

## IMPROVEMENT OF THE PROCESS OF DELIVERY OF SMALL CONSIGNMENTS

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Cargo transport in small consignments is a significant part of the total volume of cargo transportation by road. Such transport accounts for about 45% of all international shipments. The delivery interval is one of the most important indicators of the quality of transport service to the clientele. It is the time from the moment of submission of an application for carriage to the moment of delivery of a consignment to the consignee. Foreign experience shows that the large actual capacity of existing transport and warehouse logistics chains of common use, as well as a favourable combination of a number of other factors, allows the delivery of small consignments with the shortest possible delivery interval and the highest possible efficiency of the delivery process. Currently, numerous transport companies are engaged in the delivery of small consignments from the door of senders to the door of receivers, both internationally and within our country. They are doing this through their own logistics chains.

Despite the large number of transport companies operating in the same direction, the delivery intervals of small consignments do not meet the requirements of the customers. The reasons for this situation are: the use of low-quality rolling stock, irrational vehicle routes, long waiting times for loading and unloading and customs clearance of cargo, errors in the execution of customs and cargo documents, lack of necessary information about the consignor and consignee. One of the main reasons for long delivery times is the insufficient actual capacity of logistics chains. The desire of the carrier to reduce the delivery interval by reducing the frequency of loading of vehicles, which affects the current costs of the consignee associated with storage and availability of stocks, while the actual capacity of the logistics chain remains unchanged, leads to an increase in the number of vehicles required to transport the same volume of cargo, which reduces the efficiency of their use, resulting in the need to increase the tariffs for transport services. All this, in turn, can lead to a loss of customers.

At present, the development of less-than-truckload transport is mainly due to the increase in the volume of export-import transport. Abroad, terminal transport technology is the basis for the entire system of international and intercity transport. Large transport companies include terminals that meet international standards in their logistics chains, thus creating a kind of channel for the promotion of small-party cargoes in the export-import direction.

The study determines the actual capacity of existing logistics chains, the delivery intervals and the efficiency of vehicle utilisation in the process of cargo transport to the departure terminal, transport between terminals and transport from the arrival terminal, presents the classification of the nomenclature of delivered products and determines the way of distribution of cargo consignments by weight for each type of product. The study found that, given the existing actual capacity of logistics chains and the efficiency of vehicle utilisation, the average delivery time for small consignments is 18-22 working days, which is about twice the minimum possible.

In an effort to improve the quality of transport services, hauliers are reducing the frequency of vehicle delivery to the departure terminal and thus the interval between cargo deliveries, without increasing existing transport tariffs. To this end, they are developing measures to attract additional volumes of small consignments. Such measures may include: providing customers with full customs clearance services for the cargo delivered at the arrival terminal, obtaining a customs carrier's licence and transporting customs cargo from the arrival terminal to other customs terminals, building large warehouse complexes for long-term storage of cargo after customs clearance and transportation at the customer's request, and conducting advertising campaigns.

As a result, it was found that the application of terminal technology for the transport of small unit loads under unified centralised transport management in the logistics chain is a prerequisite for improving the efficiency of vehicle utilisation and reducing the delivery interval of goods. The

research has shown that the actual capacity of the logistics chain has an impact on the delivery interval. As the actual capacity increases, the delivery interval decreases. At the same time, the issue of the influence of the actual capacity of the logistics chain on the efficiency of the delivery process of small consignments, including the economic effect of the customer, taking into account the stochastic nature of the distribution of consignments in the flow by weight, has not been sufficiently investigated. The methods of modelling the flow of parcels developed in the course of the research did not result in flows that take place in reality. Therefore, the selected indicators of the efficiency of the delivery process could differ significantly from the actual values for given values of other parameters.

A relevant task is therefore to determine the actual capacity of the logistics chain at which it is possible to achieve the maximum efficiency of the delivery process, i.e. the minimum possible delivery interval and the maximum possible vehicle utilisation efficiency.

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УДК 656:338

### **ПІДВИЩЕННЯ ЕФЕКТИВНОСТІ ОРГАНІЗАЦІЇ ПЕРЕВЕЗЕНЬ ХЛІБОБУЛОЧНИХ ВИРОБІВ ШЛЯХОМ ОПТИМІЗАЦІЇ РОЗВІЗНОГО МАРШРУТУ РАЙОНУ САЛТІВКА-1 МІСТА ХАРКОВА**

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### **INCREASING THE EFFICIENCY OF THE ORGANIZATION OF TRANSPORTATION OF BAKERY PRODUCTS THROUGH OPTIMIZATION OF THE DELIVERY ROUTE OF THE SALTIVKA-1 DISTRICT OF THE CITY OF KHARKIV**

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Ринок України представлений великою кількістю вітчизняних підприємств. Значна частина продовольчих товарів імпортується. Проте особливістю ринку хліба та хлібобулочних виробів України є майже стовідсоткове забезпечення продукцією вітчизняного виробництва [1-4]. Це пояснюється тим, що хліб і хлібобулочні вироби мають короткий термін зберігання та повинні бути реалізовані протягом короткого проміжку часу. Здатність хлібопекарської продукції швидко втрачати споживчі властивості та неможливість транспортування її на великі відстані захищає вітчизняний ринок від ввезення імпорتنих товарів і, як наслідок, дає змогу вітчизняним виробникам уникати конкуренції із закордонними підприємствами. Останнім часом українці більше стали цікавитися нетрадиційними сортами: бездріжджовий, хліб, замішаний за стародавніми рецептами, хліб з мінералами і т.д. Подібні сорти трохи дорожче, тому обсяги продажів менше, хоча багато експертів схильні вважати, що частина нової продукції буде збільшуватися.