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TRANSITION OF BUSINESSES TO ONLINE IN THE COVID-19 PANDEMIC

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Abstract

This article examines the impact of the COVID-19 pandemic on business transformation. Anti-infection measures have significantly changed the business environment. This required adaptation to new conditions. In the context of the pandemic, the transfer of business from offline to online has accelerated. Digital platforms and digital ecosystems are used for this. They were known before. But the restrictions associated with countering the spread of coronavirus infection have given impetus to the digitalization of business. The analysis showed that digitalization is proceeding unevenly. It is determined by industry characteristics and depends on the quality and innovativeness of management. Retail, telecommunications, and banking became the leaders of the transition to online. During digitalization, a problem was discovered: the lack of digital competencies of company personnel. This gave impetus to the development of training. Teaching digital competencies in the context of a pandemic also took place largely in a digital (distance) format. It is shown that digital transformation and online business transfer require significant resources. It is recommended to take this into account in the state economic policy.

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1. Introduction

Over the past decades, we have seen the rapid progress in improving technologies, and the growing spread of digital devices (Bodrunov et al., 2017; Dontsova et al., 2021; Kotliarov, 2020; Shinkevich et al., 2020). Such progress is the result of the development of innovative technologies such as artificial intelligence (AI), robotics, biotechnology, nanotechnology, and other (Kryukov & Tokarev, 2018). These technologies have already brought huge benefits, which was clearly demonstrated in 2020 by the development of vaccines against coronavirus COVID-19. But such rapid development is often accompanied by serious losses (in the form of job cuts due to the introduction of automation), if the society does not have time to adapt, not keeping up with progress (Acemoglu & Restrepo, 2020; Ni & Obashi, 2021).

An important positive effect of new digital technological development appeared during the COVID-19 pandemic. Governments of different countries have taken measures to social distancing and limiting population mobility. Many businesses in these conditions have migrated to online. This has become possible thanks to the development of digital technologies, especially digital platforms, and digital ecosystems (de Reuver et al., 2018; Loos et al., 2020; Nambisan & Baron, 2019; Tolstykh et al., 2020; Trabucchi & Buganza, 2020).

Thanks to advances in language processing, machine learning, cloud solutions, and AI, it has been used by many companies to develop applications that allow them to conduct business on digital platforms. For example, Google and Microsoft use neural networks in translation applications. Neural networks are not the only solution to many problems, but they are repeatedly used in solving complex situations in which the whole world finds itself. This applies not only to neural networks. A similar conclusion can be drawn for any digital technology.

2. Problem Statement

The COVID-19 pandemic has changed the business environment. The pandemic has affected manufacturing, sales, labor relations and many other areas. These changes require business adaptation. This adaptation is more important because it is not yet possible to give a confident answer to the question "How long will the COVID-19 pandemic last?" (Charumilind et al., 2021). The pandemic triggered an economic crisis. Economic restructuring takes place. Crises give impetus to innovative development. Modern innovations are closely related to or based on digitalization. Analysis of the impact of the pandemic on the digitalization of business, on the transfer of its operations from offline to online is of great interest. Understanding this influence will make it possible to form an adequate state policy in this area, and to form effective strategies for the development in business.

3. Research Questions

1. Determine the vector of the impact of the COVID-19 pandemic on business digitalization.
2. Highlight the industries that are most actively moving online in a pandemic.

3. Assess the contribution of education and policy to accelerating the transition to digital platforms and digital ecosystems.

4. Purpose of the Study

Digital technologies have been around for a long time. They are applied in different areas of economic activity. This application is determined by the internal logic of business development and the external environment. In 2020, the COVID-19 pandemic has dramatically changed the environment. This should affect the use of digital platforms, digital ecosystems, etc. The purpose of the study is to analyze trends in business digitalization in a pandemic.

5. Research Methods

There is still insufficient systematic data on the impact of the COVID-19 pandemic on business organization and business processes. Even estimates at the level of countries, regions, industries are inaccurate. Therefore, the study analyzed the available scientific literature, as well as business media reports and materials posted on the Internet. Interviews were conducted with business representatives. The available official statistics were analyzed. The research was carried out on the materials of Russian business, a feature of which is a significant spatial coverage (Iu et al., 2018).

To process the data obtained, qualitative methods of structural, functional, and institutional analysis were used. The tools of comparative analysis, retrospective analysis, and expert assessments were also used.

6. Findings

The increasing adoption of digital platforms as a new way of organizing business has led to a growing interest in research on this topic. However, as digital platforms evolve, there is a need for new research on this topic, and many questions remain unanswered. Therefore, it is necessary to analyze the development of digital solutions in the Russian market to better understand this.

