THE ROLE OF INFORMATION COMMUNICATIONS TECHNOLOGY IN THE DEVELOPMENT OF COMPANIES’ BUSINESS STRATEGIES: THE RUSSIAN EXPERIENCE

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ABSTRACT

Today's world is characterized by the rapid development of information communications technology (ICT), which is increasingly influencing the business activity of economic entities. This paper explores the transformation of the role played by ICT in present-day economic development by way of analysis. The authors examine the evolution of the role of ICT in the private sector. They identify a set of factors each of which is distinguished by certain characteristics of the use of ICT in the private sector. In a climate of digitalization, companies' business strategies may undergo transformation in areas ranging from the use of new electronic channels for marketing to the emergence of new markets that have no comparable counterparts in the traditional business sector. The paper identifies a set of areas that characterize changes in present-day economic life, which include the following: rapid growth in the “digital” segment, reflected in its increased contribution to national GDP; increasingly wider use being made of the C2C (consumer-to-consumer) e-commerce model, including for the reason of its ease of use in the context of the latest technology; the rapid growth of the sharing economy. The authors draw the conclusion that current trends are jeopardizing the use of traditional business models, including due to the simplification of financial transactions between economic agents (e.g., the use of online banking).

Key words: information communications technology, Internet, digital economy, digital revolution, digitalization.

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1. INTRODUCTION

Starting in the late 20th century, the world has experienced a considerable leap in the development of information communications technology (ICT). In recent years, mankind has witnessed not just the emergence of new solutions and improvement of existing ones but also the keen implementation of technological innovations in socio-economic processes at the level of both the state and the nation’s businesses and households.

The recent years' trend of the Internet and ICT increasingly permeating life in society signals the development of the digital economy in society today.

Within the scholarly community, there has sprung into use the term ‘digital revolution’. Much of the groundwork for research into the genuinely revolutionary transformations taking place under the influence of technology has been laid by scholars T. Jeske [1], A. Salento [2], E. Nechushuai [3], S.T. Jin [4], K. Schwab [5], D. Tapscott [6], J. Cohen [7], D.H. Pink [8], A. Sundararajan [9], D. Bell [10], A. Toffler [11], V. Plotnikov [12], N.Yu. Sorokina [13], E.V. Ustyuzhanina [14, 15], M.V. Dubovik [16, 17], O.N. Antipina [18], A.A. Porokhovskii [19], and others.

The common global trend of digitalization has been registered in Russia as well. Many experts have noted it is in the sphere of digital technology and the digital economy that Russia has kept pace with the world’s leading nations. Data from The Boston Consulting Group (BCG) indicate that the share of the digital economy in the GDP of developed nations increased 1.2 percentage points in the period from 2010 to 2016, reaching 5.5%. With developing nations, this indicator increased from 3.6 to 4.9% [20]. The way globally in the share of the digital economy in GDP has been led by the UK (over 8% at year-end 2015) The sector, which incorporates IT and telecommunications, e-commerce, and government expenditure associated with the Internet, has ranked 2nd within the nation’s economy, behind real estate but ahead of production and commerce [21]. The Russian Internet remains the most active segment within the nation’s economy, and is having an increasingly tangible effect on other sectors at the moment. At year-end 2016, the contribution of Internet markets to the Russian economy totaled 2% of GDP, while in 2015 the figure was 1.9% [22].

Based on a study by the Russian Association of Electronic Communications (RAEC), in 2017 the contribution of the digital economy to Russia’s economy was estimated at 2.42% of GDP, while that of the mobile economy – at 3.8%. The effect of Internet markets on the economy is growing at a rate of 11% per year, and by 2021 the contribution of the digital economy to Russia’s GDP is projected to reach 4.7%. By 2020, access to the Internet in Russia is projected to be provided to 85% of Russians, while by 2021 the mobile economy is projected to become larger than agriculture. Already today the mobile economy is Russia’s 11th largest sector, and over the near five years it is projected to be growing at a rate of 10.7% per year [23].

