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Digital transformation in food retailing

Yu Syaglova^{1*}

¹ Russian Presidential Academy of National Economy and Public Administration, 84 Vernadsky prospekt, Moscow 119571 Russia

E-mail: syaglova-yv@ranepa.ru

Abstract. The relevance of the topic of this study is determined by the necessity to research, characterize, analyze, and evaluate the effectiveness of the digitalization aspects implemented in the food retail trade practice. The purpose of this study is to analyze and evaluate the effectiveness of the existing digitalization elements used by the main food retail trade participants. Among the main participants of this market, the author considers trade networks of federal and regional levels, food retail Internet operators, niche food retail companies, and agrologistic operators. The author came to the conclusion that the further growth of the e-commerce market in Russia will be due to the active participation in the food categories sales. The introduction of adequate digital technologies and tools into the practice of trade business processes can have a positive impact on improving the efficiency of trading activities in general. The methods of this study include grouping, systematization, and classification.

1. Introduction

The current stage of food retailing is characterized by the increase of digital technologies and tools introduced in the digital economy as a whole. To date, it is already difficult to imagine a trading company that is not aware of the importance of digitalization of elements into the various business processes of its trading and commercial activities. The adequate use of these elements allows traders to influence the quality of meeting the needs of key, i.e. the valuable costumers, it is better to target your product offer, which undoubtedly ultimately affects the increase in the volume of trade revenue and the margin of trading activity in general.

The purpose of the research is to analyze the existing digital technologies and tools already used in retail food retailing, and to formulate conclusions and recommendations on the adequacy and appropriateness of their application, taking into account the selected trade format, the structure of the product range, and the needs of the target consumer segment.

The main objectives of the study are the following: analyzing the current state of the Internet market in Russia; providing justification of the reasons for the slowdown in the market growth; and searching for reserves for further growth in the volume of the Internet food market through the use of digital technologies and tools.

Today considerable attention is given to the problems of Internet market research by retail experts, industry associations and associations, state authorities. All these studies are focused on finding the relevant digitalization tools inherent in the digital economy as a whole, Russia's entry into the global economic space, which could have a significant positive impact on the practice of trade in food products [2, 3, 4, 7].



2. Analysis

Earlier in the publications, the author noted that the agrofood sector in Russia as a whole is characterized by the presence of several levels of participants, such as food producers, a food distribution system in the form of wholesale and retail enterprises, and final consumers of food products [6]. These levels of participants, in the agrofood sector, taking into account and complementing each other's interests, create and accumulate value, thus forming an integrated chain of commodity circulation, which has a pronounced synergistic effect.

In this publication, the author focuses on the elements of digitization used in retail food retailing, which have already established themselves firmly and proved their effectiveness in the digital economy as a whole. Dominant participants in the food retailing industry, as the author mentioned earlier, are of federal or All-Russian importance, as well as large regional networks [5]. It is these categories of participants in the distribution sphere, possessing the greatest potential of various kinds of resources, are excellent cases that demonstrate the whole variety of digital technologies in trade.

It should be noted that, in general, the role of the Internet commerce sector in Russia has increased continuously over the past three years. So, according to Figure 1, it is evident that the growth rate of the Internet market was 31% in 2014 compared to the previous period of 2013 and 21% in 2016. The exception is only 2015, the market growth rate of 7%, which in trade practice was marked by a mass of crisis phenomena with a marked drop in consumer demand and the inclusion of a regime of storage by consumers of money. According to the data of the Association of Internet Trade Companies (AITC) in 2017, the volume market of Internet commerce in Russia reached a threshold value of 1 trillion rubles, and the percentage growth was only 13 points. However, the predicted capacity of the Internet market for consumer goods in Russia, according to experts by 2022 should increase by 10 times [1].

Figure 1 shows the growth rates of the Internet market in Russia for 2014-2017.

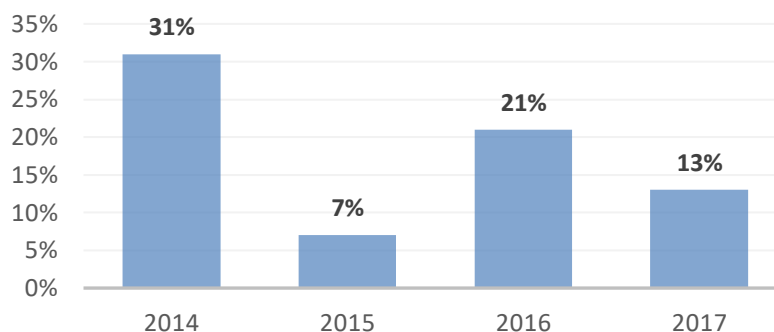


Figure 1. The growth rate of the Internet market in Russia for 2014-2017, in %.