The digital ecosystem is a complex IT product. It is a collection of communication networks, controllers, and software. These components are created in such a way as to form the boundless information space of their participants (business organizations, government and public bodies, individuals). The ecosystems in Russia are usually created by banks, IT companies and telecom operators. In 2021, the largest ecosystems on the market are Sber, Yandex, Mail.ru Group, Tinkoff, MTS. They contain the following duplicate blocks: Single ID; "Anchor business" - each player, depending on the industry, has its own main business (Sber and Tinkoff - banking, MTS - communications, Yandex and Mail.ru Group - Internet services).

The monitoring revealed the factors that determine development of ecosystems: (1) focus on the service model; (2) having a large customer base; (3) the presence of a powerful resource base, including financial.

The pandemic of coronavirus in 2020, and the transition of many business projects to a remote format required significant changes in the implementation of companies' activities. Most of the Russian

firms (62%) with a turnover of 3-100 billion rubles felt the danger of Covid-19 not only on health, but also on the economy - profit compared to 2019 decreased by 23.5% or 3.82 trillion rubles (Klerk.Ru, 2021).

To recover the losses incurred and continue working, it became necessary to try to adapt to the new regime and understand the online platforms. Unexpected extreme conditions gave an impetus to the development of business in new Internet spaces, thanks to which it was possible to increase the clientele several times. The most affected industries of the 2020 coronavirus year were the hotel business and the catering sector (the industry at the end of 2020 received a loss of 56.2 billion rubles, worsening its financial result compared to the previous year by almost 400%), transportation and storage (profit in the industry fell by 67.5%, to 392 billion rubles), wholesale trade, except for motor transport (profit decreased by 69.5%, to 697.7 billion rubles), electricity and gas supply (profit fell by 40.1%, to 429.8 billion rubles) (FinExpertiza, 2021).

However, despite the crisis, the situation was reversed in many industries. The growth was observed in the field of administrative activities (rent and leasing, maintenance of buildings and territories, security, economic support of enterprises and other support services for business; growth by 91%, to RUB 230 billion), agriculture (profit increased by 86%, to RUB 542.3 billion), real estate (by 72.3%, to RUB 831 billion), construction (by 53.1%, to RUB 249.6 billion), retail (by 34.4%, to RUB 515.8 billion), and, of course, in one of the key areas of the pandemic period - information and communications (profit growth by 30.3%, to RUB 509 billion) (FinExpertiza, 2021).

Business success in the pandemic was driven by two factors.

- The first (objective) one is the high demand for the industry's products (medicines, fuel, food, etc.).
- The second (subjective) one is the ability of the company's management to adapt to new conditions. The main way of adaptation was the transfer of operations from offline to online.

Large retail changed to a new format of work very quickly: for example, large businesses were much luckier than others, as they already had advanced online services and online stores, well-established logistics and worked out the possibility of accepting online payments. Small businesses have suffered more significantly from the coronavirus. Organizations that have failed to adapt digital tools to solve the problems that have arisen, or have lost the lead to competitors, or have ceased to exist at all. In August 2020, almost every fifth small and medium-sized business was closed in Russia.

To cope with the current situation and survive the corona-crisis, the IT industry began to actively promote among small and medium-sized businesses. To increase competitiveness in the market and achieve maximum efficiency of cooperation with customers, the development of the CRM system has helped entrepreneurs a lot. CRM is a business management program that helps to increase revenue, reduce costs, and speed up the acceptance of applications. It is a system for managing customer interaction. This program has greatly simplified the routine tasks of entrepreneurs, such as creating online reports, setting tasks, sending emails to customers, reminding them of important dates, as well as automatically performing certain functions (for example, extending a contract or issuing an invoice). All this allowed not only to save such a valuable resource as time, but also to improve the quality of work and sales volume.

According to a joint study by Jason & Partners Consulting and the Institute for Business Problems, the level of CRM use in Russia increased by 22% (JSON.TV, 2020). The most common CRM service among Russians is Bitrix24, which during the pandemic released a new tool, "CRM-Store". Thanks to which, in addition to managing sales, it became possible to accept payments from customers and manage delivery.

Due to the forced measures, entrepreneurs had to distribute their services on new social platforms, on Instagram, where most of the brands, both large and very narrowly focused, were already promoted. However, companies that had no experience in managing accounts and organizing online sales, it became necessary to hone these processes and learn to stand out from their competitors (see: <https://getcourse.ru/blog/year2020>). Companies learned and adapted to the new circumstances of business organization, discovering new ways to promote their business, which are still relevant today. The main factor for organizing effective online sales was a high-quality and convincing advertising campaign, consisting of identifying the interests and needs of the target audience, creating an individual, valuable and interesting offer, and directly launching the campaign through relevant organizations.