In 2017, Runet had an audience of 87.7 million, which indicates that one in seven Russians uses the Internet at least once per month. Russia’s mobile Internet audience surpassed in 2017 for the first time its desktop counterpart – 70 million users, or 57% of the population use the Internet via mobile devices at least once per month, while 20.9% use the mobile Internet exclusively [24].

2. HYPOTHESIS

The study’s principal hypothesis is that the effect of ICT on the business environment is undergoing a transformation: at the initial stages in the development of technological innovations, businesses employed these achievements to optimize their activity, including in the area of marketing, associated with traditional markets; at present, new technology is
giving birth to whole new markets that would make no sense outside of the information field. In this context, digitalization may be seen as a form of realizing a set of relationships on the exchange of products of business activity between buyers and sellers in the market for information goods, in relation to which the Internet is a necessary condition for production, distribution, and consumption.

To confirm the above hypothesis, it is necessary to examine the role played by ICT (above all, the development of the Internet) in the development of companies’ business strategies.

3. RESULTS
In the initial stages of its development, when the Internet was still gaining popularity in Russia (the 2000s), most businesses employed the Web mainly as a marketing tool – to create their websites. With that said, being present online was often regarded as a way to keep trendy rather than an effective way to promote the business, as Russia had quite limited Internet coverage of its population at the time (Figure 1).

![Figure 1. The use of the Internet by individual users in the Russian Federation (% of the population) [25]](image)

The extensive and intensive development of the Internet is also changing its role in the development of companies’ business strategies. Starting in the period 2005–2007, various organizations have increasingly used their websites not just as a shop window but as a tool for online sales. During the 2000s, the Russian market for online B2C trade outdid most of its Western counterparts in growth rates. Based on data from Oborot.ru, between 2005 and 2008 Russia posted a sustainable annual growth of 40–45% within its B2C market. To compare, between 2003 and 2009 this indicator totaled in Germany around 20%, in the UK 25%, and in France around 40%.
The trend of growth in e-commerce has been underpinned by the mass issuance of bank cards (a gradual shift from using cash), boosts in people’s trust in transactions in electronic form, as well as the development of relevant infrastructure.

The next stage in the transformation of business strategies is associated with the emergence of electronic social networks – Russia’s first mass social network being VKontakte (www.vk.com, founded in 2007). Many businesses have come to realize quite swiftly that the above tool is not just an effective way to have a targeted effect on the audience (which can be easily differentiated across relevant criteria) but provides a basis for the emergence of whole new types of business, like online games that employ virtual currencies acquired for real rubles; special applications that enable users to watch each other, etc.; systems for hyping user pages and communities (designed to help achieve more “likes” and better rankings, make it into “Top” lists, etc.). Thus, this stage involves not just a transformation of business strategies but the emergence of whole new forms that did not exist before.

In particular, in the first quarter of 2018, proceeds generated by the social network VKontakte rose by 60.3% and totaled 4.23 billion rubles. Revenue mainly comes from advertising, as well as from multiplayer online games and Internet value-added services, like virtual stickers and in-game purchases [26].

The next stage in the transformation of existing business strategies and emergence of new ones is the development of the mobile Internet. The widespread use of smartphones, as well as boosts in data transfer speed (this trend started to gain momentum after 2010), have enabled users to be online virtually all the time. This has given birth to whole new markets for mobile applications.

In 2016, the total number of visits to websites from mobile devices across the globe for the first time surpassed Internet use from desktop computers and notebooks [27].

The development of Internet technology is helping minimize the need to engage investors in the early stages of implementation of business ideas or during the launch of a business project. Ten years ago the launch of some even remotely significant project would be deemed impossible without having a website created – one of the simplest ways to attract the audience’s attention, while nowadays it is mobile applications that are increasingly becoming the top option for many. Today, the market is inundated with this type of IT solutions, which is due to their lightness, compactness, and ease of setting and use. Mobile applications can have a varying capacity – games, functional programs, or shopping tools.

