PROSPECTS FOR THE DEVELOPMENT OF RUSSIAN RETAIL COMPANIES IN THE CONTEXT OF DIGITAL TRANSFORMATION OF BUSINESS

Ekaterina R. Bostoganashvili

MGIMO University

Abstract

The competitiveness of modern companies directly depends on the extent of their digitalisation. Digital transformation has penetrated all spheres, industries, and business processes. Retail has historically been among the leading sectors in terms of innovation. Technologies are changing traditional inventory management and logistics processes. The implementation of such systems allows for more accurate forecasting of needs, optimization of supply chains, and minimization of losses. This significantly reduces costs and improves customer service levels. However, competition in the online space is becoming increasingly fierce, forcing companies to continuously adapt to market changes, track new trends and technologies, and require additional investments in developing IT infrastructure and training personnel. Retail companies have widely adopted artificial intelligence and machine learning technologies, big data processing technologies, Wi-Fi analytics, the Internet of Things, as well as virtual and augmented reality technologies, etc. The aim of this article is to identify the main development directions for Russian retail companies against the backdrop of the active spread of modern technologies.

Keywords

Retail companies, digital economy, artificial intelligence, virtual and augmented reality, metaverse concept.

INTRODUCTION

Digitalisation is an important factor in business transformation. In 1995, D.Tapscott was one of the first to address the concept of digitalisation. In his book, he wrote that it is an economy based on the use of information and computer technologies. The development of various digital technologies has led to significant shifts in business models. Retail is an integral part of societal life, linking production and consumption, and has historically led in the implementation of cross-cutting digital technologies. Retail companies engage daily in studying consumer demand, regulating supply processes, storage, and sales of goods. All these tasks undergo significant transformations under the influence of digitalisation processes. Moreover, consumer demands and habits have also changed. The author of the study focuses on reviewing the main macroeconomic indicators of retail trade, directions of digital transformation, and potential transition to metaverses. Information sources regarding the digital transformation of the analysed companies included reporting documents presented on official company websites, as well as industry and news portals. The basis of this work also comprises the studies of foreign and domestic scholars who have explored the impact of the digital economy on companies' activities.

MAIN MACROECONOMIC INDICATORS

The Russian retail market has been growing annually in monetary terms. A significant increase in market capacity of 16.7% occurred in 2021. It is important to note that this positive trend is partly related to rising product prices caused by the destruction of logistics systems, the exit of Western companies that imported or manufactured goods in Russia, a decrease in purchasing power, the replacement of familiar goods with lower-quality alternatives, and sanction pressure from the US and several European countries.

In 2022, the Russian retail market experienced several sharp declines related to structural changes in the industry and the introduction of sanctions. The retail trade turnover shrank by 6.7% by the end of 2022 (non-food sales decreased by 11.1%, and food sales by 1.5%). Rising prices for food products, accelerated inflation, and expanded supply chains will contribute to a decrease in the share of food products in retail turnover. A decline in consumers' purchasing power will logically lead to increased demand for discount store formats, which account for one-third of total sales.

Against the backdrop of a reduced nomenclature of exported goods, optimisation of logistics processes and restructuring of supply chains have been observed. For example, the implementation of the "New Silk Road" project aims to increase the flow of goods from China, develop transport infrastructure, reduce delivery times, and establish long-term relationships with Chinese suppliers.

In recent years, there has been a growth in the share of online sales. According to Rosstat, in 2014, sales conducted via the internet constituted 0.7% of total turnover. By 2023, this figure had nearly increased ninefold. Online trading continues to be one of the key drivers of the FMCG (Fast-Moving Consumer Goods) segment. Amid the COVID-19 pandemic, changes in the labor market structure (an increase in the number of remote workers), and the development of e-commerce services, retail has undergone accelerated digitalisation.

Since 2022, significant changes have affected the structure of major retail companies in Russia. Six large foreign retail companies, including Ikea,

Inditex, H&M, Decathlon, Uniqlo, and Adidas, exited the Russian market. The top ten largest retail chains in Russia account for 28.7% of the retail market.

