

ADAPTATION OF INTERNATIONAL EXPERIENCE OF FINANCIAL SUPPORT TO ROAD INDUSTRY ENTERPRISES TO THE NATIONAL PRACTICE ON THE EXAMPLE OF POLAND

В статті розглянуто питання фінансового забезпечення автодорожньої галузі Польщі та адаптації польського досвіду до вітчизняної практики. Подано характеристику і сучасний стан мережі автомобільних доріг в Польщі. Проаналізовано основні шляхи та джерела фінансового забезпечення автодорожньої галузі, описано сутність та механізм функціонування Державного Дорожнього Фонду Польщі, зокрема, подано джерела формування Фонду. Крім того, розглянуто реалізацію наступних напрямів втручання в області інфраструктури та шляхи правильного функціонування автомобільного транспорту в сучасній мережі інфраструктури Польщі. Проаналізовано заходи з будівництва або реконструкції автомобільних доріг та швидкісних доріг, на які були виділені кошти Європейського Союзу та фінансові кошти, які були виділені на автодорожню галузь та безпеку дорожнього руху згідно Стратегії розвитку транспорту до 2020 року (з перспективою до 2030 року). Визначено, що одним з джерел формування Державного Дорожнього Фонду є стягування оплат за проїзд дорогами в Польщі. Подано карту місць стягування оплат за проїзд платними автомобільними дорогами з використанням електронної системи стягування дорожніх зборів ViaToll. Подано характеристику класів доріг та чинників впливу на розмір ставок. Представлено розміри ставок в залежності від класу доріг або їх ділянок, на яких стягується електронна оплата. Щодо співпраці України та Польщі всфері автодорожньої галузі, то розглянуто угоду, згідно якої Польща надала кредит Україні на розвиток та ремонт мережі автомобільних доріг на прикордонних ділянках. Визначено, що співпраця між Україною та Польщею дасть змогу розвинути автодорожню галузь України в майбутньому.

Article deals with the foreign experience of financial support to road industry enterprises. Besides, the adaptation of the foreign experience in Ukraine concerning financial support of road industry is described. Current state of Poland's financial support system is given. Proved that cooperation between Ukraine and Poland in field of financial support to road industry is a way to solve the financial support problem of road industry in Ukraine.

Ключові слова: автодорожня галузь, фінансове забезпечення, співпраця, інтеграція, зарубіжний досвід.

Keywords: road industry, financial support, cooperation, integration, foreign experience.

Problem of the article. Road industry plays an important role in economy of each country, influencing the other industry of the economy and it is one of the most important industries of economy.

Unfortunately, regarding main technical and economic indicators, the network of Ukraine's roads is in a poor condition, that has a negative impact on the economic and social situation of the country and, in particular, its image in the international environment. Moreover, taking into account the territorial location of Ukraine, the development

of a modern road network, using European standards, is one of the priorities of the economy.

In turn, this will increase the area of international transport flows and international passenger and cargo transportations.

However, in a period of intense growth in international traffic, bringing roads to European standards requires significant capabilities of investments and therefore attracting the domestic and foreign capital.

Analysis of recent research and publications. There are many scientists who pay attention to problems of financial support to road industry, for example, A. Bezugly [1], V. Kontseva [2], S. Vdovenko [3], N. Bezbakh [4], O. Zahornyak and V. Bakulich [5].

But the lack of applying of experience which is in practice in developed countries and its adaptation to Ukrainian reality has been just started, so it's necessary to identify it as a crucial point in the development of road industry in Ukraine.

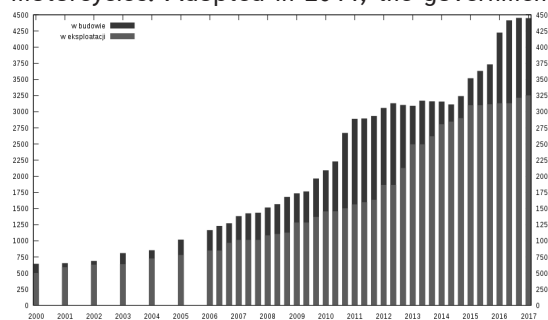
Purpose of the article. The purpose of the article is to study the theoretical and practical bases of financial support to road sector in Poland and adapting Polish experience to Ukrainian economy.

Main body of the article. Economically developed countries has financial support to road industry at sufficient level, that provides continuous development of road network.

