Warehouse Services: Content, Types, Development Trends

N. I. Voitkevich\(^1\) and T. I. Solunina\(^2\)

\(^1\) Samara State University of Economics, Samara, Russia
\(\text{VNI63@list.ru}\)

\(^2\) Samara National Research University, Samara, Russia
\(\text{tsolunina@yandex.ru}\)

Abstract. The article analyzes the content of warehouse services as a special type of business services that have specific characteristics and common types of services. Individual components of warehouse services are described: logistics, marketing, information, credit and financial, and production. The content of the activities of service organizations, operators of warehouse services, is released. The study highlights the growth of the market, changes in the structure of demand, insufficient development of warehouse outsourcing and complex warehouse services as the main trends in the warehouse services market. The evaluation of the current condition of the warehouse property market that determines the quantity and quality of storage services, the focus is on the development of new warehouses formats (wholesale distribution centers, self-storage warehouses and warehouses of “last mile”), a significant part of “custom” warehouses marked as a trend.

Keywords: Outsourcing · Trends in the market of warehouse services · Warehouse real estate

1 Introduction

With the development of entrepreneurship and in the course of market transformations in the Russian economy, the service sector has rapidly developed, including the market for transport and logistics services, which is dominated by cargo transportation, forwarding and warehouse leasing, and the share of complex logistics services is only 8%. The same indicator for EU countries is 19% \(^2\). The average annual growth rate of the Russian market of transport and logistics services for the period 2017–2020 may be 7.5%. Part of the transport and logistics market is the warehouse services market, its share is only 3% \(^2\), but it is fundamentally important for the development of the country’s economy.

In the works of Russian and foreign scientists, insufficient attention is paid to the study of warehouse services. In most scientific works, these services are considered exclusively as logistics. As a result, certain types of services that are currently provided by warehouse complexes and complement the main warehouse services are ignored, which does not allow to fully use the potential for improving this type of service in practice. In addition, scientific publications did not adequately reflect the development
of new formats of warehouse real estate, which determine the development of the market and the expansion of the capabilities of service organizations specializing in warehouse services. The purpose of this article is to develop the theory of warehouse services for enterprises and organizations by analyzing the development of its new forms. To achieve this goal, you need to solve the following tasks:

- highlight the main characteristics of the warehouse service and clarify the content of warehouse services,
- show the components of the warehouse service content,
- identify the main trends in the warehouse services market,
- demonstrate new formats of warehouse real estate and types of warehouse operators’ services for the Russian market.

2 Methodology

The research is based on such conceptual bases as service, business service, and outsourcing. A service is considered as an action, a benefit provided in the form of an activity or short-term use of a material value (lease); a business service is a service that is provided to enterprises and organizations, is an economic good and has an impact on the growth of the customer’s capital and improving the efficiency of its activities. Outsourcing is the transfer (partially or completely) to external organizations on a contractual basis of functions that were previously performed by the organization on its own. When studying the warehouse services market, a systematic approach was used, in particular, the warehouse real estate sector was considered from the standpoint of a systematic approach. The analysis of the state and development of warehouse real estate was also carried out using the method of multidimensional segmentation, which is widely used in marketing. This allowed us to identify promising and growing segments of warehouse real estate.

The main method of research was a theoretical method that allowed us to objectively assess the features and content of warehouse services based on the use of methods of abstraction, analysis and synthesis, generalization, conceptual and terminological, as well as the use of an empirical method of comparison. The research is based on the works of Russian and foreign authors, practical experience of service organizations that provide warehouse services. The dialectical combination of quantitative and qualitative assessments of the development of the warehouse services market made it possible to identify its main problems.

3 Results

Warehouse services are understood as work or actions related to the formation and organization of the movement of goods flows, as well as providing customers with conditions for performing these works on their own (such conditions are the leasing of warehouse premises). The characteristics of warehouse services, as any type of service, are their immateriality, impossibility of storage, impermanence of quality and
inseparability from the source of provision. At the same time, they have a number of specific characteristics: they are provided mainly in the business market, meet the production needs of customers in various sectors of the economy, have a positive impact on the efficiency of consumers (customers), the volume and quality of warehouse services directly depend on the development of warehouse infrastructure [2, 6, 8, 12]. Warehouse real estate allows you to carry out interrelated operations that ensure the safety of inventory during their movement in the distribution channels, and increase their readiness for production consumption or for sale. Recently, there has been a steady growth trend in the Russian warehouse real estate market, which is most actively developing in the Moscow region and St. Petersburg.

