Dispute between Russia and the WTO: possible arguments in favor of the progressivity of recycling fee

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Car utilization tax in relation to the vehicles was introduced in Russia in July 2012 (the law came into effect on September 01). Actually, introduction of the tax coincided in its amount and moment with the reduction of import fees on vehicles, provided by the Russian liabilities at accession to the World Trade Organization (WTO). The law established the order of payment of fee for the purpose of further utilization of faded vehicles.

The original version of the law had a number of exceptions at payment of tax, particularly, there was a mechanism of guarantee, that allowed the Russian producers not to pay the tax at putting of cars into circulation, but to undertake a liability of further utilization of the car at their expense (a similar waiver covered the manufacturers from non-member states of the Customs union).

A number of WTO member states (namely EU, USA, Japan and Ukraine) claimed about incompliance of the Russian measures with the WTO standards, particularly, articles I, II, III, VII of the general agreement on tariffs and trade dated 1994 (GATT). In the course of consultations with the EU representatives in December 2012, spring and summer of 2013 the understanding that mechanism of guarantee for the Russian car manufacturers would be eliminated, was achieved.

In their turn the EU will refrain from application to the Dispute Settlement Body (DSB). Due to the fact that the appropriate law draft was not approved in the course of spring parliament session of 2013, on July 09, 2013 the EU sent an inquiry in conduction of formal consultations with Russia in relation to this issue in the frameworks of the procedure of dispute solution of the WTO.

The Government of the Russian Federation developed a law project, aimed at liquidation of the guarantee mechanism and, accordingly, discrimination of foreign manufacturers (the law was considered by the State Duma and signed by the President on October 21, 2013), related to it. In accordance with the specified edition of the law, car utilization tax will also cover the

cars, imported from the territory of Belarus and Kazakhstan on equal terms with the car manufacturers of Russia (including, for cars, placed in the Kaliningrad region under the procedure of free customs zone) and importers from the third countries.

Nevertheless, withdrawal of the claim in the DSB of the WTO did not take place. In spite of equalization of conditions of payment of the tax for local manufacturers and importers, in opinion of the EU and other WTO member states, the structure of tax itself is not in compliance with the WTO regulations. Particularly, dissatisfaction of the partners is caused by the presence of divisible differentiation of the tax values depending on the volume of engine.

To the mind of the EU, differentiation of rates depending on the volume of engine is a tool of protection of the Russian producers, prohibited by article 3.2. of GATT. The explanation is based on the fact that Russia produces most cars with a relatively small volume of engines, whereas cars with a large volume of engines prevail in import, and import of such cars is related to payment of higher car utilization tax.

In a manner like, establishment of values of tax in accordance with vehicle age is considered by the EU as a measure of market protection against import of second-hand cars, which directly compete with the products of the Russian car industry. The following main questions may be marked in such argumentation – the degree of legality of dependence of car utilization tax amount on (1) vehicle age and (2) vehicle engine volume.

In accordance with the law, at determination of the size of the tax "year of manufacture of the vehicle, its weight and other physical characteristics, affecting the costs due to performance of the activity on waste treatment, resulted from the fade of the vehicle" are considered. Thus, dependence of the amount of car utilization tax on the costs of performance of the activity on waste treatment (utilization process), is established.

In practice, many car manufacturers specify that the cost of car utilization varies depending on its age or engine volume not much, as the utilization process for various categories and types of vehicles is approximately the same and includes (1) discharge of operational liquids, (2) disassembling of components, mandatory for removal and hazardous for environment, (3) disassembling of parts that represent commercial value for sale and recycling and (4) utilization itself with the help of a presser or a ASR plant.

Arguments for the fact that utilization tax may depend on the volume of engine propose that environmental harm from operation of the car is related to its age and engine volume, accordingly, utilization tax, which is paid for the purpose of provision of environmental safety, is related to the same parameters.

