

**State Organization «Institute Of Market And Economic&Ecological Researches
of the National Academy of Sciences of Ukraine»**

**Summary of scientific novelty for the research
«INSTITUTIONAL AND ECONOMIC MECHANISMS FOR ENSURING THE
COMPETITIVENESS OF WATER TRANSPORT IN UKRAINE»**

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The following scientific results have been obtained:

Originally developed:

- a scientific approach to grouping competitive advantages of water transport has been substantiated, which considers the object's level, types of water transport, their general and specific advantages, and disadvantages;

- the economic essence of the concept of competitive advantage of water transport has been justified, representing a unique combination of utilizing the existing production capabilities of business entities with their current market reputation. This ensures the provision of competitive transport services to customers, enabling business entities to maintain a long-term presence in the transport services market;

- a step-by-step model methodology for diagnosing the competitiveness level of water transport enterprises has been developed. This methodology considers the specificity of the researched field and the specialization of the enterprises' activities, considering the criteria of economic activity type, organizational form, enterprise size, type of work performed, and services provided. It facilitates identifying weak points that require improvement, existing potential opportunities and reserves, and their rational use for effective adjustment of strategic and operational development plans of enterprises;

- mathematical modeling tools for the entropy objective function as a generalized optimization function for water transport freight transportation based on its competitive advantages have been developed. Unlike existing approaches, these tools allow obtaining permissible and optimal solutions within an acceptable timeframe;

- a methodological approach to considering the multicollinear influence of factors on the integral functional value of the competitiveness of Ukraine's maritime infrastructure has been developed.

Improved:

- the structure of the competitive potential of water transport has been improved. Unlike existing approaches, it includes such main elements as natural resource potential, production potential, labor potential, institutional potential, and

innovation-investment potential. This allows for a comprehensive assessment of economic threats and risks during its use;

- the conceptual-categorical apparatus of economic theory has been advanced by defining the economic essence of the concept of "competitive potential of water transport," which, unlike existing definitions, is presented as the maximum possible volume of transport services provided by Ukraine's water transport under the most efficient use of all factors;

- algorithmic support for calculating and optimizing the economic characteristics of freight transportation, considering competitive conditions, has been improved. Unlike existing approaches, it allows forming continuous models over time, increasing their relevance;

- mathematical formalization of competitiveness assessment using a continuous scale of real numbers, independent of the measurement scales of individual factors, has been developed;

- methodological approach to assessing the competitiveness of maritime infrastructure under different factor groups has been developed, with mathematical formalization of individual vector functionals, vector additivity of these functionals, and consideration of their impact weights on the integral competitiveness of maritime infrastructure;

- measures for optimizing the structure of regulating relationships among water transport entities have been justified, and strategic recommendations have been developed based on the analysis of the impact of legal regulation on the development of business entities;

- the theoretical and methodological foundations for developing water transport have been formulated through the systematization of scientific approaches and methods for diagnosing the competitiveness level of water transport enterprises. This allowed generalizing a comprehensive understanding of competitiveness, representing a set of existing and engaged enterprise capabilities while identifying reserves. Utilizing these reserves enables higher quality and efficiency in developing strategic and comprehensive measures to achieve global transport and logistics goals;

- a methodological approach to building a competitive strategy profile for Ukraine's inland water transport has been advanced, which, unlike existing approaches, includes the main elements of competitive potential such as natural resource potential, production potential, labor potential, institutional potential, and innovation-investment potential. This allows for a comprehensive assessment of economic threats and risks during its use.

Have been further developed:

- the structure of the organizational and economic mechanism for financing the implementation of competitive strategies for Ukraine's water transport has been further developed. Unlike existing approaches, it is based on integrating the goals of

business entities in the water transport sector with the goals of national and European water transport development strategies and sustainable development goals. This integration ensures global economic and environmental security, enhancing the adaptability and competitiveness of Ukraine's water transport under structural changes in the macro-environment;

- mathematical modeling of time series using formalized extraction of background factors and aperiodic harmonics has been further developed. Unlike existing approaches, this allows identifying the influence of unknown a priori factors. Mathematical modeling for finding the integral functional of maritime infrastructure competitiveness, considering both various factor measurement scales and their mutual influence, has been further developed;

- the systematization of factors influencing the competitiveness of maritime infrastructure has been advanced by identifying two main categories: objective factors, independent of Ukraine's institutional and institutional spheres of influence, and subjective factors that institutional and institutional structures can adjust, increasing positive and reducing negative impacts. This approach, in addition to effective competitiveness management, allows forming a more relevant methodological approach for forecasting and comparative analysis of achieved results.

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