

TRENDS IN REGULATION DEVELOPMENT

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Assessing the Role of Digital Platforms and Ecosystems in Economic Development¹

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Abstract

In most countries, regulation of digital platforms and ecosystems has emerged quite recently. This regulation should consider the specifics of platform business models, characterized by network effects, access to big data, assets mobility and lightness, and large economies of scale and scope.

This article examines the trends in global economy digitalization, as well as factors and directions of digital platforms' impact on different economic indicators. The analysis serves as the basis for conceptual recommendations to improve regulation of digital platforms in Russia.

Key recommendations are related to the development and legislative adoption of definitions for digital platforms and ecosystems, the development of special measures to support national platforms (based on certain criteria for their classification as national enterprises), the amendment in, and improvement to, antimonopoly regulation, and the establishment of interdepartmental coordination and interaction with relevant stakeholders.

Keywords: digital economy, digital platforms, digital ecosystems, competition law, consumer protection

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Introduction

The development of digital technologies has led to changes in the economy, business, and the lives of everyday people at scale unprecedented over several decades. Due to technological innovations and the expansion of digital technologies, the importance of the economy based on the activities of digital platforms is growing [Kenney, Zysman, 2016]. Such platforms are very diverse in terms of their activity, sector, business model, and size. They provide various services, including search engines (Google), online marketplaces (Amazon), social networks (VK),

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sharing economy services (Uber), and online games (Steam), and make it possible to record and view videos (YouTube), and to view and listen to music and clips (Spotify) [Murati, 2021]. Developing a general definition for all these platforms is quite complex, and defining platforms based on their main features seems to be the most common approach. Thus, digital platforms are understood as business models of companies that rely on their high-tech infrastructure, including software, applications, cloud storage, big data capabilities, algorithms, predictive analytics, modelling, machine learning, and various services to create value by organizing interaction between various market participants (from the point of view of economic theory, digital platforms are multilateral markets that integrate several types of participants). Along with digital platforms, the broader concept of a digital ecosystem is often used. The definition proposed by the Russian Ministry of Economic Development seems to well reflect the essence of digital ecosystems: a customer-centric business model that combines two or more groups of goods, services, or information (produced by themselves and/or other players) to meet customers' needs [2021].

Digital platforms benefit from network effects and the ability to collect and process large amounts of data and, as a result, become competitors to traditional market participants and can create entry barriers for new players. In addition, due to their specific nature, digital platforms are disruptors not only to traditional economic processes, but also to regulation. As the platform economy evolves, both new opportunities and challenges arise, most notably related to the proper regulation of digital platforms to maximize their contribution to economic growth and social development while adequately protecting competition, consumer rights, and personal data. This article examines the main economic trends associated with digital platforms' activities (it should be noted that relevant data are scattered and not always accurate due to the partial "intangibility" of the digital environment), factors and directions of their influence on various economic indicators, and related regulatory issues. The purpose of the study is to substantiate conceptual recommendations for improving regulation of digital platforms in Russia based on the analysis of these issues.

General Trends in Economic Digitalization

Active development and spread of digital platforms is associated with the general growth of the digital economy (that is, the creation, distribution, and use of digital technologies and related products and services). The ability of the digital economy to provide access to a variety of service-based solutions, thanks to the proliferation of cloud infrastructure and computing, is becoming increasingly important. It has enabled the digital economy's expansion and an increase in its share of the global economy.

Despite the constantly growing economic and social importance of the Internet and digital data, official government statistics in these domains are often absent, and Internet Protocol (IP) traffic is often used to estimate the growth of data volumes in the digital economy. Although methodologies used are not standardized, are not always clear, and data releases are sometimes irregular, all relevant estimates suggest that global Internet traffic and the volume of data used in the global economy has grown significantly in recent decades, and this rapid growth is expected to continue due to the progress of digital technologies.

United Nations Conference on Trade and Development (UNCTAD) data show global IP traffic roughly tripling between 2017 and 2022 [2019]. According to some estimates, global IP traffic in 2022 exceeded its entire accumulated volume prior to 2016 [GlobeNewswire, 2018]. Moreover, in 2023 the number of devices connected to IP networks is expected to be more than three times the global population [Cisco, 2020].

