

BALANCE MECHANISM OF THE GLOBAL AND BUSINESS INTERESTS IN THE MARITIME MARKET

Oleksandr Shemiakin, Prof. Dr.

National University "Odessa Maritime Academy" (Ukraine)

Mykola Primachov, Prof. Dr.

National University "Odessa Maritime Academy" (Ukraine)

Olena Sienko, Prof. Dr.

National University "Odessa Maritime Academy" (Ukraine)

Abstract. The current state and development of the maritime transport industry is defined by the significant indeterminacy of the character of formation of transportation volume and structure, on the one hand, and by requirement for toughening for the environmental man-made load of the fleet, on the other hand. These conditions raise the risks that limit the attainment of normal economic utilization of the shipping company's capital assets. The net profit level is therefore constrained due to additional costing associated with promotion of the all-round merchant shipping safety. A part of such expenditures is balanced out by implementation of innovative technologies. However, a strict limitation of the mercantile marine's influence on condition of the water and air spaces is ever increasing, having transformed into the formation tendency for the sea-borne trade market parameters. There is a significant redistribution of the entrepreneurial result, which is created by ship-owning entities, in ensuring global trade for synergy components: ecological, reduction of social sacrifices to restore equilibrium in the natural and socioeconomic environment. At the same time, with a decrease in entrepreneurial efficiency in the navigation system, various types of extra-transport effect and emergent result increase. The constant increase in the role of improvement of the constructive solutions in shipbuilding and strengthening of conventional regulation of shipping on the basis of more stringent rules and standards requires specifying and strengthening of the role of legal and economic regulation of the ratios of all participants in the global maritime market.

Key words: system efficiency, global shipping, technical and economic level, legal aspects.

INTRODUCTION

Taking into account the priorities of economic growth of the main components of the world economy, the tasks of achieving a balance of interests of all subsystems of the international production relations, it becomes important to maintain the activity of business structures while rationally forming the system-wide standards for a rational and safe attitude to the operator activity environment.

In this aspect, there emerges a problem of consideration of the nature of redistribution of results and costs while maintaining interest in ensuring the mega-economic balance and living standards in certain states. In the core of solution to this task, the problem of the growth ratio of non-systemic efficiency of using the totality of natural resources on the basis of technical innovation-based improvement of the merchant fleet, which requires a significant increment of capital expenditures, is formed.

The system of regulation and administration in the structure of merchant shipping is based on improvement of the legal framework for relations between the carrier and cargo owners, managing the navigation safety, guarantee of the property rights and the effectiveness of remuneration. Considering the peculiarities of the operational process and the forms of maintaining the technical vessel reliability, it becomes fundamental to reflect the peculiarities

of shipping in the specific regions of operator activity.

In the decision-making structure, an important place should be occupied by the conformity control of both integrated and individual indicators of efficiency and of resource intensity at the time of assessment of the new technical and economic level of goods delivery. Based on the marginal indicators of capital intensity, rate of return, time limit for performing basic operations, the boundary conditions for implementation of this option for integration of the transport services are formed. The main thing is to achieve the unity of interests of maritime transport enterprises in raising the technical and economic level both by the criteria of entrepreneurial efficiency and by the criteria for meeting the external restrictions of the competitive expansion of the transport services based on off-transport results inside the intermodal system.

1. Characteristics of the tendencies in the merchant shipping development.

The modern sea-borne trade shipping is formed in accordance with the natural response to the outer requirements and limitations. Gradually, on the basis of learning the real conditions and the development of a system of scientific principles, a modern level of performance and safety of navigation is achieved.

At the turn of the 20th and 21st centuries, the conditions of formation of the modern global sea-borne trade market have changed (5th Session of the Subcommittee on Ship Design, 2022). The principles of globalization turned out to be fundamental. Despite the stringency of rules of the entrepreneurial positioning under the market conditions of formation of the production potential and of the final economic indicators, the influence of external restrictions is increasing. The role of the specialized administration system with respect to the nature of development of the production potential of shipping complexes is growing. Simultaneously, asymmetry of the development regarding the previously established principles of balance is taking place.

