Regional Conditions of Positioning of Stevedoring Business in Ukraine

Topicality. The expediency and substantiation of these scientific provisions is related to the need to take into account new trends in the positioning of maritime transport enterprises in the regional market of maritime trade. The negative impact of the pandemic on the world economy, the need to take into account the regional conditions of sea transport ports dictates the feasibility of developing theoretical and methodological foundations for effective positioning of stevedoring business in Ukraine.

Aim and tasks. The purpose of the article is to clarify new trends in the development of maritime transport enterprises in the regional market, substantiate the conditions of competitive development of line service, as well as systematization of factors of sustainable positioning of stevedoring business in Ukraine.

Research results. New tendencies and conditions of functioning of maritime transport enterprises in the system of maritime trade market are analyzed. An assessment of global economic growth is given. Factors of economic instability in the world are noted. A detailed analysis and substantiation of the activity of sea trade ports in the Black Sea region is presented. The need to develop a new and rational competitive methodology for charging port dues in Ukraine, which will take into account the interests of all stakeholders, was emphasized. The ways of development of sea trade ports of Ukraine are indicated. The work of line operators on the Ukrainian market is analyzed and substantiated. The necessity of development of the logistic component on transport is noted.
Conclusion. Systematized parameters for ensuring the development of stevedoring business in Ukraine, taking into account new trends in positioning and the negative impact of the pandemic. The factor model of effective positioning of stevedoring operators in the regional market of maritime trade is presented. Restrictions and standards of functioning of terminal operators are revealed.

Keywords: stevedoring activity, concession, line operators, regional maritime trade market, Black Sea region, sea trade ports.

Problem statement and its connection with important scientific and practical tasks. The technical and economic level of a shipping company, on the one hand, characterizes its production potential, and on the other hand, predetermines the status of a company in the competition system in terms of quality and economy of production. According to the integral indicator of the efficiency of resources concentration, a logistic system of management of material, financial and information flows is de facto being formed. The problem of maintaining the activity of investment processes that ensure the implementation of the development program according to accepted criteria and goals remains.

The functional activity of the company in an open market of maritime trade should be controlled by three parameters that characterize competitive positioning in the market. These are:
- the price of the product, which is subject to certain changes in various factors;
- marginal costs, ensuring production efficiency;
- transaction costs associated to the terms of the product sale.

Over the past five years, the global container market has seen a globalization trend, which is dictated by tough competition conditions. Three large alliances have been created that cover 85% of the global container market - 2M (Maersk, MSC), Ocean Alliance (COSCO, CMA CGM, Evergreen, OOCL) and The Alliance (ONE, Hapag-Lloyd, Yang Ming, HMM).

In accordance with the strategy for the development of seaports of Ukraine until 2038 and the National Transport Strategy of Ukraine until 2038, all state stevedoring companies must go into private business on the basis of concession or privatization. Privatization or concession is decided on the basis of a preliminary feasibility study. If the object is unprofitable for the concessionaire according to the conclusion of the feasibility study, then the decision is made in favor of privatization.

A poorly thought-out tariff policy in the system of national maritime transport enterprises leads to a decrease in the throughput capacity of trade ports in the system of the regional maritime trade market. The tariff load on business reduces the competitiveness of stevedoring operators in Ukraine. It is necessary to note the innovative technical backwardness of the seaports of Ukraine.

However, many problems associated with ensuring the competitive development of the stevedoring business in the regional maritime trade market remain unresolved.

Analysis of recent publications on the problem. Scientific research pays great attention to the development and effective positioning of maritime transport enterprises in the maritime trade market system. The mechanism of adaptation of the system of regulation of stevedoring activity has been formulated [1]; the factors of sustainable development of sea transport enterprises in the system of world economic relations have been systematized [2]; substantiated the conditions for effective positioning of the maritime transport industry [3]. However, the specificity of the regional positioning of the stevedore business has not been fully taken into account.

Allocation of previously unsolved parts of the general problem. It should be noted that the methods of ensuring the competitive development of the stevedore business in Ukraine in the structure of the regional maritime trade market have not been sufficiently developed. And as recent events related to the negative impact of COVID19 on the global economy have shown, the power of the influence of external and internal conditions for the functioning of maritime transport enterprises has not been fully investigated. Therefore, there is a need for a detailed analysis of the impact of the environment on the efficient operation of maritime transport enterprises, as well as substantiation of the conditions for the competitive development of the stevedoring business.

Formulation of research objectives (problem statement). The objectives of the scientific research are to analyze and substantiate the conditions for positioning maritime transport companies in the global maritime trade market, identifying the conditions for the functioning of sea trade ports of Ukraine in the regional maritime trade market, systematizing the factors of competitive development of the stevedoring business in Ukraine.