The COVID-19 pandemic had a major impact on Internet traffic as an increasing number of economic transactions and social interactions took place via the Internet. Global Internet

usage (traffic volume) grew by 35% in 2020, up from 26% growth the year before. This was the largest annual increase since 2013. Against this backdrop, the potential for digital infrastructure use is growing as many network operators tend to increase capacity to keep ahead of demand [TeleGeography, 2021]. Thus, according to Ericsson [2023], data traffic through mobile networks increased by 50% between Q3-2019 and Q3-2020. Global data traffic reached 180 and 230 exabytes per month in 2019 and 2020, respectively. By 2026, this figure is projected to more than triple to 780 exabytes.

Other estimates suggest that 64.2 zettabytes of data were created or replicated in 2020. The volume of digital data created over the next five years is expected to be more than double that created since the advent of digital storage, and global data creation and replication is expected to grow at a compound annual rate of 23% [PureStorage, 2021].

Digitalization is leading to an increase in the share of digital and related sectors in global gross domestic product (GDP), international trade, and other economic indicators. Despite the complexities and different approaches to assessing economic value indicators in the digital economy, this trend is largely supported by statistics. According to UNCTAD, the share of the digital economy (by a narrow definition—information and communications technology (ICT) and related sectors) in global GDP was 4.5% in 2017, whereas under a broader definition (including ICT-enabled production in other sectors) it reached 15.5%. In the largest economies, the figures are even higher—6.9% and 21.6%, respectively, for the U.S., and 6% and 30%, respectively, for China. From 2005 to 2018, global electronic services exports grew by an average of 7% per year from \$1.2 to \$2.9 trillion, while the global exports of ICT services over the same period increased by an average 9% per year from \$175 to \$568 billion [2019]. During the COVID-19 pandemic, these figures further increased (see Figure 1).

Digital economy shares in the global GDP

World		U.S.	China	
<i>Narrow definition</i>				
4,5%		6,9%	6%	
<i>Broad definition</i>				
15,5%		21,6%	30%	



Global ICT exports		Global ICT employment	
2005	2018	2010	2015
\$175 bln	\$568 bln	\$34 mln	\$39 mln
 +9%/year		 +13%	

Fig. 1. Digital Economy Development Indicators

Source: [UNCTAD, 2019].

Similar trends are observed in the Russian economy. Rosstat data show that gross domestic expenses on digital economy development in the Russian Federation increased from RUB 3.3 to 4.8 trillion in 2017–21 [Abdrakhmanova, Vasilkovsky, 2023]. According to the goals of the national programme “Digital Economy,” this indicator is expected to at least triple compared to 2017 levels by end-2024 [Government of the Russian Federation, 2018]. ICT sector contribution to the Russian GDP in 2021 and 2022 amounted to about 3.2%, and the dynamics of its gross added value is growing at a faster pace compared to other sectors. More than half of the adult population in Russia used e-commerce services in 2021 [Ibid.].

Digital Platforms’ Key Features, Growth Factors and Trends

The development of digital platforms and the desire of many companies to use platform business models is an integral element of the digital economy’s growth.

The nature of the digital economy determines its main differences from traditional economic activities. Such features directly related to digital platforms’ activities include, first, asset-lightness. Within their cloud infrastructure, companies can reduce costs associated with renting hardware and downloading software and applications and manage on-demand access to applications or storage through a cloud service provider. The availability of software applications and cloud-based tools on digital platforms reduces duplication costs and improves productivity, as such programmes can be used for similar or customized tasks, meaning there is no need to rewrite programme codes. This reduces time and financial costs for developers and increases their productivity.

Another key feature is mobility. Cloud infrastructure services enable platform companies to conduct cross-border and global operations from virtually any place in the world, no matter where their clients, suppliers, or consumers are located. This is because platform companies can use intangible assets, including software, applications, and tools, that constitute the core of their business [OECD, 2014].

Directly linked to asset-lightness and mobility are economies of scale and scope within digital platform operations. Platforms use digital technologies to create value by dramatically reducing the costs of searching, sharing, and implementing data-driven innovation [Cusumano, Gawker, Yoffie, 2019]. Thus, platform digital markets are characterized by large economies of scale, while high initial investments and fixed costs of creating services are combined with low or even zero marginal costs of attracting additional users. A good example is the exponential expansion of the largest social networks from a few dozen initial users to tens and hundreds of millions in a relatively short period of about 10 years. By operating simultaneously in adjacent markets, digital platforms can reduce costs and improve the quality of their services. These economies of scope are achieved through sharing and aggregation of consumer data, as well as brand replication, relations with suppliers, and technical expertise. Economies of scope have helped large digital companies to develop their platforms and establish ecosystems in several adjacent markets [Furman et al., 2019].

