

FINANCING OF PUBLIC ROADS IN THE REPUBLIC OF MOLDOVA

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Abstract: *The article is a research of the sources of financing destined to the Road Fund used for public roads. In this regard, the author performed a concrete analysis of some indicators that influence the investment potential in terms of maintenance and rehabilitation of public roads in the Republic of Moldova. From ancient times, road infrastructure activity has played a vital role in the development of the socio-economic complex. The first essential condition for the development of a society is the existence of modern road networks, able to ensure commercial connections at national level between various regions, but also internationally, thus contributing to the intensification of relations between states, connecting localities to the national transport network, thus facilitating the free movement of citizens and mobility increase. In this context, the efficient management of the financial means used in the process of administration of public roads represents an important role in obtaining result indicators oriented towards the modernization of quality transport networks in the Republic of Moldova with ensuring road safety in traffic. The purpose of the research was to evaluate and analyse the management of public road infrastructure in the Republic of Moldova in terms of managing the financial means of the Road Fund and other external sources used for the maintenance and rehabilitation / construction of quality transport networks. The scientific methods used are: analysis and synthesis, induction and deduction, critical analysis of materials, etc. The main results obtained from the investigations refer to the analysis of the road infrastructure in the Republic of Moldova financed from the Road Fund sources in terms of removing domain impediments, in order for users to access quality public roads.*

Keywords: *road infrastructure, road administration, transport networks, public roads, road fund, land communication.*

JEL Classification: *H54, H83.*

1. The topicality and significance of the researched problem

Economic growth requires access to resources, services, education. Modern public roads mean better communications and new business opportunities.

In the Republic of Moldova, among other major problems, the problem of roads remains a priority, the solution of which attests an important role in the economic development of the country. In this sense, the financial means reserved for roads are extremely important, the use of which must be efficient and transparent by achieving an efficient management opportunity for the rehabilitation of quality public roads.

Public roads are land communication routes specially designed for vehicles and pedestrians. The road also includes bridges, viaducts, uneven passages, tunnels, defence and consolidation buildings, sidewalks, bike lanes, parking and parking spaces, road plantations, signs and other facilities for traffic safety. Road administration aims to design, build, modernize, rehabilitate, repair and maintain roads.

Thus, the efficient management of the financial means used in the process of administration of public roads represents an important role in obtaining result indicators oriented towards the modernization of quality transport networks in the Republic of Moldova with ensuring road safety in traffic.

Therefore, an adequate and quality public road infrastructure expresses the level of development of the country worldwide by ensuring a functioning economy.

2. Sources for setting up the Road Fund in the Republic of Moldova and abroad

In the Republic of Moldova, the financing of the repair and maintenance of public roads is carried out from the financial means of the Road Fund as well as from grants and credits from abroad.

In international practice, the system of road funds and road taxes has historically developed taking into account the experience of developing public access services, whose positive external effects have been located in a specific circle of users. The oldest typical and historical examples were marked in England in the 19th century. Already in those days, there were discussions on how to finance services of this kind: through special taxes and special funds or from the budget according to the accumulated tax revenues. The system of road funds and taxes (interpreted precisely as "road prices") has been adopted, based on national specificities, in the legislation of dozens of countries around the world, including most European states: in the United Kingdom (since the 1920s), India (since 1929), China (since 1985), Australia, the states of North and South America, Africa and neighbouring countries. Almost all road funds established in foreign countries were created during the financial crisis in order to constantly carry out the necessary volume of road works in conditions of insufficient budgetary financing. These funds have been called "first generation road funds" and consisted of national revenues and payments from road users to ensure the protection of the road sector from volatile public funding.

Subsequently, in several countries, based on the restructuring of previously established road funds, "second generation road funds" emerged. These road funds consisted of payments made by public road users, and used for the maintenance and development of road infrastructure.

With regard to the funds accumulated in the Republic of Moldova, until the approval of the Road Fund Law of 1996, the financial means for the execution of repair and maintenance workers of public roads were accumulated from the road tax paid by all economic agents, regardless of the type of services provided (1,5% of the volume of production and services). In 1996, that tax was replaced by excise duty on petrol and diesel.

