

THE PRINCIPLES OF MOTOR VEHICLE TAXATION IN SELECTED EU COUNTRIES

DUBRAVKA MAHAČEK¹, JURAJ HAMMER², PATRÍCIA ŠIMURKOVÁ³,
ADELA POLIAKOVÁ⁴, PETER BLAHO⁵

University of Zilina, Tomas Bata University in Zlín

Summary

The article deals with the tax on motor vehicles in relation to the different principles of taxation of trucks in selected EU countries. There is a system of taxation in each EU country and the level of taxes and fees itself vary. As carriers carrying out road freight not only on closed national markets, but they are engaged in road transport on a common international market, it is important for the competitiveness to analyze the level of the use of transport by tax in foreign countries. The goal of article is to compare tax rates, regarding the particular semi-trailer and also point to significant differences concerning the principles of taxation but also the level of the tax rate itself in selected EU countries.

Keywords: vehicle tax, tax rate, semi-trailer, the taxation system

1. Introduction

Motor vehicle tax is not united in EU countries, which means that each country determines its principles and applied in different ways. From today's point of view, this tax is often referred to as one of the major tax-economic tool, which contributes to the reduction of exhaust emissions of vehicles, and which should also contribute in a certain way to protect the environment [1]. Taxes can effectively eliminate negative externalities, arising from the operation of vehicles, in particular exhaust gases. It is essential to set the correct tax rate, because too much tax can lead to a decline in business and on the contrary, a too low tax need not lead to desired effect and reducing environmental aspects [2] [3]. The reduction considered is very appropriate, or exemption of such vehicles, which are environmentally friendly and on the contrary, the tax increase vehicles that are excessively damaging to the environment [4] [5].

¹ Državniuredzareviziju, PodručniuredPožega, Kamenitavrata 8, 34 000 Požega, Croatia,
e-mail: dmahacek@vup.hr

² University of Zilina, Department of Road and Urban Transport, Univerzitná 1, 010 26 Žilina, Slovakia,
e-mail: juraj.hammer@fpedas.uniza.sk

³ University of Zilina, Department of Road and Urban Transport, Univerzitná 1, 010 26 Žilina, Slovakia,
e-mail: patricia.simurkova@fpedas.uniza.sk

⁴ Tomas Bata University in Zlín, Faculty of Management and Economics, Mostní 5139, 760 01 Zlín, Czech Republic,
poliakova@fame.utb.cz

⁵ ŽSR, Deputy Director of Transport Management, 9.mája č.6, 01004 Žilina, Slovakia,
e-mail: blaho.peter@zsr.sk

In the EU countries, the tax on motor vehicles mostly conceived as a kind of property tax, which are the subject of motor vehicles. An important legal regulation of the European Union within the framework of the harmonization of law on taxation of motor vehicles is the Directive 1999/62 / EC of the European Parliament and of the Council of 17 June 1999, on charges for the use of certain transport infrastructure heavy goods vehicles. This regulation has been amended several times [6] [7]. In its current form, it sets minimum tax rates and charges for heavy goods vehicles and it helps to promote competition in the Member States. Subsequently determines the calculation of vehicles, which can be exempt from tax, or which can be the tax reduced. Its role is also to prevent discrimination against carriers based on nationality. In the following section, the individual tax principles are specified, which are applied in selected EU countries including Slovakia [8].

2. Taxation of Motor Vehicles in Selected EU Countries

In the Slovak Republic, motor vehicle tax is governed by the law no. 361/2014 on the taxation of motor vehicles. The annual tax rate for passenger cars (Categories L and M₁) depending on the cylinder capacity, it is determined in cm³. For utility vehicles and buses (N₁ to N₂, M₂, M₃, N₂ až N₃) the annual tax rate is determined by the number of axles and of the total weight or the maximum permissible total weight in tonnes [9].

The tax rate on motor vehicles is for commercial vehicles and buses ranging from 74 € (vehicles with 1 to 2 axles and with a total weight of 1 tonne) up to the value 2,790 € (vehicles with 3 axles with a total weight exceeding 40 tonnes). Under the Act no. 361/2014 it is possible to exempt the following vehicles from the tax:

- rescue service, medical service, mining rescue vehicle, a mountain rescue vehicle, an air salvage vehicle, and a fire truck;
- regular regular transport services for a service contract;
- by § 21 law no. 56/2012 on road transport in the public interest;
- used exclusively in agricultural and forestry production;
- diplomatic missions and consular posts, if reciprocity is guaranteed [9].

The Motor Vehicle Tax Act allows graded percentage discounts (25 %, 20 % a 15 %) of annual tax rates for a period of 9 years. After this time, the vehicles are tax the basic annual rate. Grading is dependent from the month of the first vehicle registration (including this month).

