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The review "Russian Economy. Trends and Outlooks" has been published by the Gaidar Institute since 1991. This is the 42th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 6 big sections that highlight different aspects of Russia's economic development, which allow to monitor all angles of ongoing events over a prolonged period: global economic and political challenges and national responses, economic growth and economic crisis; the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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6.3. Platform companies: features of the business model and corporate governance¹

Digitalization of corporate activities in Russia and the world was of great importance, and until 2020 companies seeking to be competitive in hypercompetitive markets with rapidly changing customer needs, where possible, transferred their business to digital format in different volumes and speed. The rapid transmission of COVID-19 in 2020 gave an additional impetus to digitalize the economy in the wake of the forced social distancing and isolation. Technology companies and other companies that have been able to move their businesses online have stayed afloat, though often not without significant losses. Platform companies, thanks to their inherent speed and flexibility, have come to terms more easily than traditional corporations with the conditions of the pandemic. For example, Sber and Yandex, taking advantage of the current situation, expanded their digital ecosystems, but suffered some profit losses. Wildberries and Mail. ru on the contrary have significantly increased their incomes during the crisis. This viability of the platform business in extreme conditions makes it relevant to consider this mod in more detail.

6.3.1. Digital economy. Platforms as a manifestation of digitalization in the activities of companies

The concept of the digital economy, based on the transition of a human being in his economic activity to the processing of electronic bits (digital interaction), was defined at the end of the XX century. Its advantages are based on the

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virtuality of economic relations, reduced demand for raw materials and transport infrastructure, rapid global movements, etc.₁ It is believed that the transition to the digital economy will result from the forthcoming fourth industrial revolution, or "Industry 4.0".₂

The third industrial revolution of the mid-60s of the XX century is characterized by the emergence of semiconductors, personal computers, and the Internet. Along with it, the centralized and hierarchical business models inherent in the first and second industrial revolutions must be replaced by horizontal interaction. The fourth revolution will go further. It is distinguished by the global reach of the mobile Internet, the robotization of industry and the service sector (including artificial intelligence and the Internet of Things), the interpenetration of technologies in the physical, biological, and digital spheres. The proliferation of information technology should lead to the organization of a new society with complex network structures.3

In accordance with the official definition adopted in Russia, the digital economy is an economic activity where data in digital form is the key factor of production.⁴ It is also defined as an economy where economic activity is carried out using electronic or digital technologies, with an emphasis on goods, services and services implemented through e-business, e-commerce,⁵ as an economy multiplied by new technological capabilities, primarily the capability to collect, store and transmit huge data array.⁶

Experts note that today the post-industrial economy is arduously changing and is divided into the exponential economy of the physical world and the digital economy of the virtual world (hybrid reality). One of the reasons for this phenomenon is the issue of shortage of material resources amidst the continuous growth of the population, which can be resolved by shifting part of consumption to the "digit". In the digital economy, there are processes of dematerialization of things, democratization and demonetization of products. Speed and flexibility

¹ Negroponte N. Being Digital. New York: Alfred A. Knopf. 1995. 243 p.

² See: Apevalova E., Polezhaeva N., Radygin A. The standards and practices of corporate governance: relevant current trends // Russian Economy in 2019. Trends and Outlooks. (Issue 41) / [V. Mau et al.; Scientific editing by: Doctor of Economic Sciences, Kudrin A.L., Doctor of Economic Sciences, Radygin A.D., and Doctor of Economic Sciences, Sinelnikov-Murylev S.G.]. Moscow. Gaidar Institute. 2020. pp. 486–496.

³ Vaipan V. Legal regulation of the digital economy: history, theory, practice // Legal regulation of economic relations in present-day conditions of the digital economy development: monograph / Edited by: Belitskoi A.V., Belykh V.S., Beliaeva O.F., Egorova M.A. et.al. Publishing editor Vaipan V.A. Moscow. Yustitsform, 2019. 376 p.; Molotnikov A.E. Fourth industrial revolution and modern understanding of the corporate form of doing business // Business law. 2017. No. 2, pp. 3–16.

⁴ Resolution of RF Government of July 28, 2017 No. 1632-r "On Approval of Program 'Digital Economy of the Russian Federation" // SZ RF, August 7, 2017. No. 32 Art. 5138 (it is no longer valid owing to succession of the new national program of the same name – Resolution of RF Government of February 12, 2019 No. 195-r // SZ RF, February 25, 2019, No. 8, Art. 803). Datasheet of the National Program "Digital Economy of the Russian Federation. URL: https://digital.gov.ru/ uploaded/files/natsionalnaya-programma-tsifrovaya-ekonomika-rossijskoj-federatsii_NcN2nOO. pdf

⁵ *Vaipan V.* Fundamentals of legal regulation of the digital economy // Law and Economy. 2017. No. 11, pp. 5–18.

⁶ *Aliev V.* Political and legal aspects of transition to the digital economy in Russia // Rossiiskiy sledovatel. 2018. No. 9, pp. 48–52.

are becoming key in the digital world. As a result, large companies with a rigid corporate vertical and an authoritarian centralized decision-making center do not keep up with changes.

Already today, digitalization is penetrating the activities of corporations. The proliferation of platform companies is a manifestation of this process. The platform economy is characterized by a significant "reforming force that can reshape the landscape of modern market relations, change traditional and form completely new markets, industries and innovative business models, change the perception of methods and instruments for managing organizations, competitive relations, creating and distributing innovations, as well as influence certain aspects of economic and social life of a person, his freedom and independence."²

6.3.2. Platform companies and traditional corporations

Originally, corporations were organized as closed centralized hierarchical structures characterized by (1) a highly centralized source of power, (2) a clear boundary between the corporation and the outside world; (3) a strong and formal hierarchy with functionally differentiated roles; (4) standardized operating systems and procedures dictated by centralized authority. Such a highly bureaucratic model makes sense when the company's main goal is to minimize transaction costs and information asymmetry and to provide static products or services on a stable national market.³

However, today, working in hyper-competitive global markets against the backdrop of digital change (i.e., exponential technological growth and rapidly changing consumer needs) requires constant development, which is mainly due to innovations in products and services, technologies, and more recently, thanks to innovations based on digital platforms.

