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DIGITAL TRANSFORMATION OF TRADE: TRENDS, STAGES AND FACTORS OF DIGITALIZATION AT THE SECTORAL LEVEL

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Abstract. This research aims to identify the key stages of digital transformation of trade. In the course of digitalization of the world economy, certain transformations are taking place at the level of all its sectors. This phenomenon is explained by the fact that the result of the introduction of digital technologies is a complex transformation of economic models, which implies the formation of new management systems, business models, types of social attitudes and consumer societies, i.e. the digital transformation of the economy consisting of many sectors. However, it is important to realize that the emergence of new digital technologies and knowledge, the possibility of their application in different ways is reflected in the development of each individual industry, which indicates the relevance of this study. When studying the state of any industry at the current stage of economic development, we face the need to consider the process of its digital transformation. In this regard, analysts in the development of trading companies need to identify and systematize data on the sequence of stages of digital transformation in trade, as well as their content. In the process of the research the main directions and trends of digitalization of trade are considered, the interrelation of the factors of digitalization of the economy with the processes of development and digital transformation of world trade at the industry level is analyzed. As a result of the study, the author's vision of the main stages of digital transformation of trade is presented.

Keywords: digital transformation, digitalization, trade, digitalization factors, digitalization stages, digital space

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ЦИФРОВАЯ ТРАНСФОРМАЦИЯ СФЕРЫ ТОРГОВЛИ: ТЕНДЕНЦИИ, ЭТАПЫ И ФАКТОРЫ ЦИФРОВИЗАЦИИ НА ОТРАСЛЕВОМ УРОВНЕ

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Аннотация. Целью данного исследования является определение ключевых этапов цифровой трансформации торговли. В ходе цифровизации мировой экономики на уровне всех её отраслей происходят определённые трансформации. Данное явление объясняется тем, что результатом внедрения цифровых технологий и решений является комплексное преобразование моделей хозяйствования, что подразумевает под собой формирование новых систем управления, бизнес-моделей, типов общественных отношении и потребительских обществ, то есть цифровую трансформация экономики, состоящей из множества секторов. Однако важно понимать, что появление новых цифровых технологий и знаний, возможность их применение по-разному находит своё отражение в процессе развития каждой отдельно взятой отрасли, что свидетельствует об актуальности представленного исследования. В попытках проведения исследования состояния любой отрасли на современном этапе развития экономки мы сталкиваемся с необходимостью изучения процесса её цифровой трансформации. В связи с этим у аналитиков в области развития торговых компаний возникает необходимость в определении и систематизации данных о последовательности этапов цифровой трансформации торговли и их содержание. В процессе исследования рассмотрены основные направления и тенденции цифровизации сферы торговли, проанализирована взаимосвязь факторов цифровизации экономики с процессами развития и цифровой трансформации мировой торговли на отраслевом уровне. В результате исследования представлено авторское видение основных этапов цифровой трансформации торговли.

Ключевые слова: цифровая трансформация, цифровизация, сфера торговли, факторы цифровизации, этапы цифровизации, цифровое пространство

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Introduction

The driver of the formation of the digital economy has always been technological innovation, which due to the synergistic effect forms the foundation of the digital economy, including the transition to digital technologies and the distribution of ICT-based goods and services. At the same time, the digital transformation of the economy itself is a complex of economic and social effects, which, in turn, allows us to decompose it as a set of factors affecting the development of the global economy and its sectors. To better understand how the processes of digitalization and the development of world trade are interrelated, let us present a scheme of their relationship in Figure 1.

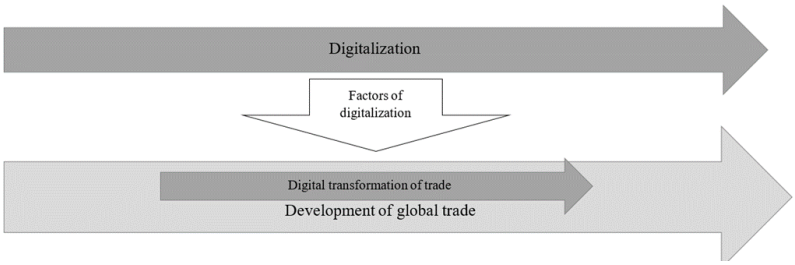


Fig. 1. The impact of digitalization on the development of global trade

According to the figure, digital transformation, being a sub-process of the process of world trade development, is influenced by digitalization factors. In other words, digitalization, including the development of information technologies, knowledge about them, data collection and processing capabilities, forms certain conditions for the development of trade, in connection with which the industry itself begins its transformation by applying these technologies and capabilities (Voronova, Kharyova, 2019). Thus, the analysis of the content of these factors in the context of digital transformation of trade will allow us to identify its main trends, which in turn will allow further research to assess their impact on the state of world trade in general and trading companies in particular (Ilyina, Mikhailova, 2013).