The annual tax rate will be reduced by:

- 25 % during the first 36 calendar months starting with the month of the first vehicle registration,
- 20 % during the following 36 calendar months (from the 37th to the end of the 72nd calendar month),
- 15 % over the next 36 calendar months (from 73rd to the end of the 108th calendar month).

Use of vehicles older than 12 years is on the contrary burdened by a percentage increase in the annual tax rate (10 % a 20 %). The annual tax rate will increase by:

- 10 % over the next 12 calendar months (from the 145th month to the end of the 156th calendar month),
- 20 % for vehicles that have more than 156 calendar months including the month of the first vehicle registration.

Annual tax rate or adjusted annual tax rate (reduced or increased by the age of the vehicle) can be reduced by 50 % for hybrid motor or hybrid electric vehicles, category vehicles L, M a N with compressed natural gas (CNG) or liquefied natural gas (LNG), or hydrogen-powered. If the truck and the semi-trailer form one semi-trailer, the taxpayer may enter the taxable amount in the tax return in the case of a truck and especially the semi-trailer, to use the next lower annual tax rate how they would belong to the maximum permissible total weight or the total weight of the vehicle.

In the Czech Republic, the tax on motor vehicles is regulated by the Act no. 16/1993 on road tax, being included among property taxes and its revenues are transferred to the State Fund for Transport Infrastructure. The subject of the tax is all road vehicles (motor and non-motorized vehicles) and trailers, which are registered in the Czech Republic and used for business or other self-employment. In addition to these vehicles, the tax is also valid for all vehicles with a total weight of over 3.5 t, which are intended for the carriage of goods, and may not be used for commercial purposes only [10]. Tax rate on motor vehicles in the Czech Republic has a national character similar to Slovakia, that is, its height is uniformly determined by law with respect to the entire territory of the state. Where a vehicle is subject to tax, the tax height is graded according to the cylinder capacity and ranging from 45.46 € (1,200 CZK) to 159.11 € (4,200 CZK). For utility vehicles, the tax rate is dependent from the total vehicle weight and the number of axles and ranges from 68.19 € (1,800 CZK) to 1,909.31 € (50,400 CZK). Rates are converted according to the exchange rate of the day 1.6. 2017 (1 CZK = 0.04 €). Tax rates are compiled once a year, that is, fixed annual rates. Vehicles are exempt from road tax in the Czech Republic for example with less than 4 wheels entered in the technical documentation as a category L1 and their trailers, diplomatic vehicles, electric, CNG, LPG and hybrid vehicles, road-maintenance vehicles or special vehicles. Other tax incentives are based on vehicle age, for example, the tax rate is reduced by 48 % on vehicles registered for the first time in the Czech Republic or abroad for 36 calendar months from the date of first registration and then again 40 % for the next 36 months and about 25 % for a further 36 months. The tax rate is reduced by 100 % in the case of trucks with a maximum permissible weight exceeding 3,5 t and less than 12 t (for vehicles above 12 t, the rate is reduced by 48 %), unless these vehicles are used for business purposes or in a direct relationship to business [10].

In Austria, the tax on motor vehicles is legally regulated by law on the taxation of motor vehicles, called. Kraftfahrzeugsteuergesetz (KfzStG). The tax on motor vehicles applies to all Austrian vehicles and all foreign vehicles registered in Austria. Taxes also include vehicles not registered in Austria, but are used on Austrian roads. For vehicles registered abroad and they these vehicles are used only temporarily in Austria it is possible to apply a daily tax rate on motor vehicles [11].

The motorcycle tax base is cylinder capacity. Passenger cars, combined cars and vehicles up to 3.5 t are taxed based on engine power in kW and for vehicles with a total weight over 3.5 t the basis of the tax is the total weight of the vehicles. Vehicle tax in Austria is paid monthly, while for commercial vehicles the lowest rate is the level 15 € – vehicles with a total weight of 3.5 – 12 t and the highest rate is the amount 80 € – vehicles with a total weight over 18 t. In Austria, it is possible to exempt in whole or in part from the tax of motor vehicles in particular vehicles used in public service, buses, taxi vehicles, vehicles for the disabled, electric vehicles, motorcycles with a cylinder capacity of less than 100 cm³, vehicles which are the subject of bilateral agreements (for example recreational vehicles), vehicles with a total weight of over 3.5 t, used for combined transport (from / to inland railway stations). There are also other exceptions for vehicles with a gross weight exceeding 12 tonnes registered in another EU country or cars of foreign students registered in another EU country, which are used in Austria [11].

