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DETERMINATION OF PRIORITY DIRECTIONS FOR DEVELOPMENT OF UKRAINE'S TRANSPORT-LOGISTICS SYSTEM: THE EUROPEAN VECTOR

Khodova Y.O.

Azov State Technical University

In the presented work the research of formation of the integrated transport-logistic system of Ukraine was conducted. The complex tasks related to adaptation to the new conditions of management in the market environment, integration into the European and world transport systems are determined. The solution of the actual scientific and practical task for the implementation of the priority directions of the Logistic Strategy aimed at the creation of an integrated transport network of Ukraine's efficient transport system is proposed. The directions of increasing the investment attractiveness of the transport industry, meeting the needs of the population in transportation and improving the business environment for the stable economic and social development of the country are singled out.

Keywords: integration, transport industry, logistics system, LPI index, logistics strategy.

Problem statement. Building up and development of Ukraine's transport and logistics system is largely conditioned by its European integration direction. The experience of the countries of Western Europe and North America shows that the development of logistics and transport sector makes it possible to reduce logistics costs by almost 12-35%. The coordination of technological, technical and organizational-economic interaction between all functional links in such countries is provided by an appropriate logistic system that ensures the interaction of all participants in the transport and distribution process in the organizational, economic, technical, technological and informational aspect.

The latest research and published works analysis. The work of I. Zaitseva, I. Sadlovskaya, O. Tkach, M. Ustenka is devoted to the development of the transport and logistics system of Ukraine in the context of European integration. Some aspects of the formation of transport-logistic systems are considered in the works of such scientists as: Vynnychenko L.F., Kolosok V.M., Kuzminov A.V., Lepekiko T.I., Tupkalo V.I., Sarkisov S.V., Chornopyska N.V. etc. It was revealed that beyond the attention of the scientists in the complex of general problems of the development of the transport and logistic system of Ukraine, the issues of its development were discussed by participating in international transport projects, in particular, transport and regional projects of the EU and logistics itself.

Unsolved questions under consideration. Due to the active development of business ties with other countries, Ukraine has challenging tasks, adapting to new business conditions in a market environment, integrating into European and world transport systems. That is why the orientation of the Ukrainian policy on integration into the European economic community and the transfer of market relations to it, as well as certain economic problems on the nation of the country, give rise to increased attention to the development and efficient functioning of the transport industry in Ukraine.

Purpose of article. The solution of the actual scientific and practical task for the implementation of priority directions of the Logistics Strategy, aimed at the creation of an integrated transport network integrated into the efficient transport system of Ukraine.

Statement of basis materials. Further development of Ukraine's transport and logistics system should not be limited to adaptation to EU requirements and standards. With the economic and financial support within the framework of European transport and logistics projects, the comprehensive development of the national transport and logistic system of Ukraine as a subsystem of the country's economic system is possible.

The EU representative said that the EU is now Ukraine's largest trading partner, providing 37.1% of Ukrainian exports in 2016. Trade turnover be-

Table 1

Exports of Ukrainian goods and services to EU countries in 2016

EU country	Exports 2016 (millions of US dollars)	EU country	Import in 2016 (million USD)
Poland	2200010,1	Germany	4318445,9
Italy	1929575,6	Poland	2693326,6
Germany	1423735,2	France	1530515,3
Hungary	1053084,2	Italy	1358227,8
Spain	1004547,4	Hungary	801992,9
Netherlands	995322,6	United Kingdom	709262,8
Romania	716981,4	Czech Republic	654830,9
Czech Republic	560756,1	Netherlands	546847,8
Slovakia	471362,6	Spain	500939,5
France	453674,3	Lithuania	492528

Source: Summarized by the author on the basis of [1]

Table 2

Freight transportations of Ukraine for 2014–2016

	Cargo turnover 2014		Cargo turnover 2015		Cargo turnover 2016	
	million tkm	in% to 2013	million tkm	in% to 2014	million tkm	in% to 2015
Transport	335151,7	89,2	315341,8	94,0	323473,9	102,4
railway	209634,3	95,5	194321,6	92,5	187215,6	96,0
automobile	37764,2	94,9	34431,1	91,2	37654,9	109,1
water	5462,3	118,5	5434,1	100,1	3998,6	73,6
pipeline	82050,9	73,6	80944,1	98,9	94378,9	117,0
air	240,0	88,3	210,9	88,2	225,9	107,0

Source: [1]

tween Ukraine and the EU in 2016 grew by 8.1%. It is noted that more active growth will be observed with the implementation of the Association Agreement over the next seven years [4].

