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PARAMETERS AND FACTORS OF ENSURING COMPETITIVE STABILITY OF THE PORT SECTOR OF UKRAINE

Topicality. The expediency of the development of scientific regulations is related to the main problems of achieving the competitiveness of the sea trade ports of Ukraine in the maritime trade market, first of all with the necessity: to achieve the adequacy of the technical and economic level of the stevedoring operators to the requirements of the environment; compliance with national needs and multimodal transport systems; support of national zones of international transport corridors; development of theoretical and methodological foundations for the competitive positioning of national maritime trading ports, taking into account the conditions of integration and globalization.

Aim and tasks. The purpose of the article is to clarify new trends in the system of competitive positioning of sea merchant ports, to systematize the parameters of the competitiveness of national maritime merchant ports and to substantiate the factors of effective development of Ukraine's port infrastructure.

Research results. The condition and conditions of the competitive development of Ukrainian seaports in the system of maritime trade market are analyzed. The assessment of the port infrastructure of the national terminal operators is given and the development trends and perspectives of the competitive positioning of the national stevedoring operators are grounded. The system factors and parameters of functioning of marine transport enterprises are grounded. The dynamics of cargo turnover of the largest container ports of Europe for the period 2015-2017 is presented and the main tendencies of development of container terminals of the world economy are revealed. The evaluation of the competitive functioning of state and private national stevedoring operators and the identification of the problem of economic stability of sea trading ports in the system of competitive positioning in the regional maritime trade market was conducted. The estimation of the relation between the profit rate and the cost of loading and unloading works of the largest ports of Ukraine is presented and given, and the change in the structure of the cargo traffic of sea ports of Ukraine under the influence of new trends in the world maritime transport industry is analyzed.

Conclusions. The systematic parameters of the competitiveness of Ukrainian seaports in the maritime trade market system are substantiated and the main principles of achieving the normalized economic results of functioning of the sea commercial ports of Ukraine are substantiated. The information-logistic model, which characterizes the influence of external conditions on the competitive positioning of national sea commercial ports, is presented. The main features of the competitiveness of national stevedoring operators are revealed. The new tendencies in the system of competitive positioning of the sea commercial ports of Ukraine are specified, factors of competitive stability of the port infrastructure under the conditions of risk and uncertainty are grounded. The revealed standards and restrictions of development of the port infrastructure of the national maritime trading ports in the system of globalization and integration.

Key words: competitiveness of terminal operators, marine transport industry, stable functioning of national sea trading ports.

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ПАРАМЕТРИ ТА ЧИННИКИ ЗАБЕЗПЕЧЕННЯ КОНКУРЕНТНОЇ СТІЙКОСТІ ПОРТОВОЇ ГАЛУЗІ УКРАЇНИ

Актуальність. Доцільність розробки наукових положень пов'язана з основними проблемами досягнення конкурентної стійкості морських торговельних портів України в системі ринку морської торгівлі, насамперед

з необхідністю: досягнення адекватності техніко – економічного рівня стивідорних операторів вимогам зовнішнього середовища; відповідність національним потребам та мультимодальним транспортним системам; підтримки національних зон міжнародних транспортних коридорів; розробки теоретичних та методичних основ конкурентного позиціонування національних морських торгових портів з урахуванням умов інтеграції та глобалізації.

Мета та завдання. Метою статті є уточнення нових тенденцій в системі конкурентного позиціонування морських торговельних портів, систематизація параметрів конкурентної стійкості національних морських торговельних портів і обґрунтування чинників ефективного розвитку портової інфраструктури України.

Результати. Проаналізовано стан і умови конкурентного розвитку морських портів України в системі ринку морської торгівлі. Дана оцінка портової інфраструктури національних термінальних операторів та обґрунтовані тенденції розвитку та перспективи конкурентного позиціонування національних стивідорних операторів. Обґрунтовані системні чинники та параметри функціонування підприємств морського транспорту. Представлена динаміка вантажообігу найбільших контейнерних портів Європи за період 2015-2017 рік і виявленні основні тенденції розвитку контейнерних терміналів світової економіки. Проведено оцінку конкурентного функціонування державних і приватних національних стивідорних операторів і виявленні проблеми економічної стійкості морських торговельних портів в системі конкурентного позиціонування в регіональному ринку морської торгівлі. Представлена і дана оцінка співвідношенню дохідної ставки і собівартості вантажно-розвантажувальних робіт найбільших портів України, проаналізовано зміну структури вантажопотоку морських портів України під впливом нових тенденції світової морської транспортної індустрії.

