilities	Units  Percent  Percent	3048  20  40	7417  35  80	10,989  50  100
6 Integral index of projects indicated in paragraphs 1–4 of this section	The Ministry of Industry and Trade of the Russian Federation, the Ministry of Energy of the Russian Federation, organisations concerned	Russian electronic products used in the implementation of projects for the digital transformation of the fuel and energy complex (out of the overall number of electronic products used in the implementation of such projects)	Percent	37.5	39.5	40.8

**Table 3** Strategic risks

<i>Name of project</i>	<i>Brief description of risks</i>
1 “Active Consumer”	Failure to reach the targets of the electricity cost reduction as a result of an insufficient number of participants (major electricity companies) in the project on demand management in the electricity and capacity market
2 Digital assistant “My Energy”	Inefficient financial and economic model for regional investors in the implementation of the initiative in the absence of budgetary co-financing
3 “Data for Growth—Artificial Intelligence”	Failure to implement the project on time in the event of longer drafting and adoption the legal framework for the industrial data market; insignificant economic impact of the project in the absence of sufficient incentives for industrial data exchange aimed at the organisations of the fuel and energy complex and the State
4 “Robotics in the Oil and Gas Complex”	Lack of the public support for the production, testing and implementation of domestic robotic solutions; a long-drawn-out amending of the legislation of the Russian Federation aimed at the removal of legal barriers that prevent the full-scale implementation and use of robotic solutions
5 “Digital Industrial Security”	The lack of public incentive measures with a view to attract additional extra-budgetary funding, which can significantly slow down the process of implementing individual digital solutions; technical problems arising in the integration of information systems of organisations with the digital industrial security platform, including those related to the information security

*Source* The digital transformation strategy for the fuel and energy complex

Government of the Russian Federation. The companies have embarked on the introduction of the latest technologies in various business processes both internally and in the course of commercial interaction. Moreover, some of the largest Russian energy companies initiated the introduction of the latest technologies long before the adoption of the national agenda.

The digital transformation projects envisaged by the Digital Transformation Strategy for the Fuel and Energy Complex are already part of the best practices of the Gazprom Group, the leader of the Russian power market. On December 17, 2021, the Gazprom Management Committee endorsed the Strategy of Digital Transformation of Gazprom Group for 2022–2026. It was consequently submitted for consideration by the Company’s Board of Directors (Management Committee endorses

2022–2026 Digital Transformation Strategy of Gazprom Group). The Strategy notes that the Gazprom Group is actively creating and implementing advanced digital technologies with widely integrated software packages and digital modeling technologies, allowing the Company to efficiently manage its business processes of energy resources production, transportation, storage, and distribution.

Some digital platforms of the Gazprom Group are already in the design stage, which deserves a special mention in terms of the expertise analysis. For instance, efforts are underway to create a Unified Digital Platform for investment project management, representing a single digital space featuring a set of IT solutions and digital information models of objects, aimed at performing project management at all stages of a project.

Gazprom Neft PJSC (hereinafter referred to as Gazprom Neft), one of the most efficient energy companies in Europe, is at the forefront of transformations in the energy business. In 2021, Gazprom Neft demonstrated a quarterly growth across all key financial indicators, surpassing both the level recorded in 2020 and the pre-crisis level of 2019. According to the 2021 results, Gazprom Neft is expected to produce over 100 million Mt of oil equivalent for the first time in its history (Oil capital, 2021).

In addition, Gazprom Neft is the first oil company in Russia to embark on a comprehensive digital transformation of its business (long before the Group began to address its centralized digitalisation) (Digital projects [Gazprom Neft]). Its digital development is largely based on the 2030 long-term business development strategy, adopted in 2018 (Join the group of world leaders in terms of efficiency: Gazprom Neft Strategy 2030), under which Gazprom Neft is to pave the way for other companies in the global industry in terms of efficiency, manufacturability, and safety. Digital transformation will enable swift and high-quality decision-making through the introduction of digital technologies (Gazprom Neft today—presentation).

To date, Gazprom Neft has more than 1000 digital projects structured into several target programs, which laid the foundation for the digital development strategy. Gazprom Neft is digitalizing every stage of its main operations, from geological exploration and drilling of multilateral wells to oil refining with its further use for the vehicle and aircraft refueling and road construction.

One of the company's major achievements is the development of a digital software for the study of the photographed geological materials

through the use of machine learning methods and computer vision algorithms (Automatic core recognition system [Gazprom Neft]). Having been extracted, marked, and initially examined, the sample is transported to a special storage facility for laboratory research. In the past, analysis was carried out manually by specialists and decisions were made on the basis of subjective experience. Currently, samples are extracted from wells and digitized through photography. The program analyzes the accumulated array of images and recognizes lithologic layers and their characteristics. New technologies increase knowledge and significantly reduce the time spent on geophysical well logging. Once the software was successfully tested at the fields of Western Siberia, it was put into operation, allowing Gazprom Neft to accelerate the laboratory analysis of samples by 7 times and save about 85 million rubles a year.

In addition, Gazprom Neft launched the world's first digital logistics management system in the Arctic. The CAPTAIN project was designed to improve logistics management and ensure year-round continuous export of the Novy Port and ARCO crude oil produced at Prirazlomnoye and Novoportovskoye fields (Captain system [Gazprom Neft]). The system allows for a real-time comprehensive analysis of the fleet operation efficiency, evaluating the speed on the route, fuel consumption, and vessel loading. The system processes about 7000 input parameters on a daily basis and provides optimal logistics solutions, responding to potential deviations. In the near future, the CAPTAIN system will determine the ice drift on the basis of satellite images, using known data on the sea current, wind direction, and strength. It will ensure optimal route planning, including the travel time and speed of shuttle tankers.

Another cutting-edge project is Smart fuel, an aircraft refueling payment system based on smart contracts (operating through blockchain technology) (Smart fuel [Gazprom Neft]). Smart fuel is a private blockchain network, the nodes of which are owned by the aviation fuel supply participants: fuel purchasing managers and pilots of an airline and sales managers and drivers of the airfield tankers of a fuel supplier. Banks, in turn, transfer funds and record payments at the request of a smart contract. Thus, payment is made at the time of refueling. Transactions recorded in the system, as in all classic smart contracts, are immutable. This creates a single evidence base of completed transactions. It can be concluded that the aforementioned initiatives of Gazprom Neft demonstrate the effectiveness of artificial intelligence, blockchain technologies, and smart contracts in terms of analyzing big data in the industry.

The automation of the business processes has proved to be cost-effective without sacrificing quality, as provided for in the Digital Transformation Strategy for the Fuel and Energy Complex.

Digitalization has changed domestic consumer markets. For instance, Gazprom Neft has developed and maintains the Gazprom Neft filling station network app by which users can pay for the fuel without leaving the car. Moreover, the application allows users to pay for another person's fuel (Gazprom Neft, 2019). Obviously, such technologies increase consumer safety. It is needless to say that contactless fuel payment is gaining momentum amid the Covid-19 pandemic.

The billing system update for subscribers is another remarkably effective project by Gazprom Mezhregiongaz. This successfully enables interaction between consumers and business and allows payments and a real-time tracking of the natural gas consumption. The new billing system is likely to increase the transparency of billing and unify the approach to bill payment, thus, increasing compliance with the following legal requirement: "Energy is paid for the amount of energy actually received by the subscriber in accordance with the energy metering data" (Clause 2 of Art. 13 of Law No. 261-FZ on Energy Saving). It is worth noting that the new billing system requires smart meters. Smart meter installation (as well as "simple" meter installation) is a right but not an obligation of citizens. Such smart devices obviate the need of the "manual" transfer of meter readings and automate the calculation of payments. The initiative to modernize bill payments has already been implemented in the Pskov region (2020), as well as in the Samara, Yaroslavl, and Vladimir regions (2021). It is worth mentioning that the Gazprom Mezhregiongaz billing (Interview with S. Gustov, General Director of Gazprom Mezhregiongaz) is based on Russian software.

### *Government Regulation in the Field of Digitalization of the Fuel and Energy Complex in the Republic of Kazakhstan*

The Republic of Kazakhstan pays particular attention to the development of digital technologies. This is due to the fact that a country that has set itself the goal of becoming one of the 30 most competitive states by 2050 (as Kazakhstan has) should keep pace with modern global trends in the evolution of public administration, law, business, environmental conservation, and other areas, and, in doing so, fully use and develop the achievements of the fourth industrial revolution (Industry 4.0).

Systemic government regulation of digital technologies in sovereign Kazakhstan was launched on November 10, 2004, by the Decree of the President of the Republic of Kazakhstan No. 1471 On the State Program for the Formation of “Electronic Government” in the Republic of Kazakhstan for 2005–2007 under which the e-Government portal (eGov.kz) was developed and introduced in 2006. Citizens and legal entities were given the opportunity to receive the necessary public services and certificates, submit reports, and suchlike online from the comfort of their home or office. That covers business registration and development, licensing and accreditation, industry and taxes, intellectual property, natural resources, and ecology, etc. The global community defined the development of the Kazakh e-government as “emerging” (emerging leaders). Moreover, it is considered to be one of the most successful projects in this area. Thus, according to the report of the World Economic Forum (WEF) published in July 2016, Kazakhstan ranks 39th out of the 139 economies included in the Network Readiness Index (NRI) (eGov.kz, n.d.).

