

REGIONAL LOGISTICS SYSTEM: THEORETICAL ASPECT

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The main elements of the regional logistics system are considered. It was revealed that the main link of the regional logistics system is the population (residents of the regions). The purpose of the development and functioning of the regional logistics system is to satisfy their needs. It is shown that the development and effective functioning of the regional logistics system is influenced by environmental factors, which are proposed to be investigated using SWOT and PESTLE - analysis methods. The use of these methods allows to systematize the strengths, weaknesses, potential opportunities and threats of the regional logistics system, to determine the main competitive positions and the most promising areas of development, to identify those factors of the logistics environment that have the greatest impact, and which should be paid more attention in the study of regional logistics systems.

Currently, the solution of issues related to the development and functioning of logistics systems at the regional level is becoming increasingly important. Despite a significant number of publications on this topic, the regional logistics system (RLS) is still a poorly studied system that does not have a clear formed methodology for its definition and analysis.

Issues on regional logistics systems are studied by foreign and domestic authors such as L.Y. Berezhnaya, N.F. Zhemaldinova, E.V. Erokhina, N.V. Kocherga, S.F. Kugan, V.V. Lukinsky, V.F. Lukinykh, A.L. Nosov, Ya.Yu. Pavlova, I.I. Poleshchuk, T.A. Prokofiev, I.A. Topalova, S.B. Usmanova, O.A. Freidman, E.L. Shishko and others.

In regional logistics, the term "regional logistics system" is defined as a set of subjects of logistics activities interacting through an integrating and coordinating mechanism for planning, organizing and managing regional flows in order to optimize them [1].

Analysis of existing publications on the research topic showed that the elements (backbone factors) of the RLS are:

- 1) participants of the RLS;
- 2) flows (resources);
- 3) logistics infrastructure (LI).

The participants of the RLS include the state, industrial enterprises, small and medium-sized businesses, universities, research centers and institutes, and the population.

High-quality interaction and cooperation of all of the above entities leads to the effective development and operation of the RLS. Enterprises and small and medium-sized businesses involved in the movement of all types of logistics flows need not only to maximize their profits, but also to take into account and calculate the level of their contribution to increasing the economic efficiency of the RLS.

Investigating the participants of the RLS, we came to the conclusion that the main link of the regional logistics system is the population (residents of the regions). The purpose of the development and operation of the RLS is to satisfy their needs.

Resources are available and spent funds, in quantitative terms, indicating the potential of the region. When moving, resources, transforming their energy, turn into a flow [2]. Material, financial, informational and service flows are distinguished as flows. All of them are inextricably linked: without a financial flow there is no material flow, and the material flow itself can become a source of financial flow. These types of flows are inextricably linked with information flows. It should be noted that none of these flows can exist without a person who initiates them, controls them and consumes them himself [3].

Logistic infrastructure, as an element of the regional logistics system, is the technical means of connecting industries serving logistics flows (warehouse and transport infrastructure, wholesale and retail trade, communications (telecommunications, postal and courier activities). These industries move resources from producer to consumer. Their purpose - minimization of costs using the optimal movement (distance, time between delivery points and cargo dimensions) of resources [4]. This is a self-sufficient structure consisting of interacting and interconnected elements, which exists relatively independently and steadily, is constantly developing and improving depending on the interaction with environment [3].

The external market environment in relation to logistics systems in the regions is characterized by a high degree of uncertainty. Therefore, when studying the RLS, special attention should be paid to the influence of environmental factors on the development and effective functioning of the RLS (fig. 1). It is proposed to analyze these factors using SWOT and PESTLE analysis methods.