In Poland, the tax on motor vehicles is applied in the form of a local tax, which the owners of commercial vehicles over 3.5 t have to pay. The tax rate depends on the number of axles and the total weight of the vehicle. Motor vehicle tax rates in Poland has a local character and are determined by a resolution of individual local authorities, with maximum rates being set by law, which may not be exceeded by individual councils. The lowest annual tax is in the amount 8.91 € (37.29 PLN) and the maximum tax value is reached 734.53 € (3,072.52 PLN). The individual amounts are converted to € according to the exchange rate of the National Bank of Slovakia of day 1.6.2017. In the case of vehicles, which meet the emission limits EURO 5 and EURO 6 a reduced tax applies [12].

In Hungary, passenger and commercial vehicles are subject to tax. The tax on passenger cars is based on engine power in kW and the number of years of the vehicle, with the lowest rate starting at a height 0.46 € / kW (140 HUF / kW) and applies to vehicles that are 16 years of age and over and the highest rate applies to vehicles, which have under 4 years of age, specifically 1.12 € / kW (345 HUF / kW). In the case of buses and lorries, the amount of the tax is depending on the total weight and emission class of the vehicle. In 2017, the tax rate in Hungary for buses and lorries on level 3.9 € / 100 kg (1,200 HUF / 100 kg). The individual amounts are converted to € according to the exchange rate of the National Bank of Slovakia of the day 1.6.2017 (1 HUF = 0.0032 €). For vehicles complying with the relevant emission limits, a tax reduction may be applied as follows:

- 20 % for buses and trucks, which satisfy the emission limits EURO 2,
- 30 % for semi-trailer trucks, which satisfy the emission limits EURO 2,
- 30 % for buses and trucks, which satisfy the emission limits EURO 3,
- 50 % for buses and trucks, which satisfy the emission limits EURO 3 [12].

Motor vehicle tax is regulated in Lithuania by law no. XII-1310. Tax base for passenger cars, which were first registered before 1 January 2005 is the maximum gross weight in kilograms. For passenger cars registered for the first time between 1 January 2005 and 31 December 2009 the tax on motor vehicles is calculated as the sum of the tax rates according to the total weight in kilograms, cylinder capacity and maximum engine power in kW. For passenger cars registered after December 31, 2009 the tax on motor vehicles is calculated based on emissions CO₂ listed in g/km. Based on the tax on motor vehicles

for commercial vehicles in Lithuania is the maximum gross vehicle weight in kilograms, with individual tax rates also differing from the vehicle suspension system (pneumatic or mechanical). The lowest rate for commercial vehicles is at the level 36 € (a vehicle with a weight less than 1,500 kg) and the highest rate is the amount 537.85 € (a vehicle weight more than 29,000 kg, with mechanical suspension) [12] [13].

In Latvia, the tax on motor vehicles is regulated by law LVS 209:2010 (called. Nodokļiunnodevas). Tax is subject only to commercial vehicles with a maximum permissible weight of 12 tonnes or more. The basis for calculating the tax is the maximum permissible weight in tonnes and the type of suspension of the vehicle. Tax rates are divided into two parts in Latvia, the first part of which sets the rates for category vehicles N2, N3 a O4, which are used separately, and therefore the tax is to be paid separately for each category of vehicle and the second part contains the rates for the semi-trailer N3 + O4. In the case of vehicles which are used separately is the lowest tax rate on the level 86 € (a vehicle weight from 12 t to 13 t with pneumatic suspension) and the highest rate is in the amount 770 € (a vehicle weight more than 39 t to 40 t with a different type of suspension than pneumatic). Regarding the semi-trailer (N3 + O4) the lowest rate begins at the level 654 € (semi-trailer with a weight of 40 t to 41 t with pneumatic suspension) and the highest rate is the amount 1,042 € (semi-trailer with the weight from 43 tons to 44 tons with another type of suspension) [12] [14].

Motor vehicle tax is regulated in Estonia RT I 2000, 81, 515. As in Latvia, only commercial vehicles are taxable with a maximum permissible weight of 12 t. The tax amount depends on the maximum permissible weight in kilograms, number of axles and suspension type. The tax authority for motor vehicle tax is the Tax and Customs Council. The taxing period for motor vehicle tax is in Estonia every quarter, with the lowest rate starting at the level 7.90 € / quarter (vehicle with a weight of 12,000 to 12,999 kg with two axles, with a different type of suspension than pneumatic) and the highest tax rate is the amount 134.30 € / quarter (a vehicle weight above 29,000 kg with four axles, with a different type of suspension than pneumatic). If the truck and the semi-trailer are used together as a semi-trailer individual rates are in the range of 3.50 € / quarter until 232.60 € / quarter [15].