It is worth noting that during the pandemic, the Instagram platform itself contributed to the promotion of entrepreneurs. The "Support Small Business" sticker allowed companies to attract new customers during the coronavirus period and stay in touch with existing ones. If a company were mentioned in a sticker, it could share the story on its profile and send a message to the person who tagged it. Another good news for businesspeople was the fact that on July 9, 2020, a new feature was launched, which means that everyone who has a business account connected to Facebook can apply for Instagram Shopping and get the opportunity to sell products directly from their profile. Instagram Shopping is a feature for tagging products on Instagram (like the ability to tag people). With its help, it is now possible to study the short description and price of the product, as well as go to the manufacturer's website to learn more about the product and buy it.

To not only keep up with the high competition, but also to prove yourself as much as possible, it is necessary to develop the brand's Instagram account. Important components are visual design (which affects 90% of the sales level), informative content of the blog, constant activity of the profile and interactivity with the audience, and, of course, personality. An SMM specialist can help you with all these aspects.

Speaking about the SMM industry, it is worth noting that the pandemic has had a very positive impact on the demand for marketers' services. For example, on the AVITO Services portal in 2020, the demand for promotion in social networks increased by 24% compared to the previous year; the number of specialists providing these services increased by 2.5 times. At the same time, about 70% of the demand for promotion is on Instagram. During the year, the number of ads for promotion there increased by 154%, and demand increased by 22%. In Telegram, the demand for such specialists increased by 22% over the year, and the number of offers increased by 123% (Sostav.ru, 2021).

In the field of online education, the demand for distance courses has increased dramatically due to the outbreak of the Covid-19 virus. So, on one of the platforms for organizing trainings and webinars on the Internet, namely Get Course, at the end of March 2020, sales of courses increased by 20% compared

to previous periods: from March 1 to 16, courses were sold for 1.2 billion rubles, from March 17 to 31 - by 1.5 billion rubles (GetCourse, 2021).

The most popular courses were on Internet marketing, SMM, setting up targeted advertising, running Instagram, visual design and learning Excel. The main indicators of high demand are a relatively short training period, during which you can get high – quality information and immediately apply the knowledge in practice, as well as another advantage-obtaining certificates at the end of the course, which confirms the student's expertise. For example, you can take a course on SMM in 3 months and, at the end, conduct projects in a remote format. The popularization of online courses is explained by two factors: someone after the quarantine does not plan to return to their previous place of work and therefore with the help of such intensive courses wants to quickly get a new specialty, and someone is simply afraid that their profession will no longer be in demand and thus tries to protect themselves by developing in a new field.

The pandemic has shown that specialists lack digital competencies. This makes the transition to digital working methods difficult. There is a strong demand for learning to shape digital competencies. The government should also get involved in this task. State participation is necessary because the foundations of digital competence are laid in childhood, at school.

AI plays an important role in the development of business transformation. At the end of 2020, the Russian company Rostelecom conducted a monitoring of digital technologies using AI, quantitative and qualitative analysis was carried out using more than 18 million data sources (see: https://www.company.rt.ru/projects/digital_trends). As a result of this study, it was revealed that for several years in a row, AI technologies occupy the 1st place in the overall rating, increasing the gap from mobile networks by an order of magnitude. In 2019, cloud technologies and augmented reality technologies showed growth.

According to a survey of companies, AI technologies are already being implemented or tested in 85% of them. First, solutions using such technologies are used to optimize internal business processes. According to the study, 70% of the companies that use or pilot AI technologies in 2020 are already receiving financial benefits. The cumulative effect of AI implementation in 2019 for 62 organizations amounted to 60 billion rubles. More than 90% of respondents expect to maintain or increase the financial result from AI solutions by the end of 2020.

7. Conclusion

First, the global spread of COVID-19 has pushed Russian companies to rebuild their business towards digitalization. The pandemic also contributed to the adoption of complex decisions to optimize existing business models in companies, find ways to reduce costs and develop new business lines.

Secondly, with the increase in the number of promotion courses, the number of specialists has increased. However, there is a problem of low-quality offers, that is, people take projects, money for them, and do not perform their work efficiently. These services, unfortunately, are difficult to challenge or not at all, so competent specialists conclude special online contracts, under which the money comes after the customer approves the work performed. Thus, it is important to note that at the beginning of 2021, more than 85% of large Russian organizations use AI solutions to optimize internal business

processes to some extent. These organizations are represented in the financial sector, telecom, retail, IT, industry and the oil and gas industry.

Third, when removing significant restrictions, business owners are not in a hurry to fully return to the offline format, because they understand that the greatest benefit will be when combining the online and offline format. For example, in the beauty industry, consultations began to be conducted in an online format, and the procedures themselves directly offline. Regardless of whether it is paid or free, so the client and the master save time before the procedure, the client does not overpay, can connect from anywhere in the city and explain their problems to the master, as well as cosmetics stores, develop their applications.