Source: Compiled by the author according to the Association of Internet Trade Companies (AITC).

As can be seen from the above analytical data, the Internet market in Russia really shows a significant growth dynamics; however, this dynamics is decreasing annually. In the author's opinion, this phenomenon is a completely natural explanation.

First, the initial growth of the market was due to the explosive penetration of Internet technologies into the Russian economy as a whole, and to the vital activity of consumers in particular. And most intensively this process took place in the major cities of Russia, in particular, Moscow and St. Petersburg. In the regions, the penetration of Internet technologies was less active due to a number of factors related to the geographical location of cities and settlements, the availability of technical coverage and so on.

Over time, Internet commerce in Russia's intensely-populated cities has stopped growing at such a significant pace, and the market as a whole has become characterized by a high degree of saturation. Currently, according to AITC, the percentage of coverage of Russia by Internet communications is

slightly more than 70%, which indicates the availability of the potential for further, albeit not so rapid, growth in Internet commerce, but at the expense of the regions of Russia.

Second, according to the author, there is some saturation of the market and Internet sales of goods from the category of non-food retail at present. Based on this, we can conclude that the main source of growth in the Russian Internet market, in addition to the influence of the regional aspect, is the activation of sales in the food segment goods. In general, food trade via the Internet appeared only recently and as the main trend in the development of Internet commerce was identified by industry experts of AITC only in 2017.

The reasons for the lag in the growth rates of the food retail Internet market, according to the author, are the following: (a) the unreadiness of the Russian consumer to purchase via Internet this category of goods; (b) in the conditions of the phenomenon of “promotization” that spread in the retail trade (mentioned earlier in author’s publications [6]), which is characterized by an increasing emphasis in sales of large network trading companies on products in the “promo” category and correspondingly a low price, consumers are already accustomed to daily trips to stores in order to find the most economical in terms of prices of goods; (c) the buyer is forced to go to the real store anyway in order to buy the rest of the commodity groups, which is not entirely convenient for them; (d) large hypermarkets, recognizing the formed need for Internet purchases in the category of buyers outside the city, express their willingness to pay for the paid delivery there (“Lenta”, “X5 Retail Group”, “Utkonos”, “Metro CC”, and so on).

These restrictions, of course, are significant in terms of the spread and development of Internet commerce in food retail, but the overall transformation of the economy towards digitalization and retailing, in particular, still allows the buyer to understand and realize that the process of digitalization is inevitable, it is necessary to adapt even when it comes to completely unusual types of food purchases using both Internet commerce and individual elements of digitalization in trade a space of existing commercial enterprises.

Let's analyze the digital technologies and tools are used to carry out this process.

Companies-retailers (or non-network enterprises) open their own online store. As a rule, the retailer has its own Internet site, which serves as an information source and a showcase for demonstrating the food product range sold by the company. In addition to the site, modern food retail companies also use mobile applications that are better than the site, which are adapted to the needs of the target customers of the company giving them additional opportunities. Successful cases of sales with the help of websites and/or mobile applications in the Russian food trade are already quite a lot. As the author described earlier, the entire food retail today is represented by several companies that differ in the level of coverage of the geographical location. In this case, it is advisable to bring cases of dominants of the food retail market – network trading companies of national and regional coverage to demonstrate the integration of their trading activities into the overall process of Russia’s inclusion in the conditions of the digital economy.

Thus, the first place in terms of retail revenue and the number of retail enterprises belongs to the national retail network “X5 Retail Group”, which today unites more than 13000 trading companies (according to the company's analytical reports), operating in the formats of a soft discounter, hypermarket and supermarket. At the end of 2017 the company X5 Retail Group later had a mobile application that was unique for each of the formats – “Pyaterochka”, “Perekrestok”, “Karusel”. This application allowed the buyer to identify themselves using a loyalty card, it was now in electronic form, receiving special offers and recommendations on products, prices, and so on [5].