In addition, digital economy and digital platform activities are characterized by network effects. The success of a platform depends on its ability to attract a sufficient number of users from both sides of the market (individual users, business users, or, in the case of so-called gig platforms, customers and workers). To do this, platforms use both pricing and non-pricing strategies, such as providing free access or rewards. These strategies create greater value for users and attract even more new customers, thereby creating network effects [Evans, Schmalensee, 2008]. Platforms also attract and retain third-party developers to stimulate innovations and increase their own value by providing access to applications and tools at a low price or free of charge [Boudreau, Jeppesen, 2015]. This also creates network effects.

Another feature of digital platform activities is active generation and use of data, or datafication. Increased computing power and availability of cloud storage have made it possible to collect, store and analyze data on a larger scale and at a much faster pace than ever before. Data has become an integral part of platform businesses because it can be monetized, for example through targeted advertising. Data can be used for a variety of purposes, such as predicting and managing consumer behaviour, improving products and services, and guiding users' behaviour through algorithms.

Finally, most digital platforms act as private regulators of their ecosystems. They set the rules for their users' interaction, decide what behaviour on the platform they should encourage and discourage, and choose how to enforce the rules [Cusumano, Gawer, Yoffie, 2019]. This "platform governance" can create significant value for platform users. Examples of platform governance include regulating market access and exclusion, defining ways for sellers to present their offers, specifying what data and application programming interfaces (APIs) users and developers can access, establishing delivery and return policy standards, introducing price controls, and so-called "most favoured" provisions [Cremer, de Montjove, Schweitzer, 2019].

Digital platforms have been able to use these features of the digital economy and their own business processes to spread across various economic sectors. The general nature of economic development has further contributed to the rapid development of platforms. For example, researchers note that availability of cloud infrastructure services at increasingly lower prices, along with venture capital funding, has decreased entry barriers and enabled the rapid growth of digital platforms over the past decade [Cusumano, Gawer, Yoffie, 2019]. Platforms' investments in traditional capital assets, such as warehouses, are often minimal. Instead, platforms tend to invest in digital infrastructure and rely heavily on data, skills, ideas, and physical assets provided by their users. For example, Uber did not invest significantly in purchasing cars, but it managed to expand at scale in 69 countries at an unprecedented pace within a decade [Uber, 2020a]. As of 2020, the company had almost 27 thousand employees and worked with five million drivers [Ibid., 2020b]. Digital platforms are also actively investing in new technologies. The latest example is the investment of major platforms, including Microsoft and Google, in startups dealing with artificial intelligence [Financial Times, 2023]. Amazon launched an industrial innovation fund in 2022, investing in the latest developments in logistics and customer service [Amazon, 2022].

Digital platform development is self-reinforcing as it has created entrepreneurial opportunities for digital startups and third-party developers to innovate and develop new products, tools, applications, and services on the platforms, facilitating further digital transformation [Miric, Boudreau, Jeppesen, 2019].

Recent macro trends have also affected the development of digital platforms. While the COVID-19 pandemic caused significant challenges, it also led to an unprecedented digital transformation that has enabled new levels of technology use in people's everyday life and economic activity. This has accelerated the already rapid pace of growth and diversification of digital platforms. Most platform companies significantly expanded their operations in response to the pandemic. GAFAM (the five largest U.S. digital companies acting as a backbone of the platform economy) made huge profits during the pandemic compared to airlines, hotels, food services, and small and medium-sized enterprises (SMEs), many of which have been driven to bankruptcy. For example, Amazon doubled its profits in Q2-2020 compared to the same period in 2019 from \$2.6 billion to \$5.2 billion, as more people ordered home delivery [Lopatto, 2020]. Platforms providing services such as delivery of food and essentials to self-isolated people contributed to overcoming the pandemic. The pandemic also contributed to the strong growth of digital platforms in education. In the post-pandemic world, many types of work that previously required travelling to the office are performed remotely, in a virtual workspace based on digital platforms. Personal and professional communication largely occurs in a similar way.

