

# COVID-19 pandemic as a trigger for digitalization of the society, state and business

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## Abstract

The purpose of the article is to outline the changes that are taking place with the modern economic system. The article discusses some of the driving forces and circumstances of her deficient condition. The coronavirus pandemic is seen as a “collider”, as an accelerator of the transition to a new model of the global economy. Its basic features are just being outlined, but a general conscious desire to streamline and automate many processes, to the reasonable digitalization of society, the state and business is already noticeable. The author points to the beginnings of transformation processes in the complex of productive forces and production relations, focuses special attention on those qualitative changes that were prompted by both the pandemic itself and the measures to combat it. These results appeared due to the use of the following methods: a) analysis of scientific reviews and articles devoted to the problems of diagnosing the need and readiness for automation of public, state and organizational processes; b) an expert survey conducted online during the “autumn quarantine” (2021), it was at this time that the problems of adapting to extreme changes, and the need for research and a practical look at the issues of intellectualization of transformational processes in society, state, and business, became significantly aggravated; c) content analysis of answers to open questions offered to respondents. The conclusions are drawn about the urgent need for the creation of useful technologies, their competent implementation in specific conditions and the formation of a benevolent regulatory environment. This is important not only from a theoretical point of view, but also for the practical preservation of the pace of digital transformation, sustainable economic development, and public good.

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**Keywords:** business, state, changes, scientific and technical progress, society, public good, transformations, digital transformation, digitalization, economic model

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## Пандемия COVID-19 как триггер цифровизации общества, государства и бизнеса

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### Аннотация

Цель статьи — обозначить изменения, которые происходят с современной хозяйственной системой. В статье обсуждаются некоторые движущие силы и обстоятельства ее дефицитного состояния. Пандемия коронавируса видится как «коллайдер», ускоритель перехода к новой модели мировой экономики. Ее базовые черты только намечаются, но уже заметно общее сознательное стремление к упорядочению и автоматизации многих процессов, разумной цифровизации общества, государства и бизнеса. Автор указывает на зачатки процессов трансформации в комплексе производительных сил и производственных отношений, заостряет особое внимание на тех качественных изменениях, к которым подтолкнула как сама пандемия, так и меры борьбы с ней. Эти результаты появились благодаря использованию следующих методов: а) анализ научных обзоров и статей, посвященных проблемам диагностики потребности и готовности к автоматизации общественных, государственных и организационных процессов; б) экспертный опрос, проведенный в онлайн-формате в период «осеннего карантина» 2021 г. — именно в это время существенно обострились проблемы адаптации к экстремальным изменениям, а также потребность в исследовании и практическом взгляде на вопросы интеллектуализации трансформационных процессов в обществе, государстве, бизнесе; в) контент-анализ ответов на открытые вопросы, предлагаемые респондентам. В заключении сделаны выводы о насущной потребности в создании полезных технологий, их грамотном внедрении в конкретных условиях и формировании доброжелательной регуляторной среды. Это важно не только с теоретической точки зрения, но и для практического сохранения темпов цифровой трансформации, устойчивого развития экономики, общественного блага.

**Ключевые слова:** бизнес, государство, изменения, научно-технический прогресс, общество, общественное благо, преобразования, цифровая трансформация, цифровизация, экономическая модель

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## Introduction

When the world was just beginning to plunge into the COVID-19 pandemic, the following questions became relevant: Will life return to its normal course? How soon will we live as before? Would the world picture have changed if not for COVID-19? Has the world's transformation matured, or has the trigger only been pulled with the pandemic? What will the world be like after the test? A year after the start of the pandemic, the question has become somewhat different: How do we adapt to the new reality, which, like the flu, is nowhere to go? For then the problem of development is replaced by the problem of survival.

