

**TRANSPORT AND LOGISTIC SYSTEM OF BELARUS:  
ESSENCE, PROBLEMS AND PERSPECTIVES OF DEVELOPMENT**

*ALINA BELIUSEVA, OLGA MESCHERYAKOVA*  
Polotsk State University, Belarus

*The organizational and economic nature of the transport and logistic system is studied in the article. A general characteristic of the transport complex of the country is represented; the structure of cargo transportation by different modes of transport in the past five years is analyzed. Also the problems and prospects of the development of transport and logistics system of the Republic of Belarus are studied.*

Important condition of economic growth of any country is formation effective transport and logistic system covering various spheres of action. Thanks to the geographical location Belarus appeared in the center of important transport streams. Nevertheless, the formation of transport - logistic system in our country is slow in coming. The need of increase in efficiency of functioning of transport-logistic system of Belarus defines the relevance of the conducted research. It is that the transport and logistic system represents very difficult and accurately working system collected from separate elements.

In view of this, we investigated essence of this definition and defined that scientists have various interpretations of the studied concept of transport and logistic system. For some scholars it is difficult, organizational complete economic system consisting of the elements and links interconnected in uniform process of management of the material and other accompanying streams, borders and problems of their functioning are united by specific goals of the organization of business. For others – it is the dynamic, open, stochastic, adaptive difficult or big system with feedback performing these or those logistic functions.

On the basis of the conducted research of the concept "transport and logistic system" we generalized views of authors in table 1.

Table 1 – Definition of the concept "transport and logistic system"

Author	Criteria of definition "transport and logistic system"					
	it is a rather steady set of structural links	performing these or those logistic functions	it is an adaptive system with feedback	the difficult, organizational complete economic system consisting of elements and links	interconnected on the main or accompanying streams	other
1	2	3	4	5	6	7
T.V. Alesinskaya [1, p. 1]		+	+			
A.I. Belzetsky [2, p. 1]	+				+	
G.G. Levkin [3, p. 20]		+	+			
L.A. Mishina [4, p. 1]						+
V.G. Bulavko [5, p. 10]	+				+	
R.B. Ivut, T. R. Kisel, V.S. Holopuv [6, p. 10]				+		
A.I. Belzetsky [7, p. 1]						+
A.G. Nekrasov [8, p. 1]						+
P.A. Drozdov [9, p. 18]		+	+			
The law of logistic activity in the Republic of Belarus [10, p. 3]						+
Total (%)	13 %	20 %	20 %	7 %	13%	27 %

Source: own development on the basis of the studied scientific literature.

Thus, it is revealed that there is no uniform concept of transport and logistic system in scientific literature and, respectively, there is a problem of insufficient scientific research of this subject. Taking into account the

aforsaid, the following definition is offered: the transport and logistic system is an economic system which has high adaptive properties when performing a complex of logistic functions and operations where there is an integration and reengineering of business processes for the purpose of decrease in risk, increase in reliability of level of functioning, improvement of quality of service by the transport organization to the cargo owner.

The most important indicator of integration of transport and logistic system of the Republic of Belarus in world economy is rational use of the existing transport networks, realization of advantages of their geographical arrangement and the communication ability providing the shortest way and the minimum time frames of passing of freights between the countries of European Union and the Pacific Rim. The transport role in the economy of the Republic of Belarus can be characterized through its share in gross value added which for the last five years does not exceed 10–11% [11]. Rather low contribution of transport of Belarus to gross value added (8,3% in 2014) is explained by insufficiently rational use of resources in transport and poor development of the transport service which is not connected with transportation which makes 18% (this indicator is equal to 25–30% in developed countries) [11].

Now transit transportation of goods through the territory of the republic is carried out by the motor transport carriers of more than 40 states. The largest volumes are accounted for by transport operations made with Russia, Turkey, Hungary, Germany, Lithuania, Poland, Kazakhstan, Ukraine [11].

In 2015 the organizations and individual entrepreneurs transported 447,4 million tons of freights that for 4, 3% is less, than in 2014. The motor transport transported 180,4 million tons of freights in 2015 that is 5,9% less, than in 2014. Rail transportation also decreased concerning the level of 2014 (decline by 7,1%). Reduction of volumes of railway cargo transportation is the greatest among all means of transport. Air freight is insignificant and actually remained at the level of 2014 [11].