On December 12, 2017, the State Program Digital Kazakhstan was approved by the Order of the Government of the Republic of Kazakhstan. The Program sets the following goals: accelerating economic growth and improving the quality of life of the population through the use of digital technologies in the medium term; enabling the transition of Kazakhstan economy to a fundamentally new trajectory of development that ensures the creation of the digital economy of the future in the long term; providing the long-term resilience of the economy; launching the digital transformation of the country by boosting the human capital development; building innovative development institutions and, in general, the progressive development of the digital ecosystem. The State Program Digital Kazakhstan sets out the transformation of traditional sectors of the country’s economy (which include mining and oil and gas sectors) through the use of cutting-edge technologies and opportunities that will lead to the increased productivity and capitalisation. This is closely linked to the goals such as “Transition to a Digital State”, aimed at transforming the functions of the state as an infrastructure for providing services to the population and business, anticipating its needs (The Order of the Government of the Republic of Kazakhstan of December 12, 2017, No. 827 on the approval of the government program Digital Kazakhstan).

National legislation in the field of digitalization is rapidly evolving. Thus, on April 2, 2019, the President signed the Law on the Amendments



and Additions to Certain Legislative Acts of the Republic of Kazakhstan on the Development of the Business Environment and Regulation of Trade Activities. The law provides for amendments to 57 legal acts, of which 11 are codes and 46 are laws. That is about 700 amendments aimed at addressing a number of targets, including the digitalization of this area (amendments are adopted in the field of the development of the business environment and regulation of the trade). On June 25, 2020, the Law of the Republic of Kazakhstan on Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on the Regulation of Digital Technologies was adopted. The amendments were made to a number of codes (Civil, Entrepreneurial, Budgetary Codes) and laws (on Banks and Banking Activities in the Republic of Kazakhstan, Patent Law of the Republic of Kazakhstan, on Informatisation, etc.) Thirty-five legal instruments were amended in total (The law of the Republic of Kazakhstan on amendments and additions to certain legislative acts of the Republic of Kazakhstan on the regulation of digital technologies).

Public administration in the field of digitalization is subject to continuous improvement. Thus, the public body responsible for the country's digital development policy-making and implementation has evolved from the Agency for Informatisation and Communications (2003) to the Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan (2019) (Ministry of Digital Development, Innovations and Aerospace Industry of the Republic of Kazakhstan, n.d.).

The fuel and energy complex of Kazakhstan sees rapid digitalization due to the targets aimed at increasing the efficiency of both fuel and energy companies and the entire national economy. The oil and gas company JSC NC KazMunayGas (hereinafter referred to as JSC NC KMG), founded in 2002, holds a leading position in the country's fuel and energy complex. JSC NC KMG manages assets throughout the entire production cycle, from hydrocarbon exploration and production to transportation, processing, and provision of services. The shareholders of JSC NC KMG are JSC National Welfare Fund Samruk-Kazyna (90.42%) and the National Bank of Kazakhstan (9.58%). JSC NC KMG provides 25% of the oil and gas condensate production, as well as 15% of the natural and associated gas production in Kazakhstan. Its main pipelines transport 56 and 77% of the country's oil and gas respectively. The share of oil refining at the refineries of Kazakhstan is 81%. In 2020, JSC NC KMG produced 21,752 thousand tons of oil and 8191 million m<sup>3</sup> of associated and natural gas. Oil transportation amounted to 73,171 thousand

tons, while gas transportation totalled 86,590 million m<sup>3</sup>. The refinery processed 18,077 thousand tons of oil (JSC NC KazMunayGas. General information).

The JSC NC KMG transformation program, which aims to increase the company's operational efficiency and value by improving business processes and digitalising production and employee capacity building, has been implemented since 2015. In 2019, Samruk-Kazyna JSC introduced a new approach to the transformation of portfolio companies with a focus on digitalisation, under which JSC NC KMG embarked on the implementation of the “Жаңару” (Update) Digital Transformation Program. The Program states that digital transformation is considered as one of the aspects of JSC NC KMG's anti-crisis strategy, given the global economic downturn caused by the Covid-19 pandemic. The Program contains projects on the implementation of an updated IT system of the ERP class, which combines financial and production information, alongside with data on human resource and material asset management (JSC NC KazMunayGas “Жаңару” digital transformation programme).

JSC NC KMG is implementing systems such as the Digital Field, which integrates several technologies for oil and gas drilling, as well as exploration and digital management combined with standardized communication technologies. The first Digital Field project was implemented in 2015 by EmbaMunayGas JSC at the Uaz field in the Atyrau region (Digital Field). It is an automated oil and gas field management system that makes it possible to ensure maximum efficiency by integrating disparate systems into a single integrated information system. Since the launch of the project, it has allowed for an additional three percent increase in oil production, reduced well recovery rate, increased turnaround, and improved energy efficiency by more than 20%. Technical field development was carried out by Kazakh specialists. In 2017, JSC NC KMG continued to successfully implement the project at 14 fields of the KazMunayGas, such as Uzen, Karazhanbas, Akshabulak, and the Prorvinskaya group of fields. According to preliminary assessments, potential economic benefits arising from the production stabilization and energy efficiency improvement are estimated at about 30 billion tenge (JSC NC KazMunayGas, 2017).

According to the State Commission on Mineral Reserves, the reserves of liquid hydrocarbons (oil and gas condensate) in Kazakhstan amount to 5.3 billion tons, of which 4.8 billion tons are oil reserves, and the rest (445 million tons) are gas condensate. Officially, Kazakhstan has

332 fields (271 oil fields and 61 gas condensate fields) (Mamayeva, 2020). Companies from the USA, Europe, Russia, and China (Chevron, ExxonMobil, Eni, Shell, Total, Lukoil, CNPC, etc.) participate in the field development. This applies in particular to the largest fields (Tengiz, Karachaganak, Kashagan). Each of these companies has achieved considerable success in the development and application of digital technologies, which are unique and subject to careful protection. This process, aimed at improving the competitiveness of companies, is implemented in accordance with the state programs and legislation of Kazakhstan, combined with the best practices of industry experts from different countries. Therefore, there can be no universal, uniform approach for companies, including those operating in the fuel and energy sector. Approaches will inevitably differ. The scope of projects in the field of digitalization depends on the material and financial capabilities, the availability of specialized human resources, etc., and represents a productive and intellectual value.

Implementation of the development programs associated with “Digital Kazakhstan” is constantly considered at the government level. Despite the efforts made by the government, the President of the Republic of Kazakhstan Kassym-Jomart Tokayev, referring to the building of a digital economy in the country, noted: “The programme Digital Kazakhstan is not being implemented quickly and efficiently enough ... We cannot afford to lag behind our partners and put the country in a state of “digital inequality” (Akorda, 2020).

Thus, the implementation of the “Fourth Industrial Revolution” in Kazakhstan, along with the digitalization of the fuel and energy complex, is relevant and requires joint efforts by the state and business amidst the development of digital technologies.

### *The EAEU Digital Agenda*

The Eurasian Economic Union (the EAEU) is an international organization for regional economic integration, which was established in 2014 through the signature of the Treaty on the Eurasian Economic Union. The EAEU has as its main goal the establishment of an enabling environment for the economic development of its member states (the Republic of Armenia, the Republic of Belarus, Republic of Kazakhstan, Kyrgyz Republic, and the Russian Federation).

The EAEU has been addressing the use of digital technologies and the creation of a common digital space for several years. On December 26, 2016, the heads of the member states of the EAEU signed the Statement on the Digital Agenda of the EAEU (The Statement on the Digital Agenda of the EAEU). On the same day, the Decision of the Supreme Eurasian Economic Council No. 21 on the Formation of the Digital Agenda of the Eurasian Economic Union was adopted (The Decision of the Supreme Eurasian Economic Council of December 26, 2016, No. 21 on the Formation of the Digital Agenda of the Eurasian Economic Union). On October 11, 2017, the Supreme Eurasian Economic Council approved the Main Directions for the Implementing of the Digital Agenda of the Eurasian Economic Union until 2025 (The Decision of the Supreme Eurasian Economic Council of October 11, 2017, No. 12 on the Main Directions for the Implementing of the Digital Agenda of the Eurasian Economic Union until 2025). The areas of the digital economy development include: digital transformation of economic sectors and cross-industry transformation; digital transformation of markets for goods, services, capital, and labor; digital transformation of management and integration processes; development of digital infrastructure and ensuring the security of digital processes.

The implementation of the EAEU Digital Agenda is divided into three stages:

1. The first stage (until 2019) is aimed at modeling digital transformation processes, developing the first initiatives and launching priority projects with a focus on the priorities for developing initiatives (digital traceability of the products, goods, services and digital assets; digital trade movement; digital transport corridors; digital industrial cooperation; data flow agreement; regulatory sandbox);
2. The second stage (until 2022) is aimed at building the institutions and assets of the digital economy, as well as the development of digital ecosystems; and
3. The third stage (until 2025) is aimed at the implementation of projects of digital ecosystems and digital cooperation at the global, regional, national, and sectoral levels.

The Agenda also notes that the strategies and programs on the development of economies of the EAEU member states are already addressing

the challenges associated with the digital transformation of the economy. However, the integration aspect of providing resilience with a view to boost the economies of the EAEU member states in response to the global challenges of digital transformation is inadequately addressed. The lack of a coherent policy of the Member States in the digital environment could be an obstacle to achieving synergies in the development of the digital space and digital economies of the Member States. A wide range of measures is proposed aimed at addressing constraints and advancing the EAEU digital agenda, including the need for the active participation of the business communities of the Member States in the process of developing initiatives and implementing projects within the Digital Agenda. To that end, expert platforms are being created to bring together the initiator, representatives of the government authorities of the Member States, structural units of the Eurasian Economic Commission (EEC), business communities of the Member States, competence centres, scientific organizations, enterprises, international organizations, and other experts, with a view to discuss and elaborate on the initiative under the auspices of the EEC. As of January 20, 2022, 10 expert platforms have been created, one of which is the platform on the initiative Creating a Digital System for the Technological Development of the EAEU Fuel and Energy Complex to Ensure the Security of the Common Market for Oil, Gas, and Petroleum Products of the EAEU Member States. In general, it must be recognised that no special documents have yet been adopted at the EAEU level that would specifically address the digital transformation of the EAEU fuel and energy complex. Currently, this issue is mainly being addressed by experts with the participation of the business community and public authorities of the EAEU Member States. The digitalization of the EAEU fuel and energy complex is envisaged by the second and third stages of the implementation of the EAEU Digital Agenda. Thus, it will cover the period from 2022 to 2025. That would suggest that the experience that has already been accumulated by the EAEU Member States (mainly by Russia and Kazakhstan) in the process of the fuel and energy complex digital transformation will serve as the model for legislative and managerial decisions at the EAEU level in the coming years.

