Conceptual and strategic framework for the digitalization of modern retail as part of innovative marketing

Irina Krasjuk^{1,}, Marina Yanenko¹, and Elmira Nazarova¹*

¹Peter the Great St. Petersburg Polytechnic University, 29, Polytechnicheskaya, St. Petersburg, 195251, Russia

Abstract. Change of a market situation causes necessity of innovative development of economy that causes necessity in research of methodical bases of formation of innovative activity. In work the questions causing necessity of application of digital technologies in economy are considered. The object of research is digital system of retail. The research is based on application of descriptive-analytical, comparative and other methods necessary for carrying out research in the chosen sphere. The work systematizes the main approaches in the development of the theory of innovation, identified a logical relationship between marketing and innovation activities, identified the priority role of innovation in the formation of consumer value chain. The necessity of digitalization of retail based on the application of innovative marketing tools has been substantiated. The strategic orientation of innovative solutions applying information technologies is proved.

1 Introduction

Changes in the market situation, external environment factors require innovative approaches to strategic planning of marketing activities, including conducting marketing research, development of strategy, product, price, sales policy, improvement of marketing communications.

In conditions of formation of knowledge economy realization of marketing principles should be based on application of new approaches based on digital, information and communication technologies (ICT), innovative marketing tools.

At the same time, despite the large number of publications on marketing, organization of innovative activity, there are very few studies covering the problems of forming innovative marketing strategies and obtaining competitive advantages in the knowledge economy [1]. The development of marketing strategies was discussed in detail in [2], [3], [4], [5], which allowed systematizing and defining the main strategic alternatives. Innovation priorities of economic development in a complex economic situation have been

* Corresponding author: iri-krasjuk@yandex.ru

studied in works [6], [7], [8], [9], the content of which was aimed at updating innovation changes.

The purpose of the present work is that on the basis of research of a place and a role of innovations in development of economy of knowledge to order and develop methodological bases of formation of competitive marketing strategies, to show possibilities of application of marketing tools for increase of competitiveness of the enterprises in the conditions of digital economy. The peculiarity of the approach suggested by the authors was considered in [10], [11] and consists in the following:

Firstly, in the process of marketing researches conducted at the initial stages of development of innovative marketing strategies, it is expedient to consider and study not separate factors of external environment, but the phenomena occurring in the sphere of business interests of the enterprise. These may be both general economic phenomena (e.g. crisis phenomena in economy, globalization, innovative development) and local, typical for one or several branches (e.g. Internet of things, cloud services, mobile technologies). At the same time, it should be taken into account that certain phenomena can be sources and initiators of a chain of changes both on individual markets and in the economy as a whole.

Secondly, when developing and adjusting marketing strategies, it is necessary to be guided by innovative scenarios of science, technology and technology development developed and published by research centers, consulting companies, and world market leaders. It is necessary to pay special attention to scenarios and programs of innovative development. It allows to define a place of the enterprise in the innovative environment of the country, branch, region, and also to position it concerning other participants of the market.

Thirdly, the implementation of newly developed or amended marketing programs is impossible without the use of competitive marketing tools to improve interaction with the contact audience. It allows obtaining competitive advantages through the use of digital technologies, geolocation services, new data processing technologies, Internet of things, etc. in marketing activities.

Distinctive features of the offered approach are clear definition of a role and a place of the enterprise in world and Russian innovative process; possibility of transition to strategy of the technological leader with reception of corresponding competitive and economic advantages; maintenance of competitiveness at the expense of application of innovative digital tools in the decision of marketing problems.

The analysis of the published works carried out by the authors shows that at present there is no complete system of forming innovative marketing strategies of modern retail [12], [13], [14], [15].

The authors believe that in the context of globalization and digital development, knowledge-based services, ICTs, play an increasing role. Such services create new markets, new needs and new opportunities for business development, which should be reflected in marketing programs being developed. One of the most important tasks is theoretical methodological comprehension of the use of mobile devices in business, creation of marketing tools, development of training programs for marketing specialists who have skills in mobile environment and are able to use digital technologies in their professional activity.

2 Methods

To solve this problem, methods of general scientific knowledge, such as observation, analysis, comparison, description, as well as systematization, classification, deduction, and analogy are used. The research is based on the application of descriptive-analytical,

comparative, method of semantic and structural analysis, method of monitoring the content of the terminology of theoretical and applied works in the field chosen for research.