The use of foreign experience of financial support to road industry enterprises in Ukraine will improve a system of financial support, using funds for the needs of road industry more efficiently and rationally. In addition, this will enable to improve road industry management as well as find additional sources of financial support.

Poland is the most appropriate country in terms of use of experience concerning financial support to road sector. Moreover, among the developed countries of Europe, adaptation of Polish experience to domestic practice is the most real decision.

The results of the forecast of demand for transport in Poland show that there is a need for investment in road transport, taking into account that the Polish road network currently receives over 2,2 million of Polish trucks, about 0,5 million of foreign trucks, 64 thousand of urban and suburban buses, almost 17 million of cars and a million of motorcycles. Adopted in 2011, the government's concept of development of main road



■ - in the construction process;
■ - in operation.

Fig. 1. Development of road infrastructure in Poland

Source: developed by the author using source [7]

network infrastructure includes a target scheme of road network, which primarily consists of the construction program of highways and express roads (A + S), and the reconstruction of other roads. It is assumed that by 2020 the length of the highways will be about 2000 km, and speed roads - about 5300 km (thus, total length of high standard roads will be approximately 7300 km) [6].

Figure 1 shows the development of road infrastructure in Poland.

The development of road transport requires implementation of the following actions in infrastructure:

expansion of highways and express roads (according to the resolution of Council of Ministers from 20 October 2009);

cooperation with local governments in the development of local roads and their connection with the network of regional and national roads;

elimination of transit traffic in cities through the construction of ring roads in cities, busiest with traffic of trucks;

infrastructure development, road safety;

infrastructure development of innovative technological solutions (including telematics applications) that optimize traffic flow and help to reduce congestion.

It is supposed that the implementation of the construction of new highest level roads will be used public-private partnership (PPP).

Proper functioning of road transport in modern network infrastructure requires:

providing with technical support to the state of the roads at sufficient level, which means restoring the initial state or modernization, and their ongoing maintenance;

providing with improvement of traffic safety that concerns road management, using framework areas which arise from programs across the country, such as Gambit 2005 and its amendments;

improve traffic management on the roads, particularly on roads with heavy traffic, both national and municipal. The actions plan should be provided new but increasingly popular application systems ITS (ITS - Intelligent Transport Systems), which will lead not only to improve traffic conditions, but also improve its security due to transfer of information about state of traffic.

In 2014, a draft of Program for the construction of roads in 2014-2023 years was made. In the same year document was discussed in the international community and consultations were completed in 2015. The aim of Program is construction of a modern road network that provides efficient operation of road passenger and cargo transportations, which is an integral part of the integrated transport system.

In 2014, according to the SED (System of roads assessment), the length of highways was increased from 1481,8 kilometers in 2013 to 1556,3 kilometers at the end of 2014.

Compared to 2013, the length of highways was increased from 1244,3 kilometers in 2013 to 1447,7 kilometers in 2014.

Besides, contracts for the construction of 487,4 km of roads were made, including 345 km of new roads and the completion or continuation of construction of 142,4 km of roads.

Contracts for the construction of new roads included 277,2 km of express roads and 67,8 km of roads of GP class (main roads with accelerated traffic).

A law of 29th of August 2014 «On Amendments to the Law on paid highways, State Road Fund and Road Transport Law» (Journal of Laws, pos. 1310) was adopted [8]. Its goal was to create, and later the implementation of procedures, managing European electronic payment service. This service was established in the decision of the European Commission on 6th of October 2009, defining the European electronic payment service and its technical elements [9].

There were also consultation about the draft of law «On amendments to the law on special rules for the preparation and implementation of investments in public roads and some other laws». This project was prepared in order to optimize investments in road

industry, particularly in the context of investing from EU funds in perspective, covering 2014-2020 years. The project stipulates extension of the decision on environmental conditions and legal permits.

On 10th of June 2014 resolutions of the Minister of Infrastructure and Development have been made, that changed:

decree about the case of technical regulations and construction works on toll highways (Journal of Laws, pos. 857);

decree about technical conditions, that engineering objects and their location should met (Journal of Laws, pos. 858).

The main purpose of making amendments to rules is the introduction of amendments concerning the placing on the traffic lanes of public roads and engineering technology facilities that was regulated by the law on 7th of May 2010 on support for the development of services and communication networks.