Currently, the Road Funds exist in many countries of the world: USA, Japan, South Africa, Argentina, New Zealand, Republic of Korea, Switzerland, etc. Many Road Funds are formed on a hierarchical basis (centre, region, municipality) and are part of the respective budgets, or separate state financial institutions. The national road classifications are fully in line with the areas of financial responsibility of the Road Funds.

At the same time, the supervision of the Road Funds is carried out by a Public Council composed of representatives of state executive authorities and civil society, which represent the interests of road users, which allows to take into account the opinion of car owners on the directions of development and improvement of the road network. In order to control the expenditure of funds accumulated in the road fund system, an independent technical and financial audit is carried out periodically.

In the **USA**, highways are funded by the Federal Highway Fund, which provides funding for the construction, maintenance and modernization of the national highway and transportation system. Funds are also spent on safety-related programs to reduce road traffic deaths and property damage from accidents. In accordance with the legislation, the Fund consists mainly of excise duties on fuels, tires, tolls.

The fund is accumulated through Treasury accounts. Each budget year, Congress approves transfers from the Road Fund to the Department of Transportation. Through the Department, the Fund's funds are distributed among six agencies. Each of these agencies, with the exception of the Technology Administration for Research and Innovation, then provides grants to state and municipal governments in accordance with the calculation formulas established by law. Also in the US, the Department of Transportation website provides detailed information on public rules and procedures for spending planning, as well as detailed reports on revenue accrued on the fund and their subsequent use, in order to inform road beneficiaries.

In **France**, all roads are public, national highways and toll roads are managed by the Ministry of Transport, departmental highways and communes - by municipal authorities. The implementation of projects for the construction of public roads is carried out, either through classical budgetary financing, or within concessions, or within partnership contracts. In all three cases, the French Agency for the Financing of Transport Infrastructure acts on behalf of the State. The Agency participates in projects either by awarding grants for investments or loans. The French State may also transfer the financing, construction, repair and operation of toll roads to concessionaires for a certain period of time, in exchange for the collection of tolls from them (the roads remain the property of the State). At the same time, another mechanism for implementing road projects was introduced - public-private partnership contracts. They allow state structures to provide labour resources to private enterprises in exchange for long-term payments (in public works), equipment and financing.

In the **UK**, motorways are operated by the UK Motorway Service, which reports to the Ministry of Transport, the Scottish National Transport Agency, the Welsh Ministry of the Economy and Infrastructure and the Northern Ireland Motorway Service. The rest of the roads are managed by local governments. The budget for the UK motorway service consists of the toll and excise duties on fuels and lubricants.

In **Japan**, highways are funded by the road office of the Ministry of Land, Infrastructure and Transport through fuel taxes and vehicle tonnage. Local highways are managed from local road funds, consisting of the same taxes, as well as taxes for the purchase of a car (3-5% of the cost) and taxes for the use of roads.

In **Ukraine**, roads are managed by Ukravtodor through territorial road funds, consisting of tolls, import duties on petroleum products and customs duties on imported cars.

A Road Fund has been established in **Nicaragua** in the form of an independent body administered by the Council. The Council includes 2 representatives of state authorities, 1 representative of local government and 3 representatives of direct and indirect road users. The independent unit is responsible for the regular maintenance of the road network, which mainly represents local roads in Nicaragua.

According to the Competitiveness Report, published in October 2019, the World Economic Forum demonstrates that, 10 years after the financial crisis, while central banks have “injected” nearly \$ 10 trillion into the global economy, infrastructure investments have been below the optimal level. The report also emphasizes that finding a balance between technological integration and investment in infrastructure is key to improving the quality of public roads. The report gives an overview of the performance of 141 countries by analysing several issues on 12 pillars, including infrastructure. Thus, among the leaders in the ranking, for the 2nd pillar, that of roads, the best transport networks were developed in Singapore, which holds the first place. And the Republic of Moldova, in terms of the quality of road infrastructure, has returned its 129th place. Thus, the financial means of the Road Fund reserved for roads mean an essential role in ensuring quality public roads through efficient and transparent use.