Висновки. Систематизовані параметри конкурентної стійкості морських портів України в системі ринку морської торгівлі і обґрунтовані основні принципи досягнення нормалізованих економічних результатів функціонування морських торговельних портів України. Представлена інформаційно-логістична модель, яка характеризує вплив зовнішніх умов на конкурентне позиціонування національних морських торговельних портів. Виявлено основні особливості конкурентної стійкості національних стивідорних операторів. Уточнено нові тенденції в системі конкурентного позиціонування морських торговельних портів України, обґрунтовані фактори конкурентної стійкості портової інфраструктури в умовах ризику і невизначеності. Виявлені стандарти і обмеження розвитку портової інфраструктури національних морських торговельних портів в системі глобалізації та інтеграції.

Ключові слова: конкурентоспроможність термінальних операторів, морська транспортна індустрія, стійке функціонування національних морських торговельних портів.

Problem statement and its connection with important scientific and practical tasks. The experience of world history shows that the market economy gradually realizes its ability to self-regulation on the basis of improving organizational structures, expanding competition and implementing the principle of interaction and agreements. At the same time, the state system should form the legislative base ensuring effective development of the economy in national borders and building the capacity for export of quality products. In the world practice, under the conditions when competition acquires the features of expensive development, the principle of agreements and integration begins to be realized. In industries where, despite the availability of standard products, the sphere of influence of the firm is determined by the individual characteristics and quality of the products, competition becomes the determining condition for domination in the market [1].

For trade ports of any state, there are common principles for ensuring competitive stability in the maritime market system. At the same time, features of competitive positioning of trading ports are manifested under the influence of a number of specific conditions, factors and parameters inherent in local or regional port subsystems. It is necessary to monitor the intensity of development of individual regions of the mega-economy and the peculiarities of the formation of international economic relations. When the external conditions of positioning and the organizational and legal form change, seaports create fundamentally new situations in order to achieve the adequacy of the technical and economic level and the system of effective management of the tasks of enterprise survival, management of effective functioning and development, taking into account new parameters.

If we proceed from the general tasks of the economic activity of production and transport enterprises, the main one for trading ports is the formation of financial goals and the implementation of investment projects.

Within the life cycle of any enterprise whose activities are aimed at achieving the effective sustainability of functional activities on the principles of competition, projects are being developed and

implemented to manage a justified level of competitiveness. Their quality is predetermined by the thoroughness of the justification of development parameters and information adequacy. However, many problems associated with ensuring the competitive positioning of national trade ports in the maritime market system remain unresolved.

Analysis of recent publications on the problem. In scientific research, the main attention is paid to issues related to the problems of the competitive positioning of Ukraine's seaports in the global transport services market. The principles of competitive development of the maritime transport industry [2] are systematized, the mechanism of sustainable development of the subsystems of the maritime transport industry [3] is substantiated, methods of ensuring the effective functioning of the marine industry [4] in the system of integration and globalization are formulated.

Selection of previously unsettled parts of the general problem. However, the mechanism for ensuring the competitive positioning of Ukraine's seaports in the maritime trade system is not fully explored, and also in connection with the new conditions for the functioning of national sea trading ports, there is a need to systematize the parameters and factors of competitive stability of Ukraine's port infrastructure under risk.

Aim and tasks. The purpose of the article is to clarify new trends in the system of competitive positioning of sea trading ports, to systematize the parameters of competitive stability of national sea trading ports and to substantiate factors of effective development of the port infrastructure of Ukraine.

Presentation of the main results and their justification. One of the conditions for achieving the competitiveness of maritime transport enterprises in the selected sector of maritime trade is the maintenance of the principle of proportional stabilization. This means maintaining technically and economically acceptable during the accounting period the appropriate level of product quality based on the management of competitive performance parameters and capital intensity. For each specific period, a strategy is chosen for managing the efficiency of production, the quality of products and the technical and economic level of the enterprise, providing, if not leadership in the chosen niche of production activity, then the status of competitive stability in terms of the level of realization of goods and financial status.

The dynamics of the container turnover of Europe's container ports are presented in Figure 1 [5]. Hamburg, one of the top three largest European ports, lost 10.8% of traffic in 2017. It differs sharply from Rotterdam and Antwerp, which increased the volume of work by 27-28% since 2017. The growth of global container turnover in the short term may slow down due to the global financial and economic crisis. The main problem with the development of container terminals in the world is that freight turnover is growing much faster than the capacity of the terminals themselves.

