

## **Establishing the optimal duration of life cycle logistics system in the aspect of ensuring the necessary level of economic security**

*A.M. Sumets, Ph.D., associate professor department  
of transport and logistics*

*Kharkov national technical university of agriculture of the Peter Vasilenko  
Sumets61@mail.ru*

**Research methodology:** By means of the use of mathematical modeling the analog model (graphical interpretation) of determination of the optimal duration of logistics enterprise life cycle is received.

**Results:** For the evaluation of the formation and ensuring the necessary level of economic security of enterprise logistics system to use such cost parameters: the cost of creating the logistics system to support the operating costs of its functioning during the period of its life-cycle, costs of recruitment and logistics personnel training, operating profit of the logistics system. The character of the influence of the cost parameters on the level of economic security of the enterprise logistics system is determined, analog model for establishment of the optimal duration of logistics system life cycle with the provision of the required level of economic security is constructed.

**Novelty:** An approach to the establishment of the optimal duration of life cycle logistics system in the aspect of ensuring the necessary level of economic security is offered.

**The practical significance:** On the basis of cost indexes application, which are proposed in the paper, the selection of the optimal duration of the life cycle logistics system that will ensure efficient logistics activities of the company with the necessary level of its economic security is facilitated.