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## PROBLEMS OF SUSTAINABLE SOCIAL AND ECONOMIC DEVELOPMENT OF UKRAINE

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### **Abstract**

The article presents the results of a systematic consideration of the complex issues of sustainable development of the national maritime transport subsystems in the global maritime transport industry. Particular attention is paid to the analysis of the real conditions of operation. There are feasible measures which should be taken to normalize the development of the national merchant fleet in order to achieve relative stability and to minimize the risk of losing the status of maritime power. Aspects of international administration in marine transport industry are highlighted in this article. The article deals with the scientific and methodological approaches to the choice of governance of economic and investment activity in the system of market relations.

**Keywords:** maritime transport industry, national merchant fleet, sustainable development, maritime power, normalized development.

JEL classification: O14, O21, P21

## Introduction

Due to natural geographical factors, national transport is one of the system-forming industries which ensure the territorial integrity of Ukraine and the unity of its economic space. The expanding international trade and integrated transport have allowed Ukrainian technology to cater for a significant portion of the global market's demand for the development of transport infrastructure, contributing in a fundamental way to the sustainable and normalized growth of the national economy, whose position both at home and abroad is thus stronger.

The experience of developed countries shows that investments in the marine transport industry are among the most effective tools to accelerate economic growth, develop new markets as well as create new opportunities for increasing investment, business and social activity in the community. Sustainable economic development of the maritime transport industry largely depends on optimized strategic decisions of administrative entities to achieve effective target orientation (national interests), on the one hand, and crisis management criteria

(external restrictions), on the other. Thus, a special group of tasks related to fleet management has to be carried out to fulfill the established criteria and restrictions. Failure to meet these requirements leads to the loss of the country's status as a maritime power.

An adequate strategy for the development of Ukraine's marine transport industry should be selected with a view to the main objectives and constraints, i.e. to achieve transport independence from foreign trade, to ensure the efficiency of the fleet and compliance with international standards and regulations. The Balanced Scorecard allows the national merchant fleet to operate reliably. Due to its limited participation in the Merchant Shipping, Ukraine loses several billion dollars annually.

Ukraine is exposed to a significant risk of loss of economic safety as a result of ignoring the feasibility studies of the development of its own merchant fleet, in consequence of which the problem of management of the development of the marine transport industry in Ukraine remains unresolved.

## 1. Literature review

The literature supplies a sizeable body of research on the problems of sustainable social and economic development in Ukraine. Relevant in this context are the writings of: Kotlubay (2004), Primachov (2009), Geyets (2014) to name just a few. There is lingering controversy, however, as to the choice of the appropriate scientific and methodological approach to economic governance and investment activity in market relations.

The operation of the national economy on the principles and standards of the WTO is closely linked with the rational development of the country's transport industry. Therefore, the EU demonstrates a systematic concern about the adequacy of the merchant fleet. Unfortunately, in Ukraine, no positive developments was seen in the merchant fleet or operating potential of ports in the period of establishing foreign economic relations on the basis of the provisions of the WTO.

Problems of sustainable economic development of Ukraine's maritime transport industry are reflected in the literature (Vinnikov, 2005; Nikolaeva, 2008; Primachov, 2011; Kotlubay, 2011; Ilchenko, 2012; Zhikhareva, Kotlubay and Kibik, 2012; Primachov and Klimek, 2014) but new challenges are emerging that require further study. Methods of assessing the impact of external administration on the effective positioning of the national merchant fleet are not completely clear, while the features of the management of systemic safety of merchant shipping in the identification of economic administration tasks in the shipping industry in the conditions of the existing sectoral division of the maritime trade market are not fully disclosed.

## 2. The main results of the study

The complexity and contradictions of the economic development of macroeconomic processes and relevant microeconomic strategies in Ukraine are due to a fundamental mistake in setting priorities during the formation of statehood. The priority of political goals over social and economic problems resulted in the loss of political stability and balance of the internal market.

The basic system of integration is gradually collapsing as no provision was made for national priorities of participation in international labor division. Ukraine has lost the industry with high added value and turned into an exporter of raw materials. Therefore, a negative balance of payments has ensued; this combined with sea transportation based on chartering foreign tonnage and other negative factors has led to a total loss of the merchant fleet and the advantages of a transit state.

Ultimately, the principle of optimal intensity of development of the national maritime transport industry in the system of regional and global transport technologies has been broken. At the same time, investment project started carrying a higher risk, while the gap widened between the technical and economic levels of productionas compared not only to developed countries, but also to countries in transition.

