

Directions for the distribution channels' transformation in the context of digitalization based on relationship marketing

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Abstract. Modern trends associated with increased requirements for the innovative development of enterprises and the use of new digital technologies and changes in consumer behaviour have destroyed traditional distribution chains, which entailed problems in the distribution of products and services during the transformation of market relations. The main goal of this study is to identify and structure the conditions and criteria for integration into the chain of interaction between the manufacturer and the consumer, taking into account digital changes. To do this, within the framework of the theoretical component, we analyze conceptual and empirical articles contained in the Web of Science database, as well as information obtained from the study of articles by Russian academicians in specialized journals, monographs and conference abstracts. We propose to build the empirical component of the article through a threefold conceptual framework to summarize research in this area. Our starting point is identified as associated triggers. This allows enterprise decision-making criteria to be put forward to evaluate different distribution channel options and opportunities for integration. The results obtained in the course of the study provide a deepening of knowledge about the factors that configure the integration of the distribution system, principles of interaction between the subjects of distribution and the corresponding tools to unite interests. In addition, the relationships and connections established among the participants in digital ecosystems are constantly evolving, therefore the study will be able to show the relationship dynamics and help to analyze the development of interaction over time.

1 Introduction

In the course of digital transformation, distribution channel relationships are undergoing a fundamental transformation. This is due to fact that the spread of information technology has an impact on all market participants: before the digital transformation took place, the product used to go through all the links of the value chain in the traditional way — from industrial production and through wholesale to retail — and only after that it could reach

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the end consumer. However, with the increasing digital transformation and widespread use of information technology, this traditional form of value creation based on the division of labour has undergone significant changes.

For this reason, the issues of rationalizing and optimizing the interaction of distribution participants, taking into account digital transformation, come to the fore today. The authors of the study have concluded that it is economically feasible to combine the manufacturer, the consumer and the accompanying set of enterprises that participate in the process of creating product value into a single system capable of personalizing the product and optimizing interaction in the value supply chain based on digital technologies. The purpose of this study is to substantiate the conditions and criteria necessary to create a unified digital business ecosystem, and to demonstrate its economic benefits.

2 Materials and methods

Analyzing the role of interaction with partners in their studies, F. Kotler and R. Akrol describe the practice of long-term mutually beneficial cooperation with key partners of the company (consumers, suppliers, distributors) focused on establishing long-term privileged relationships.

In his turn, A. Palmer proposed to classify the directions of relationship management with partners in the field of marketing as follows: tactical relationship management, which involves the use of marketing promotion tools; strategic relationship management, which involves the support and development of relationships between partners depending on efficiency factors; philosophical relationship management, which involves the implementation of interaction taking into account a philosophical and intuitive understanding of activities, as well as the creation of a special atmosphere between market participants.

The choice of corporate companies for joint activities in making business decisions is actively used. As a consequence, companies are even beginning to purposely look for suitable new businesses for partnering projects so that a larger company can profit from entrepreneurial rhythm and creativity, innovative solutions and talent [1]. Small businesses, meanwhile, look to capitalize on the resources of large companies and access to customers. Thus, both actors have good reasons to enter into mutually beneficial partnerships [2, 3]. Various studies do not consider the potential of independent entrepreneurs who can serve as serious and promising innovation partners [4] alongside traditional partners such as customers, suppliers, wholesalers and retailers [5]. Researchers tend to focus on the activities of large companies and their collective behaviour in developing the interaction of existing partnerships to make them more efficient. In order to improve the quality and quantity of promising joint projects with auspicious enterprises, large companies generally need to understand how they work and, in particular, to assess the prospects of entrepreneurs — this is an understanding that should encompass entrepreneurial decision-making behaviour based on choice of partners. Some Russian academicians associate the prospects to improve the innovative products' commercialization process in modern Russia with the creation of business accelerators [6].