2.1 The role and place of innovation in the development of modern retail

In the context of globalization, innovation enables us to secure a leading position in global commodity markets and obtain solid financial dividends through the introduction of new technologies. Therefore, developed countries are purposefully supporting innovation processes. New or improved technologies containing advanced knowledge or solutions account for up to 80% of GDP growth in developed countries.

In the current environment, the transition to an innovative development model is a necessary strategic choice, which in the medium term can contribute to the structural transformation of industry and the saturation of the market with competitive products. In the long term, such a strategy should help Russia regain its position in the community of developed countries.

J. Schumpeter interprets innovation as "a change to introduce and use new types of consumer goods, new production and transport vehicles, markets and forms of organization in industry. According to J. Schumpeter, innovation is the main source of profit: "profit is essentially the result of new combinations", "without development there is no profit, without development". [16].

By now, the term "innovation" is firmly established in economic science. Two approaches to the definition of the essence of innovation are most common in the economic literature: in one case, innovation is presented as a process of introducing new, effective products, elements and principles instead of existing ones; in the other case, it is presented as a result of a creative process in the form of new, progressive products (technology), technology and method.

Basic science acts as a generator of ideas, opens new directions in the field of knowledge and indirectly leads to the emergence of new products. Innovation is the process of transforming scientific knowledge into innovation. Retail trade is a sphere - secondary innovations. The formation of new needs leads to the creation of new goods, the use of innovative sales technologies, transformation of trade business based on the individualization of needs, consumer participation in the value chain [16,17]. Marketing approach to innovation management in trade provides an opportunity to improve the quality of trade and technological process organization, to reorganize the nature of relationships within the supply chain, which will lead to changes in supply chain management. The innovative activity of enterprises leads to the use of innovative marketing tools, which not only makes it possible to track the emergence of innovative products, goods and services, but also to create conditions for active consumer participation in the innovation process.

2.2 Digital activity in retail trade

The modern stage of economic and social development is characterized by the rapidly growing importance of the latest information and communication technologies. This is due to the transition to a post-industrial society and the formation of an information economy. The introduction of Internet technologies into innovation management at the stage of marketing research will contribute to faster creation of new goods and services [18, 19].

Retail trade is one of the fastest growing segments of the economy with fast digital solutions. Escalation of digital products covering the trade processes of mills is the main tool for attracting consumers and improving business efficiency. Figure 1 shows the level of digital activity of retailers in 2018.

Fig. 1. Level of digital activity of retailers (as a percentage of the total number of organizations)

The implementation of Internet technologies simultaneously contributes to the development of the information and telecommunication system and improves the efficiency of innovation management. Efficiency of Internet technologies implementation is conditioned by the following factors: cost saving, interactivity, ability to serve a large number of clients, global presence and others [20, 21, 22].

In Russian retail, as well as in the world, there is a constant growth of digitalization rates. This is due to the fact that more and more consumers are actively using digital technologies in order to meet their preferences and successfully compete in the market, it is also necessary to introduce and apply modern technological solutions. The Russian retail market is characterized by innovative activity. The key trends that have changed the global retail market, namely Big Data, Artificial Intelligence, augmented reality, and Blockchain, have also found application in the Russian market.

Two key trends can be identified for the digitalization of Russian retail: the active use of modern technologies and the desire for in-depth analysis of the audience. These trends are interconnected: technological retail facilities attract modern consumers, which are distinguished by their desire for development, and based on the analysis of visitors, areas of their attention and ways of moving, the targeted and more effective offer is formed. Digital systems make it possible to accumulate information about consumers, track the history of purchases, analyze demand and remain in demand for customers. Four fundamental areas of digitalization in retail can be identified:

- work with consumers, including all stages from the interest in the trademark to the moment of purchase;
- ensuring operational efficiency, including personnel efficiency, work with products, price tags, product display, etc.;
- logistics and control of product delivery;
- control of IT infrastructure and security system operation.

The leader of digitalization is Internet commerce, which is actively developing and increasing volumes, which necessitates the development of strategic marketing programs, the concept of which is based on the marketing of relationships. This situation is typical not only for the Russian, but also for the world market. Digitalization of business processes allows trade enterprises to hold their positions on the market. The system nature of digitalization determines the necessity to develop a conceptual and strategic framework of activity, to determine the role and place of innovative marketing in the formation of development strategy, which subsequently leads to the application of innovative digital solutions, revision of traditional business models, changing relationships with consumers and the business community.