The adoption of the CF principle as a criterion for sustainability of economic activity determines the need for time-differentiation, not only accounting for the position of goods or services in the Boston matrix (Jobber and Ellis- Chadwick, 2013, p. 232).

This fundamental principle of marketing ensures long-term benefits and does not require excessive efforts to increase the market share or growth rates. In the maritime industry, the demand (availability of commodity flow) precisely determines the increase in tonnage supply.

The goal, as a rule, should take into account own abilities and externalities for its implementation. However, consideration should always be given to the internal laws of the maritime transport impact on the global stability and, at the same time, to the nature of the sudden changes in the global processes. In recent years, there have been clear signs of a totalitarian impact of the so-called world currency on the transformation of the status of individual national production structures.

As it is known, in the management system of transportation process in the maritime trade market there are the specialized organizations in the form of shipping companies, ports, and service divisions. On an economic and legal leve, these represent relatively isolated entities in the unified global maritime transport industry. Transparency and consistency in servicing cargo flows are common, considering the character of the production process of maritime transport companies. For shipping companies, transparency is an important indicator shaped by the nature of effects of external environment, in particular, by the trends in foreign trade turnover.

Consistency is expressed in the characteristics of the internal environment of the shipping companies, ports and other maritime organizations. The structuring of the internal environment is conditioned by the unity of purpose and the interdependence of obligations and the place of the enterprise in the process of efficiency management in freight traffic services.

In Merchant Shipping, there is a transition from historical organizational management structures to organic ones (Balatsky, 2006, p. 37), which is flexible, despite the increased impact of global maritime organizations, which form a system of standards and behavioral restrictions. Maritime transport develops and functions in the deployment of the two conflicting approaches of the world economy – globalization, on the one hand, regionalization and integration, on the other. In line with these directions, each national economy pursues its main goal – the sustainable realization of products of local potential and its further expansion. The loss of balance at the mega-economic level leads not only to individual failures, but to the emergence of such crises as 2008-2009, with the subsequent recession.

That is why the development strategy or the national economy, as demonstrated by the President of the United States Donald Trump, is growing increasingly pragmatic. There has been a shift away from global economic associations to bilateral treaties that serve the interests of employment of citizens. It is the priority of job creation that should revive Detroit in the United States and the industrial centres of Ukraine. Unfortunately, according to various estimates, up to 7 million Ukrainian citizens work in foreign countries mainly as illegal immigrants. Only Ukrainian sailors constitute an exception in this respect, working on foreign vessels in accordance with the applicable laws.

Algebraically, the economic effect of the priority positioning of the national economy to expand jobs can be represented by the model which explains the logic behind the formation of added value and gross domestic product in the long run.

$$\Delta G_{dp} = \sum_{i=1}^{T_L} \left[ e_n I_{nv} + \Delta W_p r_l (1 + c_l) - e_l K_p \right] \alpha_{ti}, \tag{1}$$

where:

 $T_L$ - life cycle of investment project which provides an increment in workplaces;

 $e_n$ - norm of effectiveness of investment flows contributing to the development of the national economy;

 $I_{nv}$ - investment flow according to criteria of incremental jobs in the country;

 $\Delta W_p$ - the average salary in this economic cluster;

 $r_l$ - the number of new workplaces in the base unit of the cluster;

 $c_l$ - coefficient taking into account the need for additional workplaces in the related structures of the cluster;

 $e_l$ - drop in the rate of return of capital assets due to the withdrawal of production from offshore areas:

 $K_p$ - the value of capital assets transferred to the national territory;

 $\alpha_{ti}$ - discount rate of current cash flows as against changes in the value of money over time (Damodaran, 2012).

The unresolved problem of how to measure results reflecting the real presence of the economic subsystem under study limits the possibility of making adequate decisions and corresponding responses to the changes. The main issue is the choice of direction in view of the criteria of limited resources. In spite of the priority role of added value, the normalization of the ratio of the two components of the growth of added value, the basic and human capital, becomes fundamental.

The main subsystems of the world economy have adapted to develop in the conditions of low profit margins, which were formed in response to the economic crises of the late 20<sup>th</sup> century. The effectiveness of the functional activity is based on the mass of profit. In Ukraine, contrary to the systemic principles of economic growth, the first period of modern statehood was devoted to the creation of a group of oligarchs in the conditions of mounting unemployment and hyperinflation. The second period of the recent history of Ukraine was devoted to reforms, based on the transition to a new model of state structure, which reflected on the level of economic development of the country. Suffice it to mention that by 1999, the exploitation of the country's economic potential decreased by 40% from the level of 1990 (Fig 1).