The entrepreneur's perspective in this situation should be based on a compromise [7] between the choice of growth opportunities, or dependence, and the loss of intellectual property. If we link these specific aspects with entrepreneurial decision-making behaviour based on the existing findings in the entrepreneurial decision-making publications, it will become clear that to fully understand the assessment of entrepreneurial activity (seizing opportunities through partnerships) researchers should take into account not only the activity itself and the specific context of entrepreneurial decision-making (e.g., industry or collaborative/competitive factors), but also general characteristics of entrepreneurs, such as

experience, thinking and entrepreneurial self-efficacy [8]. In particular, the relationship between self-efficacy and the diversity of entrepreneurial solutions for entrepreneurial activity and tasks remains poorly understood, although some effects have been described in academic literature [9]. These gaps in entrepreneurship, innovation management, and attitudes lead us to the exploratory question of what exactly will push businesses to enter into partnerships.

Direct interaction between the closest link levels of the distribution channel is popular in Russia. Meanwhile, practical experience in this area is still not extensive. The spread can be observed in joint global projects implemented by large foreign companies, such as Danone, Nestle, P&G, Unilever, etc., and not by purely Russian partnership initiatives. The reasons for such an insufficient development of co-creation in the existing Russian conditions are threefold.

The first reason is the distribution chains' structure characterized by a variety of all types of market players. This is due to the focal location of large manufacturers in a geographically extended territory. As a result, when organizing a channel, the geographical component creates many intermediate participants, cooperation with whom is one-time and strategically ineffective.

The second reason is business culture. Co-competition assumes that all parties of the business combination strive to optimize not only their own processes, but also those of their counterparties in the distribution chain, and not to oust business competitors.

And the third reason is the impossibility to fully organize effective interaction within the distribution network due to insufficient information and technical support of the participants and their unwillingness to develop in this direction.

Statistical data for 2015–2019 show that organizations of various types of economic activities in general are increasing their digital potential. The group of leaders, as expected, includes organizations in the telecommunications and IT industries that create conditions to digitalize other sectors of the economy and the social sphere (Table 1.). Some digital practices have become not only more in demand in modern conditions, but have also managed to almost completely replace traditional methods of action. Even after the removal of the main restrictions in 2021, representatives of the Internet audience preferred to use digital services to search for information (the digitalization index value is shown in the Figure 1).

Table 1. Dynamics of the main indicators of innovation activity in the field of telecommunications and information technology.

Parameters	2017	2018	2019	2020	2021
The level of innovation activity of organizations, %	12.4	9.5	9.8	12.2	12.2
Costs of innovative activity, million rubles: in current prices at constant prices in 2010	55565.9	61734.7	100958.0	104003.4	147312.9
in constant prices of 2010	33511.8	33847.6	53584.2	54816.5	66645.4
as a percentage of the total volume of goods shipped, works performed, services	2.4	2.6	3.2	2.8	3.3
Volume of innovative goods, works, services, million rubles: in current prices	111254.6	138610.7	200311.3	222389.1	370602.1
in constant prices of 2010	67097.7	75996.9	106316.7	117213.5	167662.9
as a percentage of the total volume of goods shipped, works performed, services	4.8	5.7	6.4	6.0	8.3

Distribution channels are changing, profitability zones are shifting, and new players appear on the market. All this fundamentally changes the balance of power in industries significantly accelerating the introduction of new business models. Involvement in

universal digitalization leads to changes in all spheres of activity. Many new companies appear, while the leaders are those enterprises that build their organizational and economic ties taking into account the requirements of digital trends.

Due to the changed conditions, the product distribution can no longer be characterized only by direct relationships. Therefore, the interaction process should be revised: the continuous reduction of transaction costs makes it possible to transform the classical functions of distribution channels. At the same time, companies that specialize in providing systems and processes necessary to cover these functions are increasingly coming to the fore. Delivery services, payment service providers, e-commerce software providers, marketplaces, etc. are emerging to enter the market as new intermediaries. However, the main requirement for product value creation remains adaptation to the changing needs of customers, as well as to technological developments and capabilities of enterprises, and to the conditions of a competitive environment in the market. Distribution participants are aware of the benefits that arise from integrating the value chain and the emergence of direct interaction with the consumer [10, 11]. Such a shift in functions leads to the fact that enterprises united into a value chain can be considered not with regard to institutions, but according to the functions performed. The latter are characteristic of a certain unified system of interconnected enterprises, i.e., an ecosystem.