The growing economic importance of platforms is also evident for the labour market, as millions of people use sharing platforms to earn money, taking advantage of the flexibility of such work [Glöss, McGregor, Brown, 2016]. Researchers suggest that the spread of digitalization across different sectors and activities, including the growth and proliferation of digital platforms, will be important for economic growth and job creation in the post-pandemic world. Platform solutions are expected to enable growth in various sectors, from financial services, education, and healthcare to transport, trade, logistics, industrial production, and agriculture [Kaka et al., 2019].

Quantifying the contribution of digital platforms to economic development is challenging. A significant portion of consumer wealth created through the use of digital goods and services is not properly reflected in GDP calculations. Many digital goods and services have a zero price, therefore, gains in consumer welfare from these goods are not reflected in GDP and productivity statistics at all. A number of researchers have proposed new indicators that take into account the increase in wealth from digital goods. Their proposals cannot fully address the issue of measurability of platform economic effects but demonstrate their growing importance for consumers and the whole economy. For example, the average user of a large social network can stop using it if compensation amounts to about \$50 per month [Brynjolfsson, Collis, Eggert, 2019]. Not only individual consumers, but also companies, especially SMEs, benefit from digital platforms. For instance, according to Google estimates, in Europe alone, the development of Android applications brings developers about EUR 12 billion per year, while the use of Google Maps can save 1.2 billion hours per year. As a result, the total consumer surplus (the difference between sums of money consumers are theoretically willing to pay for goods and services and what they actually pay for them) for Google's main products in Europe is about EUR 420 billion per year [PublicFirst, 2018].

The financial market is also a good indicator of digital platforms' increasing role in the global economy. Investors are increasingly interested in trading securities of digital companies, primarily of the largest platforms. Despite some short periods of falling prices (for example, in Q1-2022, the value of digital platforms' shares decreased significantly against the backdrop of a fall in the U.S. high-tech stock market and geopolitical shocks, while the value of Chinese companies decreased amid tightening regulation), the largest companies using a digital ecosystem model have demonstrated significant growth in their value over the past five years. For example, over three fiscal years (September 2019 to September 2022), Apple's market capitalization increased from \$1 trillion to \$2.2 trillion. Other large American platform companies, such as Alphabet and Amazon, have similar rates of capitalization growth, with their value growing more than 10 times over the past decade. Chinese ecosystems such as Alibaba and Baidu have seen their market capitalization increasing fivefold or even more over the same period. This is a direct consequence of the increasing use of platforms by consumers: digital platforms and ecosystems located in China and the United States have the largest number of active users in the world [Datareportal, n.d.]. For Russian digital ecosystems such as Yandex, the figures are significantly lower, but mainly due to the general market crisis in 2022. Given these trends, McKinsey experts predict that digital ecosystem companies will achieve global revenues of \$60 trillion by 2025 and thus substantially increase their share in the global GDP [The Gaidar Institute, 2022]. At present, there are at least five digital platforms among the top 10 global companies with the largest market capitalization [Ponthus, 2023].

Companies from the raw materials and, to some extent, financial sectors still lead the Russian market in terms of profit, capitalization, and other key indicators. However, Russian digital platform companies pose serious competition to global players, and some of them have a dominant share in their respective market domains (for example, Yandex in the search engine segment). The withdrawal of western platforms from the Russian market has opened additional growth opportunities for national platform companies.

Assessing Digital Platforms' Impact on Economic Indicators

The development of digital platforms and ecosystems can have a mixed impact on key macroeconomic indicators. An increase in economic growth rates and innovative activity and an expansion of international trade are traditionally considered as positive effects of platform development. At the same time, expanding platform activities can have different effects on productivity, labour markets, inflation, and other macroeconomic variables.

The development of platforms contributes to an increase in economic growth both directly (by increasing output) and indirectly through reducing transaction costs for firms and increasing their productivity. M. N. Georgiou uses the example of Western European countries to examine all three directions of influence and developed an econometric model to show that the spread of the Internet and e-commerce (and hence the development of platforms) has a positive impact on economic growth since it promotes consumption, which, in turn, increases companies' productivity. He demonstrates that with an increase in the share of e-commerce in total trade turnover by 1 p.p., the annual GDP growth rate additionally increases by 0.001 p.p. [2009]. Other researchers have noted two types of potential economic benefits from the development of digital platforms. First, it improves the efficiency of using scarce resources, allowing for increased current consumption and creation of new digital goods and services. Second, potential economic benefits are associated with cost reductions, including search costs, administrative costs, distribution costs, and labour costs [Sumanjeet, 2008].

