

Keywords: protectionism; maritime transport; shipping; fleet; tonnage tax; subsidies

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CURRENT TRENDS OF PROTECTIONISM IN SHIPPING INDUSTRY

Summary. The purpose of this paper is to systematize the practical experience of the state protectionism in shipping industry at the current stage of its development. The reasons of protectionism in maritime transport are considered and the analysis of the world fleet ownership and flags of registration is conducted. The comparative analysis of the Dutch and Norwegian tonnage tax regimes and other current tax incentives in the different countries is made. The advantages and shortcomings of protectionist measures in shipping industry from the macroeconomic and microeconomic points of view are analysed.

The results of research contains elements of novelty: the scientific representation of state protectionism in shipping industry gained further development by systematization of international experience of application of direct and indirect measures in shipping and allocation of the main trends of protectionism; the classification of protectionist measures in shipping industry is improved by the specification of the structure of indirect methods.

1. INTRODUCTION

The shipping industry serving foreign trade has a strategic importance for economy; in 2017, it occupied more than 80% in the world regarding volume of transportation and more than 70% for cost [1]. High capital value of vessels and volatility of freight rates lead to financial difficulties for the ship owners during periods of low conjuncture of the freight markets.

During the different historical periods, the developed and developing countries used various methods of the state protectionism in shipping industry. Taking into account the changes of approaches to the state protectionism, features and volumes of their application in different countries, emergence of new measures, studying of the current tendencies of protectionism in shipping, detection of pros and cons of their application, improvement of classification of protectionist methods in shipping industry are important and actual.

2. LITERATURE REVIEW

Most of the authors researched protectionist measures in the sphere of trade and their influence on shipping industry. The protectionist measures used in the 1980s and their influence on the international shipping are considered in the book by A. Odeke [2]. The tendency of trade and services liberalization in 1970–1980 on the basis of the General Agreement on Tariffs and Trade (GATT) and the main directions of using the indirect protectionist measures by the developed European countries are considered in the article by G.N. Yannopoulos [3]. The barriers to trade in maritime transport services and regulatory framework of the World Trade Organisation (WTO) and the General Agreement on trade in services (GATS) were researched in the paper of B. Parameswaran [4].

In the article by A. Kirk [5], a growth of the use of the protectionist measures in the trade by the different countries after financial crisis of 2008–2009 is considered. It is specified that 60 countries use

more than 7000 measures directed to protection of foreign trade. A significant amount of the protectionist measures is used by the United States, India, Argentina, Russian Federation, Japan, the United Kingdom, Germany, Italy, France and Poland. It is shown in [6] that shipping companies of the EU faced growth of protectionism in many parts of the world, at the same time, the foreign shipping policy of the EU has to be aimed at the development of the global open markets and providing equal conditions of access to sea transport services.

In the publications of Ukrainian authors' approaches of systematization, the protectionist measures in shipping industry are proposed [7-9]. In the papers of N.T. Primachov and A.N. Primachov [7], V. Chekalovets and L. Rogen [8], the state entrepreneurship and various methods of legal regulation of shipping are referred to administrative–legal protectionist methods. In the monograph by O.M. Kotlubay [9], administrative and credit–financial protectionist methods in shipping are allocated.

A number of publications are devoted to certain protectionist methods in shipping industry. In the article by W. Murray [10], modern aspects of the use of the Merchant Marine Act of 1920, known as the Jones Act, regulating U.S. domestic transportation, are considered. In the paper of I.A. Rusinov, I.A. Gavrilova and A.G. Nelogov [11], the purposes and the principles of the United Nations Convention on a Code of Conduct for Liner Conferences are considered. In the article by M. Kalouptsidi [12], models of governmental subsidizing of world shipbuilding industry, allowing decrease in shipbuilding expenses, are developed. In the paper of D. Pupavac, L. Krpan and R. Marsanic [13], it is shown that subsidies in maritime transport make sense only in condition of improvement of the quality of transport services.

3. AIMS

The article aims to systematize practical experience of state protectionism in shipping industry at the current stage of its development, to improve the classification of protectionist measures in shipping, to allocate the main trends of the state protectionism in shipping, and to analyse the reasons, advantages and disadvantages of the state protectionism in maritime industry from macroeconomic and microeconomic points of view.

4. METHODS

The methodological basis of the research are as follows: system approach, economic regularities, general provisions of maritime economics, the principles of shipping management, scientific works of the leading scientists and experts in the field of maritime economics. During the research, scientific theoretical and empirical methods were used: analysis and synthesis of results and retrospective, logic and analytical methods, method of statistical information processing.

5. GENERALIZATION OF THE MAIN STATEMENTS AND DISCUSSION

A broad application of protectionist measures in the world shipping industry is connected with the aspiration of governments to develop the national fleets, to ensure economic security, as well as with using «flags of convenience» by ship owners at registration of vessels in offshore jurisdictions and the low level of profitability of the shipping business connected with a high shipbuilding value and capital costs, and a very high level of competition and volatility in the international freight markets. This statement is confirmed by the following statistical data.