In case the principle of conservation is studied in the economic aspect, then the decisions regarding the tightening of the shipping safety standards predetermine the enhancement of the economic freight reliability with simultaneous decrease of the entrepreneurial efficiency. The unit costs for formation of the capital assets of shipping companies run high. That is why the need arises for development of the specific toolkit meant for supporting the shipbuilding activity and the modernization of ships in compliance with the more stringent standards. These and other approaches to limiting the formation of the target result of ship-owning structures involve achieving a balance of interests and results on the grounding of the synergy and non-transport effect of the functional activity of merchant fleet vessels.

Unfortunately, the change in technical standards, intensification of ecological requirements, in a number of cases, does not include an assessment of the direct economic consequences for the certain vessel types. At the same time, enhancement of the technical reliability of vessels leads to the reduction in losses due to accidents. That is what determined the tasks of choosing the mechanism and tool for achieving the balance of interests of the international economy and the entrepreneurial maritime transport structures.

The achievement of the state of subsystems of the marine transport industry, which ensures the basic principles of normalized functioning in terms of the life cycle of merchant marine vessels, becomes fundamental. On the other hand, cost restrictions on freight flows do not arise from the standpoint of international trade interests. At the same time, the natural balance is restored owing to a decrease in the technogenic load on the part of industrial production, that forms the volume of foreign trade, and maritime transport, which ensures the stability of the delivery of passengers and goods under the conditions of safety and appropriate quality.

At the same time, the impact of international regulators of the safety system of merchant shipping is growing. This safety is formed on the grounding of the standards of marine business structures, which is achieved on the basis of direct additional costs that reduce the limits of the

rational economic condition of ship-owners and operators.

All the while, due to the increase in the specific capital intensity of the transportation process and average current costs, an off-transport effect is formed. Thus, there is a differentiation of costs and operating results of shipping companies and trading ports. The scale of transport work is increasing, and the efficiency of entrepreneurial activity is declining, as seen from the nature of changes in the productivity of the world merchant fleet.

Consequently, part of the cash flow provided by the growth of systemic navigation safety is concentrated in other components of global economic relations.

Moreover, the maritime transport industry forms higher economic losses during the periods of critical condition of the global economy that was starkly illustrated by the financial and economic crisis in 2009. The ship-building sector hasn't actually restored its positions by 2020 either.

2. Totality of problems of the stable positioning of the national merchant fleet.

Along with the systemic problems of stable development and positioning of shipping companies in the modern sea-borne trade market, the differentiation between the company and off-transport results is increasing. Virtually all innovative approaches of shipping companies to increasing the productivity of ships are limited by the complexity of the external conditions of functional activity.

Recognizing the credibility of the approach of the International Maritime Organization to normalization of the attitude of shipping to environmental conservation, it is incumbent to highlight the priorities of mega-economics and the tasks of stable positioning of ship-owning structures. In this aspect, optimization of conditions for formation of the ship-building and labour market for seafarers according to the criteria of social and economic justice deserves special attention.

Achieving the balance of macroeconomics, environment, systemic characteristics of the seafarer labour market and net efficiency of the capital assets belonging to the ship-owners remains the most important aspect in any project for optimization of the technical and economic level of vessels (fig. 1). The constant increase of the cost of capital assets (S) along with the broadening of requirements to ensuring the relatively uniform increment of demand for shipping (D). As seen from the graph, the increase of the carrying capacity of the transport fleet on the basis of capital investment, conditioned both by entrepreneurial interests and by global technical and economic programmes, decreases the marginal productivity of potential from a certain point (a segment of the EB curve). The loss of fleet performance due to the external limitations is represented by the CB segment. Accordingly, there is a need to keep an eye on the nature of the shift in demand for investments. This process is tightly bound to the standard sequence of improving the management of the development balance of quantitative and qualitative parameters.