In legislation and science, there is no single concept of a platform. For example, platforms are defined as "integrated assets that allow a company to extract additional value through various effects."⁴ A number of authors understand digital platforms in a broad sense as "hybrid 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 ecosystem⁵ of algorithm-driven relationships".⁶ The platform is also considered as "a business based on the implementation of value-creating

¹ Ferents V. Minin A. ("Deloitte"): Key in digital – speed and flexibility [Interview with A. Minin] // Bankovskoe obozrenie. 2019. No. 4, pp. 42–45.

² Osipov Yu., Yudina T., Geliskhanova I. Digital platform as an institution of technological breakthrough // Economic strategies. 2018. No. 5 (155), pp. 22–29.

³ Here and hereinafter: Fenwick M., McCahery J., Vermeulen E.P.M. The End of 'Corporate' Governance: Hello 'Platform' Governance (August 16, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-5; European Corporate Governance Institute (ECGI) – Law Working Paper No. 430/2018. URL: https://ssrn.com/abstract=3232663

⁴ Markova V. Platform business models / Voprosy Ekonomiki. 2018. No. 10, pp. 127-135.

⁵ By analogy with a natural ecosystem, which is a functional unity of living organisms and their habitat, an economic ecosystem brings together the platform and its participants, as well as the resources they invest.

⁶ Osipov Yu., Yudina T., Geliskhanov I. Digital platform as an institution of technological breakthrough // Economic strategies. 2018. No. 5 (155), pp. 22–29.

interactions between external producers and consumers".¹ The first economic ecosystem is sometimes called the telephone network, which appeared in the XIX century on the platform of an analog communicator of telephone channels, to which the telephone network was locked.

Compared to traditional platform companies, they are more competitive, grow fast, and spread across a variety of markets. These new economic entities develop original business development strategies, new sources of competitive advantages and added value, ensure the transition from value chains to partner networks, and create an environment for the joint evolution of companies and markets. Eight out of ten companies in the top ten by market capitalization in the world have a platform at their core (*Table 8*).

Table 8

No	Company	Platform	Country	Sector	Market capitalization (USD bn)
1	Saudi Arabian Oil	×	Saudi Arabia	Oil and gas	1741
2	Apple	\checkmark	USA	Technologies	1568
3	Microsoft	\checkmark	USA	Technologies	1505
4	Amazon	✓	USA	Consumer services	1337
5	Alphabet	\checkmark	USA	Technologies	953
6	Facebook	\checkmark	USA	Technologies	629
7	Tencent	\checkmark	China	Technologies	599
8	Alibaba	✓	China	Consumer services	577
9	Berkshire Hathaway	×	USA	Finance	430
10	Visa Inc- Class A	\checkmark	USA	Finance	372

Top 10 companies by market capitalization in the world as of July 2020

Source: PwC. Global Top 100 companies by market capitalisation (July 2020). P. 11. URL: https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-june-2020-update.pdf.

A traditional company creates value for the consumer in a linear (conveyor) way (value chain). Simplified, it looks like this. Suppliers provide the producer with raw materials that undergo some processing on the part of the manufacturer and turn into a product (service) purchased by the consumer. The finished product has a higher value than the raw material. The manufacturer aims to reduce the price of raw materials and processing and increase the value of the finished product.²

Unlike a traditional corporation, a platform company does not create tangible goods and creates almost no value. Its "products" can be called:

- a platform that has little value in itself;
- the policy of the company (i.e., the platform owner) to establish rules for the interaction of other platform participants (suppliers, developers,

¹ Novozhilov K., Golubev D., Entin N. The phenomenon of digital platforms and analysis of the architecture of digital platforms // Colloquium-journal. 2019. № 15 (39).

² See here and hereinafter: Konopatov S.N., Salienko N.V. Platform-based business model analysis // Scientific journal NRU ITMO. Series Economy and ecological management. 2018. No. 1, pp. 21–32.

partners, and consumers) and the use of its resources (applications, information, products, etc.).

The platform and policy do not require the provision of raw materials for conversion into their products, and are not purchased by the consumer. Thus, the main assets of a platform company are the platform participants and the external resources they invest. Unlike a traditional platform company, it does not own these assets, but only coordinates them through its policies.

The value of the platform for participants is determined by its size. Platforms with a large number of participants attract new participants, becoming even larger and, consequently, more valuable, and thereby attracting even more new participants. Continuous improvements to the platform from vendors and developers increase the value of the platform by attracting new consumers. The growth in the number of consumers, in turn, attracts new suppliers and developers (network effect). Due to this, the growth of the platform business does not require significant material costs, in contrast to the growth of the linear business.

The superiority of external resources over internal ones is well demonstrated by the example of Nokia and Waze. In 2007, Nokia acquired Navteq, the company that owns the world's largest network of traffic sensors, for \$8.1 bn, which was supposed to give the company a dominant position in the market of digital maps, mobile and online traffic information. Created at the same time, Waze did not invest in a system of traffic sensors, but used the capabilities of smartphones with GPS sensors, collecting information about the location of their users and, consequently, about road traffic. After 4 years, the number of Waze sources (participants) exceeded the number of Navteq road sensors by 10-fold. At the same time, adding a new source for Waze cost almost nothing, while updating the Navteq system cost a lot of money.

In 2013, Waze, with about 50 million sources (participants), was acquired by Google for \$1.1 bn, with almost no infrastructure or a large staff.

Thus, Waze's platform approach proved to be much more effective than Nokia's traditional business model, which is slow and based on the ownership of costly tangible assets.

Platform companies Uber, Airbnb, Alibaba, not owning a single tangible asset, whether it is a taxi, housing or goods, force out traditional companies (car-hailing service, hotels, and supermarkets) from their respective markets.

It should be noted that with the development of the Internet of things, various things – from machine tools to refrigerators - become new components of the platform ecosystem in addition to the platform, its participants and the resources they invest. Combining information and things together with a network effect provides a platform business with rapid growth, which is not available with the traditional linear way of organizing business.