In 2017, more than 70% of the tonnage of the world commercial fleet was registered under the flags that differed from flags of the fleet ownership countries [1]. The rating of 20 countries, which were the largest ship owners in 2016–2017, the growth rates of the general deadweight and the tonnage registered under foreign flags, calculated on the basis of data [1], are presented in tab. 1.

Table 1

Top 20 countries and territories by world fleet ownership

Country or territory	2016			2017			% deadweight tonnage 2017-2016	% foreign flag 2017-2016
	thousands of deadweight tons		foreign flag as % of total	thousands of deadweight tons		foreign flag as % of total		
	foreign flag	total		foreign flag	total			
Greece	228 383	293 087	77.9	243 240	308 837	78.8	105.4	106.5
Japan	200 206	228 980	87.4	192 270	223 856	85.9	97.8	96.0
Germany	107 866	119 181	90.5	101 688	112 028	90.8	94.0	94.3
China	84 778	158 884	53.4	89 282	165 430	54.0	104.1	105.3
Republic of Korea	62 727	78 834	79.6	66 385	80 977	82.0	102.7	105.8
The United States	52 123	60 279	86.5	57 525	67 101	85.7	111.3	110.4
Bermuda	47 950	48 453	99.0	47 545	48 059	98.9	99.2	99.2
Taiwan Province of China	41 047	46 141	89.0	42 469	46 865	90.6	101.6	103.5
The United Kingdom	46 194	51 441	89.8	41 202	51 151	80.6	99.4	89.2
Singapore	33 549	95 312	35.2	40 743	104 414	39.0	109.5	121.4
Norway	30 611	48 188	63.5	33 489	51 824	64.6	107.5	109.4
Monaco	29 892	29 892	100.0	31 630	31 630	100.0	105.8	105.8
Hong Kong (China)	19 853	87 375	22.7	22 452	93 630	24.0	107.2	113.1
Switzerland	18 956	20 480	92.6	21 931	23 688	92.6	115.7	115.7
Denmark	22 235	38 315	58.0	20 359	36 356	56.0	94.9	91.6
Turkey	19 639	27 951	70.3	19 848	27 733	71.6	99.2	101.1
Belgium	14 575	22 098	66.0	15 969	23 550	67.8	106.6	109.6
Russian Federation	11 416	18 144	62.9	14 857	22 050	67.4	121.5	130.1
India	5 978	21 678	27.6	6 199	22 665	27.4	104.6	103.7
Italy	7 312	22 739	32.2	6 051	20 610	29.4	90.6	82.8

Apparently, from the submitted data, the majority of the countries have a significant share of the tonnage under foreign flags. The greatest growth rate of this indicator in the analyzed period is shown by the Russian Federation, Singapore and Switzerland. Besides, in the majority of the countries, the growth rate of the deadweight tonnage under foreign flags exceeds the growth rate of the total tonnage.

Growth rates of the fleet by flags registration, defined using the data [1], are presented in tab. 2. In this rating, such typical offshore jurisdictions as Panama, Liberia and the Marshall Islands are in the lead, and the tonnage of the registered fleet continued to grow in 2016–2017. The significant tonnage is registered under the flags of traditional maritime nations – China, Greece, the United Kingdom, Japan and Norway. The financial results of the three global container carriers in 2016–2017, defined on the basis of data [14–16], are shown in tab. 3. In 2017, A.P Moller –Maersk took the first place among container operators, CMA CGM took the third place and Hapag-Lloyd took the fifth place [1]. Data of tab. 3 demonstrate the low level of EBITDA margin on the considered companies, which did not exceed

11.4% in 2016–2017, besides these companies had losses, and profits significantly fluctuated with years.

Table 2

Top 20 flags of registration with the largest registered fleets

Flag	2016		2017		% number of vessels 2017-2016	% deadweight tons 2017-2016
	number of vessels	thousands of deadweight tons	number of vessels	thousands of deadweight tons		
Panama	8 153	334 368	8 052	343 398	98.8	102.7
Liberia	3 185	206 351	3 296	219 397	103.5	106.3
Marshall Islands	2 942	200 069	3 199	216 616	108.7	108.3
Hong Kong (China)	2 515	161 787	2 576	173 318	102.4	107.1
Singapore	3 605	127 193	3 558	124 238	98.7	97.7
Malta	2 101	94 992	2 170	99 216	103.3	104.4
Bahamas	1 450	79 541	1 440	79 842	99.3	100.4
China	4 052	75 850	4 287	78 400	105.8	103.4
Greece	1 386	73 568	1 364	74 638	98.4	101.5
The United Kingdom	1 167	37 118	1 551	40 986	132.9	110.4
Japan	5 320	31 869	5 289	34 529	99.4	108.3
Cyprus	1 053	33 313	1 022	33 765	97.1	101.4
Norway	1 561	20 697	1 585	21 900	101.5	105.8
Indonesia	7 843	18 117	8 782	20 144	112.0	111.2
India	1 625	16 338	1 674	17 254	103.0	105.6
Denmark	671	17 185	654	16 893	97.5	98.3
Italy	1 376	16 470	1 430	15 944	103.9	96.8
Republic of Korea	1 906	16 820	1 907	15 171	100.1	90.2
Portugal	373	8 878	466	13 753	124.9	154.9
The United States	3 570	11 841	3 611	11 798	101.1	99.6