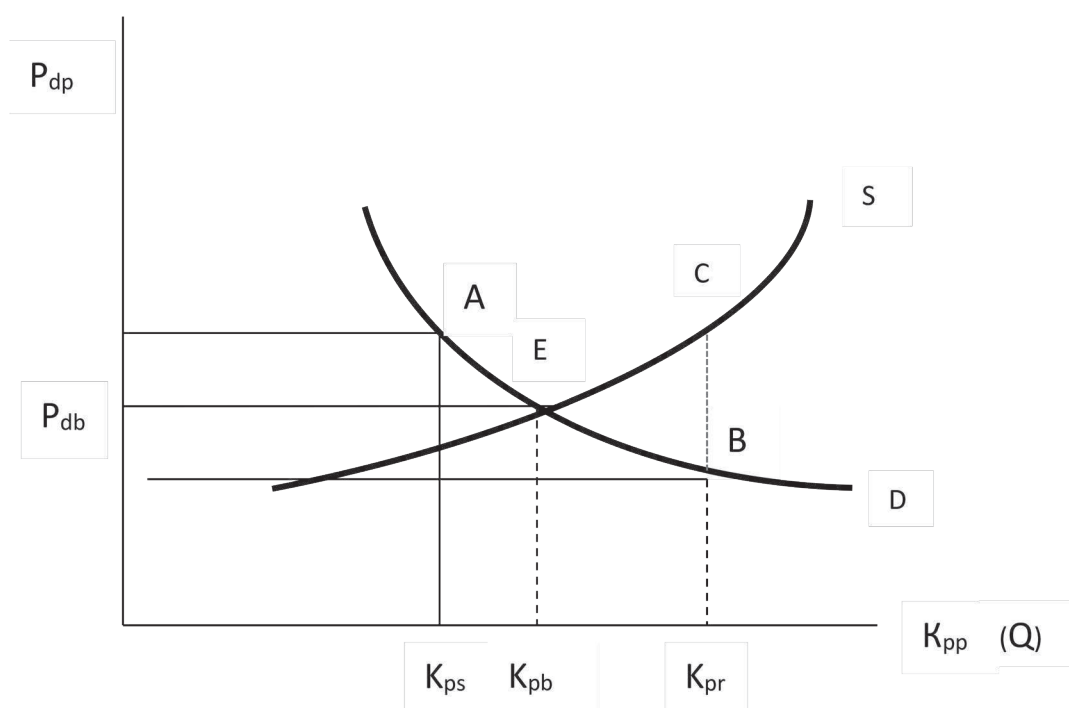


Figure1. Formation of balanced development of the specialized shipping segment

The strategy of stable positioning is implemented in accordance with the selected company goal in the normal life cycle. The preciseness of forecasting of the development conditions and parameters with consideration to the totality of risks becomes essential. Violation of standard planning approaches forms the risk of subsystem instability in the sea-borne trade market. At the same time, in the context of expediency of integration processes, the problems of timely coordination of decisions and actions in the segment of operator activity emerge.

At the same time, regulation based on a rational attitude to the environment in the structure of maritime transport shipping occupies higher positions compared to standard management principles.

On the grounds of consideration of the performance results and the realization of the carrying capacity potential, ship-owning structures, in conformity with the analysis of positioning results, should select the principles of situation monitoring and timeliness of subsequent decisions.

In this case, in fact, a situation of priorities for managing the system-wide result in accordance with the provisions arises (Dykstra Don.,2005). Choosing the mechanism for managing individual components of the global economy on the principles of eliminating the asymmetry in the concentration of results and costs in subsystems of the global economy is still a problem.

2. Patterns of balance management in the sea-borne trade market.

It is impossible to achieve the global economic equilibrium in the global sea-borne trade market, as profit maximization for each maritime shipping operator is unattainable. At the same time, in a number of cases, the maximum profitability for each cargo owner is formed unless any force-majeure arises (Review of Maritime Transport, 2019). Simultaneously, the equality of the cargo owner's income relative to the volume of the served cargo flow is not visible. Particularly difficult is the attainment of income proportionality against the cost of 1 deadweight tonne due to differentiation of the marginal tonnage productivity. The equality of supply and demand can

be achieved only during certain periods.

Under the changing circumstances of the sea-borne trade market formation, adaptation to the new requirements and description of competition becomes fundamental (fig. 2).