Over the last several years, the amount of time spent by individuals using mobile applications across the world has increased multifold, totally surpassing the figure posted by regular computers. In 2017, Russia ranked 5th in the number of applications downloaded from AppStore – a total of 4.5 billion downloads, 75% of which accounted for by games. With that said, the total amount of time spent by the average Russian citizen using an application is nearly 140 minutes daily.

Among today’s most popular trends are the keen use of ICT in the C2C market and the growth of the sharing economy.

In 2017, the Russian market for direct private Internet sales had a volume of 90 million deals and 295 billion rubles. C2C Internet sales involve nearly 20% of Internet users – as sellers or buyers. Internet sales among private individuals (C2C) already constitute nearly a third of all B2C Internet trade (295 billion rubles in 2017 versus 970 billion, respectively). In essence, this is a secondary market for goods, i.e. one where they sell used things, as well as new things that for some reason did not suit the seller [28].
According to RAEC, in 2017 the Russian market for the sharing economy had a volume of 230 billion rubles. The majority of members of sharing economy user communities are represented by individuals aged 25–44. Over 80% of users are of the opinion that the sharing economy helps save money and, at the same time, protect the environment. Today, one is witnessing the rapid development of electronic platforms designed to aggregate requests from users and propositions from manufacturers or sellers, like Airbnb (lodging) and Uber (taxi) [15].

4. DISCUSSION

Digital technology is rapidly altering society’s traditional forms and methods of doing business. Subject to change are not just business processes at the level of particular companies but those at the level of entire sectors of the national economy. For individual entrepreneurs, the effect from the mass use of digital technology has been reflected in transformations in business models, modifications in the nature of doing business, and changes in terms of business manageability and resilience.

Among the technologies that could have the greatest effect on the economy are artificial intelligence, big data analytics, cloud computing, the Internet of Things (IoT), robotics, driverless vehicles, manufacture of customized products and 3D printing, social networks, and other types of digital Internet platforms.

Notwithstanding that Russia is currently lagging behind leading nations in terms of the digital economy, the significance of ICT for the national economy is continually growing, and there is great potential for faster development within the sector.

Currently, some of the sectors that have achieved the greatest success in the area of digitalization include the financial sector, communications, and retail. With that said, there is a significant gap between the levels of ICT penetration in Russia and in nations leading the way in the availability of broadband access to the Internet, the use of information systems, and online presence.

Among the technologies that are having the greatest effect on the conduct of business already today, a major focus is on the following four:

- the Internet of Things and automated production;
- digital design and modeling;
- virtualization technology: remote access, a remote office, etc.;
- mobile technology and cross-channel communications [5].

At the same time, there are barriers that are impeding the process of digitalization, which are associated with an unstable economic situation in the country and insufficient levels of development of ICT infrastructure, as well as the unpreparedness of vendors and consumers to employ digital technology [17].

The use of the Internet of Things in industry (the industrial Internet of Things) is opening up new vistas of opportunity for the development of production and helping resolve a number of crucial objectives: boosting equipment productivity; reducing material and energy costs; improving quality; optimizing and improving working conditions for a company’s staff;
boosting the business’s profitability and its competitiveness in the global market. Today, owing to the development of digital technology, world industry is about to witness the Fourth Industrial Revolution (Industry 4.0), which is expected to bring about a thorough modernization of production [14].

The Internet is boosting the potential for the development of the C2C market (sales and purchases among households). Increasingly more people are realizing that buying or selling a product that has been used is often a sensible decision to make in terms of both savings and environmental protection. Trade between private individuals has gained a firm foothold in the life of many Russians, and its scale is expected to increase year after year. Currently, the C2C sector accounts for around a third of all online trade in Russia. Based on estimates by RAEC, in 2017 the Russian market had 8 million sellers and 10 million buyers, who carried out over 90 million transactions to the tune of nearly 300 billion rubles. As an example, Avito, a highly popular buy-and-sell ads website, registers over 5 million sales monthly, or 70% of all C2C deals on the Internet.