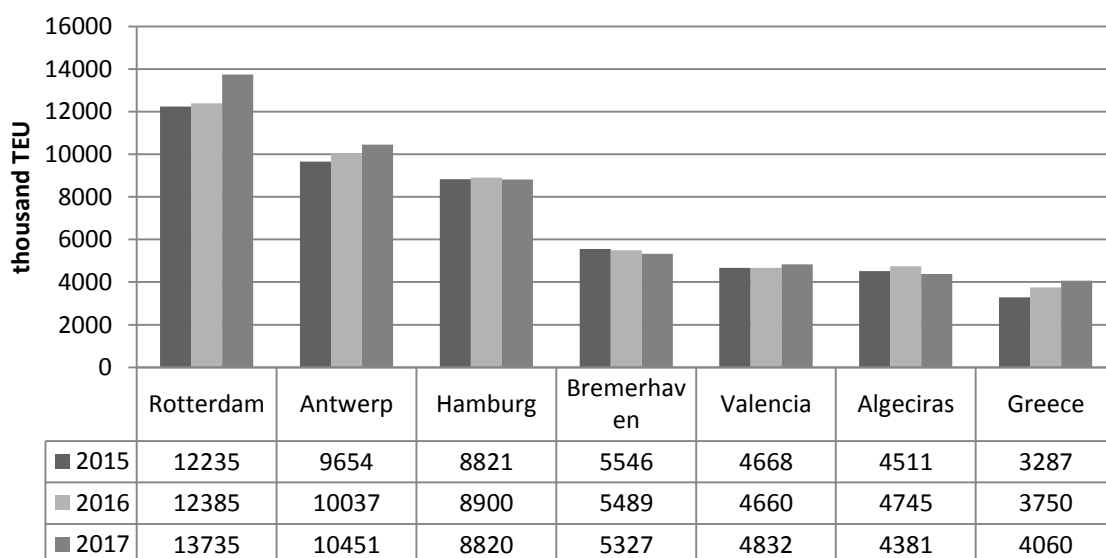


Fig. 1. Dynamics of cargo turnover of container ports of Europe, thousand TEU

National seaports play a significant role in the national economy of Ukraine. Ukraine has a powerful port potential of 13 maritime trade ports, which are concentrated in the Danube, Black Sea and Azov regions.

Only private stevedoring companies, located on the port of Odessa, the port "Yuzhniy" and «Chernomorsk», carry out the transfer of containers at the national sea trading ports. It should be noted that in Ukraine there is an excess of port capacities for container loads (loading of container capacities of national stevedoring operators is about 23%), which leads to tough competition among terminal operators. Some of them switched to alternative or incompatible shipments to download their terminals. For example, container terminal "Transinvestservice" also overloads coal, grain, ferrous metals and vegetable oil.

"Container Terminal Odessa" is the leader among national stevedoring operators. The second position is occupied by the terminal "Brooklyn-Kiev". The Ukrainian sea trading ports are in the field of view of the largest container operators, such as Hutchison Ports, DP World. One of the problems of the development of national stevedore operators is the total lack of investment resources and, in order to attract foreign investment in the national port infrastructure, an adequate legislative framework is needed that will create a favorable investment climate. In the face of competition in the regional maritime trade market, national container terminals should increase productivity, reduce cost and implement flexible, rational pricing policies.

In 2017, the turnover of Ukrainian sea trade ports reached 132 524,2 thousand tons (table 1), which is by 779 thousand tons more than in 2016. Leading positions belong to the deepest port in Ukraine - the port "Yuzhniy" with a turnover of 41 897.83 thousand tonnes. In 2017, through the berths of which about a third of all shipments processed in national sea trading ports pass. There are 12 stevedoring operators in the port of Yuzhniy, and the two largest in Ukraine are "Transinvestservice" and commercial seaport «Yuzhniy». The port is export oriented.

On the second place in terms of cargo turnover is the port of Odessa with a turnover of 24 136, 58 thousand tons in 2017. At the Odessa Maritime Commercial Port, 16 stevedoring operators operate.

The Nikolaev Sea Commercial Port, which is in the top three in terms of cargo turnover, increased its turnover in 2017 in comparison with 2016 by 4,9%. There are 19 port operators in the port.

In the seaport "Chernomorsk" there are 10 terminal operators and in general the cargo turnover of the port grew by 2017 in comparison with 2016 by 1 283 thousand tons (+ 8.05%) [6].

Table 1

Dynamics of cargo turnover of Ukrainian ports for 2016-2017, thousand tones

Ports	2013	2014	2015	2016	2017
Berdyansk	2163,5	3197,1	4450,8	3800	2397,8
Belgorod Dnestrovsky	667,34	614,72	715,7	462,93	352,41
Izmail	2762,6	3092,98	4825,2	5682,62	5097,87
Chernomorsk	16458,53	17613,18	17257,56	15942	17225,2
Mariupol	15499,42	13003,2	8984,04	7603,5	6514,47
Mykolayiv	20303,69	20802,83	22232,61	22424,31	23534,8
Odessa	23169,74	24579,15	25585,85	25250,85	24136,58
Olvia	5567,28	6975,07	6911,11	6538,53	6880,46
Reniisky	2794,86	1464,76	906,93	972,37	1124,9
Skadovsky	276,27	58,38	37,9	32,9	20,9
Ust-Danube	39,1	61,55	22,5	25,4	54,2
Kherson	3717,44	3900,95	4133,89	3712,23	3341,02
Yuzhniy	43424,5	47431,7	48582,07	39297,57	41897,83
Total	136844,3	142795,6	144646,2	131745,2	132524,2

2017 characterizes the development of Ukrainian seaports with an emphasis on private business (Fig.2). It should be noted that over the past three years the share of private business is gradually growing:

the turnover of private stevedoring companies in 2015 was 66,7% of the total volume, in 2016 - 70,8% and in 2017 it was already 74%).