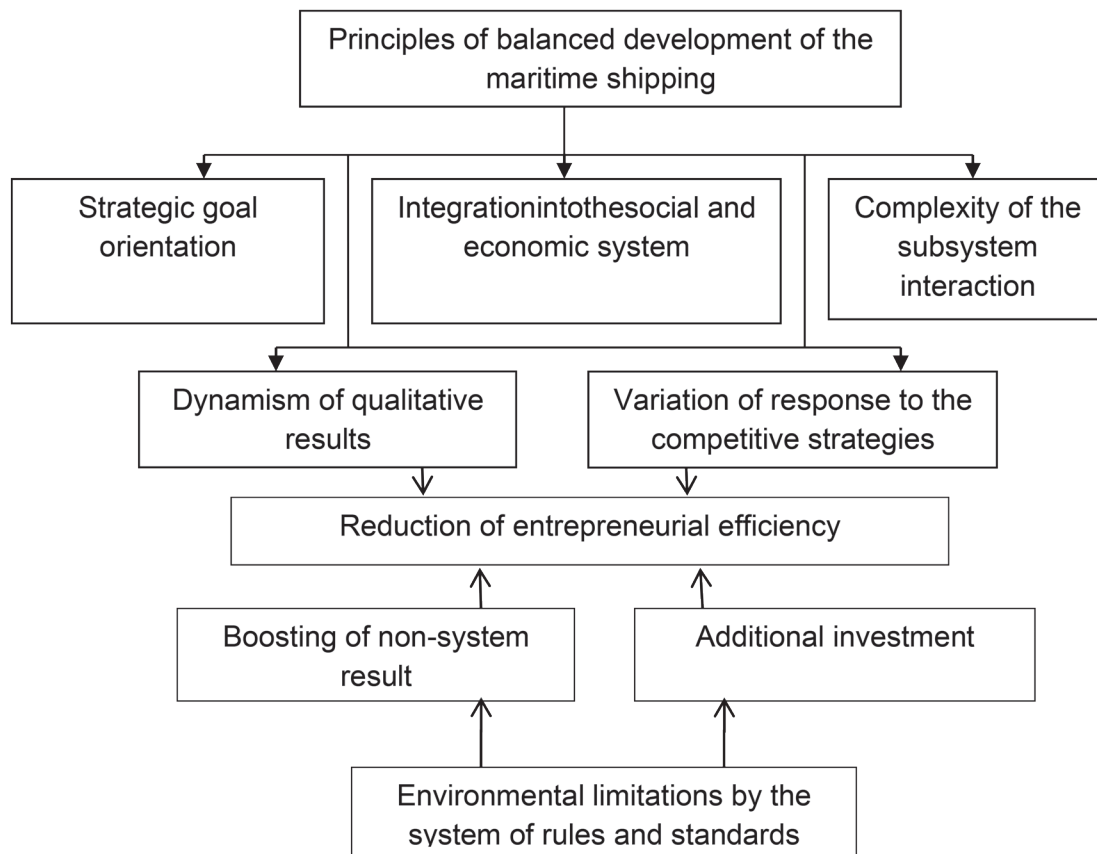


Figure 2. Main principles of control of the competitive parameters of the maritime transport complex

Commitment to the parameters of the international division of labour is prominent in the structure of the principles of balanced development of the maritime transport (fig. 2). In case of misbalance of the supply and demand, the efficiency of positioning in the selected segment of operator activity becomes complicated. This is what determines the tasks for implementation of investment programmes by the criteria of capital assets payback ratio, with consideration to the limitations on the part of environmental safety.

Within this framework, it is necessary to highlight three systemic factors for stable positioning of the ship-owning structures:

- formation of production potential of a shipping company in view of strategic goals;
- selection of directions and conditions for integration, which determine the adjustment of conditions for formation of results and expenditures:
- optimization of interaction in the system of the sea-borne trade market by criteria of timeliness of provision of the transportation services and optimality of the company's life cycle.