## DISCUSSIONS

The dynamism of digital projects carried out by the oil and gas companies testifies to the positive momentum of the comprehensive process of digital transformations in the Russian Federation. Some aspects of the fuel and energy companies' transition to Russian software are noteworthy. The transition seems to be particularly timely, given the need to ensure Russia's security amidst US, EU, and UK sanctions. However, the representatives of the Gazprom Group have repeatedly spoken out against the general rules and deadlines for the digitalization of the oil and gas business due to the cost of such projects (Gazprom warned of problems due to Russian software). However, public authorities may have to insist on specific timelines for IT transformations (for instance, by establishing that all relevant software is to be Russian by 2030), and, in doing so, should clearly define the focus activities of companies that are subject to the relevant program update for 2025. The annual replacement of the remaining programs in percentage terms by a later date can also be introduced. Progress made in the field of compliance with the public recommendations on the required minimum of Russian programs can serve as a basis for the mineral extraction tax cuts. They can be equivalently offset by taxes paid by the domestic software companies registered in accordance with Russian legislation, or, in the event of agreements with non-resident contractors, by oil and gas companies. After all, the potential costs incurred by the oil and gas sector also imply tax revenues from the implementation of new software.

To date, Kazakhstan has more than 300 oil and gas fields. Their development involves not only Kazakh, but also prominent companies from around the world. Each of these companies has achieved considerable success in the development and application of digital technologies, which are unique and ensure the competitiveness of companies. Therefore, the process of digitalisation, as an intrinsic component of the competitiveness of enterprises, will constantly advance, including through public programs and legislation of Kazakhstan. However, ensuring a universal, uniform approach in the field of digitalization (in the fuel and energy complex) can cause major challenges. These issues should therefore be given special attention by the experts of the EAEU Member States.

## CONCLUSIONS

From 2016 to 2021, the Russian Federation has made significant progress in establishing the legal framework and improving the government regulation of the economy digitalization in general and of the country's fuel and energy complex in particular. For the time being, the Digital Transformation Strategy for the Fuel and Energy Complex, adopted at the end of December 2021, is the most relevant document, which focuses on the digitalisation of the Russian fuel and energy complex. The Digital Transformation Strategy for the Fuel and Energy Complex defines the main technologies (Big Data; neurotechnologies and artificial intelligence; robotics and sensor components; wireless communication technologies) and projects (Active Consumer; Digital Assistant “My Energy”; Robotics in the Oil and Gas Complex; Digital Industrial Security; Data for Growth—Artificial Intelligence). The strategy will have been implemented by 2030. Its advantages include specific indicators of the projects' digital transformation and reference to risks associated with the implementation of such projects.

Two main aspects shall be highlighted following the analysis of the digitalization practice of Gazprom Group. Firstly, digitalization can contribute to the implementation of business projects and increase profitability. Secondly, despite the complexity and the initial high cost of the technologies and infrastructure used, the business has become the main actor in this area. Drawing on its own experience, the business charts the course of the digital development. The government is progressively developing an appropriate legal framework, adjusting to and building on the current relations within the fuel and energy sector.

The Republic of Kazakhstan pays particular attention to the development of digital technologies as well. This is due to the fact that the country has set itself the goal of becoming one of the 30 most competitive states by 2050 and should therefore keep pace with modern global trends in the evolution of public administration, human rights, ecology, and business, and, in doing so, should fully use and develop the achievements of the Fourth Industrial Revolution. This is evidenced by the adoption of relevant public programs and the development of country's legislation in this field.

The EAEU Digital Agenda aims to provide resilience with a view to boost the economies of the EAEU member states in response to the global challenges of digital transformation. The lack of a coherent policy

of the EAEU Member States in the digital environment could be an obstacle to achieving synergies in the development of the digital space and digital economies of the Member States. Given the significant progress made by Russia and Kazakhstan in recent years, as well as the expertise, financial might and economic might of the Russian and Kazakh oil and gas companies, the Russian Federation and the Republic of Kazakhstan could become leaders in the digital transformation of the EAEU fuel and energy complex.

## REFERENCES

- Akorda. (2020, November 24). *The Head of State held an expanded meeting of the Government of the Republic of Kazakhstan*. [http://www.akorda.kz/ru/events/akorda\\_news/meetings\\_and\\_sittings/glava-gosudarstva-provel-rasшиrennoe-zasedanie-pravitelstva-respubliki-kazahstan-1](http://www.akorda.kz/ru/events/akorda_news/meetings_and_sittings/glava-gosudarstva-provel-rasшиrennoe-zasedanie-pravitelstva-respubliki-kazahstan-1). (In Russian).
- Alekseev, A., Lobova, S., Bogoviz, A., & Ragulina, Y. (2019). Digitalization of the Russian Energy Sector: State-of-the-art and Potential for Future Research. *International Journal of Energy Economics and Policy*, 9(5), 274–280.
- Digital Kazakhstan. (n.d.). *Digital Field*. <https://digitalkz.kz/cifrovizaciya-otraslei-economiki/>. (In Russian).
- Digital Kazakhstan. (2017, December 12). *The Order of the Government of the Republic of Kazakhstan of December 12, 2017, No 827 on the approval of the government programme Digital Kazakhstan*. <https://digitalkz.kz/wp-content/uploads/2020/03/ПҚ-рр.pdf>. (In Russian).
- Dzhafarov, E., & Kharitonova, N. (2020). Digital technologies as a tool for improving production and technological activities and information security in Fuel and energy complex. *IOP Conference Series: Materials Science and Engineering*, 837, 012010. <https://doi.org/10.1088/1757-899X/837/1/012010>
- EGov.kz. (n.d.). *E-Government of the Republic of Kazakhstan*. <https://egov.kz/cms/information/about/help-elektronnoe-pravitelstvo>. (In Russian).
- Gazprom Neft. (2019, October 27). How Gazpromneft creates a digital path for a corporate client. *Gazpromneft*. <https://habr.com/ru/company/gazpromneft/blog/473072/>. (In Russian).
- IEA. (2017). Digitalization & Energy. *International Energy Agency*. <https://iea.blob.core.windows.net/assets/b1e6600c-4e40-4d9c-809d-1d1724c763d5/DigitalizationandEnergy3.pdf>
- JSC NC KazMunayGas. (2017, September 13). *KazMunayGas presented the project of the digital field at the exhibition of digital technologies*. <https://www.kmg.kz/rus/press-centr/press-relizy/?cid=0&rid=406?cid=0&rid=406>. (In Russian).



- Mamayeva, A. (2020, December 30). Oil-2020: further growth (Baker Tilly Qazaqstan Advisory). *Forbes*. [https://forbes.kz/process/energetics/neft\\_2020\\_nishi\\_dlya\\_posleduyuschego\\_rosta/](https://forbes.kz/process/energetics/neft_2020_nishi_dlya_posleduyuschego_rosta/). (In Russian).
- Ministry of Digital Development, Innovations and Aerospace Industry of the Republic of Kazakhstan. (n.d.). *About the Ministry*. <https://www.gov.kz/memleket/entities/mdai/about?lang=ru>. (In Russian).
- Oil capital. (2021, December 9). *Gazprom Neft's 2021 revenues to exceed 2019 levels*. [https://oilcapital.ru/news/companies/09-12-2021/dohody-gazprom-nefti-po-itogam-2021-goda-prevysyat-uroven-2019-goda?utm\\_source=ynews&utm\\_medium=desktop&utm\\_referrer=https%3A%2F%2Fyandex.ru%2Fnews%2Fsearch%3Ftext%3D](https://oilcapital.ru/news/companies/09-12-2021/dohody-gazprom-nefti-po-itogam-2021-goda-prevysyat-uroven-2019-goda?utm_source=ynews&utm_medium=desktop&utm_referrer=https%3A%2F%2Fyandex.ru%2Fnews%2Fsearch%3Ftext%3D). (In Russian).



# Implications of Increased Data Collection

*Zarina I. Khisamova and Ildar R. Begishev*

## INTRODUCTION

In 1994, long before the emergence of such digital giants as Amazon, Meta, or Google, the famous writer and scientist Philip Agre published his work “Observation and Capture” about the problem of data privacy in the development of technology. The work turned out to be prophetic. Unlike many utopian writers, Agre predicted not the emergence of a “big” brother, but the emergence of many companies whose activities will focus on the targeted collection of personal data of users of a very different nature. At the same time, the author noted that digital technologies will accumulate huge amounts of data about the whole society, but humanity will ignore this fact (Agre, 1994).

Today, the average person spends from 2 to 10 h a day online. At the same time, many actions—whether online ordering, reading news headlines

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or jokes, communicating through social platforms, etc.—leaves a digital footprint in the form of data that is collected, summarized, and sold. According to experts, in the darknet, the cost of logins and passwords for video game user accounts and file-sharing sites were available for less than \$2, a personal access record for a bank account is \$71, and domain admin accounts are sold for \$3.1 thousand (Tadviser, 2021).

Data collection and digital tracking has grown into a multi-billion-dollar industry, the volume of which is difficult to estimate today; and with the development of digital technologies, data collection is also expanding.