As can be seen in Figure 1, the economic recovery in Ukraine, which began in 2001, continued until 2009 and achieved 31.54 percent of the 1991 level. During the period of the global financial and economic crisis, the world economy fell by less than 4 percent, and the Ukrainian economy collapsed by 15. The collapse of the economic potential of 2014 - 2016 foreshadowed further economic decline to 10.7 percent.

During the years of political independence, the country has lost such industries as engineering, aircraft building, shipbuilding and merchant shipping, which have high added value and offer high-tech jobs. As a result, Ukraine in terms of per capita income came last place in Europe, with a correspondingly low level of wages. In fact, the only developing export industry is grain. However, its development differs asymmetrically, which reduces the balance of the current account. The absolute majority of grain terminals of the country's seaports are owned by foreign capital. At the same time, more than 90 percent of grain exports are carried out by foreign operators, which reduces the profitability of the industry, and, consequently, investment opportunities.

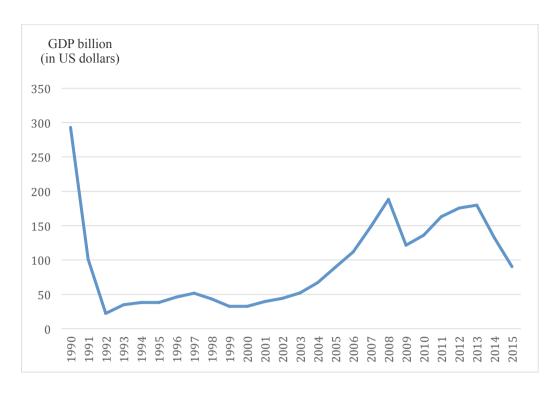


Figure 1. The dynamics of Ukraine's GDP by year

Source: State Statistics Service of Ukraine (2016).

The focus of maritime transport on the achieved volumes of world trade with a sharp decline predetermines the catastrophic condition of the entire maritime transport industry. Therefore, the balance of maritime transport in the conditions of permanent cyclicity becomes the most important criterion for managing and developing a strategy of sustainability during the active part of the life cycle of the fleet or port. Orientation to long-term sustainability of operation requires the development of programs that take into account the risks of imbalance conditions.

The accumulation of the potential of new technologies has led to the need to tighten the requirements for technical reliability in accordance with the criteria of general and ecological safety of merchant shipping. Unfortunately, the basic forms of self-regulation of the maritime transport industry do not exclude the accumulation of excess capacity or its deficit in certain periods of economic cycles.

The development of the maritime transport industry under transition from balance to imbalance and vice versa leads to periodic crisis conditions. As the retrospective analysis shows, no mechanisms or tools have been developed for long-term optimization. However, as the fleet's technical reliability improves, it becomes possible to maintain a stable operation without significant technical or financial reserves. At the same time, the threshold of operating profitability is lowered.

It is the innovative technologies for the development of the global maritime transport industry that reduce the risk of operator activity conducted in substandard facilities. These facilities are usually concentrated in separate marine areas, for example, ships of mixed river-sea navigation in the Black Sea.

The most important principle of competitive positioning is the comparability of the quality characteristics of transport services that predetermine price deviations. Therefore, when comparing alternative logistics systems, it is necessary to highlight the features of their functioning. Thus, European logistics differ in the efficiency of their organization prices in comparison with the Ukrainian segments.

The market growth rate and market share belonging to the operator is not an absolute characteristic or an indicator of competitiveness. These characteristics are limited in time and if we consider the offer of the shipbuilding segment in 2006-2015, it becomes obvious that there are a number of factors that must be taken into account when choosing a development strategy.

The negative side in the strategy of effective positioning of residents of Ukraine, even in the priority specialization segment, is the high cost of logistics services. So, according to the 2013 level, the price of loading of 1 ton of grain in Ukrainian seaports reached \$ 22, while in foreign countries the same operation cost 4-6 dollars per ton. The cost of delivery of 1 ton of grain from the field to the port reaches 546 UAH. It is considered possible to reduce these costs by 150 - 200 UAH with normal logistics.

The main idea of the technical re-equipment of the maritime transport industry can be formulated as the process of achieving competitive innovation by the criteria of safety of perceived value on the part of cargo owners. This means the formation of the normalized value of capital assets and an efficient market of specialists, and operating at a normal profit level during the life cycle of the company or the segment of the operator activity market.