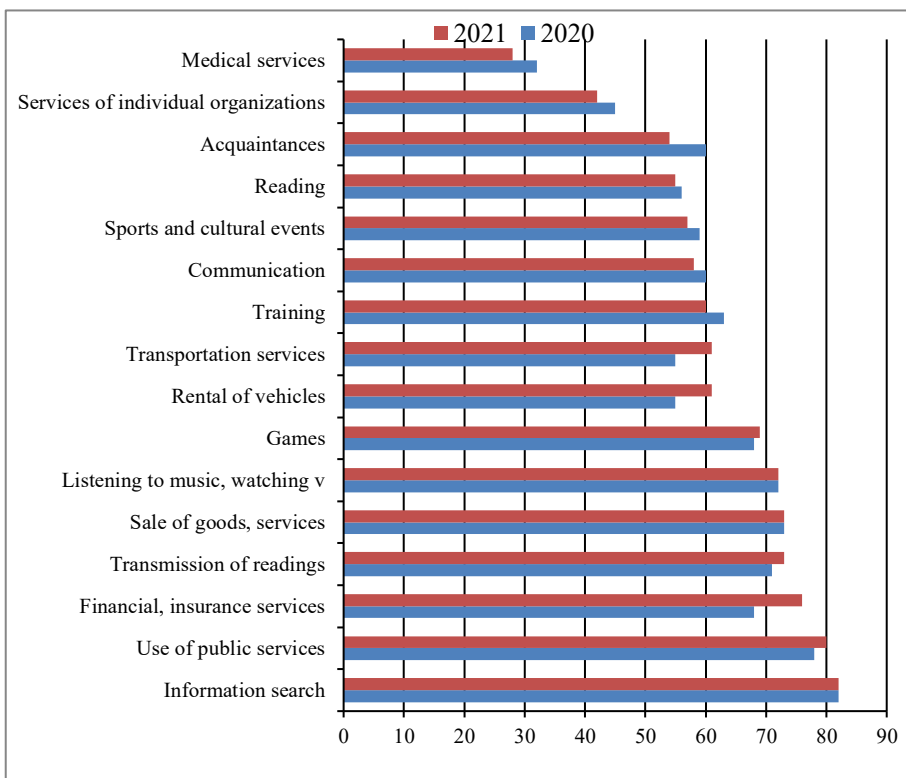


Fig. 1. Index of digitalization of social practices of Internet users in 2020-2021.

Unlike a simple business ecosystem, a digital ecosystem allows you to automate various processes and to simplify the full-fledged communication interaction of all participants, which contributes to the increased economic efficiency of the jointly obtained results [12].

In order to transform the circulation processes in the new contexts of technological innovation, globalization, turbulent and digital nature of economic development, it is

necessary to carry out the activities of the enterprise exclusively by informatization of its organizational and economic instruments and by distributing tasks in business ecosystems, thereby creating a co-competitive digital environment. The current stage in the development of economic relations shows the need to transform traditional distribution systems into more integrated structures, such as digital ecosystems.

3 Results and discussions

Maintaining competitiveness within integrated distribution systems in digital markets largely depends on increasing operational efficiency, which is obtained by optimizing distribution processes and involving the necessary market counterparties in the focal area of the digital ecosystem.

In this regard, the decision-making dilemma will be how to choose partners for integration into a digital ecosystem and how to involve the necessary market counterparties in the sphere of its interests.