Chinese researchers have carried out regression analysis to show that e-commerce factors, especially the number of Internet users and the number of e-commerce enterprises, as well as the growth in the number of users of online shopping services provided by digital platforms, have a significant positive correlation with GDP. An increase in each of the three indicators by 10 thousand provided an additional increase in China's GDP by CNY 0.5, 1.2, and 0.5 billion, respectively [Qu, Chen, 2014]. Russian researchers also note that the development of digital platforms, as well as competition between national and foreign multilateral platforms, stimulates economic growth [Eferin, Rossotto, Hohlov, 2019]. Thus, digital platforms and traditional companies produce similar economic effects but, due to increased productivity, the relative impact of platform expansion is higher.

Scientific studies and analytical reports show that digital platform development contributes to international trade growth, primarily by reducing transaction costs of purchasing goods abroad. According to the Organisation for Economic Co-operation and Development (OECD), in 2017, about 300 thousand sellers exported goods from the United States to other countries on Amazon, and most of them were classified as small businesses [UNCTAD, 2019]. European researchers have revealed that cross-border e-commerce through digital platforms reduces trade costs compared to traditional (offline) trade. Increased price competition, in turn, has a negative impact on the volume of national production in this sector (-2.6%). However, the resulting gains in retail efficiency have a positive impact on production in other sectors (0.9% to 2.6% growth) and on household consumption (+1.07%). The total macroeconomic effect of these processes adds 0.14% to the European Union's GDP on average [Cardona et al., 2015]. Other studies examining the impact of platform development on bilateral trade flows show that the expansion of digital infrastructure and the proliferation of e-commerce platforms stimulate bilateral international trade at various levels, primarily exports from developing countries [Xing, 2018].

The impact of digital platforms and ecosystem growth on economic productivity can be different. Positive impact is achieved primarily by reducing information asymmetry between market participants, increasing competition and squeezing the least productive companies out of the market, and reducing transaction costs of interactions between market participants. At

the same time, negative impact is associated with the risks of market monopolization by a single platform and disruption of existing traditional value chains. Thus, to maximize productivity, governments should create an environment that prevents the emergence of monopoly platforms. Researchers have studied the impact of online platform development on the productivity of firms in the services sector. Digital platform usage across four industries (hotels, restaurants, taxis, and retail) in 10 OECD countries was calculated based on Internet search data and related to firm-level productivity data in these industries. The authors found that platform growth improves productivity of an average firm (platform growth in 2011–17 in four sectors led to a productivity increase of about 2.5%) and also stimulates reallocation of labour to more productive firms in these industries. This may, in part, reflect the fact that user review and rating mechanisms offered by platforms reduce information asymmetries between consumers and service providers, increasing competition between the latter. However, productivity effects depend on the type of platform. Aggregator platforms that connect traditional service providers with consumers tend to improve productivity, while more innovative platforms that allow new types of providers to compete with traditional ones (for example, home-sharing or ride-hailing platforms), on average, do not have a significant impact on it. Accordingly, different types of platforms have different effects on the performance of other firms in the services sector. In addition, productivity gains due to platform development are lower when a platform is consistently dominant in its market, which implies high concentration of market power and the need for increased competition in platform markets [Bailin Rivares, Milot, Sorbe, 2019]. OECD experts have come to similar conclusions [2021], along with other estimates of the impact of digital platform development on labour productivity. For instance, M. Falk and E. Hangsten concluded that an increase in electronic sales through digital platforms by 1 p.p. increases labour productivity by 0.3 p.p. over a two-year period [2015].

In terms of inflation and prices of goods and services, the impact of digital platform development can also be mixed depending on the platform size and market shares it controls. Like productivity, increased competition between market players, leading to a decrease in information asymmetry, has a positive impact and leads to lower inflation. On the contrary, in the case of market monopolization and the “winner takes all” scenario, inflation tends to increase. Such trends are also typical of non-digital markets. Inflation in U.S. online trading in 2014–17 turned out to be more than 1 p.p. lower than the corresponding consumer price indices [Goolsbee, Klenow, 2018]. A. Lacuesta, P. Roldan, and D. Serrano-Puente [2020] examined e-commerce growth in Spain, which can be considered as a proxy for other eurozone countries. They noted that academic literature examining potential price changes for the same product sold either in a traditional format or through a digital platform did not indicate significant differences between the two markets. In addition, platform markets have some characteristics common with traditional ones, including low frequency of price changes and high price variation for the same product depending on the point of sale. However, the authors concluded that the development of trade using digital platforms in Spain contributed to increased competition and led to lower markups. At the same time, they found no evidence that these factors had affected platform profits, which may be a consequence of increased productivity and lower costs [Ibid.].