Given that the Road Fund has a special purpose, it cannot be confiscated or spent for purposes other than those provided for in the Regulation¹.

The road fund consists of the following sources, namely:

¹ Decision of the Parliament 893-XIII of 26.06.1996 "For the approval of the Regulation on the establishment and use of the road fund"

- a) annual deductions from the volume of excise duties on petroleum products subject to excise duties, except for liquefied gas, in the amount established in the law of the state budget for the respective year;
- b) 50% of the total volume of the toll for the use of roads by the vehicles registered in the Republic of Moldova, collected at national level, other road tolls collected according to the fiscal legislation;
- c) fees for issuing authorizations for international carriage of goods and occasional passengers;
- d) fines applied for non-compliance with the rules of passenger transport, damage to roads, constructions and road equipment, plantations related to roads;
- f) the tax for the sale of natural gas intended for use as fuel for car transport units.

The quality of administrator of the financial means of the Road Fund is held by the State Enterprise "State Road Administration". In addition to the means obtained from the general revenue of the State Budget, the State Administration also benefits annually from resources from projects financed from external sources. The dynamics of the resources destined for the rehabilitation and maintenance of the public roads from the Road Fund and from external sources for the years 2012-2019 are presented in Table no. 1.

Tabel. 1. Dynamics of resources for the development of public roads for the years 2012-2019

No.	Indicators	Unit.	Years							
			2012	2013	2014	2015	2016	2017	2018	2019
1.	Road fund	Thou. MDL	1024,8	1205,0	1363,9	1038,3	1000,0	1079,7	1072,4	1024,1
2.	External sources	Thou. MDL	246,1	461,3	720,7	765,8	999,3	994,1	2244,6	1516,4
3.	Total	Thou. MDL	1270,9	1666,3	2084,6	1804,1	1999,3	2073,8	3317,0	2540,5

Source: Analysis performed based on official data according to regulations.

The analysed data attest to a character of slow ascent of the financial means distributed to the public roads infrastructure, determined by the increase of external resources by 1270.3 million lei or about 6 times more, in 2019 compared to the similar period of 2012.

A clear assessment of the means needed to ensure the maintenance of public roads would determine the full nature of the resources of the Road Fund. In this sense, the Ministry of Finance has the role of organizing the planning process and elaboration of the Road Fund budget, which annually issues the circular to the authorities involved in the Road Fund planning process, in order for them to present project proposals. Thus, the revenues of the Road Fund are determined with the contribution of the bodies subordinated to the Ministry of Finance, which estimate the receipts of the administered revenues, namely: the State Fiscal Service - regarding the road taxes related to the fiscal legislation; Customs Service - on excise duties and tolls for unregistered transport units. In its turn, the Ministry of Economy and Infrastructure presents the estimates regarding the receipts in the budget of road taxes by the vehicles registered in the Republic of Moldova.

As a result of the consultations between the actors involved, however, the decisive task in the planning process of the Road Fund belongs to the Ministry of Finance - having the quality of budget administrator, focusing mainly on the actual revenues of previous years. The record of the financial means of the Road Fund, accumulated in the Single Treasury Account of the Ministry of Finance, is kept on each type of tax separately.

3. Breakdowns of excise duties on petroleum products predominate the sources of the Road Fund

After the formation of the Road Fund in 1996, the Parliament of the Republic of Moldova, at the proposal of the Government, in order to ensure a considerable increase in financing for road maintenance amended in 2009 the Road Fund Law in the part related to the allocation of less than 50% in 2010, 65% in 2011, 80% in 2012 and in subsequent years, of the total volume of excise duties on excise oil products, excluding liquefied gas and distributed for road maintenance, respectively.

The administration of excise duties is carried out by the Customs Service, by applying control actions on the payment of excise duties, and by the State Tax Service, with the undertaking of control measures already at the place of finding / destination of the excised products. Excise duties are levied as import duties on the crossing of petroleum products across the customs border, being taxed by the state, administered as customs revenues to the State Budget. Until the submission of the customs declaration, the taxable persons are to calculate and pay the excise duties according to the quotas established by the legislator, in absolute amount per unit of measurement of the goods.