For direct methods of the state protectionism in shipping industry, it is necessary to carry the measures that are directly limiting the competition in the market of sea transport services. The leader in use of direct measures of protectionism in shipping is the United States. There are bilateral agreements with the countries exporting commodities to the United States, according to which, these transportations have to be made by vessels under the U.S. flag [4, 17]. Transportation within military orders and government programs are legislatively reserved to the U.S. fleet; the quantity (percent) of cargo required to be carried on U.S. flag vessels is 100% for military cargo (governed by Military Cargo Preference Act of 1904); 100% for Export Import Bank (governed by Public Resolution 17); at least 50% for Civilian Agencies cargo and 50% for agricultural cargoes (governed by Cargo Preference Act of 1954) [18]. Despite a decrease in application of cargo reservation in the world in recent years, cargo preferences were applied in some countries of Africa, Asia and Latin America [4].

The UNCTAD Code of Conduct for Liner Conferences [19], defining shares of national carriers, is an example of the multilateral agreement between the countries. The principle enshrined in the Code (principle 40:40:20) comes down to the fact that the group of national shipping lines of each of two countries has the equal rights for participation in transportation on a freight and quantity of the cargoes

relating to their mutual foreign trade, which are carried out by a conference. Shipping lines of the third countries that participate in the conference can receive 20% of the transportation concerning this trade on a freight and quantity of cargo.

Table 3

Key financial figures of the global container shipping companies

Key figures	A.P Moller–Maersk, million US dollars / %			CMA CGM, million US dollars / %			Hapag-Lloyd, million EUR / %		
	2016	2017	Change, %	2016	2017	Change, %	2016	2017	Change, %
Revenue	27266	30945	113	15980	21120	132	7734	9973	129
Profit before depreciation, amortization and impairment losses, etc. (EBITDA)	2475	3532	143	29	1575	543	607.4	1054	174
EBITDA margin, %	9.1	11.4	126	0.18	7.5	n. m.	7,9	10,6	135
Profit / loss	-1897	-1164	n. m.	-452	701	n. m.	-93.1	32.1	n. m.

In the majority of countries, domestic transportation is legislatively assigned to the fleet under national flag within public policy of protectionism that limits the competition from foreign carriers and gives a guaranteed cargo base to national shipping companies. A classic example is the Jones Act [20] adopted in the United States in 1920. The law establishes that shipping of cargo between the U.S. ports should be carried out by the vessels built in the United States, at least for 75% belonging to U.S. citizens, operating under the U.S. flag with the crew of U.S. citizens. In recent years, the monopoly position of the American carriers leads to an increase of capital and operational costs of ship owners, growth of transport tariffs and consumer expenses, causes damage to economy of the United States, and has negative effect on economies of Alaska, Hawaii and Puerto Rico [10, 21].

The Russian Federation since 2018 has imposed a ban on transportation by vessels under foreign flags across the Northern Sea Route of oil, natural gas, gas condensate and coal extracted in the territory of the Russian Federation and in the territory that is under its jurisdiction [22]. Icebreaking and pilot vessels, the coastal fleet and vessels for shelf resource researches also have to be under the Russian flag. The purpose is receipt in the budget of the Russian Federation of revenues from transportation of the Russian cargo. Also, Russian shipbuilding enterprises can receive benefit from these measures.

One more example is the restriction of export of liquid palm oil and coal by the vessels controlled by the Indonesian carriers, entered in 2018 by the Ministry of Trade of the Republic of Indonesia [23].

Thus, the direct methods of protectionism, applied today in the shipping industry, include the following:

- bilateral and multilateral agreements in the sphere of shipping between the countries;
- cargo reservation on transportation of domestic cargo for vessels under national flags;
- cargo reservation on transportation within state programs (strategic cargo, military cargo, food and others) to the national fleet.

Despite application of direct measures of protectionism in the certain countries, taking into account the high level of competition in the market of sea transport services and requirements of the GATT, the WTO and The Organization for Co-operation and Development (OECD), in the conditions of trade and shipping liberalization, time of direct measures of the state protectionism has passed. Efforts of the majority of developed countries are directed to increase the competitiveness of national transport. The adjustment policy of the EU shipping is based on openness of the global markets and equal access for all participants to the market of sea transport services, at the same time, the EU countries do not refuse indirect methods of protectionism concerning shipping industry.