As time went on, illness and general misfortune plunged the world into an increasingly serious disorder in all spheres of life. Corresponding to the general picture, the tone of the questions also changed. It became more and more aggressive and apocalyptic. The version about the "deep government", about the skillfully planned financial revenge of globalism, about the fact that the pandemic is a falsification invented by the ultra-globalist faction of this shadow structure, either gained strength or weakened. This direction of thinking had its supporters, but their number gradually decreased over time, with the realization of the scale and realism of the catastrophe.

The following research line was seen as more productive: economists should reasonably calculate the vector of change in the world economy. In relation to it, the COVID-19 pandemic is not a cause, but a catalyst that speeds up the process, provides a more rapid course for the reaction. Increasingly, researchers began to ask the question of which model will replace the old one.

Many researchers call the old model "capitalist" and add some detailed clarifications. For example, A.V. Buzgalin [Lenchuk and Buzgalin, 2020] calls it "late capitalism". Wallerstein [2015]. interprets the modern world model as also "capitalist", but as having passed to the last stage of the structural crisis. This is the stage of stopping existence, and the cause of inevitable death is the launch of the "self-liquidating geopolitical quasi-monopoly" regime [Wallerstein, 2015]. The model will exist in this state, according to the scientist, a maximum – until the middle of the 21<sup>st</sup> century.

On a global scale, the system finds expression in the globalization model. It is, in fact, capitalist, because it focuses on the accumulation of capital. The basis of such an economic world order was laid by the Jamaica and Bretton Woods conferences, the World Bank, the World Trade Organization, the International Monetary Fund and other international organizations formed after the Second World War. They were called upon to promote the liberalization of world economic relations. According

to David Ricardo's theory of comparative advantage in international exchange, this should provide the maximum benefit for all participants [Schumpeter, 2004]. However, the demands for the elimination of protectionist barriers are, as a rule, proclaimed in the interests of the leading economies at a particular historical moment. Therefore, the world order, which was based on the liberal model of the life of society, "tipped" in the direction of not reducing, but increasing social inequality. As a result, we are witnessing a rapid slide of the current economic model into a state of deep depression. Only a qualitative transformation has a chance to bring this model out of the crisis [Voeikov, 2019].

Appropriate shifts in the productive forces are necessary. According to leading economists [Bodrunov, 2017; Glazyev, 2020; Ryazanov, 2020], the transition to a new technological cycle is ripe. This is possible only because of another technological revolution. Moreover, for such a transformation, a trigger was needed that could start it. The pandemic acted as a "trigger".

The second section of the article indicates the materials and methods based on which the study was provided. The third section describes the results of the study. In the fourth section, the obtained results are interpreted. In the fifth section, conclusions are given.

## Materials and Methods

Before starting the study, the following goal was set – to identify the changes that are taking place with the modern economic system. To achieve it, the following tasks were solved: to determine the driving forces and circumstances of the deficit state of the current model; to look at the coronavirus pandemic as a "collider", as an accelerator of the transition to a new model of the world economy (its basic features are just being outlined, but a general conscious desire to streamline and automate many processes, to a reasonable digitalization of society, state and business is already noticeable); point out the beginnings of transformation processes in the complex of productive forces and production relations; to focus on the qualitative changes that both the pandemic itself and the measures to combat it prompted.

Some of the questions identified in the introduction to the study are clearly evident when analyzing scientific content on the official websites of research and consulting organizations. Those companies whose names contain the terms "digital transformation", "transformation management", "smart management", "diagnosis of needs and transformation opportunities" are considered. The analysis is based on foreign and domestic articles published on the websites of these institutions. Of great interest were scientific reviews of the past and the beginning of the coming year, devoted to the problems

of diagnosing the need and readiness for automation of public, state and organizational processes. In the study (along with the work with the indicated sources), the following methods were used: an expert survey conducted in an online format during the “autumn quarantine” period (it was at this time that the problems of adapting to extreme changes, as well as the need for research and practical view on the issues of intellectualization of transformational processes in society, state, business); content analysis of answers to open questions offered to respondents.