Clive Humby’s odious phrase that “data is the new oil” takes on a special context in the era of the growth of digital platforms. Data is the “raw material” or “fuel” for the successful operation of digital platforms. The expansion of data collection is vital for the development of artificial intelligence (Bikeev et al., 2019; Bokovnya et al., 2020a, 2020b; Khisamova et al., 2019a, 2019b), machine learning, and big data technologies.

On the one hand, the expansion of data collection is one of the key tools for the development of digital technologies, but on the other, the concepts of privacy and confidentiality are significantly discredited, and moreover, constant leaks of data collected by digital companies cause irreparable damage to citizens and companies. According to experts, in 2020, more than 90% of Russian companies leaked databases with personal customer data (RBC, 2020). The pandemic and the massive transition online have also contributed to the digitization of an even larger array of data: scientific conferences, classes, shopping trips, remote work, and many other areas generate terabytes of user data.

## METHODOLOGY

Within the framework of this chapter of the monograph, the authors have attempted to investigate the consequences of expanding data collection, to investigate both positive and negative aspects of this phenomenon, to reflect key trends, and to give them a legal assessment from the regulatory point of view. The authors have made an attempt to evaluate the thesis of Eric Schmidt from Google that the fight for privacy is already a necessity. In the course of the study, the authors used a set of general scientific methods that made it possible to comprehensively consider the problem under study from all aspects.

## RESULTS

Kaspersky Research (2020) on privacy forecasts for 2022 identifies a number of trends that according to their predictions, will shape the “privacy landscape”. In the course of the conducted research, the authors were able to identify a number of additional trends that will accompany the process of increasing data collection in the near future.

### 1. Widespread tightening of regulations in the field of processing and circulation of personal data, strengthening of penalties

The GDPR has been in effect in the EU since 2018. The Regulation is a universal regulatory document, and is applicable both for large multinational companies managing digital platforms and small companies processing personal data. Penalties are conditionally divided into significant and insignificant, depending on the nature of the encroachment. Thus, liability for minor amounts provides for up to 10 million euros, or 2% of the firm’s annual revenue worldwide for the previous fiscal year, depending on which amount is greater. In case of a fundamental violation of the right to oblivion or privacy (violation of the basic principles of processing enshrined in Articles 5, 6, and 9 of the Regulations), fines of up to 20 million euros, or 4% of the annual revenue of the company worldwide for the previous financial year, depending on which amount is greater, may be imposed. Such severe penalties are envisaged as part of the implementation of the principle—the best way to secure data is to make the methods of their protection too expensive for non-use (GDPR, 2018).

In order to maintain competition among digital platforms, the EU regulator also plans to oblige digital giants to share commercial data and data collection algorithms with small companies. Among the potential targets of the new regime are digital giants Google, Facebook, and Apple. Penalties and compulsory withdrawal and sale of shares in monopolistic companies are supposed to be imposed as liability measures (Tass, 2020).

The bill on American Choice and Innovation on the Internet (US Congress, 2021b) obliges companies not to endow their own products and services with a privileged position, restricts competitors’ goods and services, and deprives them of the opportunity to use users’ personal data for these purposes. The fulfillment of these requirements will be controlled by a system of fines in the amount of 15% of the total income

of the company for the previous year, or 30% of the income of the victim of illegal behavior or the party who became the object of illegal behavior during the period of illegal behavior. The reason that prompted legislators to take such initiatives is numerous violations on the part of digital platforms.

The example of Amazon is indicative in this aspect, which is not only in no hurry to comply with legislative initiatives, but also prevents their adoption in every possible way. Thus, the materials of the Reuters Investigations investigation describe the predatory policy of the company, which for several years lobbied for the repeal of data privacy bills in many states by increasing political donations and lobbying for amendments to bills. The investigation materials mention activity in 25 states and at least 30 bills (Dastin et al., 2021).

Sanctions against Amazon are also imposed for violating the GDPR. The National Commission for the Protection of Personal Data of the Grand Duchy of Luxembourg imposed a fine of 746 million euros on Amazon for unauthorized processing of personal data of consumers in order to build their individual profiles and send them targeted advertising. The commission's decision was made following the results of the consideration of a complaint by the French non-profit organization La Quadrature du Net regarding the practices of Amazon and other companies of the conditional GAFAM group (Google, Apple, Facebook, Amazon, Microsoft). Amazon is charged with violating Articles 6(1), 12, 13, 14, 15, 16, 17, and 21 of the EU General Data Protection Regulation (GDPR), prohibiting the processing of users' personal data in order to build an individual consumer profile and send targeted advertising to them. Considering that the marketplace trade agreement does not require the creation of consumer profiles for targeted advertising, and the fact that Amazon does not request a separate voluntary informed consent to the processing of personal data, the company's actions were found to directly violate these GDPR provisions (Wall Street Journal, 2021).

The tightening of responsibility for the turnover of personal data is also provided for by the new legislation of China. Thus, the Personal Information Protection Law (PIPL) explicitly prohibits the illegal collection, use, processing, transfer, sale, and collection of personal data.

The liability includes a fine of at least 1,000,000 yuan for organizations, and fines from 10,000 to 100,000 yuan for the main responsible persons (\$7.7 million) or up to 5% of the violator's annual revenue (Skadden, 2021).

2. Providing digital giants like Amazon, Meta, and Google with tools for limited privacy control

The increasing tightening of regulations in all countries will lead to a situation where digital giants will be forced to implement such tools. In October 2021, a bill was introduced in the US Congress obliging digital platforms to provide users with the opportunity to use the platform's resource without content filtering and personalization algorithms. In support of their initiative, the authors of the bill noted the monopolism and dominance of individual digital platforms, depriving the user of an alternative choice (De Chant, 2021).

The previously mentioned Law on Personal Data of the People's Republic of China obliges digital platforms to create control systems for the protection of personal information in accordance with state requirements, and to formulate clear standards for the processing of personal data in relation to the products and services of the platforms.

Since January 25, 2022, two indicators of possible violations in the processing of personal data have been introduced in the Russian Federation: detection by Roskomnadzor for a calendar year of 10 or more discrepancies in the information provided by the controlled person at its request with data from citizens regarding the illegal processing of information about these people; for a calendar year, the agency revealed 10 or more facts when personal data became publicly available or were published on the Internet (Ministry of Figures of the Russian Federation, 2021).

3. The desire of digital giants in the context of stricter regulation of the confidentiality of personal data to encourage users to voluntarily transfer data and choose less privacy in the settings of Internet surfing

In 2021, a number of bills aimed at "solving the problems that have arisen as the influence of digital platforms grows" were submitted to the US legislative bodies for consideration.

The Law on Competition and Platform Opportunities of 2021 (US Congress, 2021d) recognizes as a violation the direct or indirect acquisition of a share of the entire block of shares of a competitor engaged in trading or in any activity or affecting trading.

The Augmenting Compatibility and Competition by Enabling Service Switching (ACCESS) Act (US Congress, 2021c) will require platforms to guarantee a certain minimum standard of data interoperability and portability, in particular, to ensure their portability and compatibility with other platforms.

In order to promote competition, increase economic opportunities in digital markets, and eliminate the situation of simultaneous control and dominance of individual digital platforms, the fourth bill Ending Platform Monopolies Act (US Congress, 2021a) was introduced, prohibiting large platforms—with at least 50 million monthly active users in the US and a market capitalization of \$600 billion or more—to own or operate a business that will allow them to benefit from their own products and services or put their competitors at a disadvantage.

4. The development of public digital platforms and the desire of states to gain access to data processed by private digital corporations; as a result, the introduction of requirements for IT companies to lend and the ban on cross-border data processing

The new law on personal data of the People's Republic of China obliges online platforms with a large number of users to develop detailed rules of conduct for parties providing services through these platforms. They should clearly define data processing standards and obligations to protect personal information by providers of products or services on online platforms. It is worth emphasizing that the law is extraterritorial in nature with respect to companies that process the personal data of Chinese users to provide products and services or analyze user behavior not only in China, but also abroad.

There are provisions in the law on landing and data deletion. PIPL provides that if the volume of personal information processed by the data processor reaches certain thresholds, a data localization requirement may be introduced, and the data processor will also need to appoint an information protection officer to monitor the proper processing and protection of the collected personal data. When the purposes of data collection and processing are achieved, the operator is obliged to delete the collected data. These actions must also be performed upon expiration of the terms of informed consent to the processing of personal data or revocation by the data owner of their agreement.

The rules on cross-border data transfer have been significantly adjusted—companies will be required to obtain the user’s special consent to transfer their data abroad, and subsequently to ensure that the foreign data recipient complies with data protection requirements that are no less stringent than the requirements established by PIPL.

PIPL requires that companies processing personal data—in particular, operators of critical information infrastructure and companies with a significant audience of Chinese users—undergo a state certification procedure and a special security check, the rules of which are to be established by the Chinese Cyberspace Administration, as well as conducting regular self-audits to assess their information security risks and implement appropriate policies and precautions (Skadden, 2021).

The need to adopt a stricter regime for the processing of personal data is also called for in the Russian Federation. The regime established within the framework of Federal Law No. 152-FZ of July 27, 2006 “On Personal Data” cannot be recognized as satisfying modern realities. Some authors call for establishing a regime comparable to bank secrecy in relation to data turnover, while others call for increasing responsibility for violating the rules, and others call for establishing rules and prohibiting cross-border data transfer. In response, in July 2021, the Russian Federation adopted a law on the “landing” of IT companies that operate in the Russian jurisdiction. Foreign companies with a daily audience of more than 500 thousand users will be required to open a branch, representative office, or authorized legal entity in Russia (Russian Federation, 2021).

## DISCUSSIONS

Data collection by digital platforms, initially focused only on advertising targeting, is now actively used for various services using predictive analytics and big data. The concept of AI has firmly and permanently entered the consciousness of society and programmers. Risk management, scoring, political communication, pricing, analysis of consumer demand, protest phenomena, assessment of the political and economic situation in the country—all this is carried out based on the analysis of a huge array of user activity data. The Cracked Labs report (2017) notes that digital tracking of users in combination with personalization is carried out today not only for commercial purposes, but also to influence the behavior of society as a whole and its individual layers.