Road freight transport transports 47,7% of all freights, mainly on short and average distances. So, road transport is accounted for by 10,8% of the total cargo turnover of all kinds of public transport. The greatest part of freights was transported by the motor transport: 180,4 million tons. In comparison with 2014 the volume of road transport decreased by 5,9% [12]. In 2015 – 1 107 934 transit trips were made by foreign trucks and 19 778 transit trips were made by foreign buses (81,5% and 72,7 percent to the forecast established by the State program for 2015). Over 2011–2015 about 7 million transit trips were made by foreign trucks and 112 thousand trips – by foreign buses (122,5 and 98,4 percent to the forecast established by the State program for this period) [13].

The research of current state of the international road carriers of Belarus showed that the park of the vehicles registered for implementation of international transport according to the MDP procedure was 11 700 units. In recent years high growth rate of number of the international carriers is observed. At the same time their park of vehicles is rather new. So, the share of trucks with operation term "up to 3 years" was more than 37%, "from 3rd to 7 years" – more than 35%. At the same time more than 50% of trucks meet the ecological requirements of Euro-4, Euro-5 and Euro-6. Most transport enterprises use auto trucks of the class Euro-4 and Euro-5. But gradual transition to Euro-6 which reduce the level of emissions in the environment is carried out, they are more economical on fuel consumption (from 2 to 6% in comparison with trucks of the Euro-5 standard), [14].

Railway transport corridors are the priority direction of realization of transit potential in the overland way. Two Pan-European transport corridors pass through the territory of the republic: II and IX, and also two corridors of the Organisation for Railways Cooperation: No. 1 and No. 9. Researches show that the share of international transport in the total amount of goods turnover by rail in Belarus makes 87%, in Russia – 90%, in Kazakhstan – to 72%, in Ukraine – about 70%. Generally cargo transportation in the Eurasian direction is carried out along transport corridors of Organisation for Railways Cooperation. At the same time by 2020 it is planned to complete the formation of transport routes of Uniform transport space [14].

In 2015 the volume of cargo transportation by rail decreased by 7,1% – to 131,4 million tons. Apparently, the reduction of transit transportations between the European countries and Russia in connection with mutual imposition of economic sanctions led to that [13].

Income from transportations of passengers by rail in 2015 made 22 million US dollars, and contributions to the budget – 3,7 million US dollars that respectively for 71,7 and 70,4 percent is lower than forecast level for 2015. From 2011 till 2015 the income and contributions to the budget from transit transportations of passengers by rail made respectively 243,2 and 38,8 million US dollars. The income from transit transportation of goods over 2015 made about 378,3 million US dollars, and contributions to the budget - 56,6 million US dollars. The income and contributions to the budget from transit transportation of goods by railway transport over 2011 - 2015 made respectively 2505,5 million and 412,7 million US dollars [13].

One of the main aspects of increase in transit efficiency of the Republic of Belarus is optimization of control of movement of goods through customs border and reduction of terms of their customs registration. The State Customs Committee of the Republic of Belarus together with Belarusian Railway realized the simplified order of customs registration of the freights transported by railway transport. Customs procedures are carried out

---

**Economics**

by means of modern information technologies. All this allows accelerating document flow considerably, reducing quantity of delays of freights on border, providing their free advance to destination.

Air transport of the Republic of Belarus represents a complex of the state enterprises and organizations transporting passengers and freights by air both in the republic and beyond its limits. The largest air carrier in Belarus is the National airline "Belavia" created in 1996. It is based at the National airport Minsk, making regular flights from Minsk, Gomel, Grodno in 42 directions to 24 countries of Europe and Asia. In 2012 about 1,3 million passengers flew by planes of airline that is nearly 24% more in comparison with 2011. For the same period aircrafts of Belavia transported about 1,7 thousand tons of freight and mail (7% more) [15].

Over 2015 through airspace of the Republic of Belarus more than 221 thousand transit flights that is 3,3 percent below than the level, reached in 2014 are made. The income and contributions to the budget from service of transit flights in 2015 made respectively 73 million and 41,7 million US dollars. Over 2011 – 2015 the income and contributions to the budget from service of transit flights respectively made 381,1 million and 185,4 million US dollars [13].