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References

- Acemoglu, D., & Restrepo, P. (2020). Robots and jobs: Evidence from us labor markets. *Journal of Political Economy*, 128(6), 2188-2244.
- Bodrunov, S., Plotnikov, V., & Vertakova, Y. (2017). Technological development as a factor of ensuring the national security. *Proceedings of the 30th International Business Information Management Association Conference, IBIMA 2017 - Vision 2020: Sustainable Economic development, Innovation Management, and Global Growth*, 2666-2674.
- Charumilind, S., Craven, M., Lamb, J., Sabow, A., & Wilson M. (2021). When will the COVID-19 pandemic end? <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/when-will-the-covid-19-pandemic-end>
- de Reuver, M., Sorensen, C., & Basole, R. C. (2018). The digital platform: a research agenda. *Journal of information technology*, 33(2), 124-135. <https://doi.org/10.1057/s41265-016-0033-3>
- Dontsova, O. I., Abdikeev, N. M., Bogachev, Y. S., & Tolkachev, S. A. (2021). Management of Scientific and Technological Competitive Advantages in the National Industry. *Studies in Systems, Decision and Control*, 314, 531-540.
- FinExpertiza (2021, March 15). *God trillionnykh ubytkov: padeniye pribyli rossiyskogo biznesa okazalos' rekordnym za 12 let* [A year of trillions of losses: the fall in profits of Russian business turned out to be a record for 12 years]. <https://finexpertiza.ru/press-service/researches/2021/god-trillionnykh-ubytkov>
- GetCourse (2020). *Itogi-2020 ot GetCourse* [Results-2020 from GetCourse]. Retrieved 31 May, 2021 from <https://getcourse.ru/blog/year2020>
- Iu, M. D., Selishcheva, T. A., Dyatlov, S. A., Lomakina, I. B., & Borkova, E. A. (2018). Regional supply chain structure and centralization of the economy of Russia. *International Journal of Supply Chain Management*, 7(6), 684-692.
- JSON.TV (2020, September 11). *Kolichestvo pol'zovateley CRM v Rossii v 2019 godu vyroslo na 21,4%* [The number of CRM users in Russia in 2019 grew by 21.4%]. https://json.tv/ict_telecom_analytics_view/kolichestvo-polzovateley-crm-v-rossii-v-2019-godu-vyroslo-na-214-20200911010441
- Klerk.Ru (2021, March 15). *Za proshlyy god sovokupnoye padeniye pribyli biznesa pobilo 12-letniy rekord* [The cumulative drop in business profits hit a 12-year record over the past year]. <https://www.klerk.ru/buh/news/511486>

- Kotliarov, I. D. (2020). Digital transformation of the financial industry: The substance and trends. *Upravlenets (The Manager)*, 11(3), 72-81. <https://doi.org/10.29141/2218-5003-2020-11-3-6>
- Kryukov, V., & Tokarev, A. (2018). The Need for Integrating the Service Sector into the Innovative Systems of Resource Regions. *E3S Web of Conferences*, 41, 04004. <https://doi.org/10.1051/e3sconf/20184104004>
- Loos, E., Sourbati, M., & Behrendt, F. (2020). The Role of Mobility Digital Ecosystems for Age-Friendly Urban Public Transport: A Narrative Literature Review. *International journal of environmental research and public health*, 17(20). <https://doi.org/10.3390/ijerph17207465>
- Nambisan, S., & Baron, R. A. (2019). On the costs of digital entrepreneurship: Role conflict, stress, and venture performance in digital platform-based ecosystems. *Journal of business research*, 125, 520-532.
- Ni, B., & Obashi, A. (2021). Robotics technology and firm-level employment adjustment in Japan. *Japan and the World Economy*, 57, 101054.
- Shinkevich, M. V., Vertakova, Y. V., & Galimulina, F. F. (2020). Synergy of digitalization within the framework of increasing energy efficiency in manufacturing industry. *International Journal of Energy Economics and Policy*, 10(3), 456-464. <https://doi.org/10.32479/ijeep.9397>
- Sostav.ru (2021, February 2). Na «Avito» zametili rost sprosa na SMM-spetsialistov vo vremya pandemii [Avito noticed an increase in demand for SMM specialists during a pandemic]. <https://www.sostav.ru/publication/na-avito-zametili-rost-sprosa-na-smm-spetsialist-vo-vremya-pandemii-47134.html>
- Tolstykh T., Shmeleva N., Vertakova Y., & Plotnikov V. (2020). The Entropy Model for Sustainability Assessment in Industrial Ecosystems. *Inventions*, 5(4), 54. <https://doi.org/10.3390/inventions5040054>
- Trabucchi, D., & Buganza, T. (2020). Fostering digital platform innovation: From two to multi-sided platforms. *Creativity and innovation management*, 29(2), 345-358.