The international ship registers in the majority of the countries provide the ship owners with different types of the tax benefits including the alternative system of taxation – the tonnage tax regime. The application of the tonnage tax in developed countries since the 1990s is connected with the outflow of

the fleet under «flags of convenience». The tonnage tax regimes are applied in Greece, the Netherlands, Germany, Belgium, Denmark, Italy, France, Norway, the United Kingdom, Finland, Poland, China, Japan, India and others countries including a number of offshore jurisdictions. The schemes of the tonnage tax have the different forms in various countries.

Results of comparative analysis of Dutch tonnage tax regime [24] and Norwegian Special Tax System for the Shipping [25] are represented in tab. 4.

Table 4

Comparing of Dutch and Norwegian tonnage tax schemes

Dutch tonnage tax regime		Norwegian Special Tax System for Shipping	
Rates of fixed profit			
Net tonnage (NT) of ship	Fixed profit per 1000 NT per day	Net tonnage of ship	Fixed profit per 1000 NT per day
0-1 000 NT	€9.08	0-1 000 NT	NOK 0.9 per 100 NT
up to 10 000 NT	€6.81	for the first 1 000 NT	NOK 9 per 1 000 NT
up to 25 000 NT	€4.54	from 1 001 to 10 000 NT	NOK 18 per 1 000 NT
up to 50 000 NT	€2.27	from 10 001 to 25 000 NT	NOK 12 per 1 000 NT
50 000 NT or more	€0.50	above 25 000 NT	NOK 6 per 1 000 NT
Kinds of activities			
Operating of vessels including commercial and technical management, which are used in international transportation of cargo and passengers, for dredging, research activity and others.		Operating of transport ships, owned or chartered (passenger and cargo ships, cable-laying vessels and others), support vessels in petroleum activities, ancillary activities are closely connected to the transport activities (loading, unloading and storage of goods, leasing out of containers, sale of goods and services for consumption on board and others).	
Duration of application of the taxation scheme			
10 years, then it is possible to continue to use the tonnage tax or to return to the usual corporate tax system. It can be cancelled earlier.		1 year or more (from 1 January 2018 until 31 December 2027).	
Method of calculation			
The tonnage tax is based on NT and determined by five size groups.		The tonnage tax is based on NT and determined by four size groups. In 0–1 000 NT interval, the tonnage will be rounded to the nearest 100 NT. Tonnage exceeding 1 000 NT will be rounded to the nearest 1 000 NT.	
Flag			
Ship should be registered in one of the EU Member State (exceptions are available for ships under «third flag» that will join an existing fleet).		Ship should be registered in one of the European Economic Area (EEA) Member States.	
Legal features			
A shipping company must carry out commercial and technical ship management of a vessel that it owns and co-owns in the Netherlands, except ships chartered out on bareboat charter or held under bareboat charter.		A company must own either a ship or shares or interests in limited liability companies, partnerships or controlled foreign corporations that own ships. A company can perform full management. Vessels may be operated under voyage charter, time charter or bareboat charter.	

The Dutch tonnage tax regime is the most widespread tonnage tax scheme. In this model, a taxation subject is not the real profit of shipping company, but the settlement size of profit will be defined by multiplication of the net tonnage of vessels of the company by the standard size of daily profit per ton established by the legislation [24]. Such settlement profit for one or several vessels is assessed on the established corporate tax rate. The Dutch regime can be used for the vessels that are operating in the international transportation, dredging and other kinds of activity, and can be applied for ten years. At the same time, the shipping company has to be registered in the Netherlands. There is no requirement about registration of vessels under the Netherlands flag, but vessels have to be registered under the flag of the EU Member State [24]. The method of the accelerated tax depreciation and reduction of wage tax cannot be applied under the condition of the choice of the tonnage tax regime.

The Norwegian Special Tax System for Shipping assumes calculation of a tax on the basis of a uniform rate depending on the NT of vessels [25]. The tonnage tax may be reduced up to 25% based on the environmental rating of the vessel. The tonnage tax scheme can be applied by private and public limited companies carrying out shipping activities. Vessels can also be held through domestic or foreign partnership and controlled by foreign corporations based in low tax countries; a company has to own a vessel or shares or interests in companies, partnerships or controlled by a foreign corporation that owns such a ship [25]. In the Norwegian system, there are no entry and exit barriers, unlike the Dutch tonnage tax regime.

One of the most widespread methods of indirect protectionism is the accelerated tax depreciation for vessels. The accelerated tax depreciation provides write-off of the most parts of a vessel value in the first years of operation. The value of fixed capital that is subject to depreciation can be equal to the sum of initial expenses or is reduced by the sum that can be received on the delivery of the vessel on demolition. For example, the Netherlands shipping companies, at the choice of the corporate tax, can use the accelerated tax depreciation with the maximum annual rate of 20% of the estimated residual value of vessel. However, if a profit is not enough for a depreciation sum covering, then the part that was not utilized can be carried forward to the subsequent year [24]. In Norway the rate of depreciation of 14% a year of book value is applied to the vessels [26].