Although, the legislator approved that, starting with 2012, the amount of 80% of the total volume of excise duties on petroleum products will be distributed in the Road Fund, the mentioned index was diminished by derogation, from 2015, from the provisions of the Organic Law of the road fund through the annual Laws of the state budget. And in 2018 the legislative provision was completely changed by the phrase that the annual deductions from the volume of excise duties on petroleum products subject to excise duty, except for liquefied gas, will be in the amount established in the state budget law for that year. The dynamics of the percentage share of the total volume of excise duties on petroleum products, accepted to be distributed in the Road Fund for the years 2012-2019 is presented in Figure no. 1.

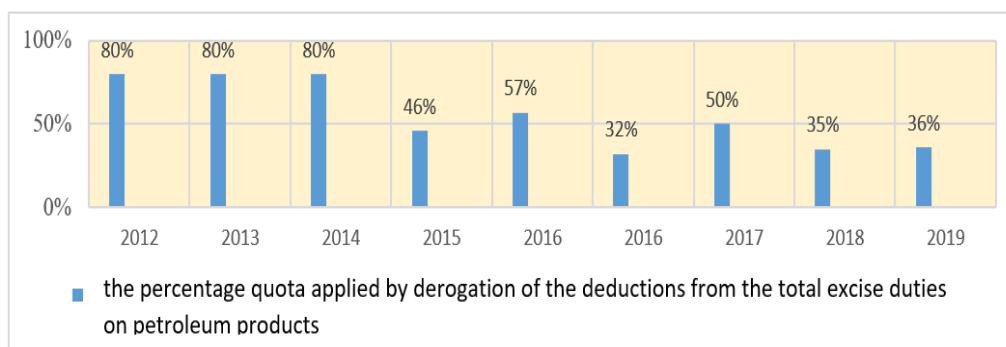


Fig. 1. Dynamics of annual breakdowns established by the percentage share of the total volume of excise duties on petroleum products for the years 2012-2019

Source: Analysis synthesized based on the regulatory framework

The analysis attests an oscillating character of the amount established for the distribution in the Road Fund of the excises for petroleum products with the decrease of this indicator year by year, starting with 2015.

Considering that the deductions from the excise duties on petroleum products represented the main source of income in the establishment of the Road Fund, of about 70%, their volume in amounts, over the years, followed the decline of the allocations destined to the Road Fund. Financial means that could be used for the rehabilitation of public roads as a whole.

Fees for setting up the Road Fund

While tolls levied under tax law are one of the sources of funding for the Road Fund, there is the problem of improving them by ensuring a greater guarantee for the benefit of road users. At the same time, the revenues obtained in this respect are not sufficient to finance the costs of maintenance and repair of transport networks and the modernization of road infrastructure. Secondly, there is no correlation between the volume of tax revenue and the actual wear and tear of roads in the region, which is caused, firstly, by the particularities of the tax bases of the taxes paid by drivers. Thus, the taxable base of the toll is calculated on the basis of the power of the vehicle and therefore has no correlation with the actual wear and tear caused to the road by the taxpayer. The information regarding the share of the main taxes, in total receipts in the state budget, destined to the Road Fund for the years 2014-2016 is presented in Table no. 2.

Tab. 2. The share of revenues from the taxes intended for the Road Fund for the years 2014-2016