Motor tax in Bulgaria is regulated by law no. 119/2002 local taxes and fees, art. 52-61. The basis for calculating the tax is the engine power in the case of passenger cars in kW and, in the case of commercial vehicles, the total weight, number of axles and type of suspension. The tax rate for buses depends on the number of seats. As for the bus with up to 21 seats (including the driver), the tax rate is in the amount 76.73 € (150 BGN), on the contrary, in the case of a bus with seats of 22 or more is the tax rate in the amount 153.45 € (300 BGN). For trailers, the rate is set 15 BGN. For commercial vehicles with a maximum permissible laden weight of 12 t any additional excess ton is required 5.12 € (10 BGN). For trucks, tax rates range from 12.28 € (24 BGN) to 2,788.24 € (5,451 BGN). Taxation rate for commercial vehicles with a gross vehicle weight over 12 t is in the range of 46.06 € (90 BGN) to 1,611.25 € (3,150 BGN). For special construction vehicles, cranes, special haulage trailers or loads that exceed the dimensions of the vehicle, as well as other special vehicles is the level of tax at the level 76.73 € (150 BGN). In the case of motor cranes with a carrying capacity exceeding 40 t and special trailers for trucks designed for the transport of heavy loads with a capacity above 40 t the tax on motor vehicles is the amount 153.45 € (300 BGN).

A reduction in the tax rate on motor vehicles is applied in Bulgaria:

- a motor vehicle with less than 74 kW with a catalytic converter spark-ignition engine and emission class less than EURO 3 to 40 %,
- a motor vehicle with less than 74 kW and emission class EURO 3 or EURO 4 to 50 %,
- a motor vehicle with less than 74 kW and emission class EURO 5 or EURO 6 to 60 %,
- a bus or a coach, lorry, truck or semi-trailer with emission class EURO 3 or EURO 4 to 40 %,
- a bus or a coach, lorry, truck or semi-trailer with emission class EURO 5 or EURO 6 to 50 %,
- electric vehicles and electric motorcycles to 100 % [16].

The German government changed the annual circulation tax in 2009 for new passenger cars registered as of 1 July 2009. It now consists of a tax base and a CO₂ base, whereby the CO₂ tax is linear. In the case of passenger cars registered before 1 July 2009, the annual circulation tax will continue to be based on emission classes and on cylinder capacity. A planned integration of these vehicles into the new system has not been implemented. For commercial vehicles with a gross weight of less than 3.5 t, the total weight in kilograms is taken as the basis of the tax, and for vehicles above 3.5 t, the tax is based on total weight, exhaust emission group and noise. The annual tax rate for commercial vehicles varies from 6.42 € to 1,681 €, increasing for every 200 kg or fraction thereof. The tax rate for trailers is 7.46 € / 200 kg and its maximum are limited to 373.24 €. Vehicles with air suspension meeting EURO 6 emission requirements and registered before 31 December 2013 have a reduced motor vehicle tax of 150 €. Full exemption from the tax has electric cars for a period of 10 years from the first registration [12] [17].

In France, the motor vehicle tax for passenger cars is based on CO₂ emissions. For vehicles registered for the first time after January 2009, the tax rate is 160 € / year. For private cars owned by the company and registered for the first time after June 2004, the tax amount is calculated based on CO₂ emissions. The tax rate is set in € / g CO₂ and its height ranges from 2 € to 27 €. Vehicles that were registered before the date are taxed according to engine power in kW, where the tax amount is in the range of 750 € to 4,500 €. Hybrid vehicles that produce less CO₂ than 110 g / km are exempt from tax on motor vehicles from 1 October 2011. For vehicles with a gross weight of 12 t and above, the total vehicle weight, the number of axles and the type of suspension are the basis of the tax. Tax rates range from 31 € / quarter (a vehicle with a total weight of 12 tons, 2 axles and pneumatic suspension) to 135 € / quarter (a vehicle with a total weight of over 27 tons, four axles and more, other type of suspension). Trailers with a total weight of 16 tonnes or more are subject to a tax rate of 30 € / quarter [12] [18].

Motor vehicle tax is regulated in Spain by Act No. 2/2004, Art. 95. The tax has a local character, it means its height is not the same throughout the territory but depends on the region concerned. The basis for calculating the tax is, in the case of passenger cars, the engine power in hp (in horses) and in the case of commercial vehicles a payload. Buses are based on rates based on the number of seats, and their height also varies depending on the location (Madrid has higher rates of tax than other parts of Spain). The rate for buses ranges from 83.30 € (buses with a seating capacity of less than 21) to 266 € (buses with more than 50 seats, Madrid's tax rate). The tax rates for commercial vehicles range from 42.28 € to 266 €, and in this case, higher rates are applied in Madrid [12] [19].