According to the State Statistics Committee, the foreign trade of Ukraine with the EU countries, taking into account the signing of the Association Agreement between Ukraine and the EU in 2016, is: exports – 13496283.2 billion dollars. USA, imports – 17140841.8 billion dollars USA. The main trading partners of Ukraine within the framework of the EU were Germany, Poland, Italy, France, Great Britain, Hungary, the Netherlands, Spain, Czech Republic, Romania, Austria, Slovakia and Belgium. Most Ukrainian goods and services were exported to Poland, Italy, Germany and Hungary (Table 1).

Most of the goods and services were imported from Germany, Poland, France and Italy. The total cargo turnover also increased in 2016 compared to 2015 by 8.4%. (Table 2).

Such improvement was achieved in the context of increased volumes of shipments of goods (in particular, by pipeline transport) and the distance of goods (road and rail transport); in water, there was a decrease of 26.5% as a result of a decrease in the range of shipments of goods and services offered by sea transport [5].

The Ministry of Economic Development and Trade of Ukraine notes that the main positive factor in the cargo segment was the demand for long-distance transport by the enterprises of the real sector of the economy to meet high domestic investment, consumer and external demand [5].

At the same time, the support of growth in transport is high demand of the EU countries in imported natural gas, favorable price conditions on foreign markets, expansion of domestic demand from

companies in the conditions of high expectations for the continued renewal of business activity [5]. Logistics costs are an important indicator of the efficiency of the country's logistics industry. So, in the EU countries logistics costs in 2016 ranged from 8.1% to 14.5%, in the USA – 8.2%, in Ukraine – 15.9%.

Table 3

The cost of logistics in the countries of the world and the EU (according to Armstrong & Associates)

Country / Region	GDP for 2016 (\$ billion)	Logistics costs (% Of GDP)
Asia-Pacific Region	262,4	17,5%
USA	18,569.1	8,2%
Europe	17,548.5	9,5%
including:		
Austria	386,8	9,3%
Belgium	467,0	8,7%
Denmark	306,7	9,6%
Finland	236,9	9,3%
France	2,463.2	9,5%
Germany	3,466.6	8,8%
Ireland	293,6	9,6%
Italy	1,850.7	9,7%
Netherlands	771,2	8,3%
Norway	370,4	9,6%
Poland	467,6	11,7%
Portugal	204,8	12,1%
Spain	1,232.6	9,7%
Switzerland	659,9	8,9%
UK	2,629.2	8,8%
Russia	1,280.7	16,1%
Ukraine	93,3	15,9%

Source: generally based on [7]

According to research on transport costs, the leaders are Britain, the USA, Canada and France (45-48%), warehouse costs – Germany, Italy, Great Britain, Russia and Middle Europe (27-34%), costs on stocks and accounting of orders – Benelux, USA, Russia (35-47%) (Table 4).

Table 4
Structure of costs for logistics in the developed countries of the world

Country	Costs, %		
	stocks and accounting	of warehouse	transportation
France	31	24	45
Benelux	47	22	31
Germany	30	33	37
Italy	28	34	38
UK	24	28	48
Average Europe	32	28	40
USA	35	20	45
Canada	30	25	45
Russia	35	27	38

Source: [7]

According to expert estimates, in Ukraine, 70% of logistical expenses come from transport (7 billion), 25% for storage (2.5 billion), and about 5% for logistics flows management (0.5 billion dollars).

