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ИССЛЕДОВАНИЕ УРОВНЯ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОГО РАЗВИТИЯ РЕГИОНОВ УКРАИНЫ

Исследованы процессы социально-экономического развития регионов Украины, предложена аналитическая схема идентификации стадии проблемности социально-экономического развития регионов страны. Обоснована система частных показателей и на ее основе рассчитаны интегральный и обобщающий показатели экономического и социального развития регионов Украины. Предложено матрицу определения проблемности регионов Украины в плоскости социально-экономического развития. Предложены критерии идентификации динамичности валового регионального продукта регионов страны и определено ее влияние на социально-экономическое развитие регионов Украины.

Ключевые слова: социально-экономическое развитие, доход на одну особу, валовой региональный продукт, уровень безработицы, коэффициент миграции, проблемные регионы.

Kozyreva Olena, *Doctor of Economic Sciences, Associate Professor, Department of Management and Economics, National University of Pharmacy, Kharkiv, Ukraine, e-mail: yakakos74@gmail.com, ORCID: http://orcid.org/0000-0002-2014-4584*

Sahaidak-Nikitiuk Rita, *Doctor of Pharmaceutical Sciences, Professor, Department of Processes and Equipment of Chemical and Pharmaceutical Production, National University of Pharmacy, Kharkiv, Ukraine, e-mail: sagaidak_rita@ukr.net, ORCID: http://orcid.org/0000-0002-9337-7741*

Yevtushenko Viktoriia, *PhD, Associate Professor, Department of Marketing and Management of Foreign Economic, V. N. Karazin Kharkiv National University, Ukraine, e-mail: evtushenko_va@ukr.net, ORCID: http://orcid.org/0000-0002-7764-2277*

Derenskaya Yana, *PhD, Associate Professor, Department of Management and Economics, National University of Pharmacy, Kharkiv, Ukraine, e-mail: y.derenskaya@gmail.com, ORCID: http://orcid.org/0000-0001-7428-6249*

Ievtushenko Ganna, *PhD, Associate Professor, Department of Marketing and Management of Foreign Economic, V. N. Karazin Kharkiv National University, Ukraine, e-mail: evtushenko_anna@ukr.net, ORCID: http://orcid.org/0000-0003-0472-0737*

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Pavuk O.

COMPARISON OF PORT ACTIVITIES OF THE EAST COAST OF THE BALTIC SEA: 1996–2016

Показано, що за період 1996–2016 рр., після будівництва ряду портів в Ленінградській області (Росія), обсяги вантажообігу в регіоні Східного узбережжя Балтійського моря зросли в 4,5 рази, в той час як в країнах Балтії приблизно в 2 рази. Зроблено висновок, що позитивна динаміка світового обороту морських вантажів дозволяє дивитися на майбутнє всіх портів з оптимізмом.

Ключові слова: *Балтійське море, Євроазіатський регіон, морський транспорт, вантажообіг, Балтійські країни.*

1. Introduction

Seaports play an important role in the development of the East Coast region of the Baltic Sea. In the mid-90s of the 20th century, the ports of Latvia, Lithuania and Estonia played a key role in transshipment of goods. For 20 years, after the construction of a number of ports in the Leningrad region, the volume of cargo turnover in the designated region has grown 4.5 times, and transshipment in six Russian ports has grown 24 times, while in the Baltic States it has approximately doubled. Politicians of both sides often use rhetoric that undermines interstate economic relations. However, the positive dynamics of the world turnover of sea cargoes allows to look at the future of all ports with optimism.

2. The object of research and its technological audit

The object of scientific research is the performance of the ports of the East Coast of the Baltic Sea, as well as data on the development of economies in the Baltic States.

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3. The aim and objectives of research

The aim of research is identification of the prospects for development of ports in the East Coast of the Baltic Sea region, located on the territory of the Russian Federation and in the Baltic States – Latvia, Lithuania and Estonia.

To achieve this aim, the economic indicators of the Baltic countries are compared, as well as a comparative analysis of the activities of the ports of the East Coast of the Baltic Sea, based on the port statistics for 20 years – from 1996 to 2016. Painful moments are determined. Recommendations are made on the development of the Baltic ports for the near and more distant future.