So, platform companies organize their internal activities in a flatter and more inclusive way, increasing opportunities for continuous innovation. We can say that it is the role of an algorithm-driven intermediary that provides and facilitates direct interaction and exchange using tools for accumulating and processing big data, complex algorithms for selecting combinations of subjects, accurate pricing, etc., together with an organization aimed at innovation, that distinguishes platform companies from traditional ones.

Platforms use network technologies to mediate economic exchange, transfer information, or bring people together. By facilitating the interaction between creators and recipients of value, platform companies make a profit.

In addition to using new technologies for transactional mediation, information exchange, or to bring people together, it is also common for platform companies to organize their internal activities to facilitate multi-stakeholder collaboration to ensure continuous innovation in the platform's functions and related products and services (interactive annual reports; the ability for employees to participate in projects that are personally significant for them, not just for the company, etc.). Stakeholders include managers, employees, investors, consumers, developers, content creators, and other companies, etc. This is how platform companies differ from the centralized hierarchical and closed structure of a traditional company.

The platform company uses the input of stakeholders and feedback to improve the experience and interaction of participants with the platform. Platform companies undermine and decentralize existing business models by removing traditional intermediaries. These companies facilitate more direct, peer-to-peer transactions.

The development of the platforms coincided with a significant reduction in information costs, which transforms the traditional balance between the advantages of the internal (company's market) and external markets. In this sense, information technology contributes to the blurring of the line between the company and the market.

In the best and most successful companies, management is no longer about hierarchy, control, or a clear boundary between the company and the world. Instead, the focus is on creating a flat, open, and inclusive organizational environment that harnesses the talents of all stakeholders in that company's network. Thus, the platforms are built on the idea of ensuring continuous innovation through an open and inclusive collaborative process. The innovation-driven organization of platforms separates them from the well-defined, fixed hierarchies, static roles, and authorized procedures of traditional companies.

Thus, the platforms are an adaptation to the realities of rapidly developing technologies and hyper-competitive global markets.

6.3.3. Benefits of the platform participants.

A platform company creates a value proposition not only for consumers, but also for other participants – suppliers and developers. The benefits to suppliers, developers, and consumers are clear. The first two groups get access to a large market with all its users. In addition, the developer can create their own platform based on their application, making the ecosystem multi-layered. For example, the Instagram app, originally developed on the IOS software platform, is itself a social platform. In turn, the consumer saves effort and time by performing many functions on a single platform (for example, the Sber digital ecosystem combines banking and manifold non-banking elements). A platform company does not sell products and services, but offers a certain technology that allows you to create value for all participants of the platform. Therefore, an important issue is monetization – extracting part of the additional value created by the platform by the platform owner - without destroying the network effect of the platform. Today, there are several main ways of monetization in the form of payment:

- access to the platform and the data generated by it, subscriptions (Netflix, partly YouTube);
- комиссии (Delivery Club, Yandex.Taxi);
- advertising space (VKontakte, Google, Alibaba);
- transactions (Visa);
- applications programming interface (eBay);
- franchising (BlaBlaCar);
- different ways.

6.3.4. Platform types

The platform business is primarily associated with technology companies that manage:

- social platform (VKontakte, Odnoklassniki, Facebook, Instagram);
- platform for exchange (services platform) (Avito, Amazon, Airbnb, Uber);
- information platform (content platform) (RuTube, YouTube, Medium, Netflix);
- software platform (Apple iOS, Google Android);
- blockchain platform (smart-contract platform) (Ethereum, EOS).

However, the platform business model is also used, for example, by companies engaged in retail sales. Platforms have also begun to penetrate the financial services industry.

According to the number of groups of platform participants, one can distinguish:1

- Two-sided integrated platforms (or transaction platforms);
- Multi-stakeholder platforms (or innovation platforms).

Two-sided integrated platforms (transaction platforms) (Yandex.Taxi, Avito, Aviasales, Airbnb) combine 3 groups of participants, matching supply and demand in a particular market:

- platform owner (attracts, brings together and encourages users of the platform);
- suppliers of goods and services;
- consumers.

Such platforms offer innovative solutions to some issues: they facilitate access for consumers (educational platforms Stepik Смотри.Учись, etc.), get rid of unnecessary intermediaries (Yandex.Taxi, online stores Wildberries, Ozon, etc.), and help in finding tickets, accommodation, etc. (Skyscanner, Tutu, Booking, Ticketland, and many other).

See hereinafter: Markova V. Platform business models // Voprosy Ekonomiki. 2018. No. 10, pp. 127–135.

The popularity of the integrated platform depends on the number of its users, since its main result is the network effect enhanced by digital technologies. The development of digital technologies contributes to the emergence of more complex integrated platforms.

Fundamentally, integrated platform itself is an intermediary, since it only brings together suppliers through a centralized closed platform and resells their goods and services using available technical means (smartphones, GPS systems, and complex payment systems). In this regard, it is interesting to suggest the rejection of this type of platform with the development of blockchain technology, which will allow suppliers to directly interact with consumers.¹

Multi-stakeholder platforms (innovation platforms) (Yandex, Telegram, iPhone, payment systems) thrive on mass cooperation, organized on the principles of openness, information exchange, and global activities.

Multi-stakeholder platform brings together at least four groups of participants:

- platform owner;
- independent developers;
- partners in sales, promotion, and service delivery (suppliers, sellers, consultants, etc.);
- consumers.

Independent developers create additional products and services, contributing to the development of the platform and the formation of an ecosystem based on it.

In addition to the network effect, the assets of independent developers (knowledge, resources, time) intended to create additional value, which allows us to talk about the economy of participation or shared consumption (sharing), as well as joint innovations produced by the platform big data, new partnership and competition mechanisms aimed at the development of the platform, are important sources of the development of multi-stakeholder platforms.

Accordingly, the considered type of platform forms an economic ecosystem is a new business model that brings together participants and resources to create and distribute value to consumers.

They also sometimes separate a "*digital twin*" platform - a complex product or project (Boeing, BMW), which is a digital workspace in the production sphere. This network structure replaces the traditional model of manufacturing outsourcing within the supply chain.

The platform brings together two groups of participants:

- platform owner;
- suppliers as partners and developers.