In November 2021, the authors of the article conducted an author’s survey “Economic Consequences of the Pandemic and Prospective Development Strategies. Digital Turn”. It was attended by representatives of public authorities, businesspersons, experts in the field of change management, specialists from consulting companies involved in the digitalization of organizational processes, teachers from several leading Russian universities. In total, 67 experts participated in the survey and answered the following open-ended questions.

1. Would the picture of the world change if not for COVID?
2. What model of the world economy is the world abandoning?
3. What model of the world economy is the world moving towards?
4. What is the role of the pandemic in this transition?
5. How can one assess the desire and readiness for the digitalization of society, the state and business?

## Results

Society is faced with the need to master something fundamentally new. The main driving forces of progressive development today are genetic engineering, nanotechnology, hydrogen energy, engineering economics, quantum computer, artificial intelligence, cyborgization, qualitatively new materials (for example, self-healing), the creation of organisms with a fully synthesized genome, regenerative medicine, growing new organs from cells patient. These technologies form the core of the sixth technological order. The vast majority of participants (94 % of respondents) spoke about progressive technologies in their answers to open questions of the author’s questionnaire. A new model cannot be built without technological mastery of these areas. At the same time, before our eyes, the old model is undergoing its speculative-financial metamorphosis. It turns into a monster that guards the liberal market reality. This reality is difficult to reconcile with the challenges of today.

What kind of economic model does the world expect? It makes sense to talk about this aptly so far, since the new system is still being formed (87 % of respondents).

The life of a number of generations of our country is like a fairy tale. This means that her heroes are constantly faced with the choice of the road along which to go further. Russia, it can be said, has just overcome an internal bifurcation (and not without losses), and a new fork in the road has emerged. There are several options for the development of events and the corresponding methods of action.

*First option.* It is clear that there is no “what will be” yet. This means that there is room for the illusion that something can be changed through minimal sham manipulations, so that, in general, nothing changes. We tried to summarize the statements of the participants in our survey. In their opinion, this means:

- maintaining the existing level of inequality under the slogan of the struggle for justice, this confrontation at the beginning of last year turned into a bloody battle for the equality of races;
- conservation of exploitation and the corresponding attitude of the “advanced” countries to the “backward” under the sauce of “green” capitalism;
- liquidation of the middle class with a popular legend about the power of meritocracy;
- keeping financialization as the main tool for increasing capital (it describes an economic process in which exchange is facilitated thanks to skillfully selected financial instruments), however, with the destruction of everything living after it. For some time such inertial motion is still possible. But only tactically, not strategically (73 % of participants think so).

*Second option.* Closing one eyes, referring to a long general depression, recognize the onset of a new era. In this case, we can just wait for the magical manifestation of the essential characteristics of the new, emerging system. For example, we can even more actively exploit the words “new society”, “neosystem”, “new world order”, “society of a new type”, completely abstracting, forgetting about the dangers of the first option. On the other hand, for example, we can proclaim the onset of the digital era, seeing in this a fundamentally new basis and salvation from socio-economic troubles.

Either way, the coronavirus pandemic has made more visible the impending changes that could take root in the new economic model. This is the opinion of more than three-quarters of the respondents, 77 %, pointing to the observed changes:

- transition to a noticeably more moderate consumption: from the so-called rational consumer, striving to maximize private pleasures, to a sufficient, costing minimal, life-supporting, acceptable consumer set;
- restrictions on the culture of mass consumption, these restrictions in a sense give a chance to develop healthy directions of the experience economy;