In tab. 5, on the basis of data [24-29], the different types of tax incentives used in activity of shipping companies in the different countries are generalized.

Table 5

Tax incentives in activity of shipping companies

Country	Corporate tax	Tonnage tax	Additional tax concessions	Tax depreciation
Greece	Shipping enterprises do not use corporate tax.	Tonnage tax is defined taking into account gross tonnage and age of vehicle. It is used for Greek-flagged vessels and other vehicles in operating of the domestic companies.	Cargo and passenger vehicles operating between Greek and foreign seaports, or between foreign seaports, have 50% additional discount from tonnage tax. Ships built in Greece and registered in Greek Vessel Registry have tonnage tax exemption during first 6 years.	n. m.
Japan	Base rate of 23.4%.	Tonnage tax was applied for some large Japanese ocean-going shipping companies during 5 years (since 2009).	The special depreciation scheme for environment-friendly ships.	Amortization rates for vessels by the straight line method: from 25% to 7.7%; by the declining balance method: from 50% to 15.4%. Useful life from 4 to 13 years.

Germany	Base rate of 15% (total up to 33% including trade tax and solidarity tax).	Taxable profit is determined by 4 size groups; it is applied to operation of trade vessels in international cargo and passenger transportation, to German ship managers, to vessels registered in German Shipping Register and the vessels under other flags operated from German territory.	95% of a capital gain from the sale of shares in a foreign subsidiary or domestic company is exempt from tax when received by a company taxable in Germany.	Straight line method for ships (useful life for tax depends on specific vehicle). The declining balance method is not used.
The United States	21%	The US does not charge special tonnage tax on the ships of a particular foreign country if that country does not charge such special tonnage tax on the U.S. flag ships.	Assistance programs provide tax deferral benefits to U.S. flag operators (The Construction Reserve Fund) and deferral of income taxes (The Capital Construction Fund). From 2018 100% first-year bonus depreciation deduction is allowed for certain qualified property acquired and placed in service after 27.09.2017 and before 1.01.2023.	Declining balance (e.g., 200% double-declining balance method) or straight line methods.
United Kingdom	Base rate of 19%.	Fixed profit is determined by 4 size groups. Commercial or strategic management has to be carried out in the UK. There is no specific requirement for vessels in the regime to be UK or EU flagged. The company has to use the system for at least 10 years.	There are capital allowances, which are the expense deductions (as alternative of amortization).	Amortization is not deducted when calculating the corporate tax.
Norway	For the resident companies of Norway, the usual rate of 23%.	Taxable profit is determined by 4 size groups. The system is applied to ship owners, charterers and to various activities connected with transport. Ships should be operated under the flag of EEA country.	Tax exemption for capital gains.	The declining balance method: 14% for ships, vessels, offshore rigs, etc.
Russian Federation	20%	At registration, in Russian International Register of Vessels, the state fee at initial registration and annual payment are paid.	From 1.01.2019, operating expenses of the vessels registered in the Russian International Register of Vessels and income gained from operation and realization of the vessels built by the Russian shipbuilders after 1.01.2010 will not be considered a taxable basis.	Based on the useful life of vessels, amortization may be calculated using either the reducing balance method or straight line method.
The Netherlands	20-25%, depending on profit value.	Fixed profit is determined by 5 size groups. Vessels can be operated under any EU flag. It can be applied only to operating of vehicles in international transportation, including ship management companies.	Corporate tax exemption for foreign shipping companies (gains from the operations of ships in international traffic to and from the Netherlands). VAT exemptions for shipping within the EU.	Accelerated method for corporate income tax purpose. Maximum 20% a year.

Methods of credit and financial regulation also include subsidizing of ship owners and shipbuilders and preferential crediting. Different types of subsidies to shipping industry were provided in China, South Korea, Taiwan and other countries in recent years [30]. Chinese ship owners received subsidies on scrap of Chinese-flagged vessels at Chinese demolition shipyards and ship building on Chinese shipyards. Shipbuilding subsidies to shipping companies and the subsidies directed to stimulation of

vessels demolition are the most widespread. An example of preferential crediting is the Norwegian new financing scheme for building of vessels for coastal shipping, which was entered in 2018. The scheme assumes granting export credits to shipping companies and shipbuilding enterprises under guarantees of the Norwegian Guarantee Institute for Export Credits (GIEC); the value of the guarantee is limited in NOK 10 billion [31].

In fig. 1, the classification of indirect methods of credit and financial regulation in shipping industry is presented. The classification is specified by allocation of various types of tax incentives, subsidizing and preferential crediting.