Today, the development and introduction of new complex physical objects to the market requires working with a wide ecosystem of partners. In this regard, the platform owner focuses more on managing both the distributed partner base and the design and development received from partners and developers. At the same time, the owner relinquishes part of their production competencies.

¹ Tapscott A., Tapscott D. Blockchain technology. Moscow. Eksmo, 2017. p. 42, 43.

For example, the Boeing collaboration platform, which is open to partners, allows them to view and change drawings and models, and check their components for compatibility. Despite the possibility of information leakage, this approach contributes to the development of cooperation and specialization of participants. The platform owner increases the efficacy and flexibility of the business, and its partners by taking over part of the development eventually increase their share of revenue in the final product.

As a result of the gradual opening of access of independent developers to platforms, companies are increasingly moving from internal platforms and integration platforms to multi-stakeholder platforms. For example, Amazon invited independent companies, including competitors, to its trading platform.

It should be noted that depending on unit analysis in addition to the economic platform ecosystem, there are also a business ecosystem focused on the company and its environment, and an innovation ecosystem that is built around a particular innovation or new economic value and a set of supporting actors.¹

Platforms can be open or closed, depending on whether non – platform owners can view and change the platform.

Open platforms include the Boeing collaboration platform, which allows as already mentioned partners of the platform owner and developers to view and change the content of the platform, check for compatibility of components.

One of the most striking examples of an open platform is Android, a mobile operating system owned by Google. In December 2019, Android's share of the mobile operating systems' market totaled 74.13%.2

Android allows any independent developer not only to provide their application to 2 billion users of this operating system through the online store Google Play, but also to work on the platform itself, i.e. the first and main set of programs, to improve it. The owner reviews the proposed changes, implements them if they are relevant, and sends updates to the platform users. With this approach, the potential of the entire outside world is open to Android.

Unlike Android, Apple's iOS mobile operating system is a closed platform. In order for an independent developer's product (app) to gain access to the iOS market (the online App Store), it must meet the strict requirements set by the platform owner. Developers cannot make changes to the platform itself. Also, unlike Android, iOS is sold only together with Apple products (iPhone, iPad, Apple TV, etc.).

Nevertheless, iOS is quite popular, occupying the 2nd place in the mobile operating system market after Android with a share of 24.79% (in December 2019). Apple's iPhone smartphones, thanks to the built-in iOS software platform, which brings together independent developers and consumers through the App Store, have seriously challenged manufacturers such as LG, Motorola, Nokia, Samsung, and Sony Ericsson.

¹ Cm.: Jacobides M., Cennamo C., Gawer A. Towards a theory of ecosystems (March 2018). Strategic Management Journal, Vol. 39: 2255–2276, 2018. URL: https://ssrn.com/abstract=3218233

² Statista. Mobile operating systems' market share worldwide from January 2012 to December 2019 (9.05.2020). URL: https://www.statista.com/statistics/272698/global-market-share-heldby-mobile-operating-systems-since-2009/

An example of a partially closed platform is Microsoft's Windows computer operating system. Independent developers are free to develop applications, but cannot make changes to the platform itself. Due to limited access, the content of the platform is not developing fast enough. However, the huge market share of computer operating systems represents an almost insurmountable barrier to entry into the market of other systems, even if they are of higher quality, but do not have a comparable number of users. In 2016, Microsoft has returned to the mobile operating system market with Windows-10. It seems that, for example, Android, which already has a sufficient number of participants, could compete with Windows in the market of computer operating systems.

Table 9

	Platforms				
	Integration platform	Multi-stakeholder platform	Digital twin platform of complex product or project		
Aim	Facilitating the interaction of participants in a particular market	Ecosystem development	Development and production of a complex product or project		
Position on the market	Intermediary	Platform ecosystem	Value creation network		
Participants	 Platform owner; Suppliers of goods and services; Consumers 	 Platform owner; Independent developers; Distribution, promotion and services provision partners; Consumers 	 Platform owner; Suppliers as partners and developers 		
Owner's role	 Data collection; Organization of participants interaction 	 Determining the architecture and the degree of openness of the platform; Management and development of the platform; Organization of participants interaction 	 Coordination; Design and development management 		
Degree of openness for partners	Closed	Different degree of openness	Open		
Examples	Яндекс.Такси, Avito, Aviasales, Airbnb	Яндекс, Telegram, iPhone, payment systems	Boeing, BMW		

Distinctive features of the three types of platforms

Source: Markova V. Platform business models / Voprosy Ekonomiki. 2018. No. 10, pp. 127-135.

Platforms differ in ownership and management models, which also reflect the degree of openness of the platform-from the most closed to the most open model:1

- proprietary platform model (Mac, iOS, Monster.com) owned by one
 <u>company</u>, managed by one company;
- 1 *Yablonsky S*. Multi-stakeholder platforms and markets: main approaches, concepts and practice // Russian Journal of management. 2013. No. 4, pp. 57–78.

- license platform model (Google Android, Microsoft Windows) owned by one company, managed by several companies;
- joint platform model (Orbitz.com, CareerBuilder.com) owned by *several* companies, managed by *one* company;
- sharing platform model (Linux, AOSP) owned by *several* companies, managed by *several* companies.

6.3.5. Platform companies and traditional corporate governance: the problem of inconsistency

Corporations, as we know them, are characterized by centralized power and a clear hierarchy. The state provides them with an appropriate political and legal environment that helps corporations to operate efficiently. Corporate law and governance were designed to support businesses organized in this way. The problem with centralized organizations, however, is the slow, cumbersome, and expensive decision-making process in a rapidly changing consumer-driven economy.

Traditionally, the main goal of corporate governance is to protect the interests of shareholders (investors) - the real, legal, and moral owners of the company. Corporate structures and procedures ensure (a) the descent of authority, responsibility and control from shareholders through the board of directors to management and employees, and (b) the ascent of accountability. Thus, corporate governance is designed for closed, centralized, and hierarchical organizations with well-defined roles, mainly for large corporations. This approach is relevant when large corporations are the main engine of economic growth.²

Shareholder primacy implies that other members of the company act as if they were shareholders, and the company's performance, as measured by the value of the shares, is improved, benefiting all stakeholders, including the public, who receive the goods and services of a successful company.