- expansion of distance learning with significant transformations of the educational space; here the situation is ambiguous: without assessing the positive and negative aspects of the online learning process itself, one can state a significant expansion of the sales market for manufacturers of relevant equipment and a noticeable deepening of the contradiction between citizens striving for education and those who have difficulty accessing high-speed Internet [Antonov et al., 2021];
- the onset of online trading on offline trading and the replacement of generally familiar, traditional business models with online business;
- the emergence of a new model of public catering, when ready-made food or products for self-cooking are delivered to the home;
- reduction of demand for medicine under voluntary insurance policies in the interests of the effective functioning and development of state medicine, working on the basis of general medical insurance; on the one hand, state medicine is entrusted with the mission of restoring mobilization capacities, and on the other hand, the need to continue the normal operation of medical institutions not related to the treatment of the virus; development of remote medical care and telemedicine;
- a new alignment of forces in the labor market: a noticeable decrease in the number of office workers, the growth of medical staff and the reduction of teachers, lawyers, restaurateurs, etc.; a sharp increase in professionals working remotely (at home or in co-working studios); peak growth of delivery networks; it is natural that in such extreme conditions we observe a decrease in the possibility of timely adaptation of the employment sector to new realities;
- the emergence of new formats of labor relations focused on a quick end result; reducing the economic and legal influence of trade unions;
- reformatting of social relations: mass reduction of workers engaged in routine activities, hence the distribution of “non-work” among all members of society through a universal basic income for the population and legislative restrictions on working hours for employees.

The manifestation of these trends, in fact, involves two ways: either the formation of a state that is able to withstand the threats of a pandemic, a social state, an industrial society of the second generation, developing in the future to a noostasis, or a phased movement along anti-utopian scenarios (from a “soft” option in the spirit of R. Bradbury [Weller, 2005] to G. Orwell’s [2020] “hard” totalitarianism).

Representatives of public authorities who participated in our survey emphasized that the pandemic has provided a serious incentive for the transition of interactions between citizens and the state to digital formats.

Most of the directions (already becoming familiar) unfolded almost in the course of action, literally within a few weeks, or even days.

If we talk about “post-pandemic” strategies that are being formed among the population, the public sector and representatives of the business community, then, judging by the answers, they are rather optimistic. Russians, placed in a rigid framework of isolation, use digital services significantly more often, many services are undergoing daily improvements. More than half of businesspersons (62 %), talk about accelerating digitalization in companies. The dynamics of transformation processes is also noticeable in the public sector (44 %). The acceleration was evidently forced, but, according to the majority of respondents (73 %), it played on the fruitful development of organizational structures and organizational cultures.

The situation with the pandemic, in their opinion, dictated its own rules of the game. Is it now possible to imagine uninterrupted work without online formats for doing business, without remote services and electronic public services, artificial intelligence technologies? They did not just demonstrate relevance. Improving themselves, these technologies, before our eyes, with our own participation, constructed a new reality in which we will have to live after the epidemic. Some digital novelties that helped users out during quarantine a year ago are already considered today as a technological anachronism, even a curiosity.

Researchers have yet to pay special attention to the issues of digital maturity, its positive and negative aspects both for the organizations themselves and in general for the recovery and growth of the country’s economy after the pandemic and effective ways to achieve digital maturity. However, analysts from consulting companies are already coming to the conclusion that digital transformation can give Russia billions of dollars in revenue (up to 520 billion US dollars by 2030, which is about a quarter of the national gross domestic product). In addition, almost two-thirds of respondents believe that Russian citizens are increasingly confident in understanding the effectiveness of many digital solutions (which become part of the public good), in a reasonable assessment of their place in our lives, in their use and development.

The effects of the pandemic are felt in many ways. The study revealed a number of options-strategies of anti-crisis behavior of organizations. The main difference lies in the activity of the commercial sector during the pandemic. Those companies that are active survive: they focus on finding new sources of income (59 %); cut costs as a result of streamlining business processes (47 %); risking financially, they start the digital transition (25 %). We can say that the coronavirus



pandemic acted as a “collider”, as an accelerator of the transition to a new business model in organizations. This is evidenced by such actions of company management: transferring accounting to online, introducing electronic document management, switching to client-oriented methods of interaction, optimizing information flows, as well as data processing and storage standards, and intensively increasing the digital competence of personnel at different levels [Nizhegorodtsev, 2020].