As for the labour market, platform development reduces transaction costs and allows companies to outsource some services, primarily non-core ones, such as security and cleaning. The development of specialized employment platforms could lead to increased flexibility of labour supply and demand, reduction of geographical barriers in the labour market, and better inclusion of disabled people, women, and youth into the workforce. According to experts, even in 2012, the majority of jobs in the world were created using the Internet. At the same time, a number of researchers, including Russian ones, note possible negative effects of digital

platforms on the labour market associated with unemployment, underemployment, and poorer social protection of workers [Sadovaya, 2018].

The mixed impact of the development of digital platforms and ecosystems is also observed in relation to consumer behaviour. The obvious benefits and convenience of digital platforms associated with the emergence of fundamentally new services and opportunities to save time and money may be offset by growing user distrust in case of discriminatory pricing, risks of personal data leakage, and other similar events. Thus, according to Rosstat, the share of the Russian population buying goods and services online has more than doubled over the past 10 years, while the share of Russian citizens who do not use the Internet at all due to data security threats remains relatively stable. Research also shows that sales of services by companies using digital solutions, including platform ones, compared to those that do not use them, are on average higher [Andrews, Criscuolo, Gal, 2016].

In a broader context, positive effects of digital platforms' activities include stimulating innovation (digital platforms have traditionally led the way in R&D investment), strengthening growth, creating markets that can satisfy demand from an unprecedented number of consumers, and supporting employment, among others.

At the same time, digital platforms are sometimes characterized as double-edged swords, since their positive impact on the economy is accompanied by inherent negative risks [Gawer, Srnicek, 2021]. The dominance of the largest platforms in their markets, which increased during the COVID-19 pandemic, has led to market power abuse. Market monopolization and replacement of traditional market players by platforms using network effects, big data, and non-standard pricing is becoming a serious challenge for regulators. Moreover, in platform markets, the relationships between dominance and market power often differ from traditional markets, further complicating regulatory work and reducing the effectiveness of antitrust instruments. Regulatory challenges posed by platforms also include protecting user rights and privacy of user data, as well as their avoidance of industry-specific regulation (this is evident for taxation, as well as for platforms in certain sectors; for example, apartment rental platforms offer services similar to hotels, but are often regulated as application providers and are not covered by security requirements, insurance, and sanitary standards), difficulties of combating illegal and harmful online content, and stalling international cooperation.

The main trends of digital platforms' impact on different economic indicators are presented in Table 1.

Table 1. The Impact of Digital Platforms on Key Economic Indicators

Indicator	Effects
Economic growth rates	Positive (output growth, cost reduction, productivity improvement)
International trade	Positive (cost reduction)
Productivity	Mixed: positive (information asymmetry reduction, competition growth, cost reduction) and negative (risks of monopolization, breaking value chains)
Inflation	Mixed: positive (information asymmetry reduction, competition growth) and negative (risks of monopolization)
Labour market indicators	Positive (cost reduction, development of specialized platforms)
Consumer behaviour indicators	Mixed: positive (new services, saving time and money) and negative (risks of user distrust)
Innovation	Positive (R&D investment, creation of new markets, increased employment)

Source: Compiled by the author.

Recommendations Based on the Study Outcomes

Given the importance of digital platforms for the Russian economy, it is necessary to further develop and improve the government's approaches to supporting them and regulating their activities. First, it seems advisable to develop and enshrine in legislation a unified definition of digital platforms and related concepts, for example, platform operators, and thus harmonize the existing regulations (for example, the Law on Consumer Rights Protection now enshrines the concept of aggregators of information about goods and services, equivalent to platforms). This will contribute to developing a regulatory framework that covers platforms of different size carrying out various activities.