Table 5
The structure of logistics costs in Ukraine

Branch	%	\$ billion
transport	70	7
warehouse storage	25	2,5
management of logistics flows	5	0,5

Source: [2]

The above information on the structure of logistics costs indicates the significance of logistics losses in the activities of not only a separate organization – an enterprise, firm or company, but also in the life of many countries. Separating each component in the overall structure of logistics costs is an urgent

issue in view of the urgency of building a system for their planning and management, as well as improving: technological and technological basis of logistics systems of different levels, starting from the enterprise and ending with chains and supply networks. But the main thing in studying the structure of logistics costs is that the results give the opportunity to develop specific measures to reduce them due to: rationalization of transport processes connected with delivery of goods to customers; mechanization and automation of loading and unloading works and warehouse processes; to reduce the value of held stocks by expediting their circulation; reduction of aging and exhaustion costs; application of modern IT technologies and information systems of cargo traffic management within logistic systems, etc. [11].

Equally important is the LPI (Logistics Performance Index), which is calculated on the basis of surveys of international, national or regional logistics and warehousing operators, freight forwarding companies. The survey consists of two parts: the international index LPI is determined – on a five-point scale, respondents evaluate the criteria that reflect the efficiency of the logistics system in relation to the 8 countries with which the logistics company operates; and internal – on a five-point scale, respondents evaluate the logistics system of the country in which they work. On the basis of the obtained estimates, the integral index of the LPI index and the ranking of the countries participating in the ranking are calculated [6].

The main criteria for assessing the efficiency of logistics include:

Customs Efficiency of customs and border registration (speed, simplicity and predictability of formalities).

Infrastructure. The quality of infrastructure related to trade and transport.

International shipments. Simplicity of organization of international transportations at competitive prices.

Logistics quality and competence. Quality and competence of logistic services provided by market operators – logistic operators, transport companies, customs brokers, etc.

Tracking and Tracing. Tracking of goods passing.

Timeliness. Timeliness of deliveries of cargoes [7]

Table 6
Ranking of top 10 countries by LPI indicator, 2016

Country	LPI rating	LPI Indicator	Customs	Infrastructure	International transportation	Logistic competence	Tracking	Timeliness
Germany	1	4,23	4,12	4,44	3,85	4,28	4,27	4,45
Luxembourg	2	4,22	3,90	4,24	4,24	4,01	4,12	4,80
Sweden	3	4,20	3,92	4,27	4,00	4,25	4,38	4,45
Netherlands	4	4,19	4,12	4,29	3,94	4,22	4,17	4,41
Singapore	5	4,14	4,18	4,20	3,95	4,09	4,05	4,40
Belgium	6	4,11	3,83	4,05	4,05	4,07	4,22	4,43
Austria	7	4,10	3,79	4,08	3,85	4,18	4,36	4,37
UK	8	4,07	3,98	4,21	3,77	4,05	4,13	4,33
Hong Kong	9	4,07	3,94	4,10	4,05	4,00	4,03	4,29
USA	10	3,99	3,75	4,15	3,65	4,01	4,20	4,25

Source: [8]

Ukraine ranked 80th among 160 countries in the World Bank's logistics performance index for 2016.

It should be noted that three years ago – in 2014 Ukraine occupied the 61st position in this ranking. Comparing Ukraine with the leader of the rating by Germany, then our country's indicators are 55% less than the German ones (2.74 versus 4.23). [5] If we consider the scores for each characteristic separately, Ukraine is worse rated in the customs clearance of goods (2.30 points), which is 116th in the list, according to the rating for a separate characteristic. Ukraine was best evaluated for the timely delivery of goods to destinations (3.51 points), which is 54th place in the list. On the whole, in the 2016 pentagonal system, Ukraine received 2.74 points (Table 7).

Also, according to experts, Ukrainian rivals in the agro-food sector also outperform our country by this indicator.

For example, the index of logistics efficiency in the United States and Argentina, respectively, is 3.99 and 2.96. But neighboring Poland occupies the 33rd position in this rating. Experts believe that poor logistics performance in Ukraine is associated with unreasonably high port tariffs and fees [5].

According to experts from the World Economic Forum (WEF), the fall in the performance of a number of countries in the ranking depends mainly on two reasons: transport infrastructure and the quality of logistics services [6].