More than half (68 %) of respondents see the benefits of transforming internal processes into digital. At the same time, in a quarter of companies, digitalization changes are only just beginning. The main and almost equivalent barriers are the lack of material resources (49 %) – this problem has become aggravated due to the fall in income as a result of the general crisis), and the shortage of qualified employees who could lead and supervise transition processes, informally participate in them (46 %).

An important aspect of the fruitful development of business and its effective interaction with the state is the competent inclusion of digital solutions in those important business processes that the transition to digital could help. To simplify and accelerate the solution of transformation problems, the role of technology companies that act as digital conductors is important [Dyatlov and Kudryavtseva, 2020].

The impact of the COVID-19 pandemic has revealed different options for citizens to adapt to a rapidly changing landscape. The degree of proactivity of the population, not only in the business environment, but also in individual self-realization, sets the variability of actions in overcoming the crisis. In this case, the choice of strategy is important: in this case, it is productive to focus not just on survival, but on the formation of a reserve for the future, on the creation of the so-called “growth cushion”. The facts are relevant here: over the past year, every fourth Russian took online courses, and every tenth made an “internal inventory of available resources” and began to master or mastered a new craft, profession, which clearly indicates an active attitude. At the same time, almost half of the participants we surveyed during the study continue to have trouble with the inclusion of new technologies in their activities (47 %), which can turn into a rather serious existential problem. Experts noted that in the near future a huge part of the employed population will lose jobs due to the almost sudden reformatting of the employment structure. Experts noted that in the near future a huge part of the employed population may lose jobs due to the almost sudden reformatting of the employment structure. It is already becoming clear that not just specialists in specific professions will be in demand, but their flexible skills, the role of practical

digital knowledge will also increase, and they will be needed directly in employment.

In different regions of the country, even before the epidemic, there was a gradual involvement of citizens in the digital economy. Quite actively, there was work on the development of IT infrastructure. Today, networks of IT centers are opening for adults, and IT schools for children. Residents of the regions can receive free training on the formation of individual digital competencies.

The two years of the pandemic were not easy for the global and Russian economies. When many industries in the country were closed, in some regions a difficult decision was made not to stop the work of industrial enterprises and construction sites. The implementation of investment projects continued so that the receipt of tax deductions would not be blocked. These business strategies gave the economy a chance to survive, and as a result, even additional revenues were generated, which were distributed to hospitals, kindergartens and schools, to repair roads in settlements, to open IT training centers. Assessing the totality of the measures taken, we can fully say that such decisions during the pandemic were correct.

Note, that the overdue digitalization of processes, which were less effective in “analog” formats, also intensified in the public sector.

A third of the survey participants (34 %) noted that the emerging socio-economic situation provides opportunities for closer cooperation between the state and business, especially in the field of information technology solutions. This unique interaction potential also opens up because many Russian businesspersons are technological optimists, regardless of the pandemic. They are open to the new, because it contains the desired reserves for business development.

Civil servants highly appreciate the willingness to collaborate with a large technology business in the information sector (77 %). They indicate that activities in public authorities require systematic consulting support in the implementation of digital transformation projects. It can already be stated that information technologies have helped to identify the most affected sectors of the economy, to select or develop new methods of user support, and to speed up work with citizens’ applications. Adapting to the ever-changing conditions of evolving digital tools and at the same time creating a friendly environment is a huge challenge. However, it is nevertheless being addressed in order to accelerate the pace of the digital transition.

Definitely, there are risks associated with the “human factor”, 84 % of respondents say this. Respondents call the main ones at the moment non-compliance with information and economic security and possible violations in working with personal data. There are technical

concerns: the instability of digital solutions, for example, may arise due to discrete coverage of the territory of the regions by mobile Internet, server failures, etc.