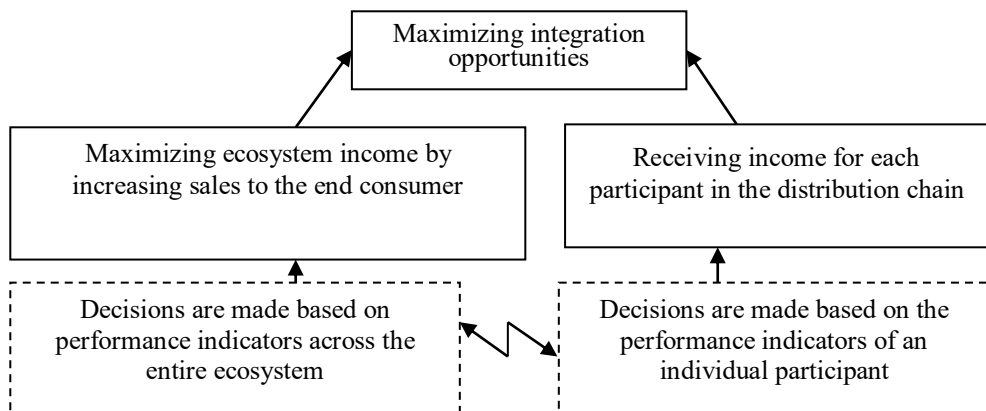


Fig. 2. Acceptance scheme of the conflict caused by distribution chain participants' choice of interests [compiled from source 13].

Figure 2 illustrates alternatives for the conflict in which distribution chain participants choose their interests in favour of one enterprise or the entire ecosystem.

As global economic activity intensifies and trade barriers decline, the creation of viable strategic alliances in the high-tech industry is gaining in importance and accelerating as needed. However, choosing the right partner to create a distribution system is not an easy decision due to a number of complex considerations [14].

The decision to cooperate in a mutually beneficial distribution chain takes a positive turn when the company sees benefits that exceed the required costs and efforts, and draws up strategic and operational initiatives that will be based on certain selection criteria and used to choose a partner.

Mandatory criteria for choosing a partner include the product specifics as well as the specifics of doing business and the existence of a certain competition, which forces market participants to look for more sophisticated ways to improve the efficiency of their activities. To have a clearer idea of it and to devise the integration program principles, it is necessary to understand the specifics of the modern companies' operation environment. Let us consider the way how the commodity circulation process is implemented in modern conditions using case stories of dairy industry enterprises.

E.g., if we consider the “specificity of products” criterion within the dairy industry framework, we should take into account exactly the characteristics of the dairy subcomplex. Milk is a valuable food product, which is in demand among various groups of consumers, therefore there is a wide range of dairy and sour milk products, curd products, cheeses, etc. [15]. The given specificity implies the idea that these categories of goods should be managed as business units and customized in each store to meet the buyer’s needs. This approach transforms the relationship between sellers and purchasers, uniting them, securing responsibility for a small section of business in a large enterprise. Hence the need for product range research methods that will take into account the realities of business units.

The “specificity of the enterprise’s activities” criterion for the industry in question means that the product is perishable, and its transportation should be fast in order to minimize the amount of expired products. Therefore, the company cannot afford to spend one or two days on logistic operations (acceptance to a warehouse, creation of a batch, delivery to points of sale). In this regard, only enterprises that are able to flexibly respond to the operational requests of the system and to fulfill the established priority of shipments to points of sale can be suitable for integration.

The “share of participant’s sales/purchases” criterion is critically important at the stage of selection, since successful cooperation still further requires the connection of small counterparties to the common system. For dairy products, an important component of this criterion is the volume of write-offs by expiration date, which characterizes the frequency of sales in a short period.

The “frequency of operations” criterion is a necessary condition for the distribution of products between outlets. To work with suppliers, a company that sells dairy products might have to comply with the following conditions:

- 1) the maximum possible frequency of deliveries (preferably every day);
- 2) the ability to place an order as late as possible (preferably one or two days before delivery).

The first point involves an increase in the product turnover: it is easier to completely sell each batch before the product expires. The second point allows you to take into account the latest consumption trends, which depend on many factors in retail, and sometimes are absolutely unpredictable [16].

4 Conclusions

Various methodologies are available for organizing interaction of participants and potential actors of the distribution channel in integrated marketing systems. These methods can differ in the level of openness, “toughness” of competition within the channel, approach to determining the market share of each of the participants as well as in the market specifics, mentality and readiness for constant updates on an innovative platform. This entails a mechanism to select participants, who might be involved on a voluntary basis or through takeover.