The collection of data on user activity by digital platforms today makes it easy to identify a person: accurately determine their ethnicity, religious and political views, family status, sexual orientation, the presence of bad habits, character traits, and personality (Christl, 2017). Among the key problems it is worth highlighting the following:

*Ethical Problems of Data Collection. The Need to Make Predictive Analytics Algorithms More Transparent Under the Influence of Regulatory Requirements and Public Requirements*

Today, special attention is paid to the issue of data control and the search for ways of communication (feedback) with digital companies. For example, the Conference of Ministers of the Council of Europe Responsible for the Media and Information Society adopted a number of resolutions concerning the moderation and dissemination of online content, the use of AI technologies, etc. The development of new approaches to the regulation of these technologies includes the emergence of independent supervisory authorities and the establishment of mandatory requirements for the automated creation and distribution of content (CoE, 2021). The obligation of developers and owners of online platforms to conduct a preliminary assessment of their possible impact on the human rights and safety of users and to design their products in such a way as to ensure respect for such rights. Russia has joined the adopted resolutions with an explanatory statement attached (Infowatch, 2021).

The need to reduce the “risk of blackmail” and negative impact from global IT companies was also mentioned in the context of a unique precedent—Facebook’s conflict with the Australian government. In response to the proposal of the Australian authorities to oblige technology companies to pay the Australian media for posting news content on their platforms, Facebook opposed, and in February 2021 blocked all publications of local media (Larkina et al., 2021).

The business model of the largest digital giants today follows the path when the person who owns certain personal data is practically excluded from the process of operating with them. A digital platform that operates with user data turns into its owner and, as a rule, uses them quite extensively. As a result, there are problems with the implementation of data confidentiality.

*The Problem of Machine “Unlearning” or “Machine Amnesia”*

Data protection regulators around the world have long had the right to force companies to delete information obtained illegally. The emergence of GDPR-type regulations, which grants the user the right to request the deletion of all information used without the consent of its owner—the “right to oblivion”—raises the question of removing information about training based on such data from the array of training data of AI technologies, as well as the problem of deleting data about a specific person in the targeting algorithm. For example, the UK regulatory authorities have already notified digital companies about the applicability of national legislation in the field of personal data based on GDPR, that some machine learning programs may be subject to GDPR rights, such as data deletion, since an artificial intelligence system may contain personal data.

In this case, digital platforms face a dilemma: how to comply with the requirements of the legislation, while maintaining the functionality of trained systems? The first and very logical way out is the idea of “rebooting” and deleting all data from the system; however, in conditions when billions are spent by digital corporations on data collection, training machine learning algorithms, and ranking based on user data, it is unlikely that such a way out of the situation becomes reasonable and probable.

Meanwhile, the practice of regulatory authorities shows the opposite: in December 2020, the US Federal Trade Commission forced the Everalbum facial recognition startup to delete a collection of incorrectly obtained photos of faces and machine learning algorithms trained with them (FTC, 2021).

To date, several groups of researchers are dealing with this problem, but the technology of machine “unlearning” or “forgetting” is still far from perfect or able to have mass application. The idea of the technology being developed is based on the separation of the initial data for training and the availability of an algorithm that allows them to be extracted. According to the researchers, this approach has been successfully tested on online trading data and photographs (Bourtole et al., 2019).

Some authors are puzzled about how to ensure the operation of the technology when it is necessary to repeatedly delete data, or there has been an unauthorized deletion request (Gupta et al., 2021), and a way to prove that specific data is really deleted, because today the learning

process itself has not been fully investigated by scientists (Sekhari et al., 2021).

Machine “unlearning” or “artificial amnesia” can allow a person to withdraw both their data and the company’s ability to profit from it.

### *The Need to Popularize Digital Hygiene Among Users*

Working remotely and providing access to corporate information on personal devices will stimulate digital security specialists of companies to conduct trainings and train employees in digital security skills (Larkina et al., 2021). Reliable digital security is the most important factor for the development of any company (Begishev et al., 2019; Bokovnya et al., 2020e), including in the context of a pandemic and infodemia (Bokovnya et al., 2020d).

In general, digital hygiene has adopted a set of methods and steps that users of computers and other devices take to maintain the system’s operability and improve Internet security. These actions are performed in order to ensure the safety of personal data and other data that may be stolen or damaged. Like physical hygiene, digital hygiene is regularly performed to prevent natural deterioration and common threats (Brook, 2020). Some of these problems include: data loss, mixed storage of personal and service data on the same device, violation of the rules for processing confidential information, use of outdated software, outdated antivirus program. In the Russian Federation, the state is seriously concerned about the popularization of digital hygiene; it is even proposed to put digital hygiene training on a more centralized track (Comnews, 2021).

### *An Increase in the Number of Class Actions Against Manufacturers of Digital Devices and Pperators of Digital Platforms*

Personal data protection tools are of particular importance in the context of the expansion of data collection.

In October 2021, a number of lawsuits were filed against one of Amazon’s divisions—Amazon Ring—for violating the privacy of its users. The company’s products are filled with third-party trackers, data from which is transmitted to other companies and, if necessary, allows them to identify the owner. Employees of the company carried out unauthorized access and viewed recordings from cameras, which, moreover, were

stored in an unencrypted form. As a result, data was also leaked on almost 3700 device owners, including names, emails, and passwords from video cameras. Using an email address and password, attackers could gain access not only to the cameras, but also to the owner's payment information, including the last digits of their bank card and the security code (Securitylab, 2021).

Filing class actions is one of the most effective tools. If this issue has long been resolved for countries with an Anglo-Saxon legal system, then it is very relevant for the countries of the Romano-German legal family (Himmelreich, 2019). Meanwhile, it will soon be possible to file class actions in the EU. The EU Parliament has approved a law on collective consumer lawsuits in case of violations (among other things) of legislation on telecommunications and personal data. The costs of judicial protection will be paid by the losing party (EU, 2020).

## CONCLUSIONS

Google, Amazon, Facebook, and Apple—which have taken a monopolistic position in the digital world—represent modern-day giants who possess and operate using data on most of the world's population. As a result, digital platforms have the ability to manage large social, economic, and political processes, taking place not only in individual countries, but also on entire continents. Digital platforms know more about a person or a company than all of that person's immediate environment.

The unprecedented economic power of digital ecosystems built on mass data collection undoubtedly causes concern for the state and conscious society. Recently, the issues of abuse by digital platforms in the processing and storage of personal data have become particularly acute. Such dominance in society and the economy, as well as the real damage caused to users and sectors of the economy, required the prompt intervention of regulators. Limiting the abuses of digital monopolists, who are gradually turning into a new branch of government covering sectors, markets, and countries, was needed in the field of the competition, innovation, and transparency of the algorithms used.

The authors managed to find the main tracks along which the regulatory mechanism will move around the world. At the same time, it is worth emphasizing that regulation should be comprehensive. The presence of exclusively imperatives can discredit the role of the state in the

digital world, while their absence in an environment where digital platforms are reluctant to change predatory strategies is vital. At the same time, it is necessary to maintain a balance between self-regulation of digital platforms and the state-legal regime. This is due to the fact that, in the absence of a real threat of regulation, platform companies that have asymmetric power over customers or business partners and have achieved indisputable gatekeeper positions may simply lack the will to self-regulate. Future regulation should be based on the fundamental principles of ensuring freedom of competition, fairness in mediation, and sovereignty in decision-making (EU, 2020).

The strengthening of the regulatory regime, the increase in fines, the requirement for the development of internal ethical codes by digital platforms, the refusal to collect data without the consent of the owner, the development of mechanisms for excluding data from the general array of moderated data when the user refuses—all of these represent a framework for future regulation as a response to the expansion of data collection.

## REFERENCES

- Agre, P. E. (1994). Surveillance and capture: Two models of privacy. *The Information Society*, 10(2), 101–127. <https://doi.org/10.1080/01972243.1994.9960162>
- Begishev, I. R., Khisamova, Z. I., & Mazitova, G. I. (2019). Information Infrastructure of Safe Computer Attack. *HELIX*, 9(5), 5639–5642. <https://doi.org/10.29042/2019-5639-5642>
- Bikeev, I., Kabanov, P., Begishev, I., & Khisamova, Z. (2019). Criminological Risks and Legal Aspects of Artificial Intelligence Implementation. *Pervasive-Health: Pervasive Computing Technologies for Healthcare*, a20. <https://doi.org/10.1145/3371425.3371476>
- Bokovnya, A. Y., Begishev, I. R., Bikeev, I. I., Almuamedova, I. R., Bersei, D. D., & Nechaeva, N. B. (2020a). Analysis of Russian judicial practice in cases of information security. *International Journal of Engineering Research and Technology*, 13(12), 4602–4605.
- Bokovnya, A. Y., Begishev, I. R., Khisamova, Z. I., Bikeev, I. I., Sidorenko, E. L., & Bersei, D. D. (2020b). Pressing issues of unlawful application of artificial intelligence. *International Journal of Criminology and Sociology*, 9, 1054–1057. <https://doi.org/10.6000/1929-4409.2020.09.119>