At the same time, representatives of the public sector (78 %) hope that a well-coordinated joint work of government agencies and business to overcome the consequences of the pandemic, bound by a common goal, will yield more results that are useful.

## Discussion

Assuming some possibility of the development of the second scenario (realization of the dystopian scenarios of R. Bradbury or G. Orwell), the participants of the study consider it more likely and desirable to implement such an economic model, the essence of which, according to the scientist S.D. Bodrunov [2017], consists in the appearance of a fundamentally new property in material production – it becomes “knowledge-intensive production of knowledge-intensive products”. Technological knowledge is beginning to surpass both in terms of providing a fundamentally different quality of a product that satisfies the growth and branching of human needs, and in terms of resource consumption for the production of such a product. That is, the industry is evolving in the direction of nooproduct (technosphere). This forces a person out of the scope of material production, but gives him more chances to realize himself creatively. Uncontrolled development of the technosphere is fraught. The content of the coming transformations should be rational activity that does not threaten nature and the interests of the majority of people.

The neoliberal model of the world order in this sense has reached the limit of its development, since it is unable to meet these requirements [Osipov, 2020].

The results obtained in the present study confirm the results of S.D. Bodrunov [2017].

We can talk about the maturation of a new system of social relations. The society more and more demanding points to the boundaries of free market competition, realizing its normative interest in an increasing number of goods and this causing concern to commodity producers. The company legally regulates the length of the working day, compliance with environmental parameters, prices for essentials. For example, in the Scandinavian countries, a third of the benefits are produced on a non-commercial basis, while guaranteeing equal access to these benefits for all citizens.

S.Y. Glazyev evaluates the transition to a new world order as “formational – from the economy of commodity production to the economy of knowledge, which forms the basis of noonomics. And in this realm of freedom from hard labor, production relations will be replaced by social ones. This is a transition from the American

cycle of capital accumulation to the Asian one, based on the mechanisms of personal responsibility of citizens for improving the well-being of society, the core of which will be China and India” [Glazyev, 2020]. This hypothesis of S.Y. Glazyev was registered back in 2016. However, the author of the judgment is not alone in his assumptions. Researchers M.M. Guzev adhere to a similar position [Guzev, 2020; Sharipov, 2021]. They believe that the coronavirus pandemic marked the transition of the epicenter of world civilization from West to East. Moreover, this is a chance for a systemic restructuring of Russia.

## Conclusion

The study showed that society’s interest in quality education, careful healthcare, and truthful media has naturally emerged. The trials that have befallen people suddenly made it sharp to understand how important these areas are for us today, even a priority – they ensure the security of every inhabitant and the whole country. It becomes urgent not only to strengthen the state and economic autonomy of the country, but also to mobilize only its own resources, to rely solely on its own forces. This requires an understanding that chronic reform and a fair amount of globalization do not lead to independence and self-sufficiency.

According to the respondents to our survey, it is impossible to avoid losses in the displacement of global production by national production. The access of local economies to the volumes of the common market will evidently suffer. This will entail a natural increase in the costs of the remaining industries on the market, or will lead to their reduction, since the minimum costs with normal sales in their case are achievable only in global markets.

The expert survey allowed us to see positive aspects as well. The desired independence from the constant fluctuations of external circumstances and world conjuncture appears, leading to maximum autonomy. There is a noticeable increase in the value of national currencies, the discovery of new opportunities for domestic producers by limiting imports, finding fresh, politically more stable supply chains in the structure of emerging macro-regional associations.

Information and economic security is becoming one of the leading factors in the formation of a new model for managing socio-economic development [Ryazanov, 2017]. At the same time, in the long-standing dispute “profit or reliability”, reliability begins to lead. It becomes an urgent need to create useful technologies, their competent implementation in specific conditions and the formation of a benevolent regulatory environment. This is important for maintaining the pace of digital transformation, economic development, and public good.

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