Application of various measures of the state protectionism in shipping industry is characterized by certain advantages and shortcomings. Pros and cons of direct protectionist measures should be considered both from the macroeconomic point of view and from the point of view of shipping companies. From the point of view of ship owners, the advantages are as follows: restriction of the competition and simplification of access to cargo base. From the macroeconomic point of view, the benefit is development of national shipping industry, increase in receipts in the government budget from operation of vessels under national flag and activity of shipbuilding enterprises as well as additional demand for manpower. Taking into account a difference in the cost of manpower in the developed and developing countries, it is necessary to refer to shortcomings in macroeconomic aspect: the growth of transport tariffs is due to increase in capital expenses of ship owners on shipbuilding on shipyards of the countries with the high cost of a manpower and operational costs of the ship owners using national crews. As a result of growth of freight rates, the cost of the goods transported by the sea increases, negatively affecting consumers of these goods. In connection with considerable negative impact of restriction of the competition on cost of the transported goods and development of the coasting fleet, many countries, including the United Kingdom, Australia and China, refused similar direct measures of the state protectionism.

Obvious advantage of application of indirect measures of protectionism in microeconomic aspect is a decrease in tax payments and a possibility of accumulation of money for investment into the new fleet, modernization and renovation. According to the ship owners, the advantages of the tonnage tax are as follows: the possibility of decrease in tax expenses; use of the fixed rates that allow to predict a size of tax payments easily; encouragement of development of shipping business as the companies using the tonnage tax systems have to operate with vessels; introduction of the tonnage tax, which contributes to the development of investment activities of shipping companies and allows accumulating money for reproduction of fixed assets. From the macroeconomic point of view, the main advantage consists of a possibility of return of vessels under national flag and the corresponding monetary receipts in the government budget. The negative side of application of indirect measures of the state protectionism in macroeconomic aspect includes violation of equal conditions of the competition between shipping companies of the different countries and moving of the fleet belonging to ship owners from the countries, which are not applying similar measures, under the «flags of convenience».

6. CONCLUSIONS

Application of protectionist measures in shipping industry is caused by low profitability of business, high level of competition and volatility in the international freight markets, the continuing outflow of vessels in offshore jurisdictions and the aspiration of governments to develop of national fleets, to ensure economic security.

The results of the research study are characterized by the following elements of scientific novelty. The classification of protectionist measures in shipping industry is improved by specification of the structure of indirect methods, which include the following: various tax incentives that incorporate alternative taxation systems at registration of fleet in the international ship registers, accelerated tax depreciation of vessel value, delay of the tax obligations, capital gains tax exemption, corporate tax exemption and VAT exemption, tax allowances, preferential income taxation of shareholders of ship-owning companies, creation of specialized reserve funds for replenishment and modernization of the fleet for tax exemption of a part of revenue; subsidizing of new buildings, modernization, acquisition

and demolition of vessels; and preferential crediting. The scientific representation about state protectionism in shipping industry gained further development by systematization of practical experience of application of direct and indirect measures in shipping and allocation of the main trends of protectionism:

- prevalence of indirect measures of protectionism over direct methods in connection with the policy of trade and shipping liberalization in the majority of developed countries of the world;
- expansion of the practice of direct measures of protectionism, in recent years, such as cargo reservation on transportation of domestic and export–import cargo for vessels under national flags and fixing to the national fleet of the cargo transported within state programs;
- dissemination of the tonnage tax regimes and other alternative taxation systems at registration of vessels in international ship registers for fight against outflow of national fleets in offshore jurisdictions in developed countries;
- application of tax incentives for shipping companies in a number of developed countries; at the same time, in the majority of the countries, the specified tax concessions are applied at the choice of payment of the corporate tax by ship owners and do not work for the tonnage tax regime;
- application of various types of state subsidizing and preferential crediting for stimulation of national fleet modernization and development in developed and developing countries.