In practice, the model of shareholder primacy is associated with corporate scandals, and the corporate governance reforms of recent decades are aimed at reducing the risks of these scandals, in other words, at minimizing the risks of improper management behavior (any actions to the detriment of the interests of the shareholders-owners) and at maximizing shareholder value. Having said that, executives, managers and other employees of the company are considered as self-serving, ignoring the negative fallout of their actions for shareholders and

Hereinafter: Apevalova E., Polezhaeva N., Radygin A. The standards and practices of corporate governance: relevant current trends // Russian Economy in 2019. Trends and Outlooks. (Issue 41) / V. Mau et al.; Scientific editing by: Doctor of Economic Sciences Kudrin A.L., Doctor of Economic Sciences Radygin A.D., Doctor of Economic Sciences Sinelnikov-Murylev S.G. Moscow. Gaidar Institute Publishers. 2020. pp. 486–496.

² Hereinafre: Fenwick M., Vermeulen E. The End of the Corporation (October 20, 2019). Lex Research Topics in Corporate Law & Economics Working Paper no. 2019-7; European Corporate Governance Institute - Law Working Paper No. 482/2019. URL: https://ssrn.com/abstract=3472601; Fenwick M., McCahery J., Vermeulen E. The End of 'Corporate' Governance: Hello 'Platform' Governance (August 16, 2018). Lex Research Topics in Corporate Law & Economics Working Paper No. 2018-5; European Corporate Governance Institute (ECGI) – Law Working Paper No. 430/2018. URL: https://ssrn.com/abstract=3232663

society. Consequently, increasing shareholder control over other members of the company becomes the main objective of the reforms.

A credible corporate governance structure is considered to be based on: (1) an accountable board of directors overseeing governance; (2) a set of internal control and monitoring processes; (3) transparent disclosure of information about the company's financial performance and (4) measures aimed at protecting the interests of minority shareholders. The main result is the shareholder value maximization.

However, shareholder value maximization is not always the best way to ensure a company's success, as this emphasis creates a corporate environment where conservative decision-making, short-term benefits, and formal compliance with the rules are prioritized. Betting on the stock price can lead to a focus on following a business model based on existing and successful products or services, which hinders innovation, identifying strategies that help the company stay relevant in the medium and long run.

Also, the focus on maximizing the value of shareholders can lead to practices that run counter to the interests of employees who work directly with clients, which can be destructive to the corporate culture, since only an interested, engaged employee can attract a client, become the key to innovation and longterm commercial success of the company.

Some measures are being taken to mitigate such unintended effects of traditional corporate governance.

Firstly, national codes of good governance (investment) (steward ship code) are being implemented, aimed at creating more engaged and responsible shareholders. Shareholders, especially institutional investors, should be treated as management companies.

Secondly, initiatives are being taken to encourage companies to adopt a more responsible and sustainable approach to their activities. Most often, we are talking about disclosure and transparency of information. Also, some companies are changing the way they distribute their profits, for example, investing it in environmental research and development.

However, in both cases, more dynamic and innovative company behavior may become their secondary effect, but it is not the main objective, whereas in the digital age, constant innovation is a necessity.

Accordingly, today there is a mismatch between traditional corporate governance that supports centralized hierarchical organizations, and the needs of platform companies, which bring together and promote cooperation between several stakeholders, seeking to increase engagement. It is necessary to reconsider the attitude to corporate governance that traditionally emphasizes shareholder primacy.

New technologies are undermining the "old world". Changing the practice and thinking of modern society, they lead to the emergence of more "flat" decentralized organizations that attract by speed and ease of use.

All the most successful companies of the digital age strive to create an open corporate culture without intermediaries, based on technology, data and

algorithms. A technology-driven business culture helps companies stay relevant in the digital network marketplace, which means developing and redesigning products and services that continuously deliver customer satisfaction. This culture gives companies a competitive advantage in attracting talent, capital, suitable partners, and in maintaining relevance in hyper-competitive global markets. Leading companies understand that it is necessary to introduce new technologies in every aspect of the organization and management of the company.

On August 19, 2019, An Association of Chief Executive Officers of America's Leading Companies, Business Roundtable (BR), stated that "chief executive officers endeavor every day to create value for all our stakeholders, whose long-term interests are inseparable." The focus on all stakeholders is important because it reflects the growing trend that companies are not static hierarchies with a focus on shareholder primacy, but complex, dynamic ecosystems that include diverse, interacting elements in hyper-competitive global markets. Leading companies understand that it is necessary to introduce new technologies in every aspect of the organization and management of the company.

In order to engage with all stakeholders and remain relevant and competitive, companies must keep up with the latest technological innovations and encourage an open and inclusive dialogue with stakeholders. For example, Philips has made its annual report interactive for a wider range of stakeholders, using a variety of strategies and online platforms. Microsoft has appointed a Chief Storyteller to help stakeholders, including the public, better understand the company. Air Asia has appointed an influencer to the board of directors (a person who has an impact on the audience in a particular area) to make the board more receptive to a new generation of stakeholders. Yandex holds a large technology conference "Yet Another Conference" every year, discussing technologies and some aspects of the company's activities (in 2020, due to the pandemic, the film "Yet Another Conversation" was prepared instead of the traditional conference). Companies use social media as a communication tool in the interests of business that somewhat transforms the value of transparency.

Consumers, made more aware by digital technologies, no longer value mass production and expect that data and data analysis will provide them with more sophisticated services that consumer feedback and social media will allow them to express their opinions and learn about the activities of companies. The same can be said about the employee. He doesn't want to be an extra in a corporation anymore. Employees endeavor to increase their potential by doing things that really matter to them, and stay in the ecosystem if it gives them the opportunity to participate in projects that matter to employees because of their work for the system. Digital technologies expand the opportunities of investors (artificial intelligence instruments, blockchain technology, etc.).