As part of national programs for 2007-2013, activities of the construction or reconstruction of roads and highways have been allocated from EU funds in the amount of nearly €9,9 billion. The cost of agreements for financing by the end of 2014 amounted to about 42,84 billion of zł. as a part of EU contribution. Based on the above agreements, according to various estimates, about 455 km of highways will be built and 958 km of express roads will be built or reconstructed.

Concerning the rest of the roads, the EU allocated funds were about more than €5,9 billion. Cost of concluded agreements for financing (in terms of the contribution of the EU) by the end of 2014 was about more than 25,60 billion of zł. On the basis of agreements for financing, according to various estimates, constructed or reconstructed roads will be about 354 km of national roads; 2,715 km of regional roads; 4,238 km of district roads and 2,570 kilometers of municipal roads (totally about 9,9 thousand km).

In 2014 five loan agreements with the European Investment Bank (EIB) were signed, funds were allocated to construction of roads:

A1 (Pyrzowice - Czestochowa) - cost: €300 mln.;

S3 (Nowa Sól - Kursk and Gorzów Wielkopolski - Nowa Sól - cost of €454mln.;

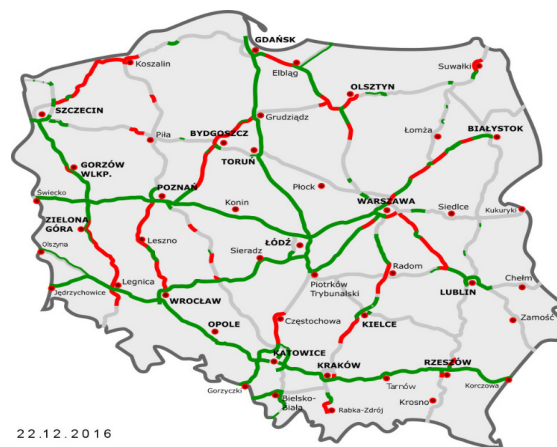
S5 (Bydgoszcz - Wrocław) - cost of €600 mln.;

S8 (access roads to Warsaw) - €170mln.;

S17 (Warsaw - Lublin) - cost: €320 mln.

It is expected that these investments will be fully made by the end of 2019.

Figure 2 shows the state of highways and express roads in Poland.



22.12.2016

■ existing; ■ during construction; ■ planned.

Fig. 2. State of highways and express roads in Poland

Source: developed by the author using source [7]

Concerning investments in the field of road infrastructure, in 2009 a new mechanism for financing of national roads was introduced (Law of June 25th 2009 “On Amendments to the Law on paid highways and State Road Fund and amendments to some other laws (Journal of Laws number 115, pos. 966)) [10], based on the funds of the State Road Fund, which is the best way to attract the necessary funds for the implementation of the road industry needs.

Changes in that Law introduced a flexible model of funding for national roads, ensuring efficient use of funds from the EU budget for implementation of investment projects in the field of high standard roads and use of funds from the State Road Fund, allocated to road investments. In accordance with these decisions, there are two main sources of financial support to national roads (except roads in cities on the rights of the municipality and projects of highways buildings, which are implemented through concession projects):

State Road Fund (formed from funds obtained from: payment for fuel, bonds issue and funds from the EU budget, credits and payments with electronic payment collection system ViaTOLL) – costs for construction, reconstruction and other capital expenditures;

State budget – the money for repairs, preparatory works and technical maintenance and network management on the road;

other potential sources of financing: PPP, EIB loans and other financial instruments such as project bonds.

In the future, taking into account the need for full internalization of costs and implementation of the principle of “user pays”, it is necessary to modify current system of financial support to roads, so that the costs of fees for access to infrastructure would be spent mainly on its maintenance and repair [11].

Table 1 represents the amount of funds spent in 2014 on the implementation of the Strategy of Transport Development by 2020 (with a view to 2030). These costs relate to the field of road industry and road safety.

Table 1

Funds, allocated to road industry and road safety (according to the Strategy of Transport Development by 2020)

№	Act	Sources of financial support	Amount of funds (PLN mln.)
1	Modernization, maintenance and management of national roads network	State Road Fund (including EU funds)	6726,00
		statebudget	2828,00
2	Information, promotion and education in the field of road safety	statebudget	4,16
		Europeanbudgetfunds	4,50
3	Research of road safety conditions	statebudget	572,00
Total	-	-	10134,66

Source: developed by the author using source [11]

As mentioned above, one of the main sources of forming the State Road Fund in Poland is a fee for toll roads.