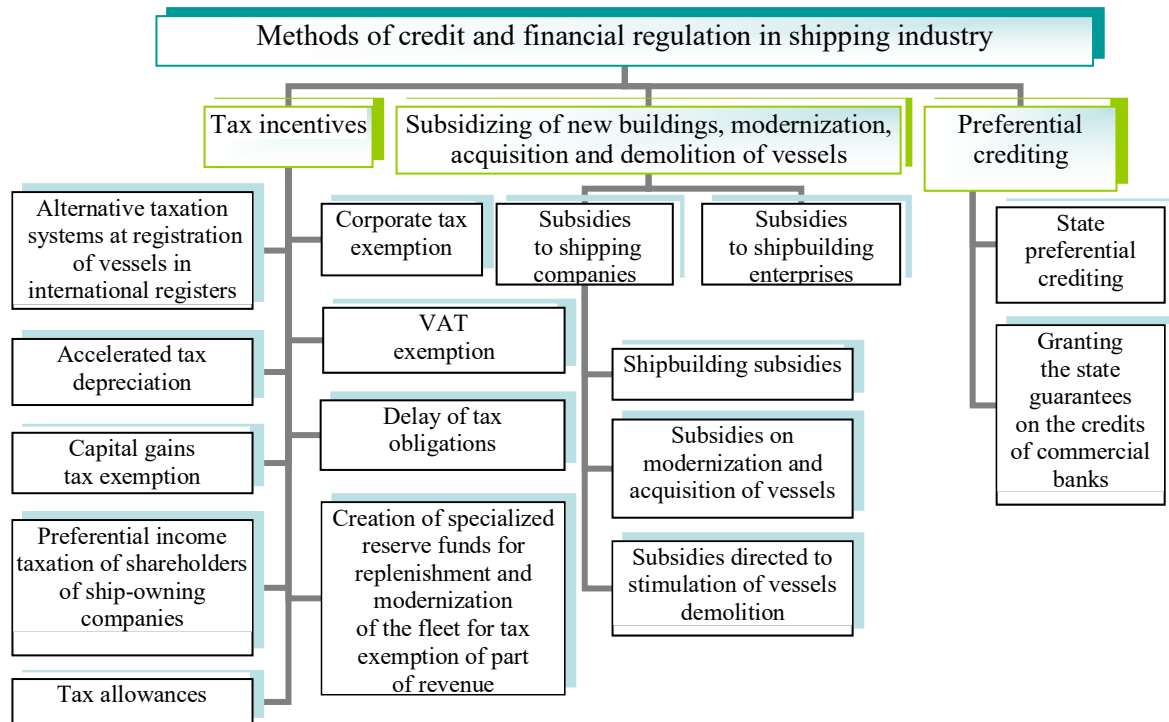


Fig. 1. Classification of methods of credit and financial regulation in shipping industry

The main advantages of protective measures according to the ship owners are as follows: simplification of access to cargo, possibility of maximizing revenue, reductions of tax expenses, capital costs and growth of investments into renewal of the fleet. From the macroeconomic point of view, development of national shipping industry, increase in receipts in the government budget and demand for manpower are important factors. Among the main disadvantages of protectionist measures, it is necessary to highlight a growth of transport tariffs due to increase in capital and operational costs of ship owners, increase in cost of the goods transported by sea, connected with direct competition restrictions, and uneven development of shipping industry in the different countries.

References

1. *Review of Maritime Transport 2017*. Geneva: United Nations Conference of trade and development. 2017. 130 p. Available at: http://unctad.org/en/PublicationsLibrary/rmt2017_en.pdf
2. Odeke, A. *Protectionism and the Future of International Shipping*. Dordrecht: Martinus Nijhoff Publishers. 1984. 446 p.
3. Yannopoulos, G.N. World Shipping: Between Liberalism and Protectionism. *North Carolina Journal of International Law and Commercial Regulation*. 1989. V. 14. No. 1. P. 45-53.
4. Parameswaran, B. *The liberalization of Maritime Transport Services*. Berlin: Springer-Verlag Berlin and Heidelberg GmbH & Co. KG. 2004. 427 p.
5. Kirk, A. Protectionism is on the rise as US and EU implement thousands of restrictive trade measures. *The Telegraph*. 2017. Available at: <https://www.telegraph.co.uk/business/2017/11/28/mapped-protectionism-rise-us-eu-implement-thousands-restrictive/>
6. *Shipping and global trade. Toward to EU external shipping policy*. Brussels: European Community Shipowners' Association. 2017. Available at: <https://www.ecsa.eu/images/PositionPapers2017/2017-02-27-ECSA-External-Shipping-Agenda-FINAL.pdf>
7. Примачев, Н.Т. & Примачев, А.Н. *Принципы интеграции в торговом судоходстве*. Одесса: Феникс. 2006. 360 p. [In Russian: Primachov, N.T. & Primachov, A.N. *Principals of integration in trade shipping*. Odessa: Fenix].
8. Чекаловец, В. & Рожен, Л. Предпринимательская деятельность в сфере морских торговых перевозок (Роль государства). *Бизнес-Информ*. 1999. No. 17-18. P. 52-59. [In Russian: Chekalovets, V. & Rogen, L. Entrepreneurial activity in the sphere of maritime transport (Role of State). *Business-Inform*].
9. Котлубай, О.М. *Економічні механізми розвитку торговельного мореплавання в Україні*. Одеса: Інститут проблем ринку та економіко-екологічних досліджень. 2004. 453 p. [In Ukrainian: Kotlubay, O.M. *Economical mechanisms of development of trade shipping in Ukraine*. Odessa: Institute of market problems and economical and ecological research].
10. Murray, W. *End Protectionism in the Shipping Industry*. Real Clear Policy. 2017. Available at: https://www.realclearpolicy.com/articles/2017/07/22/end_protectionism_in_the_shipping_industry.html
11. Русинов, И.А. & Гаврилова, И.А. & Нелогов, А.Г. Вопрос регулирования линейного судоходства на основе анализа положений Конвенции ООН о Кодексе поведения линейных конференций. *Вестник Государственного университета морского и речного флота имени адмирала С.О. Макарова*. 2016. No 3(37). P. 53-64 [In Russian: Rusinov, I.A. & Gavrilova, I.A. & Nelogov, A.G. Question of liner shipping regulation on the base of United Nations Convention on a Code of Conduct for Liner Conferences. *Bulletin of the Admiral Makarov State University of marine and inland shipping*].
12. Kalouptsidi, M. *Detection and Impact of Industrial Subsidies: The Case of Chinese Shipbuilding*. Cambridge: Department of Economics, Harvard University. 2017. 62 p. Available at: <http://www.restud.com/wp-content/uploads/2017/08/Paper-4-May-2017.pdf>
13. Pupavac, D. & Krpan, L & Marsanic, R. The Effect of Subsidies on the Offer of Sea Transport. *Nase more*. 2017. No. 64(2). P. 54-57.
14. *A.P. Møller - Mærsk A/S Annual report 2017*. Maersk. 2018. Available at: http://files.shareholder.com/downloads/ABEA-3GG91Y/0x0x971046/54DA7595-1904-4118-9174-E741CB7621D4/A.P._Moller_-_Maersk_Annual_Report_2017.pdf.
15. *Hapag Lloyd Annual Report 2017*. Hapag Lloyd. 2018. Available at: <https://www.hapag-lloyd.com/en/ir/publications/financial-report.html>
16. *2017 Annual Financial Results*. CMA CGM. 2018. Available at: <https://www.cma-cgm.com/news/1973/2017-annual-financial-results-cma-cgm-pursues-its-development-strategy-and-once-again-delivers-strong-operating-results-outperforming-its-industry->