However, it should be noted that with the transformation of some technology companies into the largest enterprises in history (the so-called "super-platforms"), they (Amazon, Google, Facebook and a number of others) have become more

¹ Business Roundtable. Our Commitment. URL: https://opportunity.businessroundtable.org/ ourcommitment

controversial and are now considered as problematic.¹ With the proliferation of platforms, especially globally, their owner companies have come to rely on corporate hierarchical organizational structures. In addition, in order to maintain their growth, many platform companies have become public and at the same time vulnerable to short-term (quarterly) financial pressures. The problem is that such a hierarchical organization can lead to the bureaucratization of the platform, to its closeness and, accordingly, to the problems inherent in traditional corporations.

Consequently, a platform (ecosystem) company should combine the following features:

1. Leverage the unique capabilities of new digital technologies (software, big data, cloud databases, the Internet, social networks, etc.) to deliver meaningful experiences to end-users.

The technology-driven platform company's business model is marked by economies of scale and network effects resulting from prioritizing software across all of its operations. This allows you to collect user data on a continuous and systematic basis, improving the productivity and experience of end-users. It follows that in an ecosystem, the end-user is vital. The main strategic goal of a technology platform company is to retain the users needed to generate revenue by providing them with a meaningful experience. To do this, the company's employees must directly contact the end-users, which means moving from mass production to personalization through interaction and interactivity. In the digital age, the combination of user ratings and reviews has become more important than brand loyalty in establishing trust and shaping consumer choice. An additional advantage of this approach is that it reduces the need for traditional advertising and marketing.

New technologies (artificial intelligence, sensors, and blockchain technology) are increasingly facilitating the organization of ecosystems. Platform companies should be constantly on high alert for technological changes.

2. Adopt a flatter, more flexible and inclusive style of organization, involving collaboration with different partners, built around a network of individual high-performance teams focused on collaborative creativity.

In the ecosystem, the boundaries between the internal and external aspects of the business are blurred, the traditional separation of the corporation and the market is erased. In a platform company, the boundaries between internal vertical divisions and horizontal levels are blurred – between the production department, marketing department, legal department, between different levels of managers, employees, etc. Within such a company, traditional roles are broken.

With such a flat and flexible organizational structure, it is crucial to maintain a network of individual, highly effective, entrepreneurial teams focused on collaboration and collaborative creativity. Technology-driven innovation is the foundation of this style of organization. A complex innovation system is hard to develop from the top down.

¹ *Galloway S*. The Four: The Hidden DNA of Amazon, Apple, Facebook & Google / Random House Large Print, 2017. 448 p.

3. Have a more open and transparent approach to the transfer and management of information.

The best platform companies understand that the transfer of information should not be a one-sided disclosure of information, but also an open dialogue with the involvement of stakeholders. Digital technologies provide new instruments for such a dialogue – social networks, blogs, annual letters, making communication even more personalized, open and effective.

4. Apply a new style of digital leadership focused on creating an environment that promotes creativity.

In a platform company, the role of the board of directors should be more complex. In addition to the classic functions, additional responsibilities should be provided to help create a suitable environment for key figures in the ecosystem to make better strategic decisions. Also, the board of directors should become more experimental, and its members should have more diverse experience related to technology, millennials, influencers, disruptors (disruptive startups), storytellers, etc. Leaders of platform companies must be visionary, enterprising, ready to innovate, and understand the dynamics of the platform.

6.3.6. The place of platform companies in the modern Russian economy

The rapid spread of the COVID-19 virus in 2020 led to extremely negative fallout for a large number of companies and the economy as a whole. Nevertheless, the forced social distancing has become an incentive for even more active development of the Russian digital platform business that has displayed stable growth in the past few years. Platform companies, whose operation is based on new technologies, were able not only to continue to operate in isolation, but also to expand their activities, now meeting the more "digital" needs of consumers and filling in empty niches of traditional companies that could not adapt to the current conditions in time.

Consequently, an obvious trend for Russian companies, especially large ones, in 2020 was the transition to a platform business model and the increased development of existing digital platforms and ecosystems with business diversification.

Against the backdrop of the total volume of the global platform economy and in comparison with such giants as Google or Amazon, the share of Russian platform companies is very small. However, in Russia itself, which is one of the world leaders in Internet access, national digital platforms have become relatively widespread. However, in contrast to the world (*Table 8*), in Russia, the top ten largest companies by capitalization in 2020¹ comprised only one digital ecosystem that one of Sber, which is rated 2nd on the rating list. The remaining places are taken by traditional companies in the fields of oil and gas production, oil refining and metallurgy (Gazprom, Rosneft, LUKOIL, NOVATEK, etc.). The next Yandex ecosystem is in 11th place.

¹ RIA rating (31.01.2020). URL: https://riarating.ru/infografika/20200131/630152195.html

In 2020, in the wake of the pandemic, Sberbank accelerated its transformation into a full-fledged technology company, shortening its name to "Sber" and including in its digital ecosystem many new non-bank services in various areas (food, goods, transport, entertainment, health, etc.), each offers several platforms (Scooter, SberMarket, Yudrive, Okko, Sberaptek, etc.). Sber expands its ecosystem through partnerships (for example, with Mail.ru and City Mobile) or by purchasing a competitor's share (Sberbank acquired 46.5% of Rambler). As a result, the consumer has access to financial and non-financial services through a single mobile application. However, we should not forget about the issues that the bank may have in connection with the assumption of business risks associated with non-banking areas.

Other banks are also aiming to merge with technology companies, but so far they can't compete with the Sber on the same level. For example, Gazprombank ceased to be a co-owner of Megafon in 2019. Tinkoff Bank made public its refusal to merge with Yandex in 2020.

There are several main aspects that limit the development of the platform business in Russia, as well as a number of other issues that Russian platform companies face.

Firstly, the issue of legal regulation of the platform companies' activities. Although platform companies play an important role (in 2018, the revenue of digital platforms exceeded \$17 bn and amounted to around 1% of Russia's GDP), Russian legislation does not consider them as a separate type of company and, therefore, does not apply special regulations for them. Nevertheless, the business model of these companies and their needs in the field of corporate governance have pronounced features, and therefore the extension of the rules originally developed for a traditional corporation to platform companies may hinder their development. At the same time, regulatory gaps can lead to abuse by the platform companies themselves.