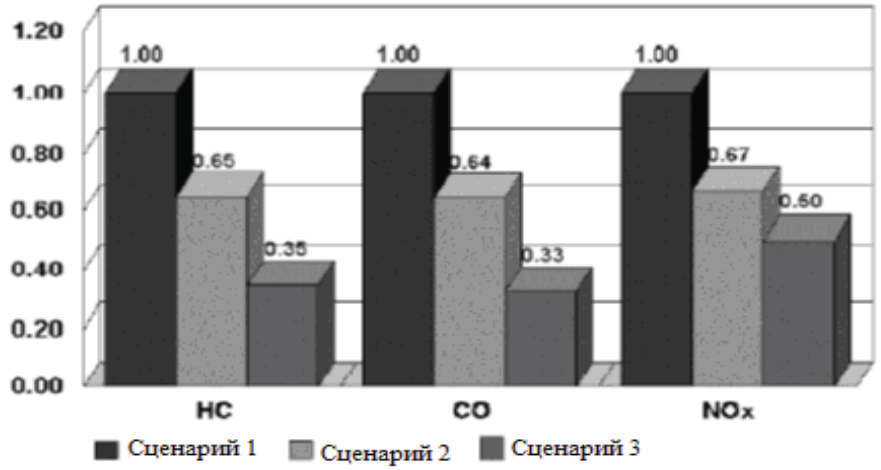
RELATION OF ENVIRONMENTAL DAMAGE AND AGE OF VEHICLE

A number of research articles, performing estimate of environmental values of vehicle depending on its age and volume of engine, is devoted to this issue. As a rule, emission is a primary estimate of environmental compatibility of passenger cars.

For example, it is shown in the investigation of the Organization of Economic Cooperation and Development (OECD) and United Nations Environmental Program (UNEP) on the basis of the model of estimate of dependence of the volume of hazardous emission (carbon monoxide, carbohydrates, nitrous oxide) on the age of the car park in the developing countries[1], that the growth of emission on vehicles in the developing countries is related to the increase of old cars.

Figure 1

Impact of age of car park on distribution of emission of HC (hydrocarbons), CO (carbon oxide) and NO_x nitrogen oxide)



Source: OECD, UNEP, "Older Gasoline Vehicles In Developing Countries and Economies in Transition: Their Importance and the Policy Options for Addressing Them", 1999, page 2.

Calculations performed in the specified work on the basis of the car park of Taiwan in 1998 propose three cases: 1) relatively high age of car park and absence of emission control; 2) relatively higher age of car park and presence of emission control; 3) relatively lower age of car park and presence of emission control.

Calculation results (see Figure 1) specify that the presence of emission control and reduction of the age of car park lead to reduction of the emission volume.

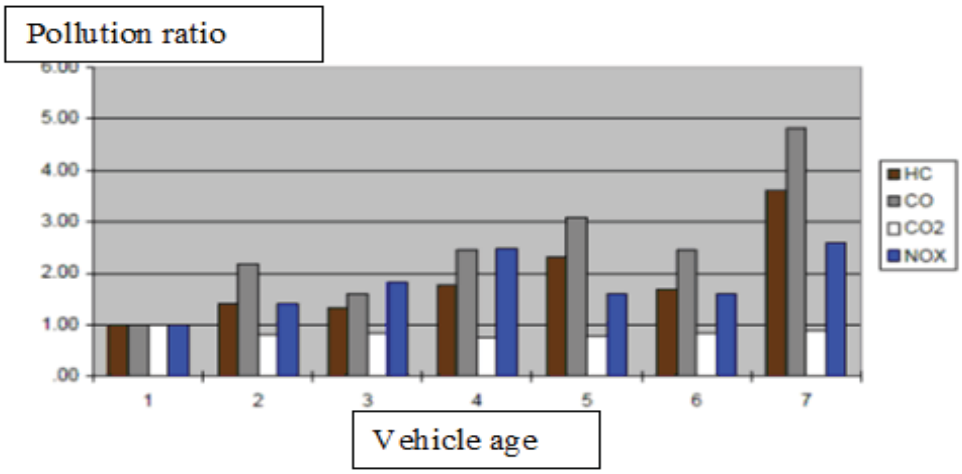
[1] OECD, UNEP, "Older Gasoline Vehicles In Developing Countries and Economies in Transition: Their Importance and the Policy Options for Addressing Them", 1999, pages 2-3