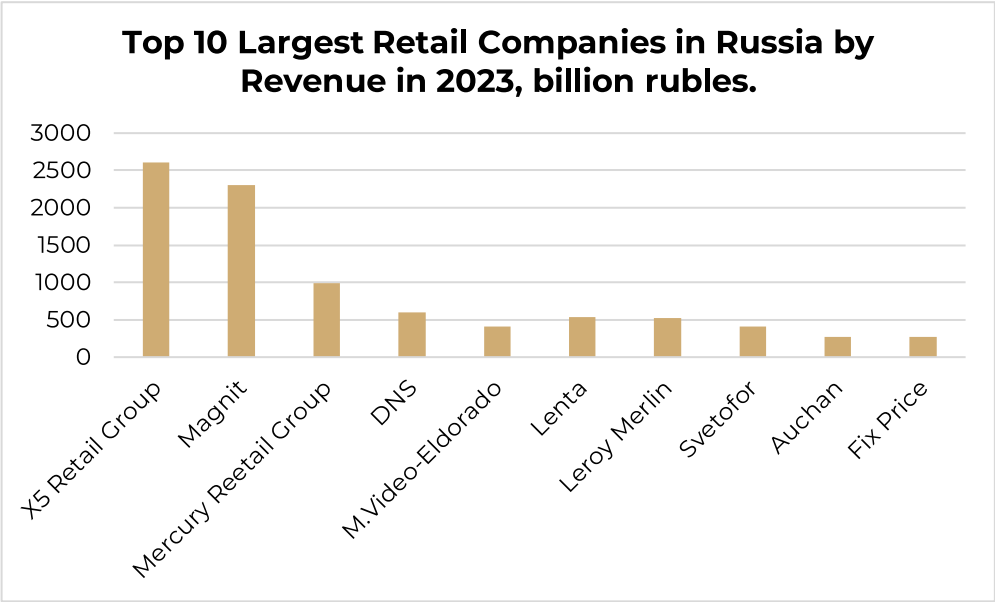

Fig. 1. Top 10 Largest Retail Companies in Russia by Revenue in 2023, billion rubles. Source: Delovoy Profil. TOP Largest Retailers in Russia: The Market of Russian Network Retail 2023. URL: https://delprof.ru/press-center/open-analytics/top-krupneyshikh-riteylerov-rossii-rynok-rossiyskogo-setevogo-riteyla-2023/ (accessed 29 December 2023).

In the first half of 2023, the combined revenue of the ten largest Russian retail companies grew by 10% compared to the same period last year. The most dynamic growth was shown by marketplaces; in particular, Ozon increased its sales by 91.6%, and Wildberries by 83.8%.

X5 Retail Group and PJSC "Magnit" have long been leaders in this industry. Over the past decade, both chains have demonstrated an annual growth rate in trading space of about 17%. However, both companies continue to trade at relatively low multiples. Last year, competition risks from foreign companies shifted to competition risks from marketplaces, online players, and hard discounters.

DIRECTIONS OF DIGITAL TRANSFORMATION IN RETAIL COMPANIES

At the present stage, two global trends of digitalisation remain relevant: the use of digital technologies and conducting in-depth analyses of consumer behavior. Russian consumers are quite receptive to digital innovations.

Retail companies are developing omnichannel sales by integrating online and offline platforms. This process is carried out with the help of an O2O (online-to-offline) strategy, which allows for collecting analytics and optimising customer interactions. In the offline segment, there is also a reduction in costs through the transition to new payment means and electronic receipts.

The following significant digital technologies are actively implemented by retail companies. First, there is Wi-Fi analytics and big data technologies. The main consumers of big data processing technology are telecom operators, banks, and large retail companies. In mid-2021, Russia approved its first national standard "Information Technology. Big Data. Overview and Glossary", which aims to ensure mutual understanding between government agencies, the scientific and educational community, and commercial organisations. For

example, the Magnit retail chain improved product availability through the use of big data technology. The network's data center consistently analyses sales and sends signals to facility administrators via mobile phones when it is necessary to replenish shelves.

Big data technologies help solve a wide range of marketing tasks, such as pricing, increasing response from loyalty programs, customer segmentation, and consumer profiling. For instance, the Russian company X5 Retail Group predicts demand and enhances the effectiveness of promotional activities through data analysis. The "M.Video-Eldorado" group increased conversion by 1.5 times after launching personalised pricing in its app. However, according to a VK Cloud study conducted in 2022, 38% of large companies still do not consider Big Data technologies when making strategic decisions.