However, against the backdrop of post-Soviet neighbors, Ukraine looks decent, thanks to the signing of the Association Agreement with the EU, and the adoption of reforms in the field of transport and logistics of the country.

The National Transport Strategy of Ukraine until 2030 (hereinafter referred to as the Strategy) determines the directions of improvement of the quality of provision of transport services, envisages approximation of their level of provision and level of infrastructure to European standards, increase of the level of safety of transport, anti-corruption policy, takes into account the necessity of decentralization of tasks and functions of central executive bodies authorities, introduction of principles of corporate governance in the public sector of the economy [6].

The strategy provides a comprehensive vision of the global priorities of transmodal policy and defines the directions of development of the in-

dustry for the period up to 2030 [6]. The overall objective of the Strategy is to determine the conceptual framework for the formation and implementation of state policy in the field of transport, aimed at creating an integrated transport network of Ukraine's efficient transport system, increasing the investment attractiveness of the transport sector, meeting the needs of the population in transportation, and improving the business environment for sustainable economic and social development of the country [6].

The main strategic documents for achieving these goals are the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their member states, on the other hand, and the EU-Ukraine Association Agenda [8].

However, at present, the transport strategy of Ukraine for the period until 2020 has not developed in specific program documents. Structural reforms in the transport sector are extremely slow, and in some transport sub-sectors are actually blocked.

The analysis allowed to identify the following priority areas of the logistics strategy, such as:

Priority Area 1. Implementation of effective public administration in the transport sector. According to the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand, it is necessary to introduce new principles for the formation and coordination of state policy in the field of transport, creating conditions for the control of the quality of the functions of the relevant executive authorities. Strengthening the interaction between the public and private sectors, state authorities and local self-government bodies, and the introduction of decentralization, especially through coordinated public policy initiatives, can provide a solid basis for the sustainable development of the transport industry in Ukraine and the creation of a free and competitive transport services market.

Priority direction 2. Ensuring the provision of high-quality transport services and integration of Ukraine's transport complex into the international transport network. In order to maximize the geographical location of Ukraine as a transit country, urgent measures should be taken, in particular, to ensure the organization of freight transport between the countries of Europe, Asia and the East.

Table 7

LPI indicator in post-soviet countries, 2016

Country	LPI rating	LPI Indicator	Customs	Infrastructure	International transportation	Logistic competence	Tracking	Timeliness
Kazakhstan	77	2,75	2,52	2,76	2,75	2,57	2,85	3,06
Ukraine	80	2,74	2,30	2,49	2,59	2,55	2,96	3,51
Moldova	93	2,61	2,39	2,35	2,60	2,48	2,67	3,16
Russia	99	2,57	2,01	2,43	2,45	2,76	2,62	3,15
Belarus	120	2,40	2,06	2,10	2,62	2,32	2,16	3,04
Georgia	130	2,35	2,26	2,17	2,35	2,08	2,44	2,80

Source: [7]

Improving the quality of services will allow the synergistic effect to be derived from the effective combination of the potential of all modes of transport on the basis of partner-competitive principles during carriage.

Priority direction 3. Ensuring sustainable financing of the transport complex. The lack of sustainable transport funding in recent decades has led to large-scale depreciation of fixed assets in transport infrastructure. Transport infrastructure in Ukraine needs more than 30 billion euros of investment to ensure the security of the service and the growing demand for transport services. Most of the funds to improve infrastructure are expected from external resources, mainly from international financial institutions and public-private partnership projects.

Priority direction 4. Increasing the level of safety in transport. Increasing transport safety implies a 50% reduction in mortality and a 4x reduction in the number of road accident victims by 2030. According to the World Health Organization, Ukraine ranks first in the world per capita death rate

caused by atmospheric air pollution: 120 people per 100 thousand inhabitants per year.

Priority Area 5. Achievement of Urban Mobility and Regional Integration in Ukraine. At present, the management of the development of regional transport is ineffective. The unprecedented number of privileged passengers (14 million) for CIS countries and the world has caused a significant degradation of public passenger transport. In many cities tram and trolley bus stops. That is why it is necessary to increase the mobility of the population, which envisages improving the rural, regional and metropolitan areas, in particular for people with disabilities or people with reduced mobility.