In 2017, private stevedoring companies processed 98.2 million tons, which is 4.9 million tons more than in 2016. The turnover of private business amounted to 74% of all transshipment. The turnover of state stevedoring companies in 2017 amounted to 34.7 million tons, which is 3.7 million tons less than in 2016 (a decrease of 9.6%). Private stevedoring companies at their own berths in 2017 processed 14.9% more than in 2016, and private stevedoring business at the berths of the Administration of seaports of Ukraine reduced cargo handling by 1.9% compared to 2016.

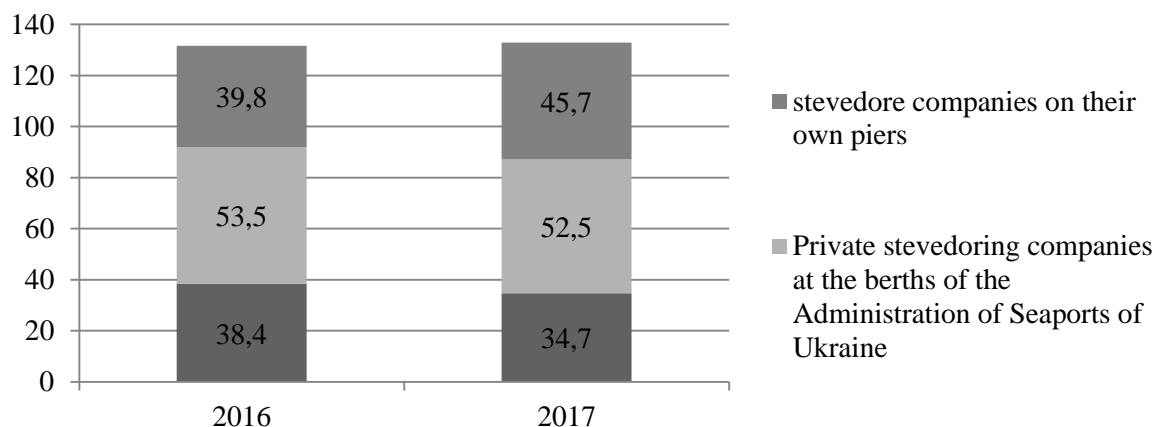


Fig.2. The ratio of the turnover of private and public stevedoring operators for 2016 and 2017,%

The leading position among private stevedoring companies is occupied by the group "Transinvestservice", located in the water area of the commercial port of Yuzhny, with 26012 thousand tons of freight turnover in 2017, which is 21% more (4552 thousand tones) than in 2016 (рис 3). This is 26,5% of the total turnover of private stevedoring companies and 19,75% of the total freight turnover. The volume of investments from 1997 to the current time amounted to about 550 million dollars.

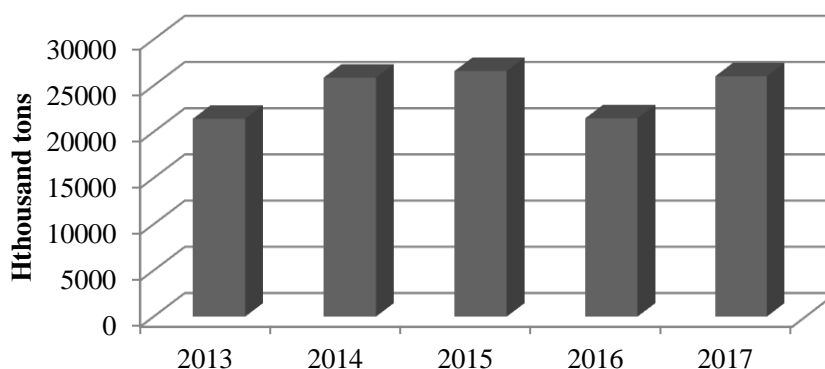


Fig.3. Dynamics of cargo turnover of the group "Transinvestservice" for 2013-2017 year

Among private operators, the «Brooklyn-Kiev» group should be distinguished with a turnover of 6,8 million tons in 2017 (a decrease of 9,3% compared to 2016). This operator transports grain cargo, sugar, and packaged goods. During the period of its functional activity, the company invested about \$ 300 million [7].

Significantly increased freight turnover in 2017, such private stevedore companies:

- Danube Shipping and Stevedoring Company - 60% growth compared to 2016 due to the launch of a new grain terminal, investment in the project amounted to \$ 75 million. This company took the 12th place among the largest private stevedoring companies in 2017, engaged in transshipment of grain cargo.