Materials and Methods

In this study, analytical methods were used, such as description, grouping of data, causal analysis, evaluation. The use of these methods allowed linking disparate facts about the current situation in the development of digitalization processes in trade in modern economic conditions. Following the National Program "Digital Economy of the Russian Federation", the digital transformation of trade includes activities aimed at achieving the following goals: improving the quality of goods and services, their accessibility, and the degree of public awareness. These goals were observed, described and classified as well.

Results and Discussion

Combining the listed objectives of digital transformation of trade, technological innovations and their impact on trade, as well as the very scheme of trade activity realization, we can conditionally represent the process of digital transformation of the economy with the help of a flowchart using Figure 2.

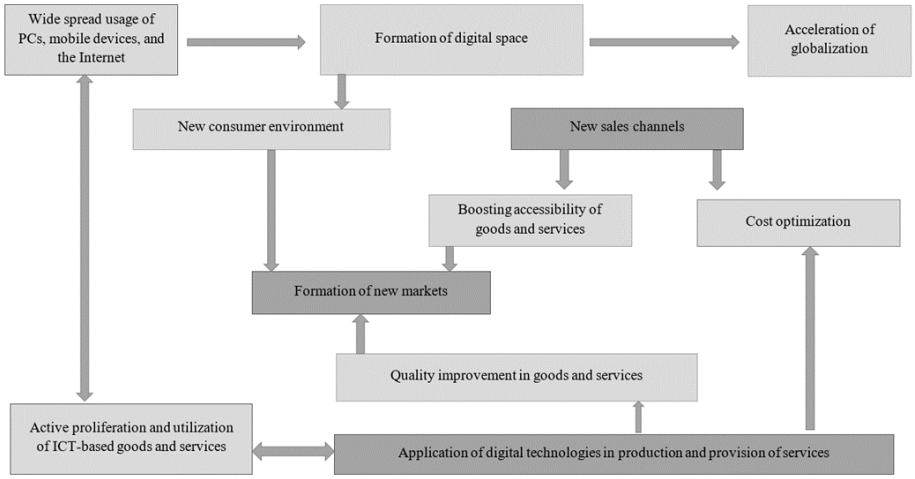
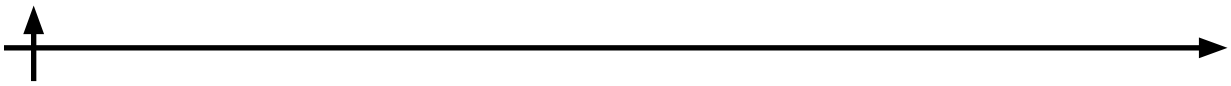


Fig. 2. Results and factors of digitalization at the sectoral level (trade)



Let us explain the meanings of the elements of the figure. As already noted, the digital economy is based on technological innovation, which at the sectoral level of trade is primarily seen as new technologies in the production and service process, as well as the proliferation of PCs, communications and the Internet. The second of the above-mentioned points allows for the formation of a digital space in the course of digitalization, which in turn can be seen as a new model of consumer environment and sales (and purchasing) channels. New opportunities in sales allow consumers to increase their awareness of their goods and services, as well as to optimize costs (marketing, transactions, etc.). On the other hand, the application of new technologies in the course of production and service activities allows, on the one hand, to improve the quality of goods and services, on the other hand, to optimize the resource and material base, and, as a consequence, to optimize this type of costs (Kokova, 2022). A striking example of cost optimization is the reduction of the role of intermediaries through the use of platform solutions in logistics, which allows to expand the possibilities of communication with consumers (Voronova, Ilyin, 2020).

Increasing availability and quality of goods and services form new markets supported by new information technologies. At the same time, it is important to note that companies themselves, in order to maintain all trade, production and service activities, and consumers - to preserve their opportunities in the new digital space, constantly require new goods and services based on newer possible ICT, which leads to the intensification of their use (Noga, 2021; Skolkovo, 2016).

In this regard, world trade is actively changing the structure of its turnover, approaches to organizational and management, marketing and operational activities, as well as to the organization of other socio-economic processes of trading companies, the key driver of development of which is the creation of a comfortable consumer environment.

The scheme presented in the figure above allows us to understand that the following main directions can be distinguished within the digital transformation process:

– Transformation of production activities through the application of digital technologies

– Transformation of logistics and sales activities in the context of new markets and sales channels;

– Transformation of marketing activities due to the formation of a new consumer environment.

Conclusion

In order to competently build the company's strategy and implement the principles of the process approach, which is an integral part of digitalization, it is necessary to understand that the first stage in the transformation will be an audit, which in the conditions of digital reality will consist of so-called digitization: modeling of business processes, the company's business model, determining the vector of development in the field of innovation and the formation of information and regulatory framework.