An outline of the main results and their justification. It is necessary to take into account the close relationship between the rates of development of the world economy and the dynamics of the work of
maritime transport. The transport subsystem determines competitive positioning in the regional system and in individual economic subsystems.

In 2019, growth in international maritime trade reached its lowest level since the 2008-2009 financial crisis due to the negative impact of the pandemic, political and trade tensions. The volume of maritime trade increased by 0.5% compared to 2018 and reached 11.08 billion tons. Global GDP growth slowed to 2.5% (Table 1). In developed countries, GDP growth slowed to 1.8%, compared to 2.3% in 2018. Developing countries had relatively high rates of 3.5%, but below 4.3% in 2018. GDP growth in transition economies has stalled. Economic growth slowed down in the European Union, East and South Asia. In America, economic growth has slowed due to unfavorable domestic and global conditions.

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<th>World economic growth, percent</th>
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Source: Complied by the author based on [4]

The growth of world trade in 2020 amounted to 11.5 billion tons (a decrease of 3.6% by 2019). World trade is forecast to grow to 12 billion tons in 2021 [5].

The economic instability associated with the activity of the virus leads to political and trade tensions and, as a consequence, the uncertainty of the macroeconomic prospects for the development of countries and individual regions.

The dynamics of freight traffic determines the rate of competitive development of the stevedoring business. The cargo turnover of Ukrainian seaports and terminals over the past 15 years has grown by 46% from 109.037 million tons. (2005) to 159.1 million tons. in 2020 [6]. However, it should be noted that the sea trade ports of Ukraine are inferior to their competitors in the Black Sea region in terms of functional and competitive stability. Figure 1 shows the dynamics of the cargo turnover of the seaports of the Black Sea region over the past 15 years.

The largest national ports of the Black Sea region are the ports of Pivdenniy, Odessa, Chornomorsk, Nikolaev. For 2019, there were 14 stevedore operators in Pivdennoiy, 15 stevedore operators in Odessa, 16 in Chornomorsk, and 22 terminal operators in Nikolaevsky (in 2020 - 23 port operators). As for the work of the Nikolaev seaport, there is positive dynamics from 5.56 million tons in 2005 to 30.135 million tons in 2020.

Unfortunately, it should be noted that the Mariupol commercial port has to work in difficult conditions due to the close proximity to the combat zone, which led to the loss of part of its traditional cargo traffic (14.77 million tons in 2005 to 7.025 million tons in 2020). In 2019, to ensure economic sustainability, the port of Mariupol had to switch to a four-day working week. Despite the negative impact of external factors, the stevedore operator is implementing investment projects: berth 18 has been converted into a modern metal loading complex.
It is necessary to note the work of the port of Pivdenniy, which at this stage is the only one among the national ports capable of accepting vessels of the capesize type. In 2020, the port received 172 vessels of this type.

The dynamics of the development of the cargo turnover of the Black Sea ports of Turkey: an increase in 15 years by almost 2.3 times from 21.9 million tons to 42.3 million tons (2019). Large Black Sea ports of Turkey - Zonguldak, Samsun, Eregli - the share of cargo turnover of the Black Sea ports of Turkey is almost 77%.

Figure 1. Dynamics of cargo turnover of the ports of the Black Sea region, mln.t.

Source: Complied by the author based on [7]

From 2005 to 2019, the Turkish port of Zonguldak increased its cargo turnover by almost 8.5 times from 1.438 to 11.96 million tons. This trend is primarily due to the adoption of rational decisions on the construction of the Eren Port deep-water terminal with a capacity of up to 10 million tons. The investment project was implemented by the diversified group of companies Eren, which processes bulk, general and ro-ro cargo. The new terminal can handle vessels of the capesize class, the depth at the berths is 12 to 18.5 m.

In 2010, the port of Samsun was transferred into a long-term concession to a group of Turkish logistics companies Cey Group (the price of the concession agreement is 125.2 million dollars, undertakes to invest another 32 million dollars), the term of the concession is 36 years. The company is making significant investments in the development and modernization of the port, which has managed to increase the port's cargo turnover to 11.150 million tons in 2019 (an increase of 53 percent compared to 2010).

Eregli port receives and processes ore carriers with deadweight up to 200 thousand tons, depth at the berths is 20 meters. For 15 years, the port's cargo turnover has been at a stable level of 9-11 million tons [8].