Nr.	Indicators	Thou. MDL					
		2014		2015		2016	
		Σ	(%)	Σ	(%)	Σ	(%)
1.	Fee for road use by vehicles registered in the Republic of Moldova	219,1	73,6	292,8	70,9	331,9	68,6
2.	Veneta	51,6	17,3	89,4	21,6	114,6	23,7
3.	Fee for issuing authorizations for international road transport	12,6	4,2	12,6	3,0	11,9	2,5
4.	Tolls for the use of roads by motor vehicles whose total mass, axle mass or dimensions exceed the permitted limits	5,4	1,8	6,8	1,6	8,2	1,7
5.	Fees for the sale of natural gas intended for use as fuel for motor transport units	6,8	2,3	7,3	1,8	9,6	2,0
6.	Fee for the use of the roads of the Republic of Moldova by motor vehicles not registered in the Republic of Moldova	0,9	0,3	3,1	0,7	6,5	1,3
7.	Fee for the use of the road protection area outside the perimeter of the localities for the location of the objectives for the provision of road services	0,6	0,2	0,7	0,2	0,7	0,1
8.	The fee for using the road protection area outside the perimeter of the localities for the placement of outdoor advertising	0,4	0,1	0,2	0,1	0,4	0,1
9.	Fee for the use of the road protection area outside the perimeter of the localities for carrying out construction and assembly works	0,3	0,1	0,2	0,1	0,1	0,1
	Total	297,7	100,0	413,1	100,0	483,9	100,0

Source: Analysis performed based on information presented by the Ministry of Finance

The data in the table show that a significant share of about 70% of the taxes for the Road Fund belongs to the tax for road use by vehicles registered in the Republic of Moldova, which in 2016 was accumulated in the Road Fund in the amount of 331.9 million lei, or by 112.8 million lei (151.4%) more compared to 2014 (219.1 million lei).

According to the object of taxation¹ and tax rate², natural and legal persons owning vehicles registered in the Republic of Moldova are to independently calculate the tax. The amount of the toll for the use of roads by the vehicles registered in the Republic of Moldova are established by normative acts approved by the legislature (presented in Table no. 3).

Tab. 3. Fee for road use by vehicles registered in the Republic of Moldova

No.	Object of taxation	Unit of measurement	Tax, lei
1.	Motorcycle, moped, scooter, moped with cylinder capacity:		
	a) up to 500 cm ³ inclusive	unit	300
	b) of over 500 cm ³	unit	600
2.	Cars, special purpose vehicles on car chassis with engine capacity:		
	a) up to 2000 cm ³ including	cm ³	0,60
	b) from 2001 to 3000 cm ³ inclusive	cm ³	0,90
	c) from 3001 to 4000 cm ³ inclusive	cm ³	1,2
	d) de la 4001 la 5000 cm ³ inclusive	cm ³	1,5
	e) of over 5001 cm ³	cm ³	1,8
3.	Trailers with a lifting capacity inscribed on the registration certificate	ton	270
4.	Lifting semi-trailers with the registration certificate:		
	a) up to 20 t inclusive	ton	225
	b) of over 20 t	unit	4500
5.	Car trailers, tractors	unit	2250
6.	Trucks, special purpose vehicles on truck chassis, any other self-propelled vehicles, with total mass:		
	a) up to 1,6 t inclusive	unit	1200
	b) from 1,6 t to 5,0 t inclusive	unit	2250
	c) from 5,0 t to 10,0 t inclusive	unit	3000
	d) of over 10,0 t	unit	4500
7.	Buses with capacity *:		
	a) up to 11 places	unit	2925
	b) from 12 to 17 places inclusive	unit	3600
	c) from 18 to 24 places inclusive	unit	4275
	d) from 25 to 40 places inclusive	unit	4725
	e) of over 40 places	unit	5400

Source: Data presented according to the Fiscal Code of the Republic of Moldova.

It is also mentioned that the receipts of the nominated tax are consolidated following the completion of the mandatory annual technical testing of motor vehicles, as well as their state or current registration. Thus, in order to create a unique centralized system for recording vehicles and trailers, with the support of the tax system, was created, by Government Decision, the State Register of Transport, whose owner is the Public Services Agency. The transport register is a unique automated information system, which includes

¹ The object of taxation is motor vehicles permanently or temporarily registered in the Republic of Moldova: motorcycles, cars, trucks, special purpose vehicles on car or minibus chassis, special purpose vehicles on truck chassis, car trailers, trailers, semi-trailers, minibuses tractors, any other self-propelled vehicles.

² Title IX, Annex no.1, Fiscal Code no.1163-XIII of 24.04.1997.

technical, economic and legal information on motor and motor vehicles, tractors, machines and specialized mechanisms for road construction, improvements, agricultural machinery and mechanisms, trailers for them, fleet vessels. small capacity, stationary and mobile units with internal combustion engines and some numbered units, as well as their owners. The register is part of the National Information System of the Republic of Moldova.