- «Risoil», which takes the 14th place in the ranking in 2017, increased its cargo handling by 32% (an increase of 0,557 thousand tones compared to 2016). During the last 4 years, the freight turnover increased

by 2,49 times. The growth was due to the launch in port of Chernomorsk grain terminal, investment in the project amounted to \$ 70 million. The company overloads wheat, corn, sunflower oil, rapeseed.

- «Novotech-terminal» located in the Odessa Commercial Sea Port, increased cargo turnover in 2017 compared to 2016 by 55% (growth of 0,736 thousand tones). The main cargo is metal and grain.

- The Ilyichevsk Sea Fishing Port handled 3,865 million tones of cargo in 2017, which is 35% more than in 2016.

The decrease in turnover was shown by such companies as «Novolog» (cargo turnover in 2017 was 1,765 million tons, which is by 0,153 thousand tons less than in 2016), «Metalsukraine» turnover in 2017 is 1.55 million tons, 38% less than in 2016. This is mainly due to the general decline in exports of metal products (Fig.4).

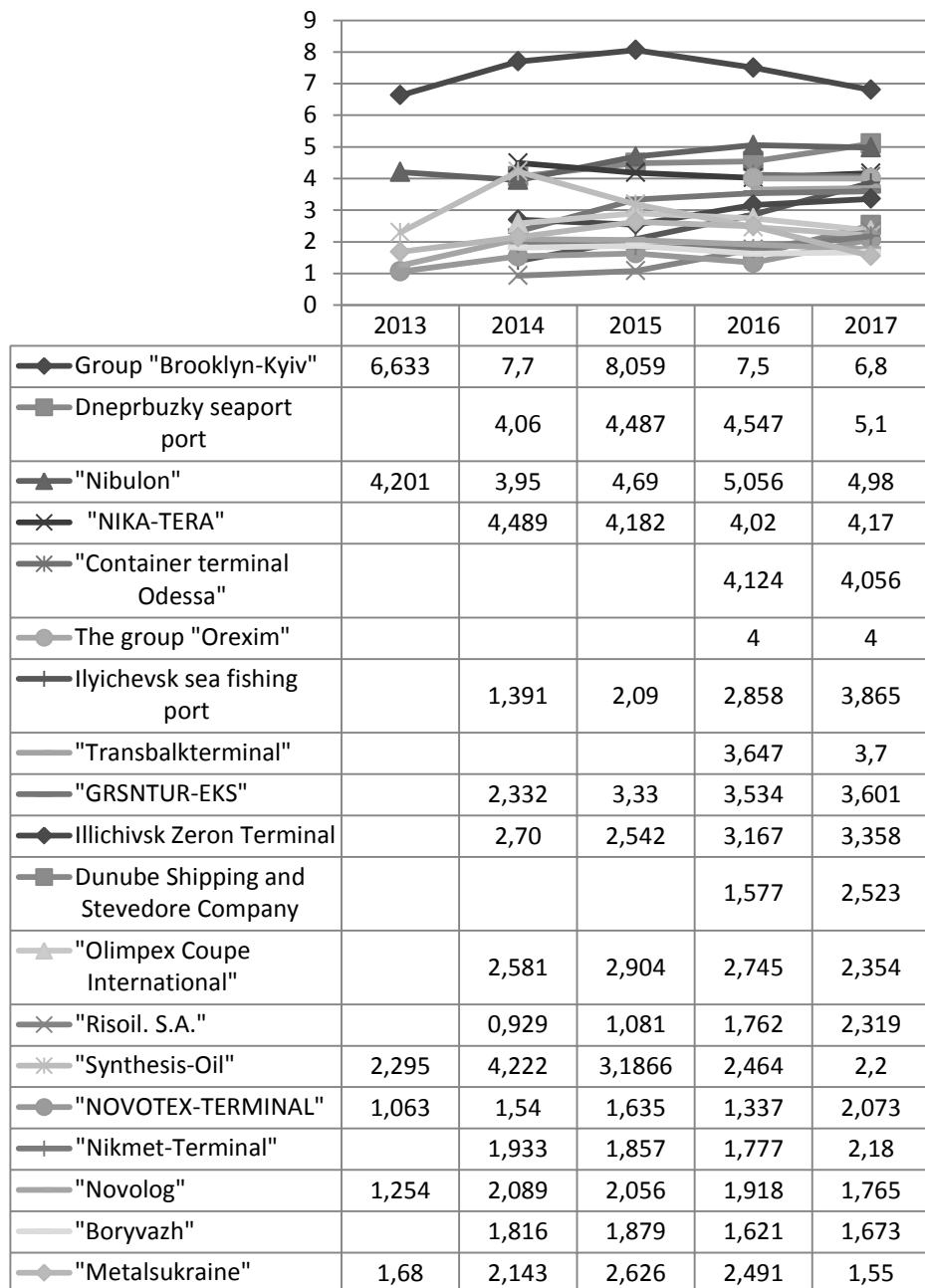


Fig. 4. Dynamics of turnover of the largest private stevedoring companies in Ukraine, mln. Tone

Over the recent time, the structure of the cargo flow has changed in the national sea trade ports: the share of processing grain cargo has grown and the handling of metals and container cargo has decreased,

which accounts for changes in the structural shift in freight turnover for the redesign of the port infrastructure (Fig 5). The main cargo that is processed in the seaports of Ukraine is grain, which accounts for 31% of the total volume of cargo turnover, ore, metals. The volumes of grain transportation are subject to strong fluctuations and depend on the economic situation in the exporting countries and the harvest.