It should be noted that owing to the specifics of its activities (it does not create material goods, does not own assets, etc.), a platform company can choose any country as the place of registration. If Russia wants to have a competitive advantage in attracting new promising companies, it must be proactive in creating a favorable legal environment for the development of platform business. However, stemming from the increasing speed and complexity of technological progress and the length of rule-making procedures, it is difficult for the legislator to calculate in advance possible directions of digitalization with associated risks. He has to constantly catch up with this process, while trying not to interfere excessively until it is more fully understood. It is necessary to find a balance between ensuring the interests of all platform participants and supporting the development of the platform business as one of the key elements of the digital economy of Russia.

¹ *Сидоров М.* «Сбер» меняет банк на экосистему (25.09.2020). URL: https://www.vedomosti. ru/finance/articles/2020/09/24/841151-sber-menyaet; *Kozlovsky S., Rynda A., Shamina O.* The struggle of ecosystems. How Sber will compete with Yandex and Tinkoff. (24.09.2020). URL: https://www.bbc.com/russian/features-54270603

It seems that in the modern world, where speed and flexibility come to the fore, laws alone will not be enough. We need a more flexible approach to the regulation and control of platform business – the principle of "observe or explain", which is already familiar in Russia under the Corporate Governance Code, or a completely new approach developed specifically for digital companies, based on new technologies, openness and active involvement of stakeholders (co-regulation).

Secondly, the problem of competition with foreign platform companies in the domestic markets and worldwide. For some countries, including a number of countries of the European Union, the dominance of foreign (global) platform companies that absorb and drive national competitors from domestic markets has become a problem.

In Russia, foreign platform companies prevail mainly in the field of mobile applications (for example, WhatsApp messenger has considerably more participants than similar Russian instant text messaging systems, for example Mail.ru Agent) and operating systems for personal computers and lag behind national companies in terms of share and coverage in other markets (their share in the total market volume of digital platforms in Russia is around 30% by revenue). So, the number of participants in VKontakte is twice as large as in Facebook. Yandex partakes a dominant position with the Google web search engine and is constantly expanding its digital ecosystem with other platform services in various areas. In the 4 years preceding the coronavirus crisis, Yandex's revenue doubled. The company's revenue for Q3 2020 gained 30% compared to the same period last year and amounted to Rb58.4 bn.1 Mail.ru also exhibits stable growth in various economic indicators.2

Despite the success of the platform business in the country, there are only a few Russian companies that have achieved the international level. For example, the Equid company that owns a platform for creating online stores for small and medium-sized businesses, has more than 1.5 million users in 175 countries around the world.³

Today, competition with foreign platforms encourages Russian companies to further develop and innovate in order to raise the number of participants and market capitalization growth. Nevertheless, in some important sectors of the economy, platform companies are either not represented at all, or are not developing fast enough. Such a state of affairs without state support can lead to the loss of a national company in the relevant area in case of arrival, where possible, of a foreign platform company.

Thirdly, the limited number of areas where platform companies are developing, and the lack of prominent government support for the growth of the platform business. In Russia, platform companies thrive mainly in the supply of goods and

¹ Batrov T. Yandex increased revenue in the third quarter by 30% (28.10.2020) // URL: https://www. forbes.ru/newsroom/tehnologii/412401-yandeks-uvelichil-vyruchku-v-tretem-kvartale-na-30.

² Eferin Ya., Rossotto K., Khokhlov Yu. Digital platforms in Russia: competition between national and multi-stakeholder platforms promote economic growth and innovations // Information society. 2019, No. 1–2. p. 31, 32.

³ Briefly about Ecwid // URL: https://www.ecwid.ru/intro

services.1 However, in such key areas of the economy as oil and gas production, oil refining and metallurgy, agriculture, construction and public health, the platform business is underdeveloped or almost absent. Some traditional companies are starting to put in place their own platforms to improve their internal operations and consolidated supply chains. For example, Gazprom Neft is developing the EvOil digital platform for continuous production management throughout the entire chain. The proliferation of platform companies in these industries can help accelerate economic growth, expand employment opportunities, and improve the quality of services. For example, in France, there is a network of platform swhere retailers, wholesalers, farmers and consumers interact with each other (Agriconomie, WeFarmUp).

Active government policies can promote the development of platform business in these important industries. For example, the emergence of China's leading platform companies has been supported by notable government intervention, including protection from foreign competition. The rise of Chinese platform giant Alibaba has been driven in part by government restrictions on foreign investment in e-commerce, which were lifted more recently. Today, China and the United States account for 90% of the market capitalization value of the world's 70 largest digital technology companies.²

Fourthly, the risks of establishing monopolies posed by large platform companies. Platform companies are able not only to create, but also to destroy, to be both a source of competitive advantages, and to drive out competition, to stifle small and medium-sized enterprises.

The network effect may sooner or later lead to the situation where there will be not enough participants in the initial sphere of operation of the platform company for further business growth, and the company will begin to expand its activities to other sectors of the economy. The expansion will be faster as traditional industries become increasingly digitized. It is easier for a leading platform company with a stable consumer base to seize new markets (for example, non-bank services of Sberbank).

To develop new areas of the market, large platform companies can get possession of existing competitors there. So, Yandex, using its stronger position in the field of web search and e-commerce, teamed up with Uber in the field of carhailing service. If a competitor refuses to merge, the strategy of a larger company with a larger number of participants may be to duplicate the functions of the competitor, which will lead to a reduction in its users and, consequently, to losses.

¹ Web-search (Yandex, Mail.ru), e-commerce (Wildberries, Ozon), financial services (Sber, Banki.ru), entertainment (Kudago, Vashdosug), education (Stepik, Smotri.Uchis), medical services (Docdoc), car-hailing service (Yandex.taxi), etc.

² Ivanov A., Shustova I. Research on digital ecosystems as a fundamental element of the digital economy // Creative economy. 2020. Vol. 14. No. 5, pp. 655–670; Eferin Ya., Rossotto K., Khokhlov Yu. Digital platforms in Russia: competition between national and foreign multi-stakeholder platforms promote economic growth and innovations // Information society. 2019. No. 1–2, pp. 20, 23, 29, 30.