The main tasks of the Transport Register are the following:

- 1) full identification, evidence and documentation of the country's fleet of vehicles and vehicles in international traffic;
- 2) ensuring the protection and public recognition of the property, possession and use rights over the vehicles;
- 3) introduction in the country of automated control over the movement of vehicles;
- 4) supporting the fiscal system and the insurance system;
- 5) providing the central and local public administration authorities, the economic agents and the population with statistical information about the number and technical condition of the vehicles operated in the country;
- 6) development of transport infrastructures and services.

In this context, it is revealed that the Public Services Agency (PSA, with territorial subdivisions), using the SIA subsystem "Transport Registration", was assigned the task of updating the information from the State Register of Transport on identification and registration of technical characteristics of vehicles, which, in turn, determines the object of the tax for the subsequent calculation of the tax. In accordance with the regulations¹, vehicles that have not been registered in the State Register of Transports shall be registered only with the written permission of the customs authorities and on the basis of certificates of conformity and / or approval, issued by the Ministry of Economy and Infrastructure. information about the year of manufacture and the technical parameters of the transport units. The Public Services Agency carried out state registration of motor vehicles on the basis of customs documents and reports identifying the means of transport, drawn up by its experts, without type-approval certificates (vehicle identity card). With a view to the partial transposition into national law of the registration and registration of vehicles of the provisions of Directive 2007/46 / EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the type-approval of motor vehicles and their trailers, the Government approved amendments which operates in Annex no. 2 to the Government Decision no. 1047 of November 8, 1999 "On the reorganization of the automated search information system" Automobile "in the State Register of Transports and the introduction of testing of motor vehicles and their trailers". Thus, the Government Decision no. 588 of 24.07.2017 regarding the amendment of annex no. 2 to the Government Decision no. 1047 of November 8, 1999 entered into force on 01.03.2018. Vehicles in the registration process, and their trailers, as well as body types will be classified according to the provisions of the European directives on vehicle type-approval, which will be transposed through national legal instruments.

According to statistical data in the Republic of Moldova as of March 1, 2021, the number of means of transport² registered 1,081,454 units or 39,282 units more than those registered in 2011. The dynamics of the number of transport in the Republic of Moldova is presented in Table no. 4 .

¹ Annex no. 2 to the Government Decision no. 1047 of 08.11.1999 regarding the reorganization of the automated search information system "Automobile" in the State Register of Transports and the introduction of testing of motor vehicles and their trailers.

² Cars, trucks, trailers, tractors, motorcycles, buses, semi-trailers.

Tab. 4. Means of transport registered in the Transport Register of the Republic of Moldova

Name	31.05.2011 (units)	30.09.2013 (units)	01.03.2021 (units)	Deviations Year 2021/2011 (units)	Weight Year 2021/2011
1.	2.	3.	4.	5=4-2	6=4/2
Means of transport, total	688642	791910	1081454	392812	157 %

Source: Analysis based on information collected from the government's Open Data portal.

The summary shows that over the years there has been an increase in the number of means of transport, which have an imperative impact on road infrastructure through more frequent use of the road. Thus, public roads being built, maintained at a moderate level of financing remain at a risk of consistent use with an innocent and deductible impact on the entire transport network and the ecological level in the country.

4. Conclusions

Ensuring the development of quality road infrastructure involves the administration of transport networks through the assimilative application of a sustainable functional management. The rational use of the resources destined for the development of the roads from the Road Fund derives the obtaining of the efficient results in the rehabilitation, the construction of the quality public roads, with the assurance of the traffic safety. The modification of the possible amount of deductions of oil excises from their total volume, through the State Budget Law, considerably reduces the revenues of the Road Fund, not making it possible to use the necessary resources in the rehabilitation of public roads. The developed evaluation of the technical condition of the transport networks with the application of the technical performance parameters is determined by the strategic importance of the modernized public roads in relation to cost-benefit in terms of duration.

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