Secondly, there are technologies based on artificial intelligence (AI) and machine learning. AI revolutionises various aspects of business activity and everyday life. The integration of such solutions into the business processes of retail companies allows for a better understanding of consumer behavior, demand forecasting, and providing higher quality service, as well as making strategically correct marketing decisions and assessing the prospects for return on investment. An important aspect is the accumulation of extensive consumer data, which serves as the foundation for building quality predictive models, automated management, and maneuvering across various channels. AI technologies are utilised throughout the value creation chain, covering marketing, sales, logistics, payment services, delivery, customer interactions, etc. The use of AI-based technologies helps retail companies improve financial performance, create personalised offers, relieve personnel workload, and launch more effective marketing campaigns, particularly in advertising. According to forecasts, global company revenues from AI technologies are expected to reach $38.8 billion by 2025. In many industries, AI acts as a sort of alternative to creating new jobs, meaning companies will be able to substantially reduce personnel costs and optimise certain business processes. In the future, AI may also be used for developing new product types. Additionally, the demand for BPM (Business Process Management) platforms and microservices architecture in software will grow among retail companies. The integration of various spheres, that is, the creation of a service ecosystem, is relevant. A bright example of such a policy is large marketplaces that offer consumers not only goods but also services, airline tickets, their own banking products, and much more. Further implementation of AI-based technologies will lead to expanded forecasting capabilities, offering even more personalised services, and greater automation of internal business processes.

Thirdly, the Internet of Things (IoT) is one of the key megatrends in technology development. In retail, the application of IoT is reduced to two main directions. The first direction is directly related to end consumers and implies the use of geotargeting, provision of personalised offers, individual shopping experiences, cross-selling, attracting customers, and the implementation of digital interactive screens. The second direction concerns processes and infrastructure: an intelligent store environment, tracking consumer behaviour, dynamic pricing, loyalty programmes, targeting, inventory management and supply chains, equipment tracking, payment processes, seamless cross-channel experiences, and in-store personnel management. Particularly relevant technological solutions in the realm of IoT include RFID (Radio Frequency Identification), NFC (Near Field Communication), BLE (Bluetooth Low Energy), Wi-Fi, etc.

From the perspective of retail trade development trends, two vectors can be distinguished. The short-term vector includes tools aimed at cost reduction, optimisation, and forecasting. The long-term vector encompasses aspects such as forming a new consumer experience and a modern approach

to managing retail companies. Over the next five years, many digital trends from 2021-2022 are expected to remain timely. It is extremely important to note the trend towards the transition to domestic software. Russian IT companies are increasing the turnover of product development for retail companies. The prospects for the speed and further development of digital technologies in retail directly depend on information and communication infrastructure, as well as the development of legislation regarding unified technological standards.

Among promising IT solutions and tools applicable to the digitalization of retail trade, it is necessary to highlight the development of mobile applications, the implementation of e-commerce development solutions, and the use of automated systems, particularly logistics management systems, cloud solutions, SRM systems, etc. In the first half of 2023, there was a significant increase in demand for smartphones (40% more than in 2022). Therefore, the development of mobile commerce is an important element in creating an effective omnichannel model. The implementation of "smart" logistics management systems can reduce the average costs of retail companies by around 10%. In this context, it refers to the digitalisation and synchronisation of warehouses, automation of deliveries, inventory processes, etc. A dynamic storage system significantly reduces supply chain lengths. In turn, SRM systems provide advantages in managing the quality of suppliers: supplier verification, rating composition, and contractor selection based on specified requirements. One of the most convenient solutions for automating procurement processes is a corporate online store that provides broad opportunities for executing small procurement procedures. A purchasing company receives more advantageous offers from suppliers from different regions, creating healthy competition and simplifying procurement processes. Among more specialised solutions for retail, RFID tags, video recognition systems, the introduction of gamification elements, virtual checkouts, and electronic price tags - which minimise manual labor - can be highlighted.

THE METAVERSE AS A NEW BUSINESS PARADIGM

As noted, digitalisation has become a crucial factor in the transformation of business and society. The development of such digital technologies as big data, the Internet of Things, artificial intelligence, machine learning, virtual and augmented reality, and cloud computing has changed the format of providing goods and services worldwide, expanded methods of business conduct, and led to the emergence of new markets and industries.