4. Research of existing solutions of the problem

Regional development of ports on the Eastern coast of the Baltic Sea attracts both Russian scientists and researchers from the Baltic countries. Some of them take part in discussions about the very concept of the region, there are differences on this issue. Some say only about the ports on the territory of the Russian Federation, on the other ports of the Baltic countries – Latvia, Lithuania and Estonia, the third – on the entire region of the Eastern coast of the Baltic Sea [1–4]. In different ways, researchers see the future of seaports. Extreme view: Russian ports will reload cargo from the ports of the Baltic countries [5–13]. However, the more common point of view becomes a discussion about the diversity of options for cooperation and development of transnational connections, as well as the common European development strategy for the entire region [14–16]. Among the Russian experts, there are those who see the development of ports, and, for example, Riga, bearing in mind the potential of undeveloped areas and participation in port operations of foreign capital from Russia, other CIS countries and China [4, 17]. One way of Baltic ports is creation of logistics centers and integration of different chains within and between the logistics centers [5] or creating hub ports [9].

In this context, we are primarily interested in the possibilities for development of ports in the Baltic countries and the factors that contribute to this.

5. Methods of research

To achieve this aim, the methods of analysis and synthesis, logical generalization of approaches to the issue of regional development of port territories, comparative comparison of port performance are used. The expediency of such comparisons is caused by different views on the role and development of maritime transport in the Baltic Sea region.

6. Research results

The transport industry plays an important role in the economy of the Baltic countries. According to Euromonitor estimates, the share of transport and related services in the added value of GDP (excluding international services) in the formation of Lithuania's GDP is steadily growing and in 2016 exceeded 13 % (in 2000 less than 8 %). In Estonia and Latvia, it consistently stands at 7–8 % and 9 %, respectively [16].

After the collapse of the USSR, the main ports on the East coast of the Baltic Sea were outside the Russian Federation. First of all, this is the Ventspils port, where in 1961 an oil pipeline and terminal for transshipment of crude oil and oil products was built. In 1996, the turnover of Ventspils port constituted 42.7 % of the total cargo turnover of the ports on the East Coast of the Baltic Sea or 35.7 million tons. And the turnover of all ports of the new Baltic countries exceeded 88 % of the total cargo turnover of the region. In the Russian Federation, there was only one cargo port in St. Petersburg with an annual turnover of 9.9 million tons (Table 1).

Table 1

Comparison of cargo turnover in the ports of the East coast of the Baltic Sea, 1996–2016, million tons

Ports	1996	2005	2015	2016	Growth/Decrease, times, 1996/2016
RF ports, total	**9.9**	**134.5**	**230.2**	**236.5**	**+23.9**
Including:					
St. Petersburg	8.3	57.5	51.5	48.6	+5.8
Ust-Luga	–	0.7	87.9	93.3	–
Primorsk	–	57.3	59.1	64.4	–
Vysotsk	–	3.5	17.5	17.1	–
Vyborg	–	0.9	1.5	1.4	–
Kaliningrad	1.6	14.6	12.7	11.7	+7.3
Ports of the Baltic States, total	**73.6**	**126.7**	**134.4**	**137.4**	**+1.9**
Including:					
Estonian ports total:	*14.0*	*40.1*	*27.7*	*26.4*	*+1.9*
Tallinn	14.0	39.5	22.4	20.1	+1.4
Sillamae	–	0.6	5.3	6.3	–
Latvian ports total	*44.8*	*58.7*	*68.2*	*61.6*	*+1.4*
Riga	7.5	24.4	40.1	37.1	+4.9
Ventspils	35.7	29.8	22.5	18.8	–1.9
Liepaja	1.6	4.5	5.6	5.7	+3.5
Lithuanian ports total	*14.8*	*27.9*	*47.2*	*49.4*	*+3.3*
Klaipeda	14.8	21.8	38.5	40.1	+2.7
Butinge	–	6.1	8.7	9.3	–
All ports of the baltic sea	**83.5**	**261.2**	**363.6**	**373.9**	**+4.5**

Note: compiled by the author according to the port statistics.