The increase of capital expenditures and operating costs of ship-owning structures remains the standard situation of economic growth of the sea-borne trade market, reflecting the manifestation of the law of diminishing returns. Moreover, the growing gap, as shown by the bankruptcy of a number of shipping companies and ship-building enterprises, leads not only to entrepreneurial losses, but upsets the global balance.

Therefore, it is important to develop methods for accounting of the system-wide results and a mechanism for compensation of the direct losses by investors, predetermined by complication of external restrictions regarding merchant shipping. As such external restrictions on the current entrepreneurial goals of the functional activities of the ship-owning structures fleet, one should consider the tightening of rules and standards on the part of IMO and ITF, aimed at achieving the environmental and transport safety of sea transport routes utilization.

Different directions of formation of the emergent result and the increase in capital expenditures of ship-owning structures predetermines the need for the principles of asymmetry reduction in the merchant fleet development under the current circumstances.

3. Fleet performance in the context of the new conditions

Amidst the new working conditions of the merchant fleet, the intensification of contradictions in assessment of the positions of certain states with retreat from the main provisions of the International Trade Organization is standing out. At the same time, the aspiration of certain national economies to achieve superiority not on the basis of market principles and a system of absolute and comparative advantages, but on the priority of the tasks of the national economy, is highlighted. This is evidenced by the standoff of the USA with China, the European Union and the Nord Stream 2 project in trade relations.

The extensive formation of a shale gas flow on gas carriers along the US – Europe route and to other maritime regions significantly changes not only routing, but the nature of ensuring the environmental approaches' safety. This example demonstrates the nature of transformation of the investment risks of traditional operators, and, consequently, the unpredictability of reaction of the alternative ship-owning structures. At the same time, the priority of the energy segment in the global economic positioning by the criteria of cost-effectiveness and alternative solutions to environmental protection is demonstrated.

Naturally, the problem of justification of the capital expenditures increment arises under the influence of alternative approaches. Therefore, from the position of sustainability of the global economy and the subsystems that form it, it is necessary to solve the problem of the admissibility of the redistribution of costs and results within the global economy. At the same time, the task of achieving the navigation safety on the basis of additional costs (Review of Maritime Transport, 2019) and assessment of the corresponding result redistribution emerges.

This leads to extra growth of the capital-output ratio of the merchant fleet, which does not form a direct effect. Apart from the traditional result – the profit margins, one should consider the broadening of the role of savings based on the improvement of the systemic navigation safety (Marr B., 2012).

Nevertheless, the totality of risks does not reduce, and an additional problem arises – of compensation of the corresponding expenditures (fig. 3).

As seen from figure 3, the necessity of choice of alternatives for maintenance of the system of stable positioning of a shipping company in the specialization segment is distinguished in the system of risk management.

The most important is formation of indicators for early identification of an evolving tendency. The management of the process of achieving the strategic goal should be oriented to the early stages of the project and programme implementation. In the real conditions of competition in any segment of the global shipping market, it is important to achieve a balance between the commercial interests and nation-wide (global) tasks.

Herewith, it is essential to take into account the increment of capital investments by ship-owning companies on the basis of consideration of the purely entrepreneurial tasks (expansion of the economic position) and compliance with the external limitations on environmental protection standards (Economic and legal aspects....., 2018).