Similar calculations for China, Mexico, Thailand and Romania specify that increase of emission happens in case of growth of the age of car park. Reasonability of application of such instruments as organization of programs on inspection and technical support, introduction of utilization schemes, transition to cleaner fuel, as well as restriction of import of used cars are marked as offers according to the results.

Research study of Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras (2000)[2] also shows that emission of HC, CO, NO_x generally increase with the age of a vehicle (see Figure 2).

Figure 2

Amount of emission of vehicles depending on the age for 1999 model year



Source: Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras, "The environmental effects of tax differentiation by vehicle characteristics: results from Costa Rica." Working Paper No 34, September 2000, page 9.

The specified study analyzes the impact of tax on second-hand cars (10% increase in cost of the second-hand car in comparison to the new one), it is shown that at introduction of such tax, emission of HC will reduce by 4.0%, carbon oxide – by 11.5%, nitrogen oxide – by 16.8%.

[2] Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras, "The environmental effects of tax differentiation by vehicle characteristics: results from Costa Rica." Working Paper No 34, September 2000, page 9.

Investigation by Johnstone and Karousakis (1999) shows regression analysis of dependence of the volume of emission on characteristics of cars. Amount of emission of carbohydrates, carbon oxide and nitrogen oxide grows with the age of a vehicle and in the course of increase of its mileage (see Table 1, ratios are important).

Table 1

Ratios of values of age, mileage and model year (depending variable – amount of emission)

	NO_X (ln)	HC (ln)	CO (ln)
Vehicle age	0,036	0,066	0,089
Mileage (ln)	0,135	0,352	0,342
Model year (ln)	-0,046	-0,062	-0,662

Source: N. Johnstone, K. Karousakis, "Economic incentives to reduce pollution from road transport: the case for vehicle characteristics taxes", Transport Policy, Volume 6, Issue 2, April 1999, Page 102.

In the studies by Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras, in accordance with information by Johnstone и Karousakis (1999), experts built the model according to the information for Costa-Rica, dividing the cars according to the categories of age before and after 5 years. Their results are similar to the previous examinations: amount of emission positively depends on the vehicle age (see Table 2)

Table 2

Ratios of values of the age for cars of various categories (depending variable – amount of emission)

	HC	CO	NO_X (ln)
Cars over 5 years	0,266	3,191	0,560
Cars less than 5 years	0,260	2,416	0,322
New cars	0,164	1,371	0,216

Source: Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras, The environ- mental effects of tax differentiation by vehicle characteristics: results from Costa Rica. Working Paper No 34, September 2000, page 9.

Characteristics of the age of cars may also be expressed in terms of the travelled distance (mileage). In the work by Hyung Chul Kim, Marc H. Ross, Gregory A. Keoleian (2004), according to the estimates of dependence of the emission volume on mileage, emissions of CO_2 do not depend on mileage, though the volume of other emissions (HC, CO, NOX) grows with the increase of mileage, that is explained, among other things, by seasoning of catalyzers and engine systems. At this, improvement of values in 1990s and further years, related to implementation of new standards and control systems, can be seen.

Despite the specified number of works, showing positive relation of emission and vehicle age, there are investigations specifying more complicated interrelations between the age of car park and the volumes of emission, including, that the gross damage from a car not always grows with its age, even in spite of increase of a number of hazardous emission of vehicle in the course of its aging.

For example, in the work by Hyung Chul Kim, Marc H. Ross и Gregory A. Keoleian (2004) it is shown with the help of the econometric model, that in spite of the fact that stimulation of