At the same time, in the mid-90s of the last century, both in Russia and in the Baltic States, a number of activities were planned to develop port activities in the region. Russia has taken a course to build new ports on the Gulf of Finland in the Leningrad region. At the same time, in the Baltic ports, measures were taken to attract foreign investors through the creation of free economic zones. In 1996, Latvia adopted the laws on free ports in Riga and Ventspils and the law on the Liepaja Special Economic Zone [15], providing tax benefits to investors investing their capital in port enterprises.

The last few years, after the deterioration of economic relations between the EU and Russia, politicians are frightened by the reduction of Russian transit for the ports of the Baltic countries. However, not everything is so unambiguous

here. Worldwide trends allow to make a bit of optimism in their rhetoric. World marine trade in the period under review has steadily developed, increasing from 1995 to 2015 in half, from 4.8 billion tons to 10 billion tons [4].

The Asian region is rightly called the locomotive of the world economy (Table 2). The role of the Asian region is growing, primarily due to China, but experts are paying attention to a new potential player – India [17]. The volume of transit between Europe and Eurasia amounted in 2016 to about 155 thousand DFE, mainly at the expense of China (Japan exports only IT services). Supplies from Europe to China in the first quarter of 2017 increased by 12 %, to 62 billion USD, and from China to Europe – by 7 %, to 81 billion USD [9].

Table 2

Development of trade between the main markets of the Eurasian region, billion USD [9]

Europe	Asia	2014	2020
EU	China	615	800
Russia	China	95	200
Turkey	China	24	100
Iran	China	62	65
Kazakhstan	China	17	46

One of the evidences of this development is Russia's construction of its ports in the Baltic Sea, which have dramatically increased transit cargo flows to Europe. Given the global trends, the construction of Russian ports in the Baltic was an urgent necessity for development of trade and economic relations between Russia and the EU countries. As a result, after commissioning the ports of Primorsk, Ust-Luga and Vysotsk by 2006, almost 70 million tons of cargo were handled through the ports of the Leningrad region, largely due to Primorsk, which overloaded 57 million tons of oil. In subsequent years, Russian ports in the Baltic showed a positive trend, reaching in 2016 the turnover of 236.5 million tons, an increase of almost 24 times in 20 years (Table 1).

Over the same 20 years the cargo turnover of the Baltic ports has almost doubled, reaching 137.4 million tons in 2016. And while the total cargo turnover in the Baltic ports is growing, in the first half of the year growth was 2.1 % compared to the same period a year earlier or 74.8 million tons. In Latvia 45.4 % of the total cargo volume was handled, in Lithuania – 33.4 %, in Estonia – 21.2 %.

The fastest growing in the Baltic countries was the Riga port, transshipment of cargo through its terminals from 7.5 million to 37.1 million tons (almost 5 times). In many respects the development of the port was promoted by vast territories, more than 100 wharfs of which stretch along the city banks of the Daugava River for 12 kilometers. A record cargo turnover of 41.1 million tons was achieved in 2014, after which a slight decline followed. However, the port's potential is great due to development of territories far from the center of Riga on the island of Kundzinsala on the right bank of the Daugava and on the Russian island (Krievu sala) on the left bank, where several new large international projects are developing. The most ambitious is the Riga fertilizer terminal, which started operating at Kundzinsala in late 2013, 51 % owned by the Russian holding URALCHEM and 49 % by the *Rīgas tirdzniecības osta* (RTO). Through the Riga port, up to 80 % of transit cargo is annually passed. However, there are also failed projects, for example, the construction of a container terminal on Kundzinsala was stopped with the involvement of the capital of the National Container Company (RF). Slower than planned, the transfer of coal terminals from the center of Riga to the Russian island is carried out, the owners of stevedoring companies are afraid of reducing the transit of coal from Russia due to the reorientation of commodity flows to China and India, where the demand for energy is growing. Stevedoring can be optimized by the cargo turnover in the first half of this year, indicating a 7.4 % increase in transshipment of coal compared to the same period in 2016.