In the national sea trading ports export direction is observed, the share of exports in the total volume in 2017 was 74%. Negative trend with transit freight flows, which in 2017 and varols slightly compared with 2016 by 1,14%, but compared to 2013, the reduction was 53% (Fig 6).The reasons for the unstable growth of transit cargo are the unstable political and economic situation in the country, the outdated mechanism for calculating port dues, a weak regulatory framework that is designed to regulate the interaction of all structures of the national sea economic complex, the drop in transit cargo flows from Russia and Belarus, transit cargoes such as oil and Oil products, coal, ore and metals moved to other countries [4].

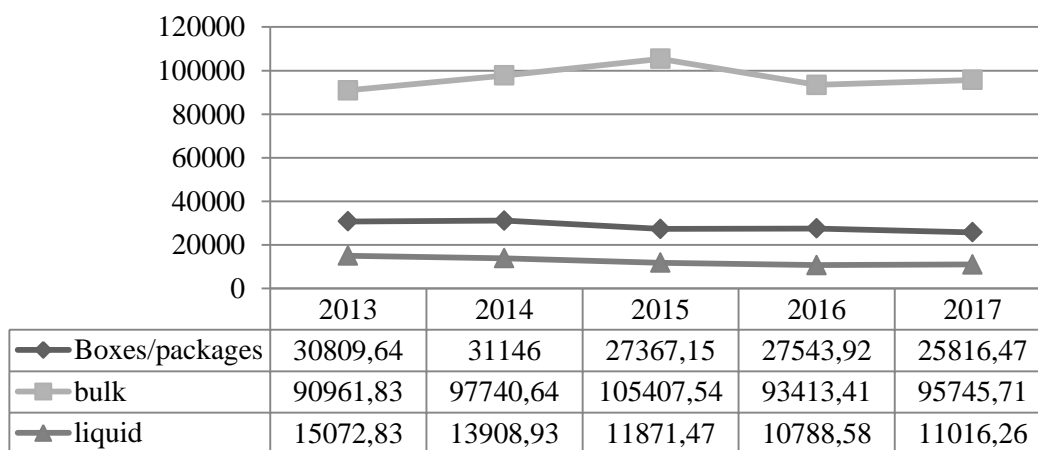


Fig 5. Dynamics of cargo turnover of trade ports of Ukraine in the nomenclature of goods, thousand tons

In 2015, the container turnover of the national ports continued to decrease: in 2014 container traffic decreased by 16%, and in 2015 - by 22.4% (compared to 2014). However, it should be noted that in 2017 the container turnover in the seaports of Ukraine increased compared to 2016 and reached 723,781 TEU. Although this is a positive trend, but this is 2012 figures (735,606 TEU) [6]. This situation is due to the complex military-political and economic situation in the country, the introduction in February 2015 of an additional fee of 5-10% for imports, devaluation of the national currency, which leads to a drop in the incomes of the population.

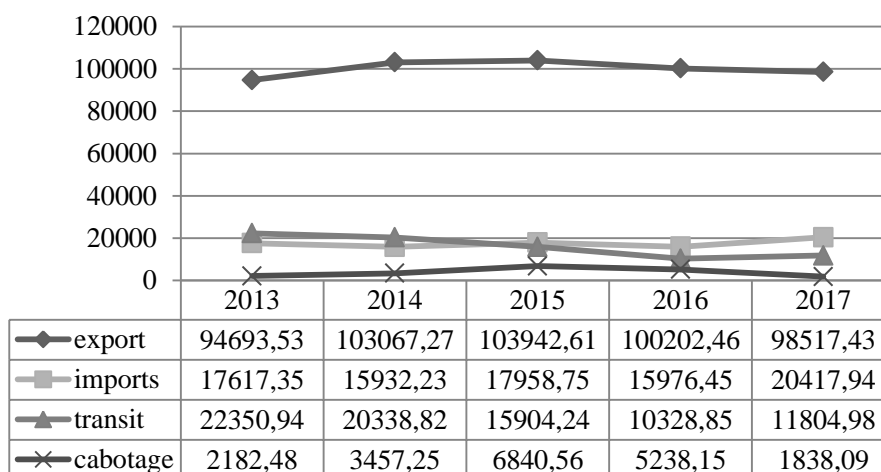


Fig 6. Dynamics of cargo turnover of Ukraine's sea trade ports by types of operations, thousand tons

One of the problems in ensuring the competitiveness of national maritime trading ports is an outdated mechanism for the formation of port dues. The world practice of forming port fees is the cost accounting plus

a reasonable rate of return that ensures the safety of navigation and the environment. In fig 7. the income rate and the cost price of loading and unloading operations in 2016 of the largest ports of Ukraine are presented.