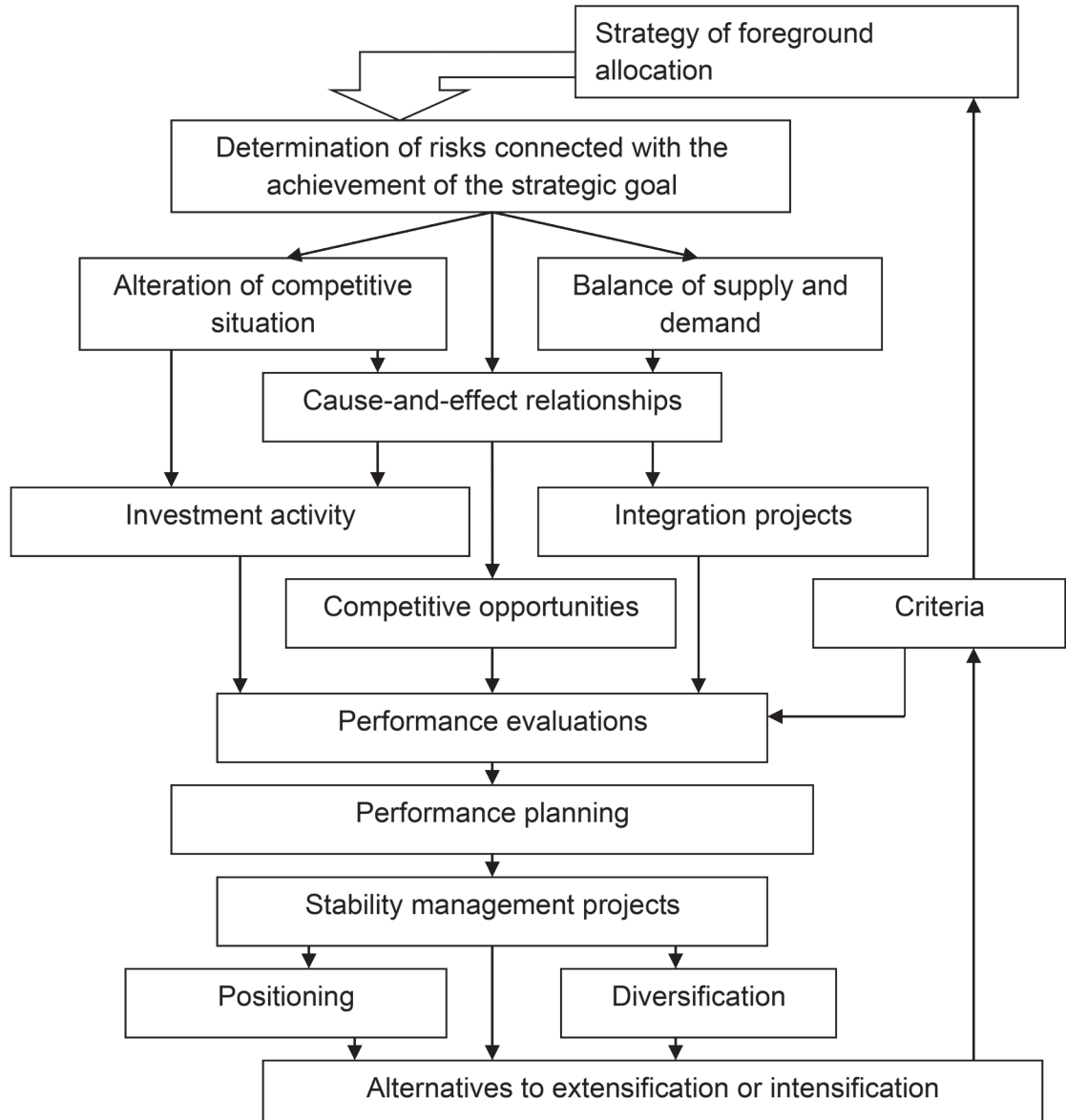


Figure 3. Risk management in the system of selection of the local segment of the specialized shipping

Given this limitation, the management of the quality parameters of the specialized shipping company functioning should rest on the formation of reserves of efficiency and the achievement of balance between the carrying capacity and the possible development of cargo flows by the criteria of competitiveness. In this regard, the planning of the stages for maintenance of the technical fleet adequacy, taking into account the systemic responsibility for convention obligations, becomes fundamental.

Then the evaluation of correlation between the systemic results and the extra investment costs of a ship-owner becomes essential is as follows:

$$K_{pt} - K_{pb} = (\Delta K_{pn} + \Delta K_{ps}) \leq E_n + E_s + E_e + E_l,$$

Where – cost of capital assets of the ship-owning structures: during the settlement period allowing for the environmental limitations (t) and during the base period (b);

ΔK_p – factors for accrual of capital assets: by non-system limitations (n) and by shipping safety (s);

E_n – economic outcome of the well-minded attitude to the environment;

E_s – effect of the new shipping safety level;

E_e – effect of business organizations (in particular, power supply optimization);

E_l – effect of human capital structuring.