The turnover of Liepaja port, which is developing on the territory of the former military port, increased 3.5 times in 20 years, making 5.7 million tons in 2016. An impulse to development of the port is provided by the Liepaja Special Economic Zone, established in 1997, which gives an opportunity to create enterprises with preferential taxation in the port and on the territory of the city. Today, the status of a special economic zone has 41 capital companies, providing employment to 2.050 employees, they produce goods and services for 168 million EU a year, 80 % of their output is exported. The average salary at the enterprises of the zone is higher than the average in Latvia. It is believed that Liepaja most effectively takes advantage of the special economic zone [8].

The port of Ventspils, which prosperity was associated with the construction of an oil pipeline and terminals for transshipment of oil and mineral fertilizers in the early 1960s, in the first decade actively used the inheritance received by Latvia. However, after Russia cut off the oil crane, the port's cargo turnover began to decline, from 35.7 million tons in 1996 to 18.8 million tons in 2016. Ventspils Free Port compensates for the loss of cargo turnover by construction and lease of premises for new enterprises in long-term lease, with the possibility of their repayment in the future. Along with the already existing industrial territories, the port allocated more than 500 hectares for the implementation of new production facilities. 17 such enterprises with preferences of the free economic zone have already found a residence permit in Ventspils, among investors there are local and foreign entrepreneurs from the East and the West.

The Lithuanian port of Klaipeda has mastered all the territories adjacent to the port, the area of which is incomparably less than that of any Latvian port (Table 3). Cargo volume of the port for 20 years increases by 2.7 times, to 40.1 million tons in 2016. Cargo volume of the terminal in Butinge increases – 9.3 million tons. In the last two years, the terminal for LNG unloading and pumping has been increasing the turnover in the port of Klaipeda, transshipping from the offshore platform built in the port water area. The LNG terminal can meet 90 % of the Baltic countries' natural gas demand. And if in 2015 in the port of Klaipeda 6 cruises of the storage tanker were made, in the current year 2017 18 ships with LNG are expected. The limited capacity of land terminals and the LNG sea terminal allowed Klaipeda port to reduce transshipment of transit cargo from Russia without reducing cargo turnover. Today transit cargo is no more than 1 million tons per year [16].

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Table 3

Port capacities in the Baltic countries

Ports	Country	Total area, ha	Length of wharfs, km	Max depth, m
Riga	Latvia	6348	18.2	14.5
Ventspils	Latvia	1728	5.7	17.5
Liepaja	Latvia	1182	10.0	12.5
Sillamäe	Estonia	750	2.6	16.5
Klaipeda	Lithuania	510	2.7	14.0
Tallinn	Estonia	4.5	5.9	18.0

Note: compiled by the author according to the data from home pages of the ports.

A difficult situation remains in the port economy of Estonia. The first call to reduce cargo turnover was the construction of a container terminal in Ust-Luga. Nevertheless, in addition to the working port of Tallinn, another private port of Sillamäe was built in 2005, 50 % of the capital of which belongs to Russian entrepreneurs. The port of Muuga, which handles 80 % of the cargoes of the Tallinn port, serves up to 90 % of the total transit cargo traffic in Estonia. The tendency of cargo turnover to fall by rail and in ports remains. Dreaming of growth is not worth it, oil and coal will not return, experts believe that it is necessary to develop new directions and work on eliminating the contradictions between Estonia and Russia [7]. One of the proposed solutions is the privatization of the shares of the Tallinn Port and the Estonian Railway.

7. SWOT analysis of research results

Strengths. The strengths of the ports on the East coast of the Baltic Sea are undoubtedly their geographical position, which connects trade routes to Europe and Asia, as evidenced by the cumulative growth in the cargo turnover of all ports in 4.5 years. Ports in the Baltic countries do not freeze in winter, which can be considered an advantage over Russian harbors, where in winter navigation it is necessary to resort to the help of icebreakers, which increases the price of the road for the transportation of goods.

Weaknesses. The weak side of the ports in the Baltic countries is the influence of geopolitics on their activities, which does not allow making long-term economic forecasts for development of port activities and attracting investments in new projects. Of economic factors, it should also be noted the limited capacity of the ports of Tallinn and Klaipeda. At the same time, the presence of undeveloped areas in the port of Riga, which are difficult to manage, can also be attributed to both the strong and its weak side. Land lease agreements were concluded in the 90s, and each separate case of non-use of the territory by the lessee requires complex litigation. In addition, the residents of the port still live on the territory of the port, remaining there after the expansion of port areas. These issues need to be addressed [16].