The efficiency of shipping companies management is a crucial factor in the transformation of the maritime trade market structure. The key is to decide on the trend of changes in the basic structural characteristics: the ratio of cargo flows by types, volumes and directions. In accordance with this, taking into account the construction lag, changes in the composition of the merchant fleet along the size range, registration flags and individual companies should be monitored.

Crisis states of national and production subsystems during global cycles predetermine low profitability, and, consequently, stability and survivability of the enterprises that create it. Therefore, business structures and institutional administration choose the main directions that reduce negative dynamics. The main problem is to keep the pre-crisis parameters of the distribution of added value, otherwise negative forms of perception of reality will follow, as happened in Greece in 2013 - 2014.

If it is not possible to solve the national and linguistic question fairly, as was done in Czechoslovakia at the time, it is necessary to take a close look at the solution of the employment problem by the new President of the United States. The mainstay of sustainable development is the use of the UN's Position Principles "Agenda for the 21st Century", the stimulation of the development of entrepreneurial structures and the achievement of the normalized solvency of citizens of the country.

In the face of severe competition in the system of the global maritime freight market, the achievement of the parameters of the status of a maritime power becomes fundamental in a system with sustainable development. For the sustainable development of the national marine industry facing stringent competition, it is necessary to develop a methodology that reflects the conditions and tasks of the strategic positioning of the shipping complex. The principles of sustainable development of the global maritime trade market are taken into account when selecting the targets of the program for the emergence of Ukraine as a maritime state. The criteria highlight the commercial feasibility and safety function of positioning residents in the international labor division.

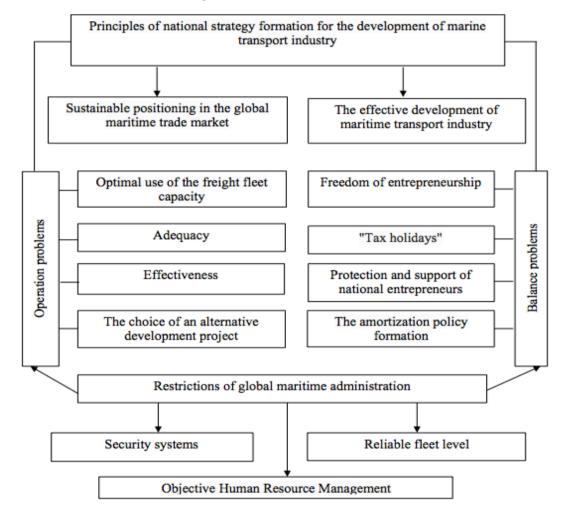
The maritime transport industry, along with the standard commercial goals of development and operation, provides a certain economic security for the country. Therefore, the normal ratio of administration and development of national merchant shipping should be preserved. From these positions, it is important to pursue a balanced policy in the formation of a national strategy for the development of the maritime transport industry. The ratio of the administration and development of national merchant shipping is formed iteratively. The National Fleet implements the principle of efficiency. Global administration is the principle of expediency. Marginal growth of average costs is one of the features. As an example: tankers with a double

bottom, stricter requirements for limiting emissions into the atmosphere, minimum wages by categories of seafarers.

Of particular importance is the value of the national merchant fleet, which accounts for 90 percent of foreign economic relations. This (Fig. 2) is related to the tasks of balancing the entrepreneurial and macroeconomic interests of the functional activity of the merchant fleet and ports.

Taking into account the system of laws and principles on the basis of which a national strategy for the development of the maritime transport industry is being developed, it is necessary to draw attention to the features of the formation of parameters characterizing the state of the maritime trade market.

Fig. 2 presents the main tasks related to the sustainable development of the maritime transport industry. The first is to match the dynamics of changes with reforms for sustainable positioning in the international arena; the second is to formulate a balanced policy regarding the development of the deadweight of the fleet and changes in the basic location of the productive forces; the third is to ensure adequate system management to ensure the sustainability of the operation. The main condition is to strengthen the role of institutional constraints and international administration. The latter brings investment activity and operation into line with the criteria of economic security.



**Figure 2.** Problems and factors of sustainable development in the marine transportation industry Source: Authors.

In the maritime transport industry, the fundamental principles of sustainable development are singled out: the requirements for the balance of navigation and shipbuilding in relation to the growth rates of freight traffic. In addition, an important role is played by the presence of a global administration system and an expanded service market. In view of this, the tendencies in the formation of fixed capital, human capital and non-systemic constraints are constantly changing in the maritime transport market.