In recent decades, the global economy has undergone profound changes as a result of the increasingly widespread use of supply chain management [17, 18]. Due to the changed conditions, the product distribution can no longer be characterized only by direct relationships. Therefore, the interaction process should be revised both by continuously reducing transaction costs (it is possible to transform the classical functions of distribution channels), and by more involvement of companies that specialize in providing the necessary services to cover additional functions of distribution systems and their processes. Delivery services, payment service providers, e-commerce software providers, marketplaces, etc. are emerging to enter the market as new intermediaries. However, the main requirement for product value creation remains adaptation to the changing needs of

customers, as well as to technological developments and capabilities of enterprises, and to the conditions of a competitive environment in the market. Distribution participants are aware of the benefits that arise from integrating the value chain and the emergence of direct interaction with the consumer. Such a shift in functions leads to the fact that enterprises united into a value chain can be considered not with regard to institutions, but according to the functions performed. The latter are characteristic of a certain unified system of interconnected enterprises, i.e. an ecosystem. For this reason, a wide range of issues arises, the most important of which is how to rationalize and optimize the interaction of distribution participants, taking into account digital transformation.

References

1. L. P. Sommer, S. Heidenreich, and M. Handrich, *R&D Management* **47(2)**, 299–310 (2017)
2. J.E. Forrest, M. J. C. Martin, *R&D Management* **22(1)**, 41–54 (1992)
3. T. Weiblen, H. W. Chesbrough, *California Management Review* **57(2)**, 66–90 (2015)
4. R. F. Hébert, A.N. Link, *The Journal of Technology Transfer* **31(5)**, 589–597 (2006)
5. J.-C. Spender, V. Corvello, M. Grimaldi, and P. Rippa, *European Journal of Innovation Management* **20(1)**, 4–30 (2017)
6. B. C. Meskhi, M. A. Izotov, Y. S. Knyazeva, T. V. Simonyan, *Espacios* **39(1)**, 4 (2018)
7. S. Alvarez, J.B. Barney, *The Academy of Management Executive* **15(1)**, 139–148 (2001)
8. D. A. Shepherd, H. Patzelt, and R. A. Baron, *Academy of Management Journal* **56(5)**, 1251–1273 (2013)
9. G. Cassar, Henry Friedman, *Strategic Entrepreneurship Journal* **3(3)**, 241–260 (2009)
10. E. V. Dudukalov, I. V. Terenina, M. V. Perova, D. Ushakov, *E3S Web of Conferences* **244**, 08020 (2021)
11. I. V. Terenina, D. D. Kostoglodov, I. O. Protsenko, *Advances in Economics, Business and Management Research.*, In Proceedings of the International Conference on Economics, Management and Technologies 2020 (ICEMT 2020), 511–516 (2020)
12. M. Schrieck, T. Riasanow, D. Setzke et al., *Electronic Markets* **30(1)**, 87-98 (2020)
13. A. Shipilov, A. Gawer, *Academy of Management Annals* **14(1)**, 92-121 (2020)
14. W. Y. Wu, H.-A. Shih, H.-C. Chan, *Expert Systems with Applications* **36(3)**, Part 1, 4646–4653 (2009)
15. M. G. Jacobides, C. Cennamo, A. Gawer, *Strategic Management Journal* **39 (8)**, 2255-2276 (2018)
16. L. Aarikka-Stenroos, P. Ritala, *Industrial Marketing Management* **67**, 23-36 (2017)
17. V. V. Rokotyanskaya, S. N. Tsvetcova, A. Yu. Usanov, I. N. Lenkov, E. L. Kulyakina, *International Journal of Supply Chain Management* **9(2)**, 731–744 (2020)
18. M. V. Rossinskaya, S. N. Tsvetcova, V. V. Rokotyanskaya, S. A. Bayzulaev, M.R. Zakhokhova, *Espacios* **39(27)** (2018)