The highest cost of loading and unloading operations in 2016 at the specialized port of Olvia - 203 UAH / t, the income rate at that was 238,2 the coefficient of return was 1,17. Profitability - 42,6%. The lowest cost of loading and unloading operations at the port "Yuzhniy" is 37,6 UAH / t with a profitability factor of 1,39, profitability reached 48.5% in 2016. These indicators testify to fairly stable functioning of sea ports in the system of the market of sea trade. However, in order to achieve the competitiveness of the sea trading ports in the transport services market system, it is necessary to take into account the principle of optimality, which involves maximizing cash flow and linearity-proportional increase in costs relative to the volume of output.

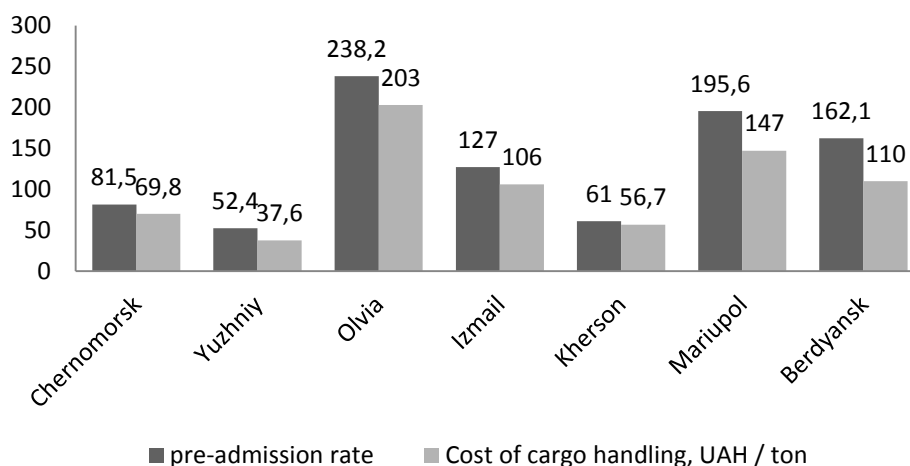


Fig 7. The ratio of the profit rate and cost of loading and unloading operations in 2016 of the largest ports of Ukraine

Tariff policy of developed foreign countries is aimed at increasing the attractiveness of the port for its clients, by providing various privileges to courts, depending on the purpose of the approach of vessels to the port and their quantity, the degree of their loading, linearity of the courts [8].

In order to ensure the competitiveness of national maritime trading ports and the transport system as a whole, a harmonized mechanism of tariff policy is necessary, taking into account all elements of its logistic component. Achieving competitive stability of the port infrastructure of Ukraine includes the establishment of normal relations with ship owners and cargo owners, which ensures the priority of accounting for final economic goals by all units of intermodal communications. It is important to ensure rational interaction with all modes of transport.

Conclusions and perspectives of further research. High capital intensity of port facilities predetermines the onset of periods of an unbalanced balance of financial needs for updating the technical and economic level and the parameters of the physical and moral state of the material and technical base.

In Fig 8. a logistic model is presented reflecting the influence of the main parameters and factors of sustainable development on the economic performance of the sea trading port.

There are alternative investment strategies for achieving the chosen goal of entering the transport services market. In general, in the world practice, in all instruments of investment activity, special types of strategies are implemented: long-term ownership; obtaining a high return on invested capital; long-term growth of investment quality; aggressive share management.

An important aspect in managing the competitiveness of sea trading ports is the question of reducing the level of uncertainty in the state of the market sector. This entails the entropy of the long-term development of society and enterprises, oriented to the satisfaction of constantly changing demand. Therefore, the problem arises of optimizing the control of streaming processes. The effectiveness of the market is determined by such a state of producers and consumers, in which the first achieve the goal - maximize profits, and the second - maximize utility. Violation of this equilibrium leads to a cyclical

functioning of the transport services market. On this basis, there is a tendency to centralize the management of product flows and economic results based on commercial logistics.

In conditions close to perfect competition in the market of goods, the principles and possibilities for establishing exogenous equilibrium prices are formed. At the same time, the competitiveness of enterprises is characterized by such a state, when it is formed not by its costs, but is determined by the level of consumer value, and the gap between this price and the individual cost becomes either a guarantee of the company's stability, implementation of a strategy for further development, or withdrawal from the market sector.