It should be also noted that the company “X5 Retail Group” is the leader in the introduction of various kinds of digital and technological innovations, one of the first, for example, introducing artificial intelligence systems in the management of merchandising processes in stores, based on the system of so-called Big Data, even a separate division in the company structure that accumulates and processes these data, contributing to increased monetization from the business processes in which they are used directly.

Other examples of companies that use online stores in offline food trading processes are the regional retail chains - “Azbuka Vkusa” and “Vkusvill”. It should be noted that both companies have mobile applications for customers, allowing them to make various manipulations with the loyalty card. The “Azbuka Vkusa”, working in the format of a supermarket, uses rather widely the orders and orders in its trading activity, organizing the delivery of courier forwarders on a fee basis. This sales channel in this case is successful and contributes to the development of the company's overall turnover. With regard to the previously mentioned regional trading network “Vkusvill”, specializing in the implementation of fresh and ultra-fresh food products, it should be noted that the issues of using digital technologies are being given quite active and close attention.

Returning to the issues of introduction of the Internet trade into food retailing, it should be noted that in there are also cases of companies that from the very beginning formed a model of Internet operators the regional retail and did not have their own real store format. These market participants include the trading company “Utkonos”, operating in the format of a food hypermarket in Moscow, for instance.

Undoubtedly, technological and digital transformation of trade enterprises in the food category of goods is inevitable. However, there are some difficulties on the way of such solutions, which can slow down their implementation and also have a negative impact on the emotional component of the purchase. The point is that clients of trade networks are quite diverse. The target group of consumers is wide, and not all of them are already ready for such a transformation for various reasons.

Among the newest technological solutions used in networked and non-networked food retailing, it is possible to mention the specialized IT platforms for block systems that involve the use of a distributed registering system for tracking and monitoring various trade processes. For example, it allows to identify and track the quality of a certain product, from the collection, processing of raw materials until the product enters the retail trade. In such product categories as, for example, wine, cheeses and others, this system is already actively used. In addition, the processes of building agrologic integrated chains, including all participants in the production and distribution process, also gradually introduce the system of blockchain. A great example of introducing such systems is the Lavka-Lavka company, which also operate with “biocoins”, allowing customers to earn them and then spend.

Thus, after analyzing the current state of Internet trading in the category of food products, it should be concluded that this category is one of the sources of further growth in the volume of trade in the Internet trade in Russia as a whole. The existing food companies (market dominants: retail chains of federal and regional levels and non-network, smaller retailers) have already realized the need and expediency of digital and technological transformation, which elements with adequate choice and variety, can have a positive impact on the growth of sales revenue, marginality of trade business processes, as well as to contribute to more accurate satisfaction of the needs of the target audience.

At the current time, almost every food retail enterprise of a modern format is trying in one way or another to join the general trend of digital transformation of business processes. This transformation is quite natural and correlates with the overall situation of development of retail trade turnover both in real enterprises and through Internet sales. The food category of products, of course, contributes a certain, albeit small contribution to the development of Internet commerce in Russia. Modern, constantly improving digital technologies and tools should be gradually and systematically included in the activities of trading companies of different levels of coverage of the target audience. However, these tools and technologies should be adequately selected taking into account their economic feasibility and readiness for their use by the target audience.

3. Conclusions

As a result of the analysis of digital tools and technologies in the practice of trading activities of enterprises selling food products, we can formulate the following conclusions:

1. Internet trading in Russia has stopped growing at such a staggering pace and demonstrates a decline in growth rates.
2. The reasons for slowing the growth rates of the Internet trading market is the saturation of the market in terms of the non-food category of goods, as well as the inadequate level of coverage by the Internet of regions that could influence the further active growth of Internet sales.
3. The author sees the growth reserves of Internet commerce as the activation of sales of the food category of goods both from existing real-trading companies using an additional sales channel, and Internet operators which organize their trading activities exclusively this way.
4. Almost all participants of the federal food retail, as well as many regional network companies, resort to the use of Internet shops and mobile applications, which is explained by the presence of significant financial and organizational resources that are scarce for smaller companies in the food retail market.
5. Large network trading companies also actively use other digital tools in real trading practice, for example, digital payment systems and terminals, special systems for self-scanning purchases, assistant bots, artificial intelligence systems for tracking planograms and merchandising, and so on.

Distributed registries (platform block systems) are increasingly being introduced into the agrofood sector in order to ensure traceability of product quality and safety, manage loyalty programs with the company's customers or build a chain of interaction with suppliers.

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