In the Moscow region, a record number of warehouses were put into operation in 2019: 957,000 sq. m. or 19% more than in 2018 (805,000 sq. m.). In total, the region now has more than 15 million square meters of high-quality warehouse real estate. In other Russian regions, 995,000 sq. m. of A and B classes warehouses were rented and purchased, demand reached a 10-year maximum [9].

The coronavirus pandemic did not have a devastating impact on the warehouse real estate market due to increased demand for warehouse services from grocery operators and e-commerce. However, in the first half of 2020, only 132 thousand sq. m. of warehouses were commissioned in the Moscow region, which is 53% less than in the same period of 2019. According to experts, the volume of new construction by the end of 2020 will reach 560 thousand sq. m. It is 30% less than it was introduced in 2019 [5]. The main share of demand for warehouse spaces in the first half of 2020 was accounted for retail chains, online retailers and logistics operators. The vacancy rate in the first half of 2020 was 3.2% [9].

In the capital region, the number of projects for a specific tenant and the number of areas leased/purchased at the construction stage has increased significantly. According to the forecasts of market operators, in the future, the construction of new warehouse areas will be mainly based on the built-to-suit (BTS) scheme, i.e. construction taking into account the individual requirements of the customer. In the regions of Russia there is a predominance of the speculative construction of warehouses. Taking into account the shortage of warehouse centers with multi-temperature areas, a set of additional services for processing, packaging and storage of products from farms and other agricultural producers, wholesale distribution centers (WDC) are increasingly being built. It is a format of premises where wholesale lots of agricultural products are stored, processed and distributed.

An important innovation for the Moscow market is the construction of warehouses within the city limits or “last mile” warehouses, including multi-storied warehouses that differ from standard class A warehouses, for example, two-stored buildings have access for freight transport to the upper floor. According to experts’ forecasts, the number of “last mile” warehouses will increase in 2020, as there is a significant demand for their services from online retailers and logistics operators serving them [8].

The self storage format is being further developed in Moscow, St. Petersburg, and in other cities with millions of users. The total area of self-storage facilities in Europe as of the end of 2018 is 9.7 million square meters. In the Moscow market, the area of self-storage warehouses is currently approximately 160 thousand square meters, and the share of available space is in the range of 5–15% [8].
One of the trends in the warehouse services market is the development of outsourcing. Outsourcing of warehouse services is not yet fully developed due to the unwillingness of many industrial enterprises to transfer the functions of warehouse supply to third-party organizations. One of the reasons for low development outsourcing is the problem of choice of outsourcing provider, which is evident in the lack of clear mechanisms of systematization and formalization of a set of criteria that should guide companies to customers when choosing a service provider.

4 Discussion

Warehouse services in a number of studies of domestic and foreign scientists are considered as part of transport and logistics services, and this is quite reasonable, since the condition for providing the main types of warehouse services is the availability of material resources and goods in warehouses, where they are imported by transport and then delivered to customers using vehicles [1, 4, 6, 11, 12]. At the same time, warehouse services have nothing in common with transport services in terms of their content and variety of types. They should be considered, studied, monitored and analyzed as an independent market segment.

Of course, the warehouse services of service organizations are based on logistics services provided to industrial or institutional consumers, but in addition to the logistics component, warehouse services include: marketing, information, financial and credit services and services for preparing material resources for consumption. Sharing the point of view of the study authors [11], who reveal the content of warehouse services of an intra-corporate outsourcer and their components, it should be clarified that these components of warehouse services with slight differences are also present in the services of independent service organizations operating on the market.

Thus, logistics services for fulfilling customer orders include: acceptance and processing of customer orders; placing orders with suppliers; storage; inventory management; distribution of resources to customer enterprises; acquisition of delivery or release batches, and, if necessary, delivery of batches of goods to customers. Delivery service is currently an important factor of competitiveness due to the growing demand for services from online commerce.