In Luxembourg, the motor vehicle tax is legislatively regulated by the TSVR Act of 22 December 2006 (Taxe spécialesurcertainsvéhiculesroutiers). The basis for the calculation of the tax is, in the case of passenger cars, CO₂ or cylinder capacity. In the case of commercial vehicles, the tax is based on the total weight, the number of axles and the type of suspension. The tax rate for trailers with a weight of less than 12 t is between 25 € and 150 € and the tax rate for trailers weighing 12 or more times is in the range of 255 € (3 or more axles, total weight from 12 t to 28.5 t, pneumatic spring) up to 700 € (3 axles and more, total weight 28.5 tons more, other type of suspension). Tractors are set for tax rates from 225 € to 420 € and in the case of semi-trailers the rates are moving from 50 € to 455 € [12] [20].

3. Comparison of Motor Vehicle Tax Rates in Selected EU Countries

Based on the analysis of individual EU countries, tax analyzes of motor vehicles, significant differences between countries can be noted. In addition to varying rates of tax, it is mainly about the differences in the subject, the basis and character of the tax (local, national) [21].

Table 1. Comparison of motor vehicle tax in selected EU countries

EU country	The tax base for passenger cars	The tax base for commercial vehicles	The character of the tax rate
Slovakia	cylinder capacity	total weight, number of axles	national
Czech Republic	cylinder capacity	total weight, number of axles	national
Poland	none	total weight, number of axles	local
Hungary	vehicle age	total weight, emission limits	national
Austria	engine power	total weight	national
Lithuania	none	total weight, axles, suspension	national
Latvia	total weight, cylinder capacity, engine power	total weight, axles, suspension	national
Estonia	none	total weight, axles, suspension	national
France	CO ₂ emissions, fuel type	total weight, axles, suspension	national
Germany	CO ₂ emissions / cylinder capacity	total mass, exhaust emissions, noise	national
Luxemburg	CO ₂ emissions, cylinder capacity	total weight, axles, suspension	national
Spain	engine power (hp)	payload,	local
Bulgaria	engine power	total weight, axles, suspension	local

In Table 1 provides the tax base for passenger and commercial vehicles in various countries analyzed and whether the State applied to motor vehicle tax as a local tax or, on the contrary national character. In the case of passenger cars, taxing based on cylinder capacity is the most applied in the analyzed countries. Especially in the western EU countries, the tax base is also calculated based on the amount of CO₂ emissions, with Germany, France and Luxembourg applying such bases. This compares most with Hungary, where the tax base for passenger cars depends on the age of the vehicle. The tax on motor vehicles

does not apply to passenger cars, particularly in the Baltic States, namely in Estonia and Lithuania. Utility vehicles are most often taxed based on total weight, number of axles and type of suspension. The tax base for commercial vehicles is different, especially in Germany, where commercial vehicles are taxed in addition to their total weight, also based on exhaust and noise emissions.

About the comparison of the character of the tax rate, 10 Member States apply the national character of the tax rate, that is, the rate is uniformly determined by law in relation to the whole territory of the State. This condition differs between Poland, Spain and Bulgaria, where local tax rates are set by resolution of regional councils. Based on the analysis of tax analysis of vehicles in selected EU countries, Fig. 1 mentioned annual tax rate comparison. As methods of taxation are different in each country, when comparing tax rates is considered the articulated vehicle, which has air suspension and the following parameters (according to the specific registration certificate):

Tractor unit:

- total tractor weight: 18,000 kg,
- 2 axles, maximum permissible axle weight: 7,100 kg, 11,500 kg (18.6 t total)
- Truck weight: 7,500 kg
- average fuel consumption: 30 l / 100 km
- emission class: EURO 5

Semi-trailer:

- total weight of the semi-trailer: 34,000 kg,
- 3 axles, maximum weight per axle: 8,000 kg, 8,000 kg, 8,000 kg (total 24 tons)
- Semi-trailer weight: 7,250 kg.

Both tractor and semi-trailer were registered 1 January 2011.