Conclusion. Thus, the expediency of implementation of these priority directions of the Logistics Strategy aimed at creating an integrated transport network of Ukraine's efficient transport sector, raising the investment attractiveness of the transport industry, meeting the needs of the population in transportation and improving business conditions for the stable economic and social development of the country is substantiated.

References:

1. Державна служба статистики України. [Електронний ресурс]. – Режим доступу: <http://www.ukrstat.gov.ua>.
2. Ібрагімхалілова Т.В. Потенціал розвитку ринку транспортно-логістичних послуг в Україні. [Електронний ресурс]. – Режим доступу: <http://www.economy.nauka.com.ua/?op=1&z=1352>.
3. Інформаційне агентство УНІАН. [Електронний ресурс]. – Режим доступу: <https://www.unian.net>.
4. Інформаційний портал «Економічні вісті». [Електронний ресурс]. – Режим доступу: <http://eizvestia.com>.
5. Інформаційний портал Укрінформ. [Електронний ресурс]. – Режим доступу: <https://www.ukrinform.ua>.
6. Міністерство інфраструктури України. [Електронний ресурс]. – Режим доступу: <https://mtu.gov.ua>.
7. Саркісов С.В. Формування міжнародних логістичних систем в умовах глобалізації світової економіки / С.В. Саркісов. – М.: Анкіл, 2007. – 264 с.
8. Офіційний сайт компанії «Armstrong & Associates». [Електронний ресурс]. – Режим доступу: <http://www.3plogistics.com/>.
9. Офіційний сайт компанії «DSV Global Transport and Logistic». [Електронний ресурс]. – Режим доступу: <https://dsv.ua/uk>.

Ходова Я.О.

ДВНЗ «Приазовський державний технічний університет»

ВИЗНАЧЕННЯ ПРІОРИТЕТНИХ НАПРЯМКІВ РОЗВИТКУ ТРАНСПОРТНО-ЛОГІСТИЧНОЇ СИСТЕМИ УКРАЇНИ: ЄВРОПЕЙСЬКИЙ ВЕКТОР

Анотація

У представлений роботі проведено дослідження формування інтегрованої транспортно-логістичної системи України. Визначено складні завдання, пов'язані з питаннями адаптації до нових умов господарювання в ринковому середовищі, інтеграції в європейську та світову транспортні системи. Запропоновано вирішення актуального науково-практичного завдання з впровадження пріоритетних напрямків Логістичної стратегії, спрямованих на створення інтегрованого до світової транспортної мережі ефективного транспортного комплексу України. Виокремлено напрямки підвищення інвестиційної привабливості транспортної галузі, задоволення потреб населення у перевезеннях та покращення умов ведення бізнесу задля стійкого економічного та соціального розвитку країни.

Ключові слова: інтеграція, транспортна галузь, логістична система, індекс LPI, логістична стратегія.

Ходовая Я.А.

ДВНЗ «Приазовский государственный технический университет»

ОПРЕДЕЛЕНИЕ ПРИОРИТЕТНЫХ НАПРАВЛЕНИЙ РАЗВИТИЯ ТРАНСПОРТНО-ЛОГИСТИЧЕСКИХ СИСТЕМЫ УКРАИНЫ: ЕВРОПЕЙСКИЙ ВЕКТОР

Аннотация

В представленной работе проведено исследование формирования интегрированной транспортно-логистической системы Украины. Определены сложные задачи, связанные с вопросами адаптации к новым условиям хозяйствования в рыночной среде, интеграции в европейскую и мировую транспортные системы. Предложено решение актуальной научно-практической задачи по внедрению приоритетных направлений Логистической стратегии, направленных на создание интегрированного в мировой транспортной сети эффективного транспортного комплекса Украины. Выделены направления повышения инвестиционной привлекательности транспортной отрасли, удовлетворение потребностей населения в перевозках и улучшение условий ведения бизнеса для устойчивого экономического и социального развития страны.

Ключевые слова: интеграция, транспортная отрасль, логистическая система, индекс LPI, логистическая стратегия.