Information services of a service organization consist in informing customers about the operating mode, terms of lease or provision of other types of services, the terms and frequency of delivery of goods to customers. Marketing services of a service organization should include conducting market research on individual product markets based on customer orders, as well as promotions to stimulate demand for services. Financial and credit servicing of client enterprises consists in providing commodity credit and various payment methods for rendered services. Production services are services for preparing material resources for production consumption: cutting long materials, packaging materials in small containers, forming sets of goods, etc.

When analyzing the development of outsourcing in scientific research, little attention is paid to the segment of warehouse services. In the works of Mustafayeva, Malkarova, Stapran [7, 10] and other scientists, the models and the importance of outsourcing for achieving competitive advantages are considered, but the outsourcing...
of warehouse services is not studied enough. Meanwhile, large Russian and international companies provide warehouse services to industrial enterprises, retail chains, and online commerce on the terms of outsourcing, but not to the same extent as abroad. A new form of outsourcing in Russia – fulfillment – is becoming more and more developed. It involves the fulfillment center performing a complex of operations from the moment the customer places an order to the moment they receive the purchase. The basis of this service are traditional warehouse operations. This service is fulfilled mostly for the online stores in terms of outsourcing. Taking into account the increasing processes of globalization and increasing competition, it is necessary to study the factors that hinder the development of this form of warehouse services [3].

5 Conclusion

Warehouse services of service organizations that are provided to industrial enterprises and organizations in other sectors of the economy are classified as business services in terms of their economic content. The peculiarity of warehouse services is their heterogeneity, and at the same time, their complexity, the close relationship of their individual components (logistics, marketing, information, financial and credit and production), which allows us to talk about the increased value of such services for customers. Warehouse service providers are specialized warehouse operators of logistics services, wholesale intermediaries operating on the market, and service organizations that operate as part of large manufacturing and trading companies.

References

1. Caridade, R., Pereira, T., Pinto Ferreira, L., Silva, F.J.G.: Analysis and optimisation of a logistic warehouse in the automotive industry. Proc. Manuf. 13, 1096–1103 (2017)
2. Dmitriev, A.V.: Problems of increasing the efficiency of warehousing logistics and the features of its formation. Logistic Syst. Global Econ. 7, 127–131 (2017)
3. Ernst, R., Haar, J.: Globalization, Competitiveness, and Governability. The Three Disruptive Forces of Business in the 21st Century. Palgrave Macmillan, London (2019)
4. Hompel, M., Schmidt, T.: Warehouse Management. Automation and Organisation of Warehouse and Order Picking Systems. Springer, Cham (2007)
5. IRN: The commissioning of new warehouses in the Moscow region in the first half of the year decreased by 53% (2020). https://www.irn.ru/news/135787.html. Accessed 07 July 2020
6. Kang, S.: Relative logistics sprawl: measuring changes in the relative distribution from warehouses to logistics businesses and the general population. J. Transp. Geogr. 83, 102636 (2020)
7. Mustafaeva, Z.A., Malkarova, Z.A.: Sourcing tools: status and prospects. Inter. Innov. Res. 4, 86–88 (2018)
8. PWC: New trends in the real estate market 2020. The annual study of the Russian real estate market. https://www.pwc.ru/ru/publications/etre-2020.html. Accessed 06 July 2020 (2020)
9. Samborskaya, O.: Demand for warehouses in Russia reached its maximum level in 10 years (2020). https://www.vedomosti.ru/realty/articles/2020/02/18/823279-spros-skld. Accessed 07 July 2020

10. Stapran, D.A.: Outsourcing relations in economics and entrepreneurship. Spatial Econ. 2, 52–73 (2018)

11. Voitkevich, N.I., Chernova, D.V., Satdinov, N.S.: Warehouse services of an internal corporate outsourcer as a type of business services. Bus. Educ. Law 3(48), 39–44 (2019)

12. Yu, W-H., Chiu, Sh-K., Tung, Ch.M.: The study of evolution among logistic service quality, service compensation and long-term cooperation commitment. Proc. Manuf. 39, 1493–1500 (2019)