- Bokovnya, A. Y., Begishev, I. R., Khisamova, Z. I., Narimanova, N. R., Sherbakova, L. M., & Minina, A. A. (2020c). Legal Approaches to Artificial Intelligence Concept and Essence Definition. *Revista San Gregorio*, 41, 115–121. <https://doi.org/10.36097/rsan.v1i41.1489>
- Bokovnya, A. Y., Khisamova, Z. I., Begishev, I. R., Latypova, E. Y., & Nechaeva, E. V. (2020d). Computer Crimes on the COVID-19 scene: Analysis of Social, Legal, and Criminal Threats. *Cuestiones Políticas*, 38(66), 463–472. <https://doi.org/10.46398/cuestpol.38e.31>
- Bokovnya, A. Y., Khisamova, Z. I., Vasyukov, V. F., & Begishev, I. R. (2020e). Assessment of Potential Risks of Regional for Global Financial Security. *Cuestiones Políticas*, 38(66), 156–166. <https://doi.org/10.46398/cuestpol.38e.10>
- Bourtole, L., Chandrasekaran, V., Choquette-Choo, Ch. A., Jia, H., Travers, A., Zhang, B., Li, D., & Papernot, N. (2019). *Machine Unlearning*. Cornell University. <https://arxiv.org/abs/1912.03817>
- Brook, C. (2020). What is cyber hygiene? A definition of cyber hygiene, benefits, best practices, and more. *Digital Guardian*. <https://digitalguardian.com/blog/what-cyber-hygiene-definition-cyber-hygiene-benefits-best-practices-and-more>
- Christl, W. (2017). *Corporate surveillance in everyday life. How companies collect, combine, analyze, trade, and use personal data on billions*. Vienna: Cracked Labs.
- CoE. (2021). *Challenges and opportunities for media and democracy. 10–11 June 2021. Final Declaration. Resolution on freedom of expression and digital technologies. Resolution on the safety of journalists. Resolution on the changing media and information environment. Resolution on the impacts of the COVID-19 pandemic on freedom of expression. Guidance on the AI auditing framework. Draft guidance for consultation*. <https://ico.org.uk/media/2617219/guidance-on-the-ai-auditing-framework-draft-for-consultation.pdf>
- Comnews. (2021). *Citizens in Runet will add freedom to IT companies – Responsibilities*. <https://www.comnews.ru/content/212874/2021-02-02/2021-w05/grazhdanam-runete-dobavayat-svobod-it-kompaniyam-obyazannostey>
- Dastin, J., Kirkham, C., & Kalra, A. (2021). Amazon wages secret war on Americans' privacy, documents show. *Reuters*. <https://www.reuters.com/investigates/special-report/amazon-privacy-lobbying/>
- De Chant, T. (2021). Content-ranking algorithms. Bipartisan bill would force Big Tech to offer algorithm-free feeds, search results. *Arstechnica*. [https://arstechnica.com/tech-policy/2021/11/bill-proposes-algorithm-free-option-on-big-tech-platforms-may-portend-bigger-steps/?utm\\_social-type=owned&utm\\_brand=ars&utm\\_source=facebook&utm\\_medium=social&fbclid=IwAR1uT4s7exAhoLiNjWWCxXKUynRrto0MvvyE5UrJcKKkfgaIB11roJJ8Aw](https://arstechnica.com/tech-policy/2021/11/bill-proposes-algorithm-free-option-on-big-tech-platforms-may-portend-bigger-steps/?utm_social-type=owned&utm_brand=ars&utm_source=facebook&utm_medium=social&fbclid=IwAR1uT4s7exAhoLiNjWWCxXKUynRrto0MvvyE5UrJcKKkfgaIB11roJJ8Aw)

- EU. (2020). *EU consumers will soon be able to defend their rights collectively*. <https://www.europarl.europa.eu/news/en/press-room/20201120IPR92116/eu-consumers-will-soon-be-able-to-defend-their-rights-collectively>
- FTC. (2021). *In the Matter of*. Everalbum, Inc. <https://www.ftc.gov/enforcement/cases-proceedings/192-3172/everalbum-inc-matter>
- GDPR. (2018). *Complete guide to GDPR compliance*. <https://gdpr.eu/?cn-reloaded=1>
- Gupta, V., Jung, C., Neel, S., Roth, A., Sharifi-Malvajerdi, S., & Waites, C. (2021). *Adaptive machine unlearning*. Cornell University. <https://arxiv.org/abs/2106.04378>
- Himmelreich, A. (2019). Collective legal protection – Class actions and the right of associations to sue in German civil proceedings. *Law Enforcement Review*, 3(2), 59–76. [https://doi.org/10.24147/2542-1514.2019.3\(2\).59-76](https://doi.org/10.24147/2542-1514.2019.3(2).59-76)
- Infowatch. (2021). «Smart devices» for home security are not safe. <https://www.infowatch.ru/analytics/daydzhesty-i-obzory/umnye-ustroystva-dlya-domashney-bezopasnosti-nebezopasny>
- Kaspersky. (2020). Defending digital privacy: Taking personal protection to the next level. *Kaspersky*. <https://www.kaspersky.com/blog/global-privacy-report-2020/>
- Khisamova, Z. I., Begishev, I. R., & Gaifutdinov, R. R. (2019a). On methods to legal regulation of artificial intelligence in the world. *International Journal of Innovative Technology and Exploring Engineering*, 9(1), 5159–5162. <https://doi.org/10.35940/ijitee.A9220.119119>
- Khisamova, Z. I., Begishev, I. R., & Sidorenko, E. L. (2019b). Artificial intelligence and problems of ensuring cyber security. *International Journal of Cyber Criminology*, 13(2), 564–577. <https://doi.org/10.5281/zenodo.3709267>
- Larkina, A., Momotov, D., & Tushkanov, V. (2021). Privacy forecasts for 2022. *Kaspersky Security Bulletin*. <https://securelist.ru/privacy-predictions-2022/103970/>
- Ministry of Figures of the Russian Federation. (2021). *Order of the Ministry of Finance of Russia dated 15.11.2021 No. 1187*. [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_406830/](http://www.consultant.ru/document/cons_doc_LAW_406830/)
- RBC. (2020). *More than 90% of companies from Russia have experienced data leaks*. [https://www.rbc.ru/technology\\_and\\_media/15/10/2020/5f8846f9a794733c8754ef5](https://www.rbc.ru/technology_and_media/15/10/2020/5f8846f9a794733c8754ef5)
- Russian Federation. (2021). *Federal Law No. 236-FZ of 01.07.2021 «On the Activities of Foreign Persons in the Internet Information and Telecommunications Network on the Territory of the Russian Federation»*. [http://www.consultant.ru/document/cons\\_doc\\_LAW\\_388781/](http://www.consultant.ru/document/cons_doc_LAW_388781/)
- Securitylab. (2021). *The credentials of thousands of Amazon Ring camera users have leaked online*. <https://www.securitylab.ru/news/503547.php>

- Sekhari, A., Acharya, J., Kamath, G., & Suresh, A. T. (2021). *Remember What You Want to Forget: Algorithms for Machine Unlearning*. Cornell University. <https://arxiv.org/abs/2103.03279>
- Skadden. (2021). *China's new data security and personal information protection laws: What they mean for multinational companies*. <https://www.skadden.com/Insights/Publications/2021/11/Chinas-New-Data-Security-and-Personal-Information-Protection-Laws>
- Tadviser. (2021). *Pricing of user data in the cybercriminal market*. [https://www.tadviser.ru/index.php/Статья:Расценки\\_пользовательских\\_данных\\_на\\_рынке\\_киберпреступников](https://www.tadviser.ru/index.php/Статья:Расценки_пользовательских_данных_на_рынке_киберпреступников) (In Russian).
- Tass. (2020). *FT: EU will oblige tech giants to share customer data with competitors*. <https://tass.ru/ekonomika/9591225>
- US Congress. (2021a). *Ending Platform Monopolies Act H. R. 3825*. <https://www.congress.gov/bill/117th-congress/house-bill/3825/text?r=34&s=1>
- US Congress. (2021b). *H.R.3816 – American Choice and Innovation Online Act*. <https://www.congress.gov/bill/117th-congress/house-bill/3816/text?r=43&s=1>
- US Congress. (2021c). *H.R.3849 – ACCESS Act of 2021c*. <https://www.congress.gov/bill/117th-congress/house-bill/3849/text>
- US Congress (2021d). *Platform Competition and Opportunity Act of 2021d H. R. 3826*. <https://www.congress.gov/bill/117th-congress/house-bill/3826/text?r=5&s=1>
- US Congress. (2021e). *Ending Platform Monopolies Act H. R. 3825*. <https://www.congress.gov/bill/117th-congress/house-bill/3825/text?r=34&s=1>
- Wall Street Journal. (2021). *Amazon Faces Possible \$425 Million EU Privacy Fine*. <https://www.wsj.com/articles/amazon-faces-possible-425-million-eu-privacy-fine-11623332987>





# Legal Regulation in the Field of Internet News Using Artificial Intelligence

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## INTRODUCTION

The media is currently at a turning point. News aggregators are replacing print media, and journalists are gradually being replaced by digital algorithms that generate news on their own.

These innovations have a strong economic justification: modern news platforms allow more flexible approach to the selection of material, taking into account the habits of readers, integrating news across different levels, and at the same time providing news search by keywords. From a reader's point of view, the use of AI for news aggregation ensures the diversity

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and reliability of information, as well as the convenience of the reader in terms of finding information.

A 2018 survey of nearly 200 publishers by the Reuters Institute for the Study of Journalism found that 59% of digital news platforms use some form of AI for content recommendations (Newman, 2018).

Global aggregator Flipboard said it has been using AI for years to manage the news feed from 11,000 publishers for 145 million users as of 2019.<sup>1</sup>

Forbes also confirmed the information that it uses AI (namely the Bertie robot) to write articles—income reports based on the analysis of big financial data.<sup>2</sup> Other major publications are also using AI not only to collect information, but also to write articles from scratch. For example, The Washington Post uses Heliograf, which can generate entire articles from quantitative data, while Bloomberg uses Cyborg to create and manage content. The Guardian, Associated Press, and Reuters are now testing AI not only for writing articles, but also for compiling financial documents and reports, as well as for tracking and blocking fake news.<sup>3</sup>

The use of digital technologies in the media has increased the availability of information and made news more adaptable to the interests of readers, but at the same time, it has updated the issue of legal regulation of the activities of online news sites. In fact, the business news industry has reached a point in its development where any further movement forward can become dangerous due to the lack of a transparent regulatory mechanism for news aggregators and AI products.