Opportunities. The opportunities for development all ports in the Baltic are associated with the expansion of economic ties between the Asian region and Europe, primarily with China, which requires further research of economic parameters and the possibilities of transporting goods through seaports.

Threats. Negative impact on the object of research of political factors can complicate the development of economic ties between the Asian and European regions and the inclusion of seaports in the Baltic countries in these chains.

8. Conclusions

The expansion of international trade between East and West leads to an increase in cargo turnover in the ports of the East Coast of the Baltic Sea, primarily due to the active development of Russian ports (an increase from 1996 to 2016, 4.5 times). However, the Baltic ports still show growth dynamics (+1.9 % over 20 years), primarily due to development of the Riga port (+4.9 %) and Klaipeda port (+2.7 %). There is a potential for development of the ports of Estonia and Latvia due to the presence of Russian investors there.

The ports of the Baltic countries count on the development of a large-scale and promising Belarusian project «Great Stone», of which the Chinese national logistics company is a partner and which must connect China through Belarus with the German port of Duisburg. First of all, the Riga Free Port is of interest, due to the development of multimodal transport from Germany to China via Riga, as the opportunities for Polish and Slovak railways to transport Chinese goods through the Minsk Logistic Center «Great Stone» to Europe are limited.

The following factors influence the development of transport corridors in the Baltic Sea Region in order of importance: geography, economics, politics, transport infrastructure and new technologies of logistics business. If we talk about the ports of the Baltic countries, then there is a narrowing of geographical plans due to the reorientation of cargo to Russian ports. The economy is influenced by tariff policy. The influence of politics is still great. The most optimistic is the impact of transport infrastructure.

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СРАВНЕНИЕ ДЕЯТЕЛЬНОСТИ ПОРТОВ ВОСТОЧНОГО ПОБЕРЕЖЬЯ БАЛТИЙСКОГО МОРЯ: 1996–2016 ГГ.

Показано, что за период 1996–2016 гг., после строительства ряда портов в Ленинградской области (Россия), объемы грузооборота в регионе Восточного побережья Балтийского моря выросли в 4,5 раза, в то время как в странах Балтии примерно в 2 раза. Сделан вывод, что положительная динамика мирового оборота морских грузов позволяет смотреть на будущее всех портов с оптимизмом.

Ключевые слова: Балтийское море, Евроазиатский регион, морской транспорт, грузооборот, Балтийские страны.

Pavuk Olga, *Doctor of Economic Sciences, Associate Professor, Baltic International Academy, Riga, Latvia, e-mail: olga.pavuk@outlook.com, ORCID: http://orcid.org/0000-0003-3930-7010*

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Khalatur S.

INNOVATIVE DOCTRINE DEVELOPMENT OF AGRICULTURE GROWTH OF UKRAINE

Запропоновано інноваційну доктрину розвитку сільського господарства України на основі процесу синергії елементів стратегії, в якій визначено механізми її реалізації. Ці механізми передбачають концентрацію на основних напрямах науково-технічного та освітнього аграрного потенціалу країни на засадах конкурентності, створення національної і регіональних інноваційних інфраструктур, формування організаційно-економічного механізму інноваційного розвитку сільського господарства.

Ключові слова: *сільськогосподарська галузь, інноваційна доктрина, людські ресурси, процес синергії елементів стратегії.*

1. Introduction

Research directions related to development of a methodology for analyzing the effectiveness of the national economy in general and agriculture in particular, require significant adjustments. The economic efficiency of production in agriculture means, in the most general form, the effectiveness of the production process. The relationship between the achieved results and the costs of living and materialized work reflects in turn the degree of perfection of production resources and the effectiveness of their use. A successful solution to the problems facing agriculture is possible only on the basis of increasing the economic efficiency of its production.

2. The object of research and its technological audit

In order to effective formation of an innovation strategy of agricultural development, an innovation doctrine of development is being conducted.

Experts [1–6] point to the need of innovative development of the national economy and agriculture in particular.

That is why in developing the theoretical, methodological and practical foundations of innovative development of the agrarian sector of Ukraine one should take an example of developed countries.