17. Protectionism in shipping. *The Journal of Commerce*. 2018. Available at: https://www.joc.com/protectionism-shipping_19870811.html.
18. *Cargo Preference*. MARAD Maritime Administration. Available at: <https://www.marad.dot.gov/ships-and-shipping/cargo-preference/>.
19. *Convention on a Code of Conduct for Liner Conferences*. Geneva: Admiralty and Maritime law guide. 1974. Available at: <http://www.admiraltylawguide.com/conven/liner1974.html>.
20. *The Merchant Marine Act of 1920*. Washington: Commerce Committee. 1920. Available at: https://archive.org/stream/jstor-1171831/1171831_djvu.txt.
21. Grennes T. *An Economic Analysis of the Jones Act*. Washington: Mercatus Center of George Mason University. 2017. 48 p.
22. *Кодекс торгового мореплавания Российской Федерации*. Москва: Государственная Дума. 1999. [In Russian: *Maritime Code of Russian Federation*. Moscow: State Duma]. Available at: <http://ktmrf.ru/>.
23. *Protectionism makes a comeback in international shipping*. The Maritime Executive. 2018. Available at: https://www.maritime-executive.com/article/protectionism-makes-a-comeback-in-international-shipping#gs.5o8_E_8.
24. *The Dutch tax regime and incentives for shipping companies 2017*. Tax Consultants International. 2017. Available at: https://www.tax-consultants-international.com/read/The_Dutch_tonnage_tax_regime.
25. *The Norwegian Special Tax System for Shipping 2018-2027*. Oslo: Ministry of Trade, Industries and Fisheries. 2017. Available at: <http://www.eftasurv.int/media/esa-docs/physical/214-17-COL.pdf>.
26. *Depreciation rates in Norway*. Oslo: The Norwegian Tax Administration. 2018. Available at: <https://www.skatteetaten.no/en/rates/depreciation-rates/?year=2018#rateShowYear>
27. *Worldwide Capital and Fixed Assets Guide*. 2017. Available at: <https://www.ey.com/gl/en/services/tax/worldwide-capital-and-fixed-assets-guide---country-list>
28. *Worldwide Corporate tax guide 2018*. Brussels: EYGM Limited. 2018. 1819 p. Available at: [https://www.ey.com/Publication/vwLUAssets/EY-2018-worldwide-corporate-tax-guide/\\$FILE/EY-2018-worldwide-corporate-tax-guide.pdf](https://www.ey.com/Publication/vwLUAssets/EY-2018-worldwide-corporate-tax-guide/$FILE/EY-2018-worldwide-corporate-tax-guide.pdf).
29. *Shipping tax guide 2015*. Deloitte. 2015. Available at: <https://www2.deloitte.com/global/en/pages/energy-and-resources/articles/shipping-tax-guides.html>.
30. *Søren Skou Calls for an End to Subsidies*. The Maritime Executive. 2018. Available at: <https://www.maritime-executive.com/article/soeren-skou-calls-for-an-end-to-subsidies#gs.PPmdV=c>.
31. *New Norwegian ship financing scheme launched*. Export credit Norway. 2018. Available at: <https://www.eksportkreditt.no/en/2018/06/28/new-norwegian-ship-financing-scheme-launched/>.

Received 26.10.2017; accepted in revised form 03.06.2019