Digitalization is affecting different areas of activity and will accelerate in the near future. The key element of companies' activity is innovative marketing, which provides the use of information technology to carry out innovative activities, it defines the contours of strategic management, forms the conceptual and strategic directions of digitalization.

3 Conclusions

1. In the conditions of globalization the actualization of issues related to the implementation of the knowledge economy becomes more important. Definition of innovative priorities of development of economy, transition to innovative model of development causes necessity of application of marketing, use of modern digital technologies for business development.

2. Methodological comprehension of the theory and practice of innovative activity determines the necessity of application of instruments of innovative marketing, creates conditions for formation of new needs, development of new markets. The marketing approach to innovation management provides an opportunity to improve the quality of goods supply organization, to reorganize the nature of relationships within the supply chain, which leads to changes in supply chain management and justifies the use of innovative marketing.

3. Digitalization of economy is caused by innovative character of development, application of information technologies allows the enterprises to provide leading positions in the market, promotes realization of innovative decisions and application of tools of innovative marketing that allows to define conceptual and strategic bases of digitalization of modern retail as a component of innovative marketing.

References

1. S. Krasnov, S. Sergeev, N. Mukhanova, 2017 6th International Conference on Reliability, Infocom Technologies and Optimization: Trends and Future Directions, ICRITO 2017 (2018).
2. V.A. Bondarenko, I.N. Efremenko, V.A. Larionov, International Journal of Economics & Business Administration, **7(1)**, 388-394, 2019. <https://www.ijeba.com/journal/283>
3. V.A. Bondarenko, S.N. Dianova, T.A. Joom, M.A. Dubinina, European Research Studies Journal, T. 21, 1, 51-62 (2018). <https://www.ersj.eu/journal/1216>
4. V.A. Bondarenko, A.A. Remeta, D.P. Reva, T. Suryanto, European Research Studies Journal, **21(2)**, 246-252 (2018). <https://www.ersj.eu/journal/1234>
5. I.N. Efremenko, V.A. Bondarenko, A.Ya. Palant, G.V. Nazarenko, *Specific Features of State Regulation of Operations with Cryptocurrencies in the Conditions of Digitalization International*

6. S. Krymov, M. Kolgan, S. Suvorova, O. Martynenko, *IOP Conference Series: Materials Science and Engineering* (2019).
7. S. Krymov, M. Kolgan, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020* (2019).
8. S.Makarenko, N.Sukhina, S.Krymov, S.Martynenko, A.Adamenko, (2018) Testing economic systems of capitalist countries by the world economic crisis Espacios
9. S. Krymov, I. Kapustina, M. Kolgan, *Proceedings of 2017 IEEE 6th Forum Strategic Partnership of Universities and Enterprises of Hi-Tech Branches (Science. Education. Innovations)*, SPUE 2017 (2017).
10. M. Ianenko, M. Stepanov, S. Iliashenko, *IOP Conference Series: Materials Science and Engineering*, 012119 (2019).
11. I. Krasnyuk, T. Kirillova, V. Bakharev, B. Lyamin, *IOP Conference Series: Materials Science and Engineering* (2019).
12. M. Kolgan, I. Moshkin, E. Nazarova, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020* (2019).
13. S. Reznichenko, N. Vasilieva, R. Shichiyakh, Y. Medvedeva, Y. Mindlin, *International Journal of Economics and Financial Issues* (2016).
14. Y. Medvedeva, A. Barbaruk, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020* (2019).
15. I. Kapustina, T. Pereverzeva, T. Stepanova, I. Rusu, *IOP Conference Series: Materials Science and Engineering*, 012120 (2019).
16. M.M. Smirnova, V.A. Rebiazina, & S.G. Khomich, *Industrial Marketing Management*, **74**, 126-137 (2018).
17. M.M. Smirnova, V.A. Rebiazina, & J. Frösén, *Journal of Business Research*, **86**, 457-467 (2018).
18. M. Pasholikov, G. Dudakov, *33rd IBIMA conference*, pp. 4198-4206, (Granada, Spain. 2019).
19. L. Desfontaines, E. Korchagina, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020*, pp. 2216-2221 (Granada; Spain, 2019).
20. E. Konnikov, O. Konnikova, V. Leventsov, *IOP Conference Series: Materials Science and Engineering* (2019).
21. T. Nekrasova, V. Leventsov, V. Gluhov, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (2019).
22. V. Gluhov, V. Leventsov, A. Radaev, N. Nikolaevskiy, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (2018).