It is necessary to note the promising work of the private port of Karasu, which was opened in January 2017. It has an advantageous strategic position, ships do not need to cross the busy Bosphorus and pay taxes, which made it possible to attract ferry lines. In 2019, all Ukrainian ferry lines were transferred to the port of Karasu with a direction to Turkey, which was due to favorable pricing. The cargo turnover of the port of Karasu in 2019 reached 1.373 million tons.
Currently, an investment project is being implemented in Turkey (158 million dollars) at the expense of public investments - the construction of the port of Filyos with a capacity of 25 million tons. Terminals for transshipment of bulk, general and container cargo are planned. Commissioning is scheduled for 2023 [9].

In the Black Sea region, the leading position is occupied by the Romanian port of Constanta, which, along with Ukrainian ports, also shows record figures for cargo turnover in 2019 (66.6 million tons). Constanta is one of the largest grain and container hubs in the Black Sea region. Port cargo turnover - Constanta agricultural products (21.3 million tons, about 32% of the total cargo turnover in 2019), container cargo, ore and oil cargo.

To ensure sustainable development, the Georgian government approved an investment project to expand the seaport of Poti in early 2020 (AMP Terminals Poti company). The throughput capacity of the project should double: the construction of a new protective jetty with a length of 1.7 thousand meters and two deep-water berths with a length of 700 meters. This investment project will strengthen the competitive position of the port and thereby additionally attract the flow of bulk, general and container cargo.

The Georgian ports of Poti and Batumi specialize in transshipment of bulk and liquid cargo. The Moldovan port of Giurgiulesti specializes in the processing of grain and sunflower oil (export) and import - coal and oil products.

Due to the unbalanced development of the country's transport complex and despite the transit attractiveness of Ukraine, sea trade ports did not achieve adequate positioning in the Black Sea region.

The process of developing a new methodology for calculating port dues in Ukraine has been going on for many years. National seaports use an outdated and economically unjustified methodology for calculating port dues, which is already 30 years old, which negatively affects the competitiveness of the stevedoring business in Ukraine. For example: the cost of a container ship call in Ukraine, depending on the size, costs about 42-50 thousand dollars, at the same time, the call of the same container ship to Turkish ports costs 16-28 thousand dollars, Israel - 25 thousand dollars, Greece - 10 thousand dollars Port dues in Ukraine are twice the average in the Black Sea region and, as a consequence, the unstable development of transit cargo flows (Fig. 2).

![Figure 2. Dynamics of transit cargo flows through national ports, 2013-2020, thousand tons](image)

Source: Complied by the author based on [10]

According to the assessments of the Svitovoy Bank, the potential for the decrease in port fences in Ukraine is 63%. For example, the decline in port collection in Ukraine by 20% since 1 June 2018 called for the increase in the number of ports in 2019.

The largest share of cargo turnover is handled by private stevedore operators, their share in 2020 amounted to 78% of the total cargo turnover (Fig. 3). Among the state-owned port operators, the State Enterprise "MTP" Yuzhny "holds a significant share, in 2020 it increased its cargo turnover by 24.1% compared to 2019 to 18.8 million tons.

But as noted above, the Ministry of Infrastructure plans to transfer almost all national seaports to concession in the near future (Belgorod-Dniester, Ust-Danube and Skadovsk preparations for privatization).
The global container market in 2020, despite a sharp decline in production due to the pandemic, showed resilience and recovered rapidly in the second half of the year and as a result demand exceeded supply. The dynamic growth of container traffic has led to disruptions in ports on the Pacific coast of the United States [12].

The Black Sea container market is represented by container terminals in Ukraine, Russia, Romania, Georgia and Bulgaria (Figure 4). The share of Ukraine in the total volume of processing of loaded containers in the Black Sea region in 2020 was 34.7%, Russia - 25%, Romania - 19.9%, Georgia - 12% and Bulgaria - 8.5%. The distribution of container traffic on loaded and empty in 2020 is 74.7% to 25.3%. As for loaded containers, 58% are imported.

![Figure 3. Dynamics of cargo processing by public and private stevedoring operators, the percentage](image1)

*Source: Complied by the author based on [11]*

![Figure 4. Dynamics of processing of loaded containers in the Black Sea region, 2016-2020, TEU](image2)

*Source: Complied by the author based on [13]*
Positive dynamics in the processing of loaded containers in 2020 was observed in Ukraine (1.5% growth) compared to 2019 and Russia (2.48% growth). Romania, Georgia and Bulgaria reduce the processing of this cargo. In Georgia, the most significant reductions in processing volumes compared to 2019 - 22.1%.

