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Studies of the Logistics Services Market: Information and Analytical Support and a System of Statistical Indicators

Information and analytical database for the market support is required to prevent communications of contradictory information to higher levels of management, with adverse effects for the process of taking rational management decisions. The article's objective is to substantiate the information and analytical support for studies of the logistics services market, with constructing a system of statistical indicators for this market assessment, to be laid as the solid basis for elaborating medium-term and long-term strategies and policies of the logistics services market in Ukraine.

A definition of information and analytical support for studies of the logistics services market is given; a review of secondary sources of data for this market studies is made. A conceptual model for information and analytical studies of the logistics services market is proposed. The key statistical indicators for studies of this market are identified, with substantiating the feasibility of their use in computing multivariate indicators for the assessment of performance and capacities of the logistics services market in Ukraine. The core criteria to be met by the abovementioned system of statistical indicators are highlighted. A system of statistical indicators for the assessment of the logistics services market is proposed, containing four modules. It allows for diagnosis of this market performance and tendencies, with accounting for the impact of other related markets and activities, and for forecasting. This system, constructed with consideration to the global practice, is designed for comprehensive studies of the logistics services market.

Keywords: data sources, information and analytical support, logistics services market, statistical indicator.

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Інформаційно-аналітичне забезпечення та система статистичних показників дослідження ринку логістичних послуг

В статті обґрунтовано інформаційно-аналітичне забезпечення дослідження ринку логістичних послуг та сформовано систему статистичних показників дослідження цього ринку. На основі розробленої автором концептуальної моделі інформаційно-аналітичного дослідження ринку логістичних послуг запропоновано систему статистичних показників для оцінювання ринку логістичних послуг, яка містить 4 блоки та дозволяє діагностувати стан і тенденції розвитку зазначеного ринку, враховуючи вплив інших суміжних ринків та видів економічної діяльності, а також здійснювати прогноз розвитку ринку логістичних послуг в Україні.

Ключові слова: джерела даних, інформаційно-аналітичне забезпечення, ринок логістичних послуг, статистичний показник.

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Introduction. When there is no information and analytical database for the market support, build on integrated principles, contradictory information may be communicated to higher levels of management, with adverse effects for the process of taking rational management decisions. Also, problems of statistical studies of the logistics services market can be caused by the existence of considerable numbers of methods for identification of the logistics services market, which, however, are impracticable, incomplete or inconsistent; this leads to heterogeneous or inaccurate results not allowing to investigate the logistics services market in an appropriate manner.

The abovementioned raises the importance of creating the information and analytical support for the logistics services market, to be laid as the basis for constructing an effective system of statistical indicators for studies of the logistics services market. This system of indicators is designed for identifying territorial and sectoral disproportions and reserves, with constructing tools helping achieve the sustainable and effective performance of the logistics system, harmonized with the pace of the economy’s evolution.

Literature review. Theoretical and practical aspects of the logistics services market have been subject of research by domestic scientists such as M. Yu. Hryhorak [1], Ye. V. Krykavskiy [2], S. S. Lysa [3] O. Ye. Shandrivska [2, 4], L. Ya. Yakymyshyn [4] and others. Methodological issues of the assessment of domestic logistics services market were dealt with foreign researchers: T. Elger, K.-J. Lundquist, L.-O. Olander [5]; K. Rantasila and L. Ojala [6]; B. Shepherd [7]; M. Steglich, D. Feige, P. Klaus [8], C. Yu [9]. Also, the methodological framework for constructing a system of statistical indicators for analyses of the logistics services market and its information support has been in focus of international institutions such as International Transport Forum, World Bank, European Commission and others.

In spite of a strong emphasis on the abovementioned aspects, issues related with the conceptual model for the information and analytical support to studies of the logistics services market in Ukraine and constructing a system of respective statistical indicators require further studies.

The article’s objective is to substantiate the information and analytical support for studies of the logistics services market, with constructing a system of statistical indicators for research purposes, to be laid as the solid basis for elaborating medium-term and long-term strategies and policies of the logistics services market in Ukraine.

Results. Information support for studies of the logistics services market should be defined as “a set of information contained in databases, and information technologies and technical means designed for its processing”. Information support can enhance the effectiveness of analytical processes that are the key to analyses of any kind of market. The effectiveness of analytical processes can be achieved through reducing time and labor costs for the search of necessary information and carrying out analyses.