In the process of developing the maritime transport industry, it is important to clarify the structure of the mechanism and tools for managing the sustainability of maritime transport subsystems at any phase of the economic cycle. The criterion of functional and economic sustainability of the subjects of the maritime market is the normative parameters of the production potential of the shipping complex. These parameters are limited by the conditions of the freight market and the possibilities of new investment. The principles of managing the economic stability of the fleet in the changing environment of the maritime trade market for individual subsystems of the shipping complex are reduced to the achievement of the normalization of the functional and financial condition.

Each country which develops its own strategy for the development of the marine industry is forced to take into account the targets of other subjects in the international arena as the main condition for achieving sustainability and minimizing the risk of losing its position, as well as compliance with administrative requirements. Therefore, it makes sense to use a system of indicators that reflect national interests and a set of conditions for the formation of parameters of the global maritime trade market.

The maritime transport policy should be based on a mechanism and tools for a stable renewal of productive capacity. This is resolved by the principle of adequate increase of the technical and economic level. It is necessary to provide a real budgetary support for the programs that will subsequently ensure a budgetary return on the basis of the multiplier effect.

The transport security of the country should be regarded as the basis for the normalized development of the national maritime industry. Transport security should be understood as the creation for and maintenance at the national level of a set of conditions for sustainable development of the fleet's carrying capacity, which should ensure the achievement of effective social, environmental and economic standards. This guarantees the protection of competitive positions of national producers in the global transport services market.

In any situation in the global maritime transport industry, a strategy that reflects the principles of optimizing the relationship between direct and alternative costs for the delivery of goods and the value of transportation perceived by operators of foreign economic relations is important. It is necessary to take into account that the factor of turnover of resources of enterprises becomes the main factor in world trade. It is for this criterion on which shipbuilders must base the design features of the transport fleet.

Ukraine's loss of advantages in all types of merchant shipping and in shipbuilding should draw attention to ways in which to formulate an effective maritime transport strategy and to the search for optimal external investments ensuring the improvement of the technical and economic level of Ukraine's maritime transport as well as the creation of new jobs. One of the potentials for the revival of the national maritime transport industry still lies in the favorable geographic location of the country and the availability of specialists in this field.

## **Conclusions**

Ukraine's transport industry has completely lost its independence even despite its location at the crossroads of global transport flows: East - West and North - South. In view of this, the principal critetion should be to optimize productivity in order to fulfill the fundamental goal, i.e. timely delivery of quality goods and compliance with the standards, rules and restrictions

arising from the regulatory principles laid down in the conventions of the International Maritime Organization and the International Labour Organization.

In the context of the Ukraine's integration hitherto in the system of international and regional division of labor, sea transport should be considered as the most important economic guarantor of the stability and independence of foreign economic activity. In this process, fundamental changes are needed in the economic mechanism for managing the economic parameters of national units that are oriented to functional activity in the global economic space.

The choice of state policy aimed at achieving effective parameters of the maritime transport industry should be based on the following principles: the creation of favorable regulatory, legal and financial-economic conditions for the activities of national enterprises and foreign investment in this sector; tax support and guarantees by the state of the priority subsystems of the maritime industry, capable in a short time of improving economic security; the development of infrastructure with the use of new technologies and innovations that are adequate to the stringent requirements of global administration.

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# PROBLEMY ZRÓWNOWAŻONEGO ROZWOJU SPOŁECZNEGO I GODPODARCZEGO NA UKRAINIE

#### Streszczenie

Niniejszy artykuł przedstawia wyniki systematycznych rozważań na temat złożonych zagadnień związanych ze zrównoważonym rozwojem poszczególnych działów krajowego transportu morskiego w ramach morskiego transportu światowego ze szczególnym uwzględnieniem analizy rzeczywistych warunków pracy. Istnieją realne działania na rzecz normalizacji rozwoju krajowej floty handlowej, które należy podjąć, aby osiągnąć względną stabilizację, jak również aby nie stracić statusu potęgi morskiej. Praca ta podkreśla aspekty administracji międzynarodowej w transporcie morskim. W artykule omówiono naukowe i metodologiczne koncepcje dotyczące wyboru metody zarządzania działalnością gospodarczą i inwestycyjną w zakresie relacji rynkowych.

**Słowa kluczowe:** transport morski, krajowa flota handlowa, zrównoważony rozwój, potęga morska, znormalizowany rozwój

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