Attention should be paid to the pan-European maritime transport policy, which is strictly aimed at reaching the meso-economic goals, taking into account the peculiarities of the off-system development of the fleet and commercial ports. Attention is focused on normalization of the economic, organizational and legal instruments for managing the investment processes that ensure the technical reliability and functional competitiveness of vessels and terminals. Maintenance of priorities is based on the principle of standardization (Frasynyuk, 2018), which is what actually limits the entry into the regional freight space of shipping companies that do not meet the established restrictions.

In consideration of the foregoing, improvement of the mechanism for stimulation of the innovative fleet development by the ship-owning structures is required. In case the conditions for balanced results are violated, the task of support for the ship-owning structures emerges. It should be borne in mind that without sustainable production and economic results, there will be no reliable maintenance for world goods exchange operations, which exceed 45 trillion US dollars. At the same time, the costs for maintaining the navigation safety and the costs for training of the maritime transport specialists by the criteria of compliance with the new competencies are increasing.

That is to say, we need a tool for supporting the ship-owning subsystems on the grounding of the non-transport effect redistribution. However, it should be considered that seafarers, working on ships of foreign companies, form the gross domestic product of the country of citizenship. Ship-owners using convenient fleet registries ensure the formation of the national domestic product of foreign states.

NOTES

Taking into account the priorities of economic growth of the main components of the world economy, the tasks of achieving a balance of interests of all subsystems of the international production relations, it becomes important to maintain the activity of business structures while rationally forming the system-wide standards for a rational and safe attitude to the operator activity environment.

In this aspect, there emerges a problem of consideration of the nature of redistribution of results and costs while maintaining interest in ensuring the mega-economic balance and living standards in certain states. In the core of solution to this task, the problem of the growth ratio of non-systemic efficiency of using the totality of natural resources on the basis of technical innovation-based improvement of the merchant fleet, which requires a significant increment of capital expenditures, is formed.

The change of the international labour division conditions, achieving the marginal grade of transport flows in the regions with the stable industrial manufacturing, mainstreaming of technologies based upon reduction of energy output of the cargo transportation predetermines the relevancy of economic justifications for the ultimately new approaches to routing on the grounding of priorities.

Essential are not only the tasks of development of merchant shipping on the basis of national companies, but also the ones of strengthening the role of methods for enhancement of reliability of the operational activities according to criteria limitations. This is due to the rising cost of innovative technologies for transport services in international trade and standard transport and economic relations.

The system of regulation and administration in the structure of merchant shipping is based on improvement of the legal framework for relations between the carrier and cargo owners, managing the navigation safety, guarantee of the property rights and the effectiveness of remuneration. Considering the peculiarities of the operational process and the forms of maintaining the technical vessel reliability, it becomes fundamental to reflect the peculiarities of shipping in the specific regions of operator activity.

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The MECHANISM OF BALANCE OF GLOBAL AND BUSINESS INTERESTS IN THE MARINE TRADE MARKET considered in the paper can become the basis of an analytical course on the principles of the functioning of the world freight market and part of the course in the preparation of Master of Science and PhD postgraduate students of operational specialties, as well as in the preparation of applicants for the specialty of Maritime Transport Management.

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Oleksandr Shemiakin, Prof. Dr.
National University “Odessa Maritime Academy”
8, Didrikhsona str. Odessa, Ukraine 65052
E-mail: shemyakin@onma.edu.ua

Mykola Primachov, Prof. Dr.
ORCID iD: 0000-0003-0192-2894
National University “Odessa Maritime Academy”
8, Didrikhsona str. Odessa, Ukraine 65052
E-mail: nickolas.primachev@gmail.com

Olena Sienko, Prof. Dr.
ORCID iD: 0000-0003-2076-8503
Web of Science ResearcherID: IAP-5822-2023
National University “Odessa Maritime Academy”
8, Didrikhsonastr. Odessa, Ukraine 65052
E-mail: elenavsienko@gmail.com