As a criterion for the firm's firmness in terms of quality parameters, it is necessary to consider the ratio of the average indices of the quality of the enterprise's production process to the same indicators for the industry in its market sense. At the same time, the concept of alternative costs predetermines the solution of the problem of output in conditions of a limited supply of the main resource

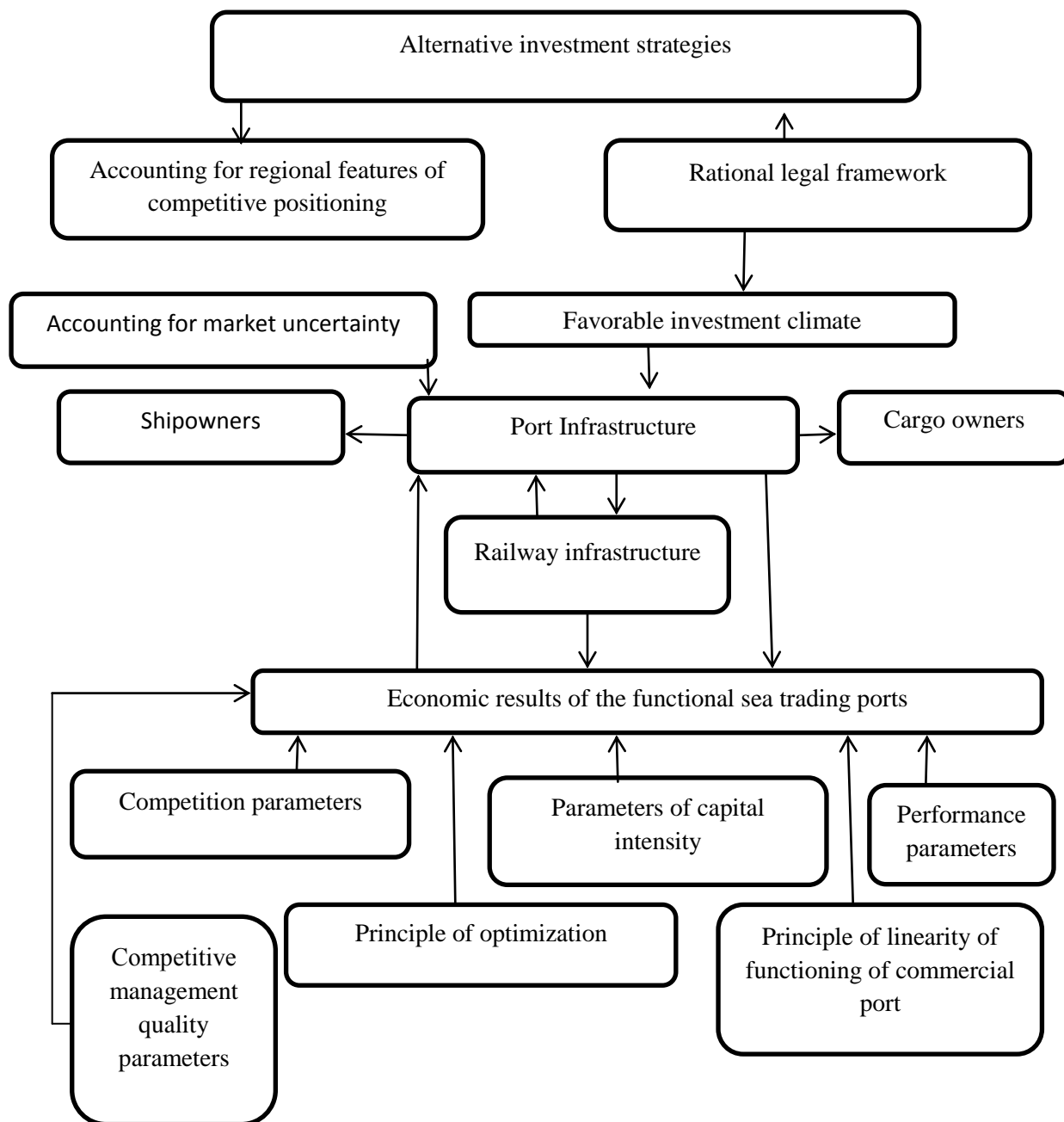


Fig 8. Influence of the main parameters on the economic performance of the sea trading ports

Under standard conditions, the production program determines, on the one hand, the distribution of available firm resources by main processes, and on the other hand, the release parameters depend on the availability of resources and their adequacy to competitive quality requirements.

The most important is the focus on quality factors of management of competitive stability and reliability of company positioning in the priority specialization sector.

The principle of decision-making in the conditions of the emerging market situation limits the operation of destructive conditions and involves the use of clear organizational structures in management with parameters of quality and competitiveness. It should be borne in mind that any commercial transactions are formed in the conditions of a certain limited information, including the quality of the object of the contract - the transaction. This makes it difficult to manage the flow of resources with a certain limitedness to achieve competitive efficiency.

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