In the case of Slovakia, the annual tax on motor vehicles is based on the tax rates applicable in 2017, as set out in Section 6 of Act No. 361/2014 Coll. on the taxation of motor vehicles [22]. For the purposes of determining the taxable amount, the tractor or the semi-trailer shall be based on the line 33 (in the certificate of registration) – the maximum permissible axle weight. As the tractor and the semi-trailer are used within a single ride, they are classified in a lower category than originally based on the number of axles and total weight. To determine the taxable amount in the case of a tractor, the rate for 1 or 2 axles for a total weight of over 16 t to 18 t was considered. The annual tax rate for a tractor with the above parameters is 1,089 € per year. In the case of a semi-trailer, the 3-axle rate for a total weight of over 21 t to 23 t, which is 1,144 € per year, was considered. The tax on motor vehicles is 2,233 € / year. but the vehicle is registered 1.1. 2011 is also eligible for a discount, 15 % of the tax rate (from 73rd to the end of the 108th calendar month). The final tax for a given vehicle will therefore be 1,898.05 € per year.

In the Czech Republic, the tax rate for a given semi-trailer set is based on the rates applicable for 2017, as set out in Section 6 of Act No. 16/1993 Coll. on road tax. In the case of a tractor, the annual rate is 29,100 CZK (2 axles, the total weight is over 18 t to 21 t) and in the case

of semi-trailer (3 axles, the total weight over 23 t to 26 t) is 27,300 CZK. After the calculation according to the NBS exchange rate sheet on 1.6.2017 the annual tax rate for the tractor is 1,103.95 € and for the semi-trailer 1,035.66 €. In the CR, it is also possible to apply a reduction in the tax rate as the vehicle was registered on 1.1. 2011. Since the first vehicle registration has passed more than 72 months, the tax rate may be reduced by 25 % of the basic tax rate. Ultimately, the annual tax for vehicle is 1,604.71 € / year (827.96 € / trailer and 776.75 € / trailer).

In Austria, the annual tax rate for motor vehicles is based on the rates indicated in § 5 of the Kraftfahrzeugsteuergesetz (KfzStG.). Tariffs for commercial vehicles are based on the total weight, with the respective coefficient being set for each category of the total weight. It is first necessary to set a monthly tax amount calculated as follows:

- monthly tax deductible: $1.90 \text{ (coefficient)} \times 18.6 \text{ t (gross weight)} = 35.34 \text{ €}$
- monthly tax rate semi-trailer: $1.90 \text{ (coefficient)} \times 24 \text{ t (gross weight)} = 45.6 \text{ €}$
- annual tax: tractor + semi-trailer: $(35.34 + 45.6) \times 12 = 971.28 \text{ €}$

No paragraph of the Motor Vehicle Tax Act in Austria permits the application of a percentage reduction in the tax rate as in the case of the SR and the Czech Republic and therefore the resulting calculated value of the annual tax for the vehicle is final.

The annual tax on motor vehicles in Germany is based on the rates laid down in § 9 of the Kraftfahrzeugsteuergesetz. Rates for commercial vehicles are fixed for every 200 kg and are divided into 4 parts depending on the emission category and noise. The rate for the tractor was based on the category of rates applicable to S2, S3, S4, S5 and EEV emission limits (with / without G1 noise category) at a maximum rate of 556 € per year (vehicles with a gross vehicle weight of more than 12,200 kg). The tax rate for trailers is 7.46 € / 200 kg, but the maximum rate is 373.24 € per year. The final annual tax for the selected vehicle is 929.24 €. Similarly, to Austria and Germany, the law does not define any reduction in the tax rate for the selected vehicle with given parameters (eg based on the date of first registration).

In Hungary, the tax on motor vehicles for a given semi-trailer is 898.69 € per year. The rate for the tractor is 723.62 € (223,200 HUF) and is calculated using the 3.89 € / 100 kg (1,200 HUF / 100 kg) coefficient, which is the total weight of the tractor. The tax rate for the semi-trailer is calculated using a coefficient of 4.47 € / 100kg (1,380 HUF / 100 kg) and imparted by the total weight of the semi-trailer 24,000 kg and therefore the final rate for the semi-trailer is 1,073.76 € (331,200 HUF). As the vehicle has a EURO 5 emission class and thus also meets the EURO 3 emission class, it is entitled to a 50 % reduction in the rate and the final motor vehicle tax for the selected vehicle is 898.68 € per year.

Since the tax on motor vehicles is local in Poland, the tax rate has been compiled based on the average of the minimum and maximum rates set. The annual tractor rate is 334.41 € (1,402 PLN) and the trailer is 416.46 € (1,746 PLN).

The annual tax on motor vehicles for the selected vehicle in France is based on the rates set out in the ACEA 2017 Guide. The individual tax rates are quoted per quarter, while for a pneumatic spring-loaded tractor with 2 axles and a total mass over 12 t, the rate is 31 € / For a 3-axle semi-trailer with pneumatic suspension with a total weight of 12-38 t, the rate is 93 € / quarter. The final annual tax for a given the selected vehicle is 496 € in France.