In 2015 goods turnover of the Belarusian airlines made 66,2 million tkm that is 14,6% more in comparison with the same period of previous year [16].

Thus, proceeding from the conducted research, it is revealed that transit potential is not fully implemented in the Republic of Belarus. A number of problems are an obstacle:

- the imperfect standard and legal base providing transit appeal of the country, lack of standardization of normative legal acts with the progressive standard norms;
- discrepancy of transit infrastructure fully in technical, technological and organizational parameters to the similar systems created in the European Union (discrepancy on the load-bearing ability of the republican highways on gross vehicle weight rating of road train with 5 and more axes and load of an axis in 11,5 tons);
- existence of bottlenecks and considerable temporary delays on joints of railway tracks of various width; backwardness of network of the transport and logistic centers;
- irrational placement of some logistic centers created within implementation of the Development program of logistic system and transit potential concerning routes of logistic streams;
- insufficient volumes of investment into logistic sector;
- processing of consumer goods by most of the logistic centers;
- insufficient use of the developed warehouse infrastructure of railway transport [13].

In our opinion, to improve the development of transport and logistic system of the Republic of Belarus it is necessary to conduct the following activities:

- involvement of national logistic operators to the organization of deliveries of export-import freights of the Republic of Belarus;
- development of the competitive environment for activity of logistic operators (the forwarding organizations), including due to liberalization of the market of transport services;
- improvement of customs regulation concerning the logistic centers having the status of Authorized Economic Operator;
- elimination of the factors constraining use of opportunities of preliminary electronic informing customs authorities without participation of the third parties;
- carrying out voluntary certification of logistic services in the Republic of Belarus;
- increase in the number of the logistic services rendered by the logistic centers (logistic operators) according to STB 2306-2013 "Logistic services. General requirements and procedure of certification";
- development of the accompanying services in the territory of the logistic centers;
- use of opportunities of foreign institutions of the Republic of Belarus in development of international cooperation in the field of transport and logistic activity;
- involvement of logistic operators in system of exchange and electronic trading in foreign economic activity;
- reduction of number of the transport documents necessary for performance of the international automobile transportation of goods;
- development of system of electronic passports of goods in commodity distribution networks;
- expansion of use of electronic document flow in logistic activity in the Republic of Belarus;
- expansion of use of the international standards and standards of identification and marking of consumer, group and logistic units of goods (production);
- creation of national intellectual system of monitoring of commodity transport streams on the basis of modern information and communication technologies, technologies of automatic identification and electronic commodity accompanying documents;
- introduction of automatic registration of customs declarations, automatic release of goods when they are placed under separate customs procedures;

– carrying out analysis of legal operating conditions of the logistic centers and preparation of offers on their improvement;

– study of a question of introduction of voluntary certification of forwarding activity [17].

In 2017 the Republic of Belarus will preside in the Central European Initiative (CEI) of which it has been a participant since 1996. It is also a favorable factor for the development of transport and logistic system of the Republic of Belarus. At the same time efforts on ensuring geographical balance of activity of CEI, and also expansion of partnership with other international and regional organizations will be continued. For the solution of these complex tasks Belarus has to seek for creation of full cooperation both between the countries of the region, and between various integration platforms at the same time. EU, EEU, initiative "Eastern Partnership", and also other sub-regional organizations as Visegrad Group, Council of the Baltic Sea States, Organization of the Black Sea economic cooperation are among them. Belarus has to promote cooperation on large initiatives which are important for sustainable economic development of all European regions [18].