Despite the negative impact of the pandemic on the economic situation in the country, the Ukrainian market remains attractive for global container carriers (Fig. 5). Ships of all three alliances enter Ukrainian ports. In the port of Odessa transportation is carried out by 16 companies, the Black Sea fishing port - four companies (Maersk, MSC, Arkas, Sea Line), the port "Pivdennyi" ships of the Maersk company come. Maersk, MSC and CMA CGM control 60.5% of the national container market.

![Figure 5. Dynamics of container turnover of the leading linear service passing through the ports of Ukraine, 2008-2020, TEU](image)

*Source: Complied by the author based on [14]*

Container cargoes in national ports are processed at four terminals (Fig. 6) and all operators are private business. And two stevedoring companies operate on their own terminals - DP World TIS Pivdennyi and "Chornomorsk FP".

![Figure 6. Processing of containers at terminals in seaports of Ukraine, TEU](image)

*Source: Complied by the author based on [15]*
Since 2016, the container terminal of the port "Chernomorsk" with a capacity of 850 thousand TEU per year does not fulfill its functional purpose, it is mainly used for transshipment of coal and ore. Currently, the Ministry of Infrastructure of Ukraine is preparing to transfer the container terminal to concession.

Recently, the delivery of goods by container trains to and from ports is growing. The first stevedoring operator, which started working with the service of container trains, the TIS group in 2017, it turned out to be more cost-effective than road transport. Currently, the TIS group sends 15 container trains a week. In 2020, the transportation of containerized cargo by rail increased by 10.7%. This process is caused by advantages: the minimum influence of weather conditions, the accurate schedule of transportations, big on weight cargo taking into account weight restrictions, as on motor transport. It is possible to predict further growth of transportation by rail across the territory of Ukraine. International container routes are also developing at a rapid pace. In January 2021, the German company Hapag-Lloyd launched weekly trains between Pivdenniy and the main industrial centers of Ukraine (Kharkiv, Dnipro, Kyiv). In March 2021, the Mediterranean Shipping Company launched the route Odessa-Kiev, Odessa-Kharkov, Odessa-Dnieper.

Conclusions and perspectives of further research. The effect of participation of the stevedoring business in the process of servicing the national economy can be achieved at an optimal level of costs, which is ensured by adequate external conditions for positioning the technical and economic level of stevedoring enterprises. But it should be noted that to ensure the normalized stability of the stevedoring business in the selected segment of the maritime trade market, a large amount of investment is required, which limits the competitive development of terminal operators in the regional maritime trade market system (Fig. 7).

**Figure 7. Factor model of effective positioning of stevedoring business in Ukraine**

*Source: Complied by the author*
Monopoly shipping companies and their alliances maximize profit based on marginal revenue. To get out of the dependence on monopolistic companies, Ukraine must form its own merchant fleet operating in a competitive environment. The negative impact of the monopolistic status of the freight market segment is the limited access to the world market for products of national economies that cannot pay for transportation costs. At the same time, the countries, which do not pay enough attention to the maritime transport industry, lose the status of a maritime power. That is what happened to Ukraine. The shipping company must constantly improve its operational efficiency and strive to optimize the use of its production capacity, taking into account the nature of medium-term freight cycles.

The leaders are shipowners who have ensured the effectiveness of investment and innovative solutions. It should be noted that new technologies, such as additive technology, e-commerce can lead to a reduction in demand in the line segment. The common economic interests of manufacturers and other participants of the logistics distribution system determines the feasibility of combining intellectual potential to develop solutions to ensure the sustainability of this sector of the market.

Due to the changing conditions in the container shipping market, maritime trade ports need to develop a mechanism for adapting the technical and economic level of the port infrastructure, taking into account the emergence of an enlarged container tonnage. These conditions apply not only to the world's largest container ports serving main lines, but also to regional sea trading ports due to the transfer of enlarged container ships from main lines to secondary ones. However, it should be noted that only global sea trading ports are capable of financing the achievement of adequacy of the technical and economic level of a commercial port to the level of scientific and technical progress. The possibility of deterring NTP by some oligopolies with the aim to preserve profits in the absence of sufficiently strong competitors should be also taken into account.

Transport independence of foreign economic relations of Ukraine is conditioned by the competitive development of all links of transport enterprises.

The optimality of the results of the work of the stevedoring enterprise is influenced by the efficient adjacent modes of transport. The criteria for entrepreneurial feasibility must be consistent with macroeconomic goals. The competitive positioning of the stevedore business depends on a complex set of parameters, based on the capital cost of the enterprise, the level of operating costs and creative management aimed at implementing the leadership strategy in the maritime trade market system.

The goal of the effectiveness of solutions in the stevedoring business system is to compare the results and costs and find ways to optimize the gap between them.

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