

Section 2.

Technical sciences

*Konograi Olga Anatolievna,
the senior lecturer of the Logistics
and commercial operations department
Emperor Alexander I Petersburg
State Transport University*

COMBINED CARGO SERVICE AS A VARIANT OF LOGISTICS DEVELOPMENT IN A CRISIS PERIOD

The relevance of the organization of the combined cargo service is due to the need for cargo delivery by logistics companies in the conditions of the crisis caused by the COVID-19 pandemic. The restoration of the volume of transport services after the crisis associated with restrictive measures due to the COVID-19 pandemic began already in the second half of 2020, currently suspended production is resuming work, delivery of raw materials, components, finished products is required, demand for transportation is growing. It takes time to restore production and transportation volumes to the level of the pre-covid period, now companies are forced to look for opportunities to reduce costs. One of the savings options was the return to the organization of transportation of combined cargoes.

Combined transportation means the transportation of small-sized cargoes of various customers in one direction on one vehicle. Most often these are small transport units that do not exceed the

dimensions of one Euro pallet and weighing no more than 350 kilograms. In railway transport, a consignment that does not require the provision of a separate wagon or container and is presented on a single railway bill of lading is called a small shipment. The abbreviations LTL and LCL are used in the logistics of international and multimodal transport. LTL or “Less than Truck Load”, literally means “partially loaded truck”, the cargo of several customers is transported by road, transportation costs are divided among all customers of the service. LCL or “Less than Container Load” is a partially loaded container, consolidated transportation of several cargoes in one container [4].

Logistics companies organize transportation of combined cargoes:

- consolidate shipments of different customers at their terminal to an economically justified volume of transportation (goods are weighed, are measured, marked, if necessary, additionally packed);
- provide services for the delivery of small-volume shipments over long distances, reducing the possible transport costs of individual shippers: when delivering bulk cargo, the cost is distributed among the senders according to the occupied area and the established tariffs [3];
- arrange delivery to the terminal at the destination using all convenient modes of transport, including multimodal transportation;
- the transport batch is disbanded and the cargo is delivered to the recipients (or the consignee can pick it up independently from the warehouse).

The attractiveness of this delivery option is explained by the requirements of the market during the crisis: the goods must be delivered on time, small and medium-sized companies do not

have the opportunity to accumulate cargo up to the volume of a container (or a whole car), risking losing customers due to long delivery.

Competition with unstable demand is intensifying, the struggle for the customer forces companies to apply new work technologies and use already known ones, such as the transportation of bulk cargoes. One of the ways to reduce costs is to abandon the stocks of products, from the costs of their storage, while raw materials, components or finished products are sent in small batches.

We will highlight the main advantages of the combined cargo service:

- cheaper delivery method (smaller batch, transportation of bulk cargo is cheaper than renting a separate container or a car;
- regular dispatch schedule;
- the possibility of redirecting cargo in transit;
- logistics company solves all transportation issues.

The disadvantages of transportation of combined cargoes include:

- unsecured cargo in terms of quantity and quality due to damage during loading and unloading operations, warehousing, as well as due to the presence of a human factor;
- longer delivery, due to a certain schedule of transportation of combined cargo and the organization of transportation.

Risks in the organization of transportation of combined cargoes, in addition to cargo damage, include violation of delivery times due to additional customs control measures during import, special requirements for the transportation of dangerous and excise goods [5]. The use of containers allows to ensure the safety of combined cargoes en route and during transshipment, to avoid additional costs for transshipment operations and to optimize their duration in multimodal delivery schemes.

The cost of delivery of the combined cargo depends on the distance and complexity of the route, the characteristics of the cargo (weight, size), the need to pack the cargo, the provision of additional services. The break-even point for the customer when sending a combined service is the volume of transportation of 19 cubic meters, i.e. the cost of sending which is comparable to the cost of sending one 20-foot container with a cargo volume of 35 cubic meters [2].

The most frequently used transport for organizing the transportation of bulk cargo is automobile, the most accessible (including for remote settlements), which allows you to organize door-to-door delivery (logisticians determine the optimal route with stops at specified points or at the warehouse of the carrier company), which minimizes the risks of losses in the quantity and quality of goods [3]. Rail delivery is a popular logistics service, but it requires more time to organize transportation, initial and final operations at loading and unloading points, therefore it is effective over long distances. Air transport is very fast delivery but expensive, in addition there are restrictions on the dimensions of the cargo, it is used for courier express delivery of small by weight cargo. Sea transportation is relevant in international transportation and for the supply of hard-to-reach areas. River transport directly depends on navigation, is used for large shipments, delivery is relatively cheap, but long. For small and medium-sized businesses, the balance between cost and speed of delivery is important, which is better provided by road transport than others [6].

Among the factors of growth in demand for the combined cargo service are the development of online commerce and the territorial expansion of retail chains [5]. There is a particularly high demand now for combined cargoes from European countries, e-commerce goods come out on top. Unlike standard imported goods, they are small in size.

E-commerce is the process of buying and selling products using electronic means, such as mobile applications and the Internet. E-commerce enterprises have significantly lower operating costs compared to physical stores: no rent, no staff, operating costs are lower compared to traditional retail enterprises. E-commerce stores have expanded significantly during the pandemic, thanks to the possibility of remote orders and contactless delivery, continuous operation during lockdowns [7].

During the pandemic, many logistics companies were forced to start optimizing their activities, respond to changes in market demand, introduce IT technologies that allow them to interact more effectively with supply chain participants, and switch to electronic document management. Cargo tracking online, online ordering, transportation calculation become basic services.

Combined transportation allows shippers to get well-established and efficient logistics at a reasonable price. Combined cargoes allow the logistics market to develop, even in a crisis, they allow you to quickly organize the delivery of any amount of cargo but the most economical and efficient is the transportation of small and medium-sized batches [1]. The optimal cost of transportation is an important advantage of the combined cargo service, especially relevant during the crisis and the search by entrepreneurs for ways to reduce costs.

References:

1. Consolidated cargo as a market driver. Text: electronic. sea news. Information and analytical agency [website].2021.– URL: <https://seanews.ru/2021/09/08/ru-sbornye-gruzy-kak-dvigatel-rynka>
2. Containerized or prefabricated? Challenges of the freight market. Text: electronic. sea news. Information and analytical agency [website].2021.– URL: <https://seanews.ru/2021/09/16/ru-kontejnernye-ili-sbornye-vyzovy-rynka-gruzoperevozok>

3. Delivery of consolidated cargoes. cargo question. Forwarding company. [website].2021.– URL: <https://gruzovoy-vopros.com/sbornyj-gruz>
4. FTL and LTL transportation: what is the difference between 3PL transport services? Text: electronic. VARETEKA [website]. 2021.–URL: <https://wareteka.com.ua/blog/ftl-ltl-perevozk-faq>
5. Repetskaya N. V. Doroshchenko E. S. Increase in demand for the “groupage cargo” service during the COVID-19 pandemic. / N. V. Repetskaya, E. S. Doroshchenko //Actual problems and prospects for the development of the economy: Russian and foreign experience.2021. – No. 1 (33). – FROM. 71–76.
6. The groupage cargo market is waiting for universal automation. Text: electronic. RZD-Partner.ru. Information Agency. [website]. 2021.– URL: <https://www.rzd-partner.ru/logistics/interview/rynok-sbornykh-gruzov-zhdet-vseobshchaya-avtomatizatsiya>
7. What is e-commerce? Definition of e-commerce for 2021. Text: electronic. Trader’s Dictionary. [website].2021. -URL: https://ecommerce-platforms.com/ru/glossary?ep_lang=ru