The COVID-19 pandemic has intensified the penetration of technologies into our lives. Bright examples of these transformations include online shopping, online education, and virtual meetings. By the end of the pandemic, there was a significant increase in interest in cutting-edge technologies, which initiated the convergence process of digital and physical worlds. The concept of the metaverse began to attract business attention after major technology companies started investing in this direction. American author N.Stephenson was the first to describe the metaverse in his book "Snow Crash". Today, the metaverse represents a network of interconnected applications, experiences, tools, devices, products, and infrastructure. It creates a space where users can exist, blurring the boundaries between the real and virtual worlds. Through the creation and existence of so-called digital avatars, network users can engage in various collective social actions, such as attending concerts, shopping, and participating in games. The metaverse can be used in various fields, including business, entertainment, education, healthcare, and employee training. In this context, several important aspects that companies should pay special attention to must be highlighted.

First, there is the technological aspect, particularly the costs associated with developing technological potential. It is crucial for company leaders to understand the long-term viability of these investments.

Second, there are strategies. To function effectively in this new reality, companies need to develop new strategies. Retail companies implement different approaches to working with the metaverse. For example, the Adidas brand collaborates with NFT (Non-Fungible Token) market players to sell exclusive clothing in online games. Because a virtual market is part of the metaverse, its development holds significant potential for marketing and advertising. For instance, electronic purchases in a three-dimensional environment, where users can learn more about products and services using virtual and augmented reality technologies, will necessitate the development of new marketing strategies and product promotion methods in a virtual dimension. This will provide a new impetus for the marketing aspect of companies' activities. With the emergence of e-commerce, retail companies have placed significant attention on gathering, processing, and analysing consumer data to improve their interaction with customers. Up until the development of the metaverse concept, physical and online stores existed in parallel, despite employing an omnichannel business model. The metaverse concept implies greater integration of various channels and a shift to three-dimensional virtual space.

Third, there are personnel issues. The transition to the metaverse will significantly reflect on the labor market, as companies will require highly skilled employees who possess the necessary skills and competencies to operate within the metaverse. Expected in-demand competencies will include computer modeling, software development, augmented reality technologies, blockchain engineering, 3D modeling, and data handling skills.

Fourth, there are legal and ethical issues. This pertains to data protection, information security, consumer protection, and fraud. Addressing cybersecurity challenges is complicated due to the fact that, sometimes, identities can be hidden behind digital avatars. Furthermore, within the metaverse, in addition to interactive consumer engagement, retail companies collect personal data, which contradicts the laws of certain countries. The protection of intellectual property rights is also a pressing issue. New challenges are associated with copyright, trademark, and patent preservation issues, particularly unauthorised use of trademarks in virtual environments.

The trend related to the emergence of metaverses reflects the rapid development of the augmented and virtual reality market, as well as the spread of immersive three-dimensional digital ecosystems. The first Russian company to open its official store in the metaverse was Lenta. In 2021, the Russian retail company launched its server in the Minecraft metaverse, aiming to attract more young people to the brand. Yandex.Market opened a school with interactive games through which users can earn promo codes for making real purchases in the marketplace.

In the future, it is expected that creating a server will become a significant tool for enhancing consumer loyalty, as improving customer experience is currently closely linked to the introduction of gamification elements. However, it should be noted that while ecosystems have long existed, the transition to the metaverse remains a less evident process.

CONCLUSION

In recent years, there has been a significant change in the development directions of retail. Online platforms and marketplaces are becoming increasingly popular; however, X5 Retail Group and Magnit still remain market

leaders. At the same time, a consolidation of the Russian retail market is apparent.

The development of technologies has provided a powerful impetus for implementing digital innovations in many fields, particularly in retail. The largest companies in the industry are building an omnichannel business model, selecting ever more interesting digital solutions to automate their business processes and improve interaction with end consumers. Furthermore, there is an increasing use of virtual and augmented reality technologies in companies' activities, fostering growing interest in the concept of the metaverse and considering the humanitarian aspects of its functioning.

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About the author:

Ekaterina R. Bostoganashvili - PhD in Economics, Senior Lecturer, English Language Department No. 2, MGIMO University, 76 Vernadsky Prospect, Moscow, Russia, 119454, e-mail: eka_94@live.ru.

ORCID ID: 0009-0006-1538-5013

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