In this regard, the issues of determining the legal features of a news aggregator are of particular importance.

<sup>1</sup> SmartNews: An AI News App for Personalized Discovery. <https://www.nanalyze.com/2019/08/smartnews-ai-news/>.

<sup>2</sup> Allison Murray. How AI Personalizes Your News Feed. <https://www.lifewire.com/how-ai-personalizes-your-news-feed-5200775>.

<sup>3</sup> Ron Schmelzer. AI Making Waves In News And Journalism. <https://www.forbes.com/sites/cognitiveworld/2019/08/23/ai-making-waves-in-news-and-journalism/?sh=303da9f37748>.

## METHODOLOGY

The study used a wide range of general scientific and private scientific methods. The historical method allowed the authors to consider the issue of legal regulation of digital news platforms in the historical conditions of the creation of law. The method of formal logic helped to analyze the legal norms that determine the status of news providers and news agencies. Analysis and synthesis made it possible to comprehensively study the legal nature of news generated by AI and formulate typical models for protecting information and copyright. The method of comparative legal analysis made it possible to identify the similarities and differences in the legal approaches of foreign legislation to determining the legal nature of news posted on the platforms of news aggregators. The system method has become the main private research method; this made it possible to reflect the characteristic features of digital media and formulate a number of conclusions about the directions for the development of legislation on digital news aggregators.

## RESULTS

The legal regulation of news platforms using AI is developing in three main areas: determining the legal status of online news services, analyzing the patentability of products created with the help of AI, and creating guarantees to protect users of news platforms from false information and prohibited content.

Unfortunately, none of these areas has yet been able to develop a single universal model of regulation or a unified position of regulators.

In particular, despite the active development of digital law, the question of what rights and obligations a news aggregator has and whether it can be held liable for content and copyright infringement still remains unresolved.

In the absence of a specific law on news aggregators, they are regulated in Europe under Copyright Directive 2001/29/EC (InfoSoc Directive) (European Commission, 2021b).

Article 5 of the Directive provides for copyright exceptions for online news, provided that Member States mark the relevant information as free. At the same time, the Directive does not distinguish between a news compilation made by a human or AI. The main thing is that the content should be related to current events and be news (informational) in nature.

This general European rule has some exceptions. In particular, in 2013, the German Copyright Law was supplemented by guarantees from news publishers. They received the exclusive right to use their content for one year from the date of publication. Use of the content by others (including news platforms) can only be done with the consent of the publishers. An exception is made for the use of single words and very small fragments of text (§87(f) of the German Copyright Law).

Following Germany, the protection of publishers' rights was enshrined in Spanish law. According to Article 32(2) of the Spanish Intellectual Property Law, news aggregators using even minor pieces of press must pay compensation to the Association of Spanish Daily Editors (AEDE). The Association, in turn, must distribute the profits among the publishers. At the same time, the law prohibits publishers from waiving compensation and allowing news aggregators to freely use their content.

At the initial stage of the discussion of Directive 2001/29/EC of the European Parliament and of the Council of May 22, 2001 on the harmonization of certain aspects of copyright and related rights in the information society (European Commission, 2021b), it was assumed that it would reflect the German rule on the limitation of rights to playback of news content, but the Directive offered loyal rules for news aggregators. Under Article 5, exceptions to reproduction rights can be made in cases of “reproducing in the press, communicating to the public or making available published articles on current economic, political or religious topics, as well as works broadcast or other subjects the same content. nature, in cases where such use is not expressly stated, and as long as the source is indicated, including the name of the author, or the use of works or other objects in connection with the reporting of current events, to the extent that it is justified for the informational purpose and subject to the indication of the source, including the name of the author, unless this proves impossible.”

At the same time, the Directive (Directive 2001/29/EC) reserves the right for countries to determine for themselves a list of exceptions to copyright, including those that they had before the adoption of the Directive.

With regard to the status of a news aggregator, it is defined as an information society service provider whose main purpose is to store or make available to the public a large amount of copyrighted material.

According to Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce'), an information society service provider is not responsible for news content only on the condition that the activity of the platform is limited to the technical operational process and the ability to provide access to the data network, through which information that becomes available to third parties is transmitted or temporarily stored. If the platform uses AI to create and compile news, then the extent to which the platform may have been aware of the use of inaccurate information is taken into account.

This approach is replicated in the Regulation of the European Parliament and of the Council on a single market for digital services (Digital Services Act) and amending Directive 2000/31. According to Art. 5, the online platform is not responsible for the nature of the content if the service is provided in the form of storing information provided by the recipient of the service. At the same time, it is important that the news aggregator is not aware of the illegal content (European Commission, 2021a).

Thus, the current European legislation does not distinguish between the format of news written by a human or AI in relation to their posting on online platforms. News aggregators are allowed to use secondary materials from publishers in their news collection with the obligatory indication of the source. Only in this case are they not responsible for copyright infringement. Otherwise, they have the status of an information society service provider.

Russia approaches the status of a news aggregator in more detail. The Federal Law of July 27, 2006 N 149-FZ "On Information, Information Technologies and Information Protection" (Federal Law of July 27, 2006 N 149-FZ), identifies the copyright holder of the program for electronic computing sites and/or pages sites on the Internet that process and distribute news information online and are visited by one million Internet users per day.

At the same time, the platform is recognized as a news aggregator on a notification basis. The federal regulator enters the platform into the register of the news aggregator and sends a notification to the hosting provider. Within 3 working days, the provider is obliged to provide all the necessary documents to confirm its official status.

From now on, the platform is responsible for the posted news content. In particular, the news aggregator is obliged to: prevent the use of content for committing crimes, disclosing secret data, pornography, or incitement to terrorism and extremism; check the reliability of disseminated socially significant information before its dissemination; prevent falsification of information; and prevent the dissemination of defamatory information or information about private life, store news information for 6 months, information about the source of its receipt, and information about the timing of its distribution, etc.

At the same time, the owner of the news aggregator is not responsible for the dissemination of news information by it if it is a verbatim reproduction of messages and materials or their fragments posted on the official website of a state body on the Internet or distributed by the media (Article 10.4 of the Federal Law).

At the same time, the law distinguishes between news publishers (mass media) and news aggregators. News aggregators are not recognized by the media because they do not write the news themselves. Similar to the European Directives, Russian law does not recognize the responsibility of news aggregators for posted content if this content was not under their effective control.

Thus, in the ruling of the Court for Intellectual Property Rights dated 07/06/2017 N C01-491/2017 in case N A40-216,998/2016, it is noted that the site administrator is not responsible for posting photos. The administrator did not know and should not have known that the use of the result of intellectual activity by the person who initiated the transfer of material containing the result of intellectual activity is unlawful, and therefore cannot be held civilly liable for violation of the plaintiff's exclusive rights to photographs.

In another case, the court dismissed the company's claim against the owner of a news aggregator which distributed news materials of partners on its site on the basis of contracts concluded with them. The service was not an electronic mass media, but was only a platform on which news from third parties was aggregated in a user-friendly format. (Decree of the Arbitration Court of the Moscow District dated June 20, 2019 in case N A40-67,095/2018) (Bychkov, 2019).

As for the news generated by AI, the legal regulation of this area is currently just beginning to take shape.

As a rule, the whole range of issues is related to the legal status of AI products.

At present, the range of opinions on this issue is wide: from full recognition to a categorical denial of protectability.

The European Parliament proposed the following algorithm: if AI was used as a tool to help the author in the process of creation, the person is recognized as the author. If the work is created by AI autonomously, then its protection is impossible due to the lack of a human author. Thus, the European Parliament expressly refused to recognize any legal capacity of robots and AI.<sup>4</sup>

In early 2021, the UK government conducted a public survey on a range of issues related to AI and intellectual property rights. Most of the respondents said that AI cannot be recognized as the author of a work.<sup>5</sup>

A similar survey with similar findings was conducted by the US Patent and Trademark Office in 2019. The conclusions were the same.<sup>6</sup>

In Western scientific literature, the following possible options for the regimes of legal regulation of intellectual property rights are distinguished (Regulation of Robotics, 2018):

The first approach involves a complete waiver of granting any intellectual property rights to AI.

This approach is the main one in Russia. The Civil Code of the Russian Federation recognizes intellectual rights exclusively for people (Article 1257 of the Civil Code of the Russian Federation).

In Germany, labor is the result of only the creative activity of a person. Thus, the law excludes copyright protection for products created without human intervention (Bettinger, 2001).

American courts take a similar approach. In *Feist Publications v Rural Telephone Service Company, Inc.* 499 US 340 (1991) states that copyright law only protects “intellectual products” that are “based on the creative powers of the human mind” (Morkhat, 2017).

Denying the patentability of AI products, three options for legal regulation are proposed:

<sup>4</sup> Intellectual property rights to AI works: the EP proposal. [https://www.cms-lawnow.com/ealerts/2020/12/intellectual-property-rights-to-ai-works-the-ep-proposal?cc\\_lang=en](https://www.cms-lawnow.com/ealerts/2020/12/intellectual-property-rights-to-ai-works-the-ep-proposal?cc_lang=en).

<sup>5</sup> <https://www.gov.uk/government/consultations/artificial-intelligence-and-intellectual-property-call-for-views/government-response-to-call-for-views-on-artificial-intelligence-and-intellectual-property>.

<sup>6</sup> <https://www.whitecase.com/publications/alert/uspto-publishes-report-public-views-artificial-intelligence-and-ip-policy-us-ip>.