C2C Internet sales involve nearly 20% of Internet users – as sellers or buyers. Just a minor portion of sellers within the C2C sector is engaged in trade professionally and considers this kind of selling the primary source of their income. In essence, we are talking here about a secondary market for goods, i.e. one where they sell used things, as well as new things that for some reason did not suit the seller. Based on recent research, 16% of all Internet users (12.2 million people aged 18 to 65) have made at least one purchase from or at least one sale to a private person online within a half-year. There are a little fewer sellers than buyers (6.6 million versus 8.3 million, respectively). On classified ads websites Russians most often purchase and sell computer equipment (42%) and clothing (37%), and least often – major household appliances (8%) and sports equipment (13%).

The C2C market is posing a threat to the national economy, as most of these deals are unofficial and are not taxed. Very often, participants in them use mobile banking applications to send the money.

As an example, in 2017 Sberbank registered the passage of nearly 1 trillion rubles ($17 billion) in regular money transfers between clients and certain accounts through its online payment system. A portion of these transactions may be associated with commercial activity.

The share of Russian transactions from the ‘Other’ category, the bulk whereof is represented by card to card transfers, increased by 77% in 2017. Nearly two-thirds of those payments went through Sberbank. A portion of those funds went to servicing the “informal sector” (economic activity not taken into account by official statistics).

The sharing economy is another trend that is quickly gaining in popularity and having an increasingly considerable effect on companies’ business models.

This area is getting increasingly significant for Russia, especially in the context of the shift to the digital economy – some of the key areas the state has recognized as promising and has been keenly developing. Companies and startups are emerging quite actively in this segment, which is due to that the digital and mobile economies are penetrating increasingly into our daily life. The sharing economy is a socio-economic model that has been developing dynamically in Russia, and is already today making a substantial contribution to the development of the national and regional economies. Companies within the sharing economy are online platforms that help people and companies unite with a view to making joint use of resources they own. These companies are developing a service quality control system of their own that is predicated on the trust of users and their assessments of each other – more specifically, by way of reviews and ratings. Traditional means of protecting the rights of consumers are getting replaced with a mechanism whereby users can themselves assess and
control each other. Platforms for the sharing economy are turning into a place where propositions find their users. Among the key pluses of joint consumption are:

- opportunity to save money;
- greater accessibility of resources;
- faster service.

Companies in the sharing economy enable rational use or exchange of resources, helping ease some of the strains on the environment and helping many people from around the world make extra income, which is a significant social function to perform. Themselves these companies normally end up with a revenue of no more than 15% of the turnover.

In addition, joint consumption makes it possible to ease major strains on urban infrastructure (especially, its transportation segment) and ease access to a whole lot of goods and services.

Despite a wide popular interest in the subject, presently there has yet to be reached a consensus as to how to construe the sharing economy within the framework of Russian legislation.

Currently, both the business sector and the state are perfectly aware of the significance of digital technology for the future development of society. A crucial factor in this shift is the process of discussion and adoption of ‘The Digital Economy of the Russian Federation’ program. There are hopes that this could help generate a variety of initiatives and projects related to digitalization at all levels – from the overall state level to that of particular companies. These projects turning into a mass phenomenon provide a hope that technological changes will help improve people’s quality of life, enhance existing systems of administration and business models, and foster better relations among people. This kind of integrated changes should help turn the Russian economy into a digital one sooner.

5. CONCLUSIONS
This paper identifies a set of stages that characterize the evolution of the role of ICT in business strategies implemented by Russian companies. Currently, the development of ICT is influencing the business sector in two major ways. Companies engaged in the conduct of traditional types of business (sale and purchase of goods, construction, provision of traditional services, etc.) are using new technology as a marketing tool. With that said, it is incorrect to associate this activity only with advertising, since new technology also helps gain a more detailed insight into consumers’ tastes and preferences, analyze their habits, schedules, geographic location, etc. At the same time, over the last 10 years there have emerged totally new, electronic, markets, the existence of which is impossible without the Internet (online services, Internet platforms, mobile applications, etc.). Without question, the future development of technology will be associated with the emergence of new business strategies and transformation of the existing ones. This relevant issue may require further scholarly conceptualization.

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REFERENCES
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