Platform companies resort to other methods on the fringes of the law in order to eliminate competitors. For example, in 2020, Ivi, Avito, CYAN, Profi. url and a number of other companies have filed a complaint with the Federal Antimonopoly Service about the abuse of Yandex's dominant position, accusing it of hiding competitors from its web search results. In 2019, one of the most high-profile scandals was the case of patent raiding – a criminal case on the application of Rambler against the developers of the NGINX web server for copyright infringement.²

Platform companies can extract, monitor, and analyze huge amounts of data, thereby reducing costs, satisfying consumers, and improving products, giving them a competitive advantage over traditional corporations. The ability of the owner of a digital ecosystem to unilaterally control a huge amount of data about its participants can lead to information asymmetry and manipulation. Other participants in the ecosystem do not have this information and are not able to estimate such volumes.³

Platform companies can create some "attachment". For example, 1C company is a leader in the development of software products for the automation of business processes in companies of all sizes and directions, specifically the system of programs "1C: Enterprise". Paid software products, although it is possible to rent programs with a monthly subscription fee through cloud storage. The funds invested in the acquisition of the software system, the complexity of setting up basic configurations for the tasks of a particular company, and the lack of compatibility of 1C: Enterprise system with similar software products of competitors force companies to use 1C: Enterprise.

As a reminder that with the proliferation of platforms, their owner companies may begin to rely on corporate hierarchical organizational structures, which can lead to issues inherent in traditional corporations.

Today, the development of the platform business is one of the key components in the making of the Russian digital economy. For the implementation of the national program "Digital Economy of the Russian Federation", the Government of the Russian Federation has been assigned the task until 2024 to ensure: (1) through the introduction of digital technologies and platform solutions, transformation of priority sectors of the economy and social sphere (health, education, industry, agriculture, construction, energy infrastructure, financial services, etc.); (2) creation of a comprehensive system for financing projects for the development and implementation of digital technologies and platform solutions.⁴ The development of digital platforms and ecosystems within the framework of the digital transformation of economic sectors and cross-industry transformation

¹ Shestoperov D., Lebedeva V. They will make Yandex responsible for the answers. Online services complained about the search engine // Kommersant daily. No. 140 of August 7, 2020 p. 7.

² Case Rambler against NGINX: criminal risks of digitalization – round table discussion May 16, (15.05.2020) // URL: https://habr.com/ru/company/analogbytes/blog/502156/

³ *Ivanov A., Shustova I.* Study of digital ecosystems as a fundamental element of the digital economy // Creative economy. 2020. Vol. 14. No. 5, pp. 655–670.

⁴ Executive Order of the RF President of May 7, 2018 No. 204 "On National Goals and Strategic Objectives of Development of the Russian Federation for a period until 2024" // RG, No. 97c, 09.05.2018.

is one of the main directions of the implementation of the Digital Agenda of the Eurasian Economic Union until 2025.1

Russian platform companies are developing steadily at the country level, but in a limited number of industries. This is partly due to the peculiarities of the economy, including the continued dependence on hydrocarbons and centralized power and property. For traditional areas where digitalization is slower, active government support for platformization is especially important.

The state's policy directions for expanding the platform business can be divided into legal and applied ones.

In the first case, the goal is to create a legal environment that encourages the positive and reduces the negative effects of digital platforms. In general, it is necessary to adjust the legislation, including tax and labor legislation, in order to establish a balance between the interests of all stakeholders, including society and the state. In particular, among other things, it is necessary to develop and implement effective mechanisms for arbitration and dispute resolution, mechanisms for ensuring the security of big data management and transactions.

At the application level, it is necessary to support Russian production in the area of new technologies in every possible way, and to develop the infrastructure of broadband access networks. National transportation and logistics capacities need to be improved in order to significantly increase the use of digital e-commerce platforms and improve the quality of services provided.

* * *

The proliferation of platform companies is directly linked to the digitalization of the economy. In recent years, it is precisely innovations based on digital platforms that increasingly provide companies with the continuous development necessary to maintain competitiveness in hyper-competitive global markets.

Today, traditional corporations continue to prevail, and it is unlikely that this situation will change in the near future. Nevertheless, practice demonstrates that when a platform company appears on the same market as a traditional corporation, the former, as a rule, begins to lead. Therefore, it is important for traditional corporations to master the platform business. At the same time, there is no need to reject traditional forms of production.

Platform companies are not without their drawbacks. The level of trust in the platform giants is being reduced due to the concentration of power, finance and information. However, such companies are rapidly expanding, and obviously their even greater proliferation in the future makes us talk about the need to use new technologies (artificial intelligence, blockchain technology, etc.) to minimize these issues, for a truly more decentralized organization.

The regulatory environment should facilitate the creation and promotion of platforms, establish corporate governance rules that meet the specific needs of

¹ UEC. The Digital Agenda of the EAEU 2025: prospects and recommendations // URL: http://www. eurasiancommission.org/ru/act/dmi/Pages/digital_agenda.aspx

platform companies. Due to the close connection of the platform business with rapidly changing technologies, the new regulation must be sensitive to constant changes, prompt and flexible. The most active jurisdictions in this area will have a competitive advantage in attracting new promising companies.

In Russia, the development of platform companies is one of the main components in the making of the digital economy at least in the medium term. An additional impetus to the growth of the platform business, which has been gaining momentum in recent years, was the COVID-19 pandemic. Thus, in 2020, platformization has become a more pronounced trend in the Russian corporate sector.

At the global level, the share of Russian digital platforms is insignificant, however in the national highly digitized areas, domestic platform companies occupy firm positions (web search, e-commerce, entertainment, etc.). In key sectors of the economy (oil and gas production, agriculture, etc.), platformization is slow and requires state support.

It is particularly necessary to point out several problematic aspects that limit the development of platform companies in Russia, which are addressed by the state policy on the expansion of platform business:

- legal regulation of the platform companies' activities;
- competition with foreign platform companies in domestic markets and at the global level;
- a limited number of areas where platform companies are developing, and the lack of clear support for the growth of the platform business from the state;
- risks of establishing monopolies by large platform companies.