Researchers have not elaborated a single conceptual approach to understanding the essence of the logistics services market, its determining factors and a method for its assessment. In spite that the scopes of statistical data and other sources for studies of the logistics services market increased over the past few years, a consistent conceptual model for the information and analytical support for statistical studies of the logistics services market is yet to be built. Although statistical and analytical reports are a secondary source of information for assessing national and global logistics services markets, they are essentially important in constructing an adequate statistical base for medium-term and long-term strategy and policy for the development of the logistics services market in Ukraine (Table).

Table

A review of selected secondary sources of data required for studies of the logistics services market

Organization / Title of edition	Type / method of the study	Approach to the study	Periodicity of publication	Geographic coverage
1	2	3	4	5
Economy Watch / Economic Statistics Database [10]	Secondary data	Quantitative assessment	Annual	National, global, regional

Table

1	2	3	4	5
Fraunhofer SCS / The standard reference work for the logistics industry “TOP 100 in European Transport and Logistics Services” [11]	Secondary data; interviews and questionings	Quantitative and qualitative assessment	Biannual	EU, national markets of EU countries
International Transport Forum / Key Transport Statistics [12,13]	Questionings and case studies	Quantitative assessment	Annual	Global and national markets
Organization for Economic Cooperation and Development / Economic Outlook. OECD.Stat [14]	Анкетування	Quantitative assessment	Annual	Global and national markets
World Bank / Connecting to Compete: Trade Logistics in the Global Economy / Logistics Performance Indicator [15, 16]	Questionings	Analytical assessment	Annual	Global and national markets
Transport Intelligence / Emerging Market Logistics Index [17]	Questionings	Analytical assessment	Annual	Regional and national markets
United Nations Conference on Trade and Development / Review of Maritime Transport [18]	Secondary data	Quantitative assessment	Annual	Global and national markets
State Statistics Service of Ukraine / Business performance. Transport and communication of Ukraine [19]	Secondary data	Quantitative assessment	Annual	National market

Source: compiled by the author

Considering that the information and analytical support for studying the logistics services market has to meet all the information needs of management and rationalize the process of taking management decisions, we are going to propose the below given model for information and analytical support for studies of the logistics services market (Figure 1).

Not all the studies that are of relevance today can be conducted by use of the available statistical data. A statistical study of the logistics services market requires a scientifically sound system of statistical indicators. It can be used to determine the scopes (levels), structure, dynamics and relationships between results and factors with impact on the statistics services market. Therefore, statistics provides for the quantification of tendencies and relationships specific to the development of the logistics services market. A system of statistical indicators needs to be constructed by reliance on the socio-economic theory framework and the principle of dialectic method of cognition.

Constructing a scientifically sound system of statistical indicators and investigating the performance of the logistics services market, with characterization of all the components of the market structure is extremely important and necessary objective considering the development of international transport corridors, the economic attractiveness of multimodal transportations and search for the optimal operation of regional transport systems. Besides that, further developments the strategy for the logistics services market and its capacity building need to rely on the comprehensive assessment that accounts for the specifics of geographic location of productive forces [20].

A system of statistical indicators for studies of the logistics services market needs to comply with the following set of core criteria:

- the statistical indicators must be correct, quantifiable, and must have a reliability required for practical purposes;
- the statistical indicators must be aggregated: it means that when aggregated they must allow for moving from one level to another by use of various statistical methods;
- the statistical indicators must be politically neutral and applicable for an economic-statistical analysis with identification of the causalities.