The next step could be the development of special measures to support Russian national digital platforms to ensure their effective competition with foreign players (primarily traditionally influential American ones, as well as Chinese ones that are increasing their influence), as well as small-scale and new platforms to counteract their "containment" by larger companies. This goal of regulating digital platforms is stated as one of the main priorities in the concept of general regulation of the activities of groups of companies developing digital services based on the "ecosystem" approach, developed by the Ministry of Economic Development of the Russian Federation [2021]. At the same time, it will be necessary to formulate criteria of a national platform (registration of software copyright holders in Russia, certain shares of users, income, investments, and jobs located or received in the Russian Federation). Supporting smaller platforms can also contribute to addressing the issue of the platform markets' inclusiveness. Currently, a wide range of services from online platforms are only available in major cities. Therefore, support for financial, information, and other types of SMEs in the digital sector should become a priority.

Another important aspect is the development of special antimonopoly rules for digital platform activities. Research demonstrates that Russian domestic regulators have chosen the path of introducing changes and making additions to existing standards, rather than creating a separate regulatory perimeter for platforms. Recently, Russia adopted the "fifth antimonopoly package," which supplemented the Federal Law "On Protection of Competition" with provisions prohibiting monopolistic activities of some digital platforms (marketplaces) and dominant market position abuse of large players whose revenue for the last calendar year exceeds RUB 2 billion. The new law has also introduced the concept of network effects and provided for mandatory approval of mergers and acquisitions in the digital market worth over RUB 7 billion with the Federal Antimonopoly Service. It is already clear that platforms such as Cian, Avito, Yandex.GO, as well as Apple and Google as owners of application stores, will be subject to the new regulations. On 1 September 2023, the new rules came into force, and in the near future it will be necessary to evaluate their effectiveness and consider the feasibility of extending antitrust requirements to other types of platforms.

To address these issues, it may be necessary not only to develop and adopt or amend legal acts, but also make institutional decisions (following the example of foreign jurisdictions) to create an interdepartmental coordinating body bringing together relevant regulators, as well as take measures to support self-regulation. These can include, inter alia, continued work on specification and compilation of the best and inappropriate practices lists within the framework of the principles of interaction of digital market participants, prepared by the FAS Russia and industry representatives.

At the same time, it is important to position the existing and future measures as advanced, taking into account the best international experience and ensuring a balance between stimulating digital platform development and protecting competition, consumer rights, data security, and privacy. Comparability with international best practices will facilitate easier implementa-

tion and increase the attractiveness of Russian domestic regulation. This could encourage partner countries, primarily within the Eurasian Economic Union (EAEU), to develop and adopt requirements harmonized with those of Russia, which will help ensure a predictable regulatory environment for Russian platforms throughout the union. It is advisable to increase cooperation on digital platform regulation in broader formats. For example, within the BRICS group of countries (Brazil, Russia, India, China, and South Africa), it could be possible to conduct an analysis of platform regulations in force in the five countries, identifying common challenges and best practices, including in terms of updating and applying instruments related to consumer protection, data protection and privacy, competition policy, and ex-ante regulation development. Identification of common problems and the best regulatory practices of the BRICS countries may in the future become a step toward developing common approaches, unifying rules, and providing mutual support for the development of national platforms. In the future, BRICS outreach and BRICS Plus partners can be integrated into this cooperation.

Conclusion

The platform economy has significantly expanded in recent years. This was facilitated by the general digitalization trends and the benefits of the platform business model associated with the reduction of operational, transaction, and time costs for all actors involved in platform operations.

Digital platform development can have a mixed impact on key macroeconomic variables. In particular, depending on the type of platforms, their proliferation can either increase or decrease productivity, employment, and inflation. Researchers clearly demonstrate the positive impact of digital platform development on economic growth rates, trade expansion, and innovations. These effects are mostly similar to the traditional economy; however, the digital nature of the platforms determines their greater relative positive impact and, accordingly, their attractiveness for consumers and suppliers of various goods and services (different sides of the multi-sided market). At the same time, the market multi-sidedness in the platform economy leads to specific manifestations of competition and market power concentration, posing new challenges for regulators.

Thus, governments face the task of maximizing positive economic effects of digital platforms while properly taking into account the risks associated with the spread of the platform business model. Russia is no exception: the development of platform solutions and improvement of the digital environment regulation are among the priorities of the national programme “Digital Economy” and other initiatives aimed at achieving long-term socio-economic development goals.

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