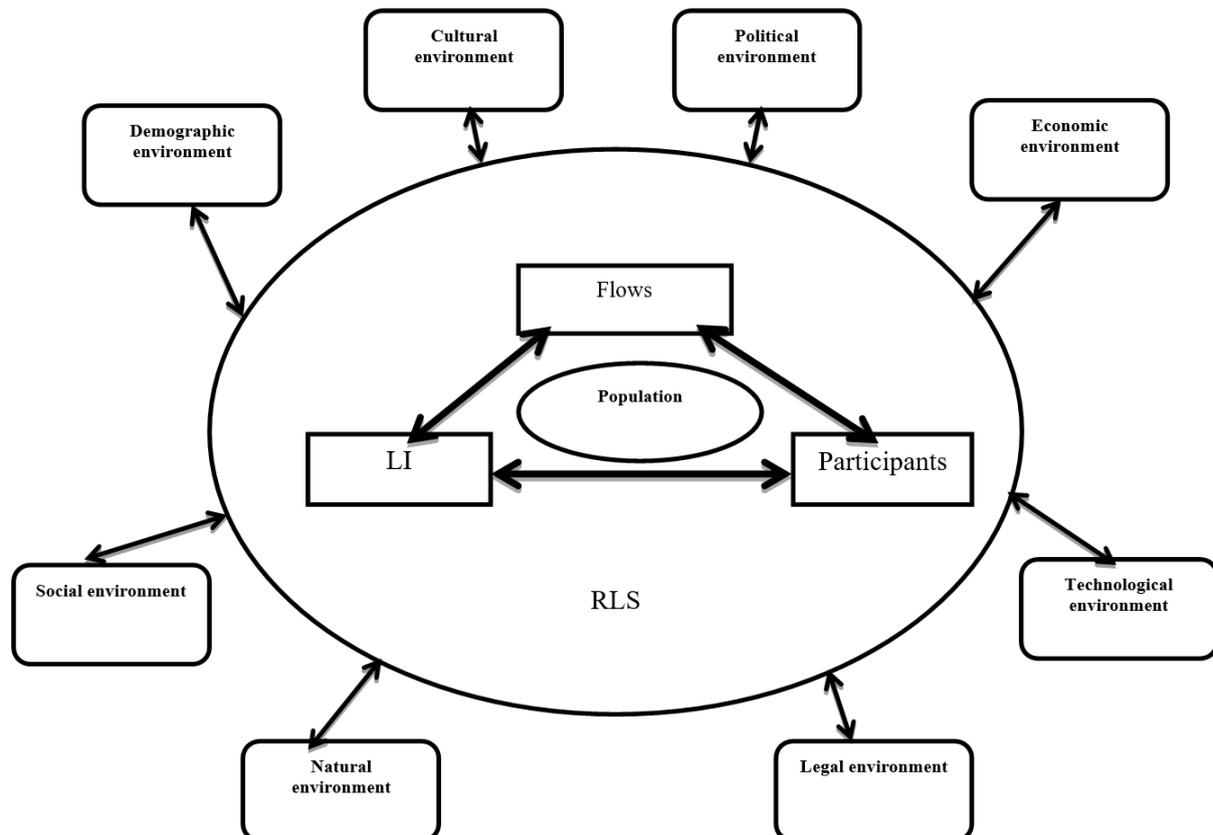


Fig. 1. – The influence of environmental factors on the RLS

Source: own development

SWOT analysis of RLS is a method that identifies the factors of the internal and external environment of the logistics system of the region and divides them into four categories: strengths, weaknesses, opportunities and threats.

Strengths are associated with achievements that make it possible to compete with the regional logistics system in the long term. Weaknesses include real factors that slow down the sustainable development of the RLS in the region. Opportunities are viewed as currently not realizable data, the implementation of which can lead to an increase in the well-being of the RLS. Threats include negative factors affecting the RLS, if their occurrence is not prevented.

Conducting the SWOT analysis of the RLS includes the following steps:

1. Identification of factors of the internal environment (division into strengths and weaknesses);
2. Identification of environmental factors (division into factors that carry opportunities and carry threats);
3. Evaluation (ranking) of all factors in terms of significance;
4. Screening out insignificant and unlikely factors as having no practical significance;
5. Formation of the matrix of SWOT factors;
6. Formation of a cross matrix, including a pairwise comparison of each of the factors with the identification of how strong the RLS is capable of realizing the opportunities that open up before it; the extent to which the strengths of the RLS station allow neutralizing the threats of the external environment; what opportunities provided by the external environment can be used to turn the weaknesses of the RLS into its strengths; how to defend against external threats by strengthening weaknesses.

When forming the cross SWOT matrix, various combinations of environmental factors and internal properties of the RLS are sequentially considered:

- The SO field indicates which strengths need to be exploited to capitalize on opportunities in the external environment;
- The WO field shows the capabilities of the external environment the RLS will be able to overcome the existing weaknesses;
- The ST field shows which forces the RLS must use to eliminate threats;
- The WT field shows which weaknesses must be eliminated in order to try to prevent the impending threat [5].

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Thus, based on the SWOT-analysis matrix, a comprehensive assessment of the current state of the RLS is given. Based on the results of the analysis, it is possible to assess whether the RLS has the internal forces and resources in order to realize the existing capabilities and resist external threats.

Currently, the importance of environmental factors is increasing, which leads to the need to take them into account when analyzing and studying the regional logistics system. Therefore, for strategic analysis of the RLS macroenvironment, it is proposed to use an improved version of PEST analysis - PESTLE analysis, which includes legal and environmental factors.

The analysis identifies the most significant political, economic, sociological, technological, legal and environmental factors for the RLS. The composition of the selected factors depends on the socio-economic characteristics of the region and the availability of initial data. Each factor is given an expert assessment of the level of importance for the industry on a scale (3 - high, 2 - moderate, 1 - weak), the degree of influence on the RLS (3 - strong, 2 moderate, 1 - weak, 0 - no influence) and direction of influence (positive or negative). Multiplying the above three expert assessments, a general assessment of the factor is obtained, demonstrating the degree of its significance for the RLS [6]. The result of this analysis is the identification of those factors of the logistic environment that have the greatest impact, and which should be paid more attention to when studying the RLS.

Conclusions. The main elements of the RLS are its participants, flows and logistics infrastructure. The main link in the regional logistics system is the population (residents of the regions). The purpose of the development and operation of the RLS is to meet their needs. The development and effective functioning of the RLS is influenced by environmental factors, which are proposed to be investigated using SWOT and PESTLE-analysis methods. The use of these techniques allows to systematize the strengths, weaknesses, potential opportunities and threats of the RLS, to determine the main competitive positions and the most promising directions for the development of the RLS, to identify those factors of the logistics environment that have the greatest impact, and which should be given more attention in the study of the RLS. Based on these analyzes, a decision is made on the further possible development of the RLS.

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