- (a) giving AI the status of a tool or the creation of a fictional human author with the transfer of intellectual property rights:
- giving responsibility to a person who created the basic concept/idea of the corresponding result of intellectual activity, which was subsequently only processed by the AI with the participation of its operator;
  - user-operator;
  - the owner of the underlying software (Abbott, 2016);
  - the owner of a hardware complex (computer system) equipped with artificial intelligence (Butler, 1982: 734);
- (b) giving AI the legal status of an agent without granting it any intellectual property rights (accordingly, all works created by the AI division or with its participation are automatically transferred/considered transferred to the public domain) (Sidorenko et al., 2021); and
- considering AI jobs as service jobs (Li & Roslof, 2018).
- (c) as part of the second approach, giving AI the rights of the author at the same time as the person. There are 4 models of rights symbiosis:
- division of rights between the AI and the person who created the basic concept of the corresponding result of intellectual activity, which was subsequently processed only by the AI division with the participation of its operator;
  - division between AI and its user-operator;
  - division between the AI and the owner of the underlying software; and
  - division between AI and the owner of a hardware complex (computer system) equipped with artificial intelligence.

Finally, within the framework of the third direction, it is proposed to retain a limited list of intellectual rights for AI. An example is Section 178 of the UK Copyright, Designs, and Patents Act (CDPA). It establishes the legal status of a computer-generated work in circumstances where the author of the work is not a human. The idea behind this provision is this: to create an exception to all requirements of human authorship by recognizing work aimed at creating a program capable of generating works, even if the machine creates something original and new.



The above examples show that, despite the diversity of positions, most of them agree on the main thing: AI works can only be protected if copyright is tied to a specific person: developer, operator, etc.

With regard to news aggregators using AI to create news, this means that, depending on who uses AI and for what purposes, the issue of the legal status of news content will be decided.

Thus, if AI is used to create news, then the resulting content will not be copyrighted. The fact is that in most countries, messages about events and facts that are purely informational in nature are not included in copyright objects. In particular, such a rule is enshrined in Art. 1259 of the Civil Code of the Russian Federation.

If the news content contains analytical information, then it can be recognized as a work. In this case, the author of the article will be recognized either as a journalist who has assumed the functions of a user (an AI operator) or a person (the owner of a hardware complex equipped with AI [depending on the business model]). In this case, the publisher will have related rights to this product.

If AI is used only for data processing by a news aggregator (analyzes information, integrates news content, checks information, etc.), then it plays the role of a tool, and the product created by it cannot be recognized as an independent work. In this case, the news aggregator retains the rights and obligations of the information society service provider. However, they are only responsible for AI-produced material if it is under their effective control. In this case, they must additionally have the characteristics of either a user—an operator, or an owner of the hardware complex.

If the information generated by AI is posted on the news aggregator by third parties, the aggregator is not responsible for the content of the content.

## DISCUSSIONS

In addition to solving global issues of legal regulation of news platforms and determining the patentability of AI products, modern law faces a number of acute applied tasks.

The key issue here is the legal regime for the commercial use of AI.

From a legal point of view, the rights to news AI can be protected in at least three ways: patents, copyrights, and trade secrets.

### *Patent Model*

The news compiler program could theoretically be patentable, but this is unlikely. At *Alice Corp. Pty. Ltd. v. CLS Bank* (2014), the Supreme Court held that it is possible to patent programs that carry more than a simple idea: that is, the program must somehow implement the idea in a special and new way. That is why, in order to recognize the patentability of AI, it is not enough to indicate the inventive concept.

For example, an AI-generated news program can only be granted a US patent if it goes beyond mathematical calculations (USPTO Guidelines for Determining the Eligibility of Patent Subject Matters, 84 Federal Law 50), has a specific practical application, and is a clearly understood formula with routine and usual elements (USPTO, 2019).

However, even if it is possible, protecting AI through patents has disadvantages compared to other forms of intellectual property protection, including the following:

The process of applying for a patent usually takes several years, during which the commercial value of the invention may decrease, especially with the rapid development of technology. The patent process requires public disclosure of the claimed invention, which may result in the disclosure of the applicant's valuable trade secrets.

The default term of a patent is 20 years from the filing date of the earliest US priority application. In contrast, copyright lasts for the lifetime of the author, plus 70 years; or the potentially infinite term for Thomson Reuters trade secrets (Thomson Reuters, 2022).

### *Copyright Model*

In this case, the AI source code will be protected as text.

Copyrighting AI software has disadvantages. Copyright is limited to protecting only the text of the source code and does not extend to other aspects of the AI system, such as the hardware, functionality, and capabilities of the program.

Proof of copyright infringement requires proof of actual copying, which is not required to establish patent infringement.

Behavior that would otherwise qualify as copyright infringement may be permitted as long as it is fair use (for example, for educational purposes).

Copyright holders who wish to renew their registration must re-register each version of the protected software; this may not be economically justified.

### *Trade Secrets*

Experts also consider the third model—the model of trade secrets (Thomson Reuters, 2022).

Trade secret protection offers several advantages over patents and copyrights. Firstly, it is unlimited, and secondly, it does not require registration and public disclosure of technology. However, all the risks of storing data are borne by the owner.

Directly with the question of the commercial use of AI in the news industry, there is the question of how the copyrights of persons whose material is processed by AI in the preparation of publications are protected.

News aggregator programs work with big data, as well as with Internet data. At the same time, there is a high risk that data protected by copyright will get into the analysis vector.

To understand how copyright should be protected in this case, it is important to understand the algorithm of news aggregator programs.

Initially, IT specialists collect a “corpus” of texts to form an AI training sample. Then they mark it up, adding their own notes and otherwise processing it for machine analysis.

Then the program processes the received material. Regardless of the type of algorithm used, at this stage there is a new copy of the training papers when these files need to be copied into the machine’s memory. Of course, the copy in this case is likely to be temporary, as these copies do not need to be kept after having been passed through the AI system. As a result, the AI produces a set of new rules that become part of it.

For the purposes of Directive 2001/29/EC, throughout this process there is a “reproduction” of copyrighted works. From the point of view of Art. 1270 of the Civil Code of the Russian Federation, reproduction also takes place here.

The exception is cases where such reproduction is temporary or accidental and constitutes an integral and essential part of the technological process.

The main attention should be paid to the “corpuses”—that is, the unprocessed arrays of texts brought together. They may have commercial value in and of themselves.

Directive 2001/29/EC solves this problem in relation to scientific organizations entitled to “text and data mining” (text and data mining), but this does not solve the problem on a global scale.

As Theodoros Chiou rightly points out, there is still no clear picture in modern law about the legality of machine learning using copyrighted works (2019). In some countries, this activity can generally be considered an illegal reproduction of the work.

## CONCLUSIONS

The review carried out in this work showed that at present a universal approach to the legal regulation of news aggregators has not been developed, largely due to a lack of understanding of where the border of such regulation should be. At the same time, one of the key issues is to find differences between publishers and news aggregators using someone else’s content. This task seems even more difficult due to the widespread use of AI news generation software.

As practice has shown, modern recommendations (Directive 2001/29/EC) are clearly not enough for quality regulation of the media and news platforms.

Obviously, at present, new rules for the operation of news aggregators should be formulated: firstly, these will determine the status of AI products; and secondly, these will clarify the responsibility of online platforms for copyright infringement when using machine learning and when publishing illegal content.

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## REFERENCES

- Abbott, R. (2016). I think, therefore I invent: Creative computers and the future of patent law. *Boston College Law Review*, 57(4). <https://doi.org/10.2139/ssrn.2727884>
- Bettinger, T. (2001). *Der Werkbegriff im Spanischen und Deutschen Urheberrecht*. C.H. Beck (In German).
- Butler, T. L. (1982). Can a Computer be an Author – Copyright Aspects of Artificial Intelligence *Hastings Communications and Entertainment Law Journal*, 4(4), 707–747.
- Bychkov, A. (2019). News aggregators: a new type of mediation. *New Accounting*, 12.
- Commission, E. (2021a). Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce'). *Official Journal*, 178, 1–16.
- Commission, E. (2021b). Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society. *Official Journal*, 167, 10–19.  
<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2020%3A825%3AFIN>  
<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32001L0031>  
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32001L0029>
- Li, T., & Roslof, C. M. (2018). *Robots vs. monkeys: Intellectual property rights of non-human creators*. <https://osf.io/preprints/lawarxiv/jbr9u/>. Accessed 4 July 2018.
- Morkhat, P. M. (2017). *Artificial intelligence. Legal view*. Buki Vedi. (In Russian).
- Newman, N. (2018). Journalism, media, and technology trends and predictions. *Reuters Institute for the Study of Journalism*. <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2018-01/RISJ%20Trends%20and%20Predictions%202018%20NN.pdf>
- Sidorenko, E. L., Galstyan, I. S., & Sitnik, A. A. (2021). Legal regulation of digital platforms: reference points of modern legislation. In S. Ashmarina, V. Mantulenko, & M. Vochozka (Eds.), *Engineering economics: Decisions and solutions from eurasian perspective. Ser. "Lecture Notes in Networks and Systems"* (Vol. 139, pp. 408–418). Springer. [https://doi.org/10.1007/978-3-030-53277-2\\_49](https://doi.org/10.1007/978-3-030-53277-2_49)

- Thomson Reuters. (2022). *Artificial intelligence key legal issues: Overview*. [https://uk.practicallaw.thomsonreuters.com/w-018-1743?originationContext=document&transitionType=DocumentItem&contextData=\(sc.Default\)&firstPage=true#co\\_anchor\\_a751646](https://uk.practicallaw.thomsonreuters.com/w-018-1743?originationContext=document&transitionType=DocumentItem&contextData=(sc.Default)&firstPage=true#co_anchor_a751646)
- USPTO. (2019). *US Patent and Trademark Office. Revised Patent Subject Matter Eligibility Guidance*. [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf)

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