

IDENTIFICATION OF PROBLEMATIC ISSUES IN THE FORMATION OF AN EFFECTIVE OPTION FOR THE USE OF MATERIAL RESOURCES IN THE WAREHOUSE

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Globalisation in the global market of economic relations, transformation of existing and creation of new international transport corridors, trade and logistics networks, development of warehouse infrastructure, and expansion of information technology confirm the importance of developing logistics services in the transport market for Ukraine. The global logistics services market is experiencing significant development and is estimated at more than five trillion US dollars, with annual growth of 4-5% [1]. Warehousing systems are one of the most important elements of supply chain logistics. There is an objective need for specially equipped places for storing stocks (goods) at all stages of the material flow, from the primary consumer to the end user. Recently, the real estate market has seen a significant specialisation of warehouse property. Typically, warehouses are part of the infrastructure of the respective enterprises, but in "western" countries there is a segment of individual storage systems that is rapidly developing.

The warehousing services market in any country depends on the development of its economy. Managers of warehousing (logistics) companies ensure the interaction of market participants, build production chains, direct material flows to appropriate storage locations and deliver them to customers in a timely manner. The volume of services provided in the field of logistics directly depends on the appropriate level of activity of their customers, certain dynamics of production, as well as domestic and foreign trade in the country [2, 3, 4]. The future revival of logistics in the transport market will lead to an increase in the corresponding demand for warehouse systems. The post-war increase in trade turnover will lead to an increase in warehouse occupancy and, in the long run, to higher requirements for the use of resources.

It is well known that the logistics component of the structure of the product produced in a country is an important characteristic of the country's development. In the gross domestic product (GDP) in developed countries, the logistics component can be equal to 10-15% (in Europe and the US it is 12-16% of GDP, in China - 26%, and in Japan - 6%). As for Ukraine, most relevant experts compare our country's economy to the level of the Third World, where logistics costs can reach up to 40% of total GDP. In our country, this figure roughly ranges from 30 to 35%. At the same time, transport accounts for 70% of logistics costs (USD 7 billion), warehousing for 25% (USD 2.5 billion) and logistics flow management for about 5% (USD 0.5 billion) [1].

The area of warehouses in Ukraine is about 3 million sq m. Most of the space is concentrated in the regions: Kyiv (23.4%), Lviv (9.1%), Cherkasy (7.6%), Kharkiv (7%), and Dnipro (6.8%) (Fig.1). A significant number of warehouses are former production facilities built before 1991 that do not meet the modern requirements of most consumers [5].

The availability of warehouses for any company is an important factor in the logistics of supplying goods, which is why it is necessary to rebuild and modernise warehouses and introduce resource-saving technologies. The efficiency of inventory management depends on this [6].

In the logistics property market, operators have recently begun to take a more efficient and serious approach to design and construction. Logistics property is one of the most promising real estate sectors. This is due to the following features: Ukraine's geographical location (close to the European market); sufficient pace of business development and e-commerce, growing business activity, shortage of modern warehouse space on the market; projected plans for foreign warehouse operators to enter the Ukrainian market; short payback period for warehouses (up to about seven years) compared to Europe. In European countries, the payback period for this type of facility is approximately 20-25 years. In Ukraine, the relevant costs for the construction of new warehouse real estate are low compared to other facilities, as well as high profitability of warehouses, up to about 18-20% per year [6].

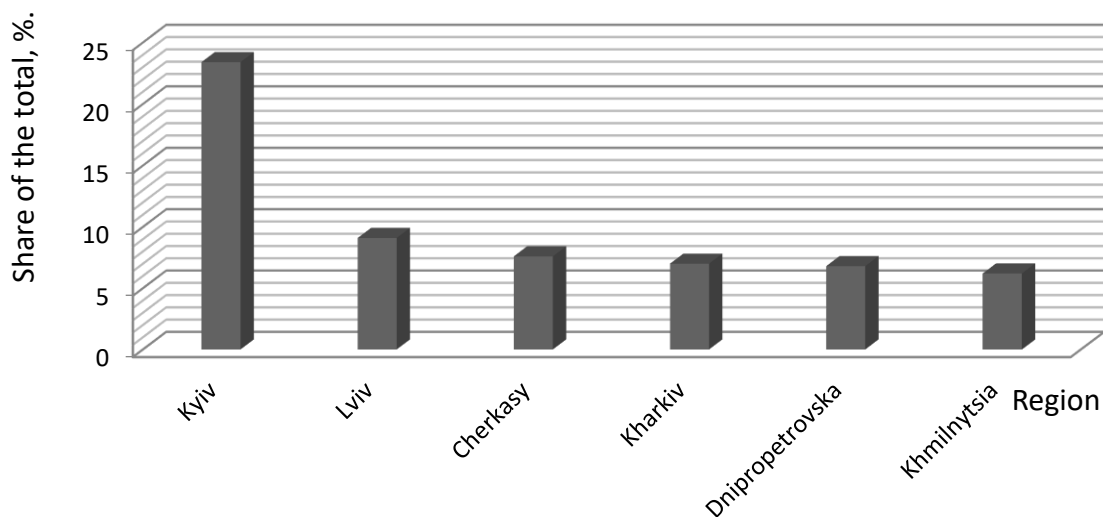


Fig.1. Share of warehouses by regions of Ukraine with a value of more than 5% of the total volume

The development of Ukraine's logistics market has its own distinctive features, which are driven by a number of factors. The warehouse property market can be divided into warehouses and a range of logistics services. Traditional warehouses are gradually losing their relevance. The list of services provided by logistics centres is growing, and the quality of these services is also improving as competition increases. Companies are striving for "multiformity", preferring a warehouse system (complex) that includes production, a certain number of warehouses, as well as office space and parking for commercial vehicles. It should be noted, given the regional specifics, that the commercial warehousing property market is no longer associated exclusively with Kyiv. In general, Ukraine is witnessing an increase in the use of warehousing properties, especially in transit cities [7, 8, 9].

The priority areas for the development of warehousing in the post-war economic environment should include the construction of sufficiently large, high single-storey warehouses according to the most advanced projects and the organisation of integrated warehouses on their basis. Given the dynamics of warehouse logistics development in our country, the participation of warehouse systems in the technology of cargo delivery is justified by: the location of warehouses near existing motorways, major railway stations and airports, in order to take advantage of different modes of transport for the delivery of one consignment; its internal and external cooperation; location outside a large city; concentration of a significant number of warehouses near large cities and cities with growing trends in foreign economic activity [10-15].

It is determined that warehousing service providers in the transport market strive to optimise all types of costs, introduce modern technologies, improve the quality of services, and establish efficient use of resources. The structure of most warehouse systems allows them to provide a wide range of services. The analysis of the technology of transport services provided by warehouse systems operating in Ukraine has revealed shortcomings in its organisation: inefficient use of existing resources (technical means, workers) and restrictions on the use of modern technical means when designing new or modernising old warehouse systems. Scientific theoretical developments on the introduction of modern transport service technologies in the operation of warehouse (terminal) systems have been identified by a number of scientists. In their works, considerable attention was paid to the development of the infrastructure component, solutions to optimisation tasks for building supply logistics, but without determining the optimal values of the parameters of the technology of warehouse systems.

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