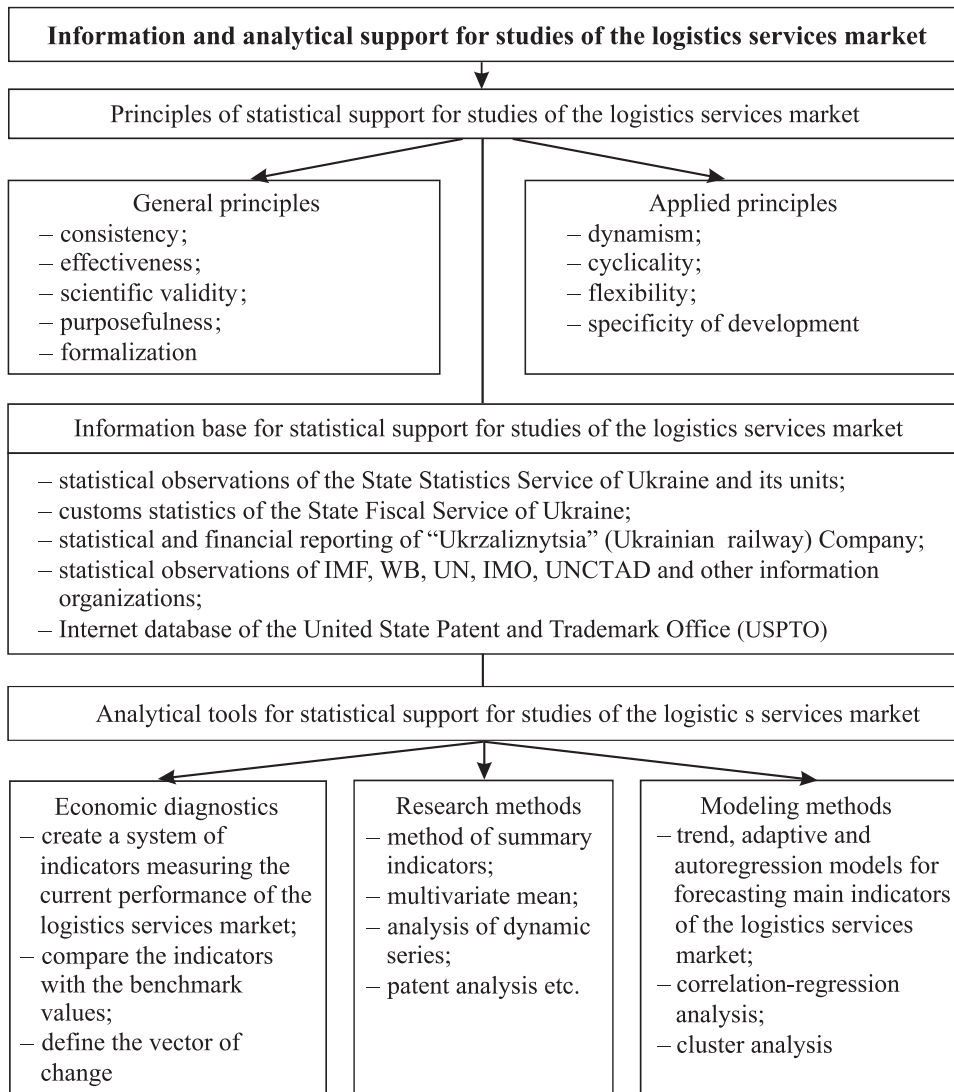


Figure 1. A conceptual model for information and analytical studies of the logistics services market

Source: constructed by the author

A system of statistical indicators for the assessment of the logistics services market is proposed, consisting of four modules. It allows for diagnosis of this market performance and tendencies, with accounting for the impact of other related markets and activities, and for forecasting and modeling of the developments at the Ukrainian logistics services market. This system, constructed with consideration to the global practice, is designed for comprehensive studies of the logistics services market (Figure 2).

As there is no aggregated indicator that would allow for measuring the size of the logistics services market in Ukraine, a system of indicators is proposed for a comprehensive study of this market. The periodicity with which the indicators are to be computed should be determined with account for the internal environment of Ukraine. The main source of data is monthly, quarterly and annual reporting. For some of the indicators demonstrating slow dynamics, data can well be reported once in several years.

Statistical observations of the State Statistics Service of Ukraine are the most useful source of comparable, complex, consistent, reliable and scientifically valid data for the assessment of the logistics services market.