In Lithuania, the annual motor vehicle tax for a given the selected vehicle is determined based on the rates applicable for the year 2017 set out in Act no. XII-1310th. The annual rate for the tractor is 144 € and the annual rate for the semi-trailer is 243 €.

The annual tax on motor vehicles in Latvia is based on the rates listed in Part 2 of LTV 209: 2010. The annual rate for vehicles with a total weight of over 15 tons with 2 axles with pneumatic suspension is set at 170.74 € and the annual rate for trailers with three axles is 162.21 €. The final annual tax for a given the selected vehicle is 332.95 €.

Rates for the selected vehicle in Estonia are based on RT I 2000, 81, 515, and are quoted for the quarter. The rate for tractor and semi-trailer (2 axles + 3 axles) with pneumatic suspension is 128.8 € / quarter, and therefore 515.2 € per year.

In Bulgaria, the motor vehicle tax for the tractor and the semi-trailer is 981.7 € (1,920 BGN). As the vehicle has an EURO 5 emission class, it is entitled to a 50 % reduction. The final tax rate is 480.85 €.

Motor vehicle tax in Luxembourg is determined separately for the tractor and especially for the semi-trailer. For a given tractor the tax rate is 255 € and for the semi-trailer 120 €.

The annual tax rate for motor vehicle in Spain (Madrid) is 213 € for the tractor and 149 € for the semi-trailer.

In the case of V4 tax comparison, Slovakia has the highest tax on motor vehicles and the lowest tax is applied in Poland. Motor vehicle tax for the selected vehicle is the highest in Slovakia as well as the comparison of all the analyzed Member States. The lowest tax is in Latvia, namely 332.95 €, which is 82.5 % less than the tax in Slovakia (Figure 1).

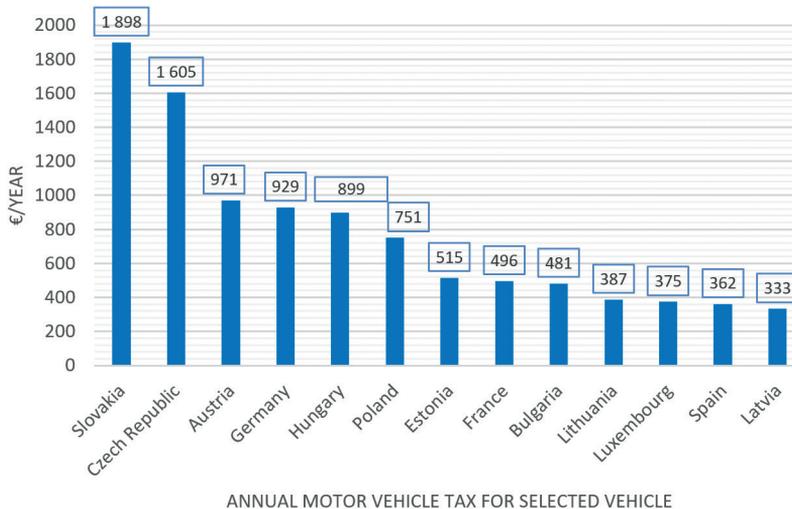


Fig. 1. Comparison of the annual motor vehicle tax for selected vehicle

4. Conclusion

Based on the analyzes carried out, it can be noted that there are still significant differences between the EU countries regarding the taxation system as well as the actual tax rates of motor vehicles. It is therefore necessary to deal with EU legislation which is gradually seeking to remove any obstacles in the Member States that hinder the completion of the internal market [23] [24]. Harmonization of law is important, above all, to ensure multi-priced conditions for EU carriers [25].

However, there has been no over-harmonization around taxes on motor vehicle. Despite Directive 1999/62 / EC of the European Parliament and of the Council laying down minimum rates for motor vehicle tax, in some EU countries, the tax rate and the minimum threshold are still not yet in place. On the contrary, in other EU countries, tax rates also exceed three times the minimum tax rate prescribed by the Directive. To ensure a level playing field, it would also be appropriate to set a maximum tax on motor vehicles within EU countries, as insufficient harmonization of legislation in individual Member States may create inequalities between the operators or carriers, based on nationality.

The contribution was elaborated with the support of the Ministry of Education of the Slovak Republic VEGA no. 1/0143/17 POLIAK, M.: Increasing the competitiveness of Slovak carriers providing road transport services in the common market of the European Union.