Based on digital modeling of the company's activities and installation of the necessary digital resources, it will be possible to move to the "qualitative stage" of transformation and start complex work to improve activities in the era of the digital economy, which includes a complex system of digital solutions. At the same time, it is important to realize that first of all, a new digital and technological infrastructure should be developed and applied, and only then should new technologies be applied, including, for example, e-commerce, cloud solutions, Big Data, etc (Barkalova, 2021; Pezzella and Pliushch, 2022).

When the infrastructure is prepared and new digital technologies are applied, new data processing capabilities are used to analyze the company's operations and the market in order to

make further objective management decisions (Krymov, 2019).

To some extent, this process can return the organization's activity to the first, "quantitative" stage and rethink the model of the enterprise's activity. When all the plans and decisions established in the beginning in the field of formation of production activities have been achieved, the equally significant stage of developing customer-oriented solutions begins (Ilyina, Kapustina, 2015).

New markets functioning in the digital space, allowed consumers to expand the choice of goods and services, to detail their requests, in this regard, offering him a convenient technology to choose and make a purchase in the electronic environment today is the main competitive advantage of trade enterprises, in this regard, the formation of a comfortable consumer environment stands out as a separate driver of industry development. This idea arises from the idea that the "new generation consumer" uses digital space not only as a place of recreation, but also as a place of work and the main channel of communication and purchase of goods.

When all models and processes have been digitized, relevant digital and technological infrastructures have been created, and customer-centric business strategies have been developed, the final - transformational - stage comes. It is at this stage that a trading enterprise, having restructured its business model, is ready to fully realize its activities in the new digital space. Based on the above, the authors have systematized the main stages of digital transformation of the trade sphere, presented in Figure 3.

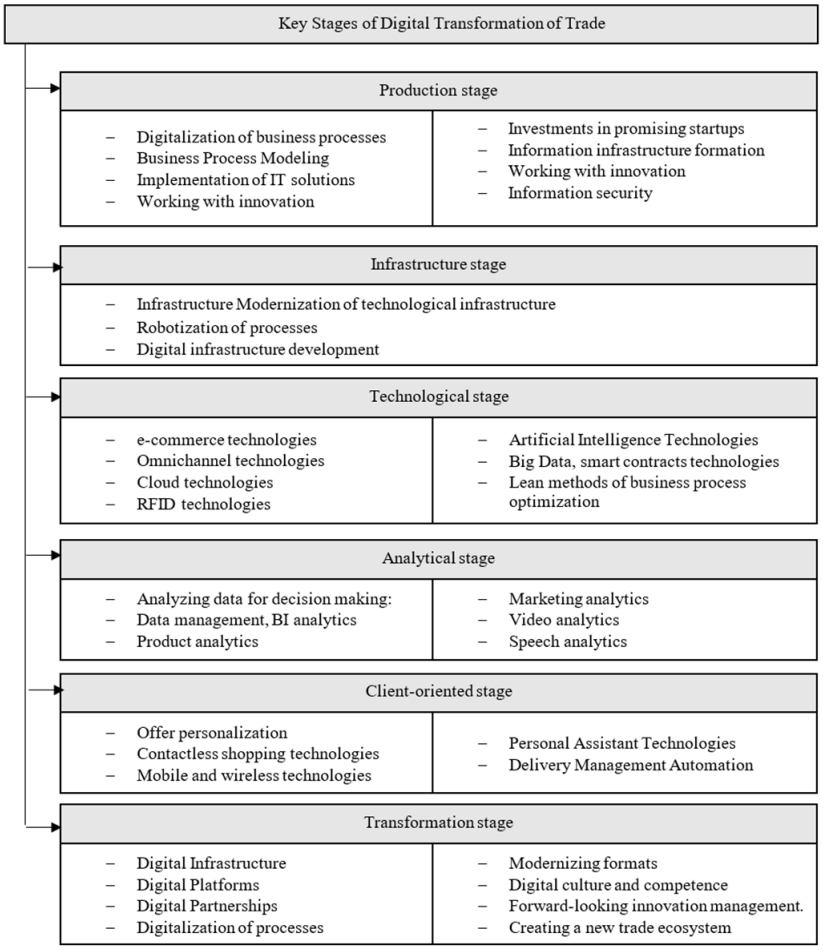


Fig. 3. Main stages of digital transformation of trade

It should be noted that due to the continuity of the digitalization process, digital transformation itself does not have a final form at this stage of economic development. The technologies and capabilities of enterprises in the digital environment are developing faster than businesses can adapt to them, so the transformation stage itself cannot be considered finite. In this regard, the most actively developing companies place great emphasis on staying ahead of innovations and continuous modernization of business formats.

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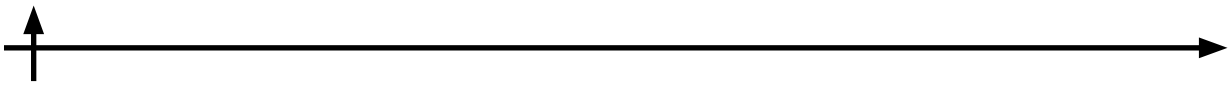

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