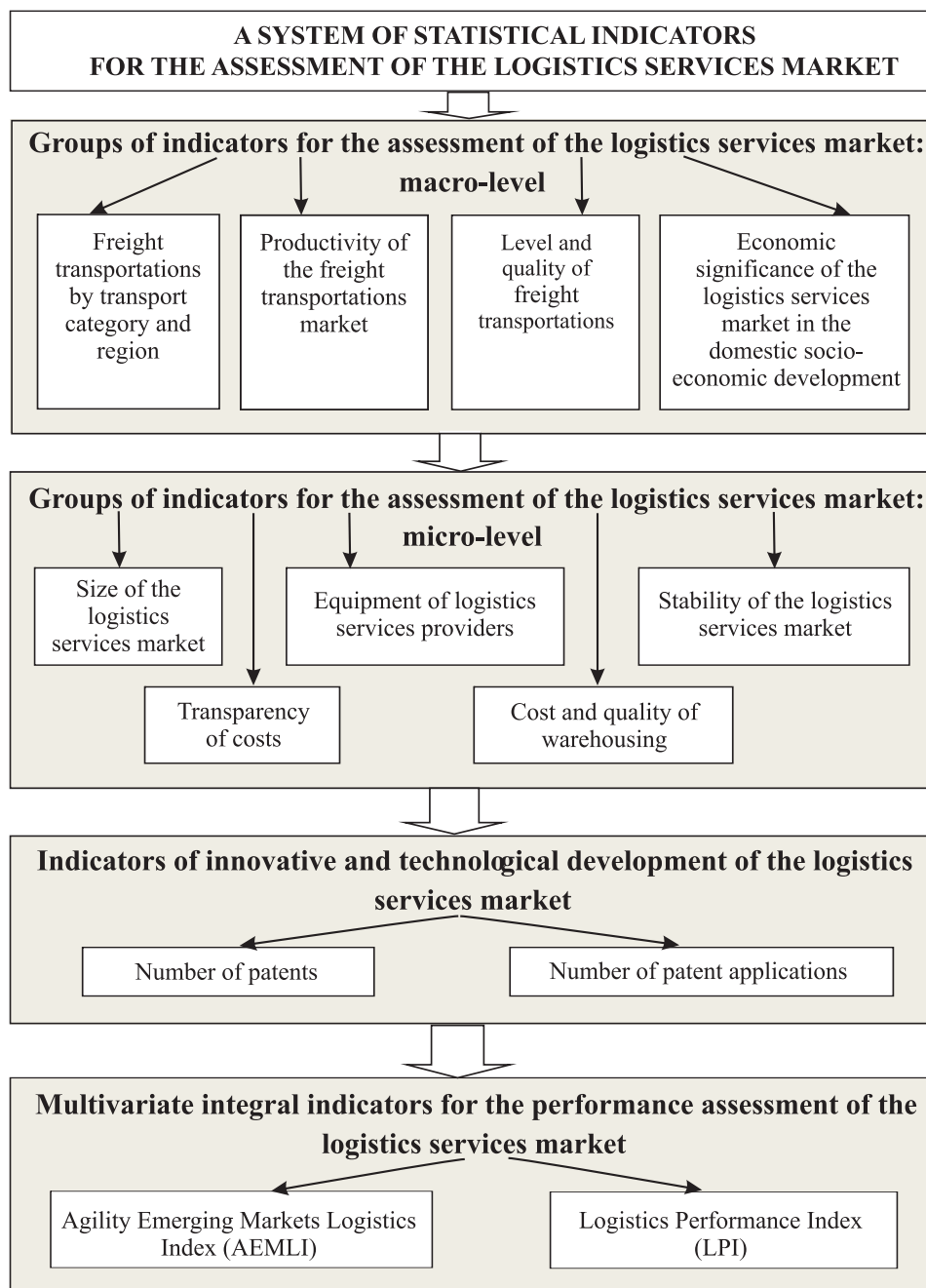


Figure 2. A system of statistical indicators for the assessment of the logistics services market

Source: constructed by the author

The system of indicators used for the analysis should be regularly revised and updated in order to maintain the relevance of the statistical database in view of the fluctuations in the logistics services market in Ukraine. Also, new data sources allowing for constructing new indicators should be subject to constant monitoring.

Conclusions. The study allowed for constructing a conceptual model for the information and analytical support to studies of the logistics services market, which covers a broad range of statistical information sources (e. g. statistical and financial reporting of companies, data

of the State Statistics Service of Ukraine, the State Fiscal Service of Ukraine, international organizations), characterizing all the components of the logistics services market (transportation, warehousing, logistics infrastructure etc.) and methods of statistical study, allowing for management decisions on the development of the logistics services market in Ukraine, its transformation and integration in the global logistics system. A system of statistical indicators for the assessment of the logistics services market is proposed, consisting of four modules. It allows for diagnosis of this market performance and tendencies, with accounting for the impact of other related markets and activities, and for making forecasts for future. This system, constructed with consideration to the global practice, is designed for comprehensive studies of the logistics services market

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