#### REFERENCES

1. Алесинская, Т.В. Основные понятия [Электронный ресурс]. – Режим доступа: [http://www.aup.ru/books/m95/2\\_3.htm](http://www.aup.ru/books/m95/2_3.htm). – Дата доступа: 03.01.2017.
2. Бальзецкий, А.И. Понятие логистической системы [Электронный ресурс] / А.И. Бальзецкий. – Режим доступа: <http://finbel.by/WebPages/ChapterPage.aspx?ChapterID=825&ThemeStatus=2&BookID=13&ThemeNumber=0&ChapterNumber=20>. – Дата доступа: 03.01.2017.
3. Левкин, Г.Г. Л37 Логистика: теория и практика / Г.Г. Левкин. – Ростов н/Д : Феникс, 2009. – С. 20.
4. Мишина, Л.А. Понятие логистической системы [Электронный ресурс] / Л.А. Мишина. – Режим доступа: <http://psyera.ru/4664/ponyatie-logisticheskikh-sistem>. – Дата доступа: 03.01.2017.
5. Булавко, В.Г. Формирование транспортно-логистической системы Республики Беларусь / В.Г. Булавко, П.Г. Никитенко. – Минск : Беларус. наука, 2009. – С. 10.
6. Ивуть, Р.Б. Логистические системы на транспорте: учебно-методическое пособие / Р.Б. Ивуть, Т.Р. Кисель, В.С. Холупов. – Минск : БНТУ, 2014. – С. 10.
7. Бальзецкий, А.И. термины и определения [Электронный ресурс] / А.И. Бальзецкий. – Режим доступа: <http://finbel.by/webpages/ChapterPage.aspx?ChapterID=868>. – Дата доступа: 03.01.2017.
8. У 677. Управление процессами в транспортных логистических системах : учеб. пособие / В.М. Беляев [и др.] ; под общ. ред. А.Г. Некрасова ; МАДИ. – М., 2011. – С. 119.
9. Дроздов, П.А. Основы логистики: учебное пособие / П.А. Дроздов. – Минск: 2008. – 211 с. С-18
10. Закон Республики Беларусь о логистической деятельности [Электронный ресурс]. – Режим доступа: [baifby.com/UploadedFiles/post/237/Проект%20ЗЛД.doc](http://baifby.com/UploadedFiles/post/237/Проект%20ЗЛД.doc). – Дата доступа: 06.01.2017.
11. Международные грузоперевозки и логистика в Республике Беларусь в контексте развития глобализации [Электронный ресурс]. – Режим доступа: <http://era-oikonomos.org/mezhdunarodnyie-gruzoperevozki-i-logistika-v-respublike-belarus-v-kontekste-razvitiya-globalizatsii/>. – Дата доступа: 06.01.2017.
12. Новости Беларуси [Электронный ресурс]. – Режим доступа: <http://banki24.by/news/1274-za-2015-godu-v-belarusi-perevezeno-2-mlrd-passazhirovo-lyudi-stali-bolshe-letat>. – Дата доступа: 13.01.2017.
13. Республиканская программа развития логистической системы и транзитного потенциала на 2016 – 2020 годы [Электронный ресурс]. – Режим доступа: <http://government.by/upload/docs/file10f0af8923c585e3.PDF> – Дата доступа: 13.01.2017.
14. Исследование транспортной и логистической системы Республики Беларусь [Электронный ресурс]. – Режим доступа: [https://www.unecce.org/fileadmin/DAM/trans/publications/Transport\\_Belarus\\_2013r.pdf](https://www.unecce.org/fileadmin/DAM/trans/publications/Transport_Belarus_2013r.pdf). – Дата доступа: 13.01.2017.
15. Воздушный транспорт Республики Беларусь [Электронный ресурс]. – Режим доступа: <http://allby.tv/article/1348/vozduzhnyiy-transport-belarusi>. – Дата доступа: 17.01.2017.
16. Грузооборот воздушного транспорта Беларуси [Электронный ресурс]. – Режим доступа: <http://www.belta.by/economics/view/gruzooborot-vozduzhnogo-transporta-belarusi-v-janvare-nojabre-2015-goda-vyros-na-146-176256-2016/>. – Дата доступа: 17.01.2017.
17. Мероприятия Республиканской программы развития логистической системы и транзитного потенциала на 2016 – 2020 годы [Электронный ресурс]. – Режим доступа: <http://www.government.by/upload/docs/file0f7c89891671430f.PDF>. – Дата доступа: 18.01.2017.
18. Председательства Беларуси в ЦЕИ в 2017 году [Электронный ресурс]. – Режим доступа: <http://www.belta.by/politics/view/glavnoj-temoj-predsedatelstva-belarusi-v-tsei-v-2017-godu-stanet-sodejstviesovmestitelnosti-v-evrope-226844-2017>. – Дата доступа: 18.01.2017.