Figure 3 shows a place which chargepayments on toll roads in Poland.



Fig. 3 Places of toll collections in Poland

Source: developed by the author using source [7]

Ministry of Infrastructure of Poland has identified the following rates of fees for driving on highways in the Resolution of the Ministry of Infrastructure on rates of fees for driving on highways:

fare for driving on 1 km of highways for the I-st category of vehicles (motorcycles) is 0,05 PLN;

fare for driving on 1 km of highways for II-nd category of vehicles (motor vehicles with a permissible total weight not exceeding 3,5 tonnes) is 0,10 PLN.

There is a legal basis for an electronic system of charging payment on toll roads "Law on public roads" from 21st of March 1985 (Journal of Laws, 1985, № 14, pos. 60 with changes) and

the Resolution of Council of Ministers "On the list of national roads or their sections on which electronic payment is charged and the rates of electronic payment" [12].

Vehicles with a maximum weight of over 3.5 tons have to be charged electronically on sections of toll roads, highways and express roads, which are managed by the General Directorate for National Roads and Motorways (pol. - Generalna Dyrekcja Drogi Krajowych i Autostrad).

Tariff rates depend on: class of roads; maximum permissible total weight of the vehicle; EURO emission class.

Classes roads:

A - highway; S - express roads; GP - the main road with accelerated motion; G - main roads.

Tables 2 and 3 show the rates depending on the class of roads.

Table 2

Fares for electronic payment on A and S classes of roads or its sectors, on which electronic payment is charged

Vehicle category	Fare of electronic payment for 1 km of road (in PLN)			
	Class of vehicles (EURO) depending on the limit of vehicle emissions			
	max EURO 2	EURO 3	EURO 4	min EURO 5
Vehicles with permissible total weight above 3.5 tons and below 12 tons	0,40	0,35	0,28	0,20
Vehicles with permissible total weight not less than 12 tonnes	0,53	0,46	0,37	0,27
Buses regardless of the permissible total weight	0,40	0,35	0,28	0,20

Source: developed by the author using source [13]

Table 3

Fares for electronic payment on GP and G classes of roads or its sectors, on which electronic payment is charged

Vehicles category	Fare of electronic payment for 1 km of road (in PLN)			
	Class of vehicles (EURO) depending on the limit of vehicle emissions			
	max EURO 2	EURO 3	EURO 4	min EURO 5
Vehicles with permissible total weight above 3.5 tons and below 12 tons	0,32	0,28	0,22	0,16
Vehicles with permissible total weight not less than 12 tonnes	0,42	0,37	0,29	0,21
Buses regardless of the permissible total weight	0,32	0,28	0,22	0,16

Source: developed by the author using source [13]

According to the data, the fares for highways and express roads are higher than the fares for other classes of roads. This is due to fact that highways and express roads have more flows of cars, traffic loads, pressure on roads surface, therefore its deterioration comes quicker.

Regarding cooperation between Ukraine and Poland in the area of road industry, in 2015 countries signed an agreement on granting loan of 100 mln to Ukraine, which involves the development of border infrastructure, road network and border crossing points. Money were allocated under 0,15% per annum for 30 years.

This will allow Ukraine to repair 144,5 km of roads in Volyn and Lviv regions, namely between cities (towns):

- Hrushiv - Yavoriv – 20 km;
- Hrushiv - Nemyriv – 9 km;
- Nyzhankovychi - Sambir - Drohobych - Stryi – 46 km;
- Rava-Ruska - Chervonograd – 53 km;
- Smilnytsia - Staryi Sambir – 3 km;
- Ustylug - Lutsk - Rivne – 13 km [14].

Later, in the future, an extensive network of modern roads in the border area will increase the volume of international traffic through Ukraine.

Conclusions. Adaptation of experience of financial support to road industry in Poland to domestic practice is to establish an electronic system for fares charging for driving on the toll roads, charge payments for heavy vehicles, use of funds from the State Road Fund of Ukraine only on the development of road sector and related issues (e.g. road safety), establishment of intelligent transport systems. Using the European experience, mainly the experience of Poland, Ukraine will be able to accelerate the growth of its economy.

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