References

- [1] Lai Y B. The political economy of capital market integration and tax competition. "European Journal of Political Economy" 26 (2010), p. 475–487.
- [2] Poliak M., Komackova L., Semanova S., Hernandez, S., Jaskiewicz M. Defining the influence of the support of busservice on roadsafety. "Communications - scientific letters of the University of Žilina" 18 (2016), p. 83-87.
- [3] Scully R. Becoming Europeans? Attitudes, Behaviour, and Socialization in the European Parliament. Oxford University Press, Oxford, (2005).
- [4] Blendon R., et al (1997). Bridging the gap between the public' and economists' views of the economy. "Journal of Economic Perspectives" 11 (1997) p. 105–118.
- [5] Zdrov G. Tax competition and tax coordination in the European Union. "International Tax and Public Finance" 10 (2003), p. 651–671.
- [6] Poliak M., Krizanova A., Semanova S., Stefanikova L. The impact of procurement method of the transport services to the financial requirement of performance contracting entity. "Transport Problems / Problemy Transportu : international scientific journal" 8 (2013), p. 67-76.
- [7] Hilal N. L'eurosyndicalisme par l'action. Cheminots et routiers en Europe, Paris, l'Harmattan, coll., Logiques politiques. (2007) p. 298.
- [8] Brøchner J., Jensen J., Svensson P., Sørensen P. The dilemmas of tax coordination in the enlarged European Union. "CESifo Economic Studies" 53 (2007), p. 167–181.
- [9] Act no. 361/2014 Z. z. o dani z motorových vozidiel. Available online: (<<https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2014/361/20160101>>)
- [10] Act no. 16/1993 Sb. o dani silnicni. Available online: (<<http://zakony.centrum.cz/zakon-o-dani-silnicni/>>)
- [11] Motor Vehicle Tax in Austria - Kraftfahrzeugsteuergesetz (KfzStG). Available online: (<[https://www.jusline.at/Kraftfahrzeugsteuergesetz_\(KfzStG\).html](https://www.jusline.at/Kraftfahrzeugsteuergesetz_(KfzStG).html)>)
- [12] ACEA TAX GUIDE 2017. Available online: (<<http://www.acea.be/news/article/acea-publishes-2017-tax-guide>>)

- [13] Motor Vehicle Tax Lithuania. Available online:< <http://www.baltic-legal.com/taxes-in-lithuania-eng.htm>>
- [14] Tax Rates on Motor Vehicle in Latvia. Available online:< <http://www.kauno-tac.lt/naudinga/mokestis-uz-registruotas-krovinines-transporto-priemones>>
- [15] Motor Vehicle Act in Estonia RT I 2000, 81, 515. Available online:< <https://www.riigiteataja.ee/en/eli/531102013006/consolide>>
- [16] Motor Vehicle Tax in Bulgaria. Available online:< <http://www.nap.bg/>>
- [17] Motor Vehicle Tax in Germany. Available online:< <http://www.vdik.de/departement/finance-administration/motor-vehicle-tax.html>>
- [18] Motor Vehicle Tax in France. Available online:< <http://www.diplomatie.gouv.fr/en/the-ministry-and-its-network/protocol/privileges/article/motor-vehicles>>
- [19] Motor Vehicle Tax in Spain. Available online:< <https://www.euraxess.es/spain/information-assistance/taxes-spain>>
- [20] Motor Vehicle Tax in Luxembourg. Available online:< <http://www.guichet.public.lu/entreprises/en/fiscalite/impots-benefices/impots-divers/vehicules-automoteurs/index.html>>
- [21] Osterloh S., Heinemann F. The political economy of corporate tax harmonization – Why do European politicians (dis)like minimum tax rates? "European Journal of Political Economy" 29(2013) p. 18-37.
- [22] Poliak M. The Relationship with Reasonable Profit and Risk in Public Passenger Transport in the Slovakia. "EKONOMICKY CASOPIS" 61 (2013), p. 206-220.
- [23] Poliak M., Konečný V. Factors Determining the Electronic Tolling Scope of Road Network. "EKONOMICKY CASOPIS" 56 (2008) p. 712-731.
- [24] Posuniak P., Jaskiewicz M., Kowalski K., et al. Child restraint systems: problems related to the safety of children transported in booster seats (without integral safety belts). Conference: 11th International Scientific and Technical Conference on Automotive Safety Location: CastaPapiernicka, Slovakia Date: APR 18-20, 2018 XI International Science-Technical Conference Automotive Safety.
- [25] Moravcik L., Jaskiewicz M. Boosting Car Safety in the EU. Conference: 11th International Scientific and Technical Conference on Automotive "Safety Location: CastaPapiernicka, Slovakia Date: APR 18-20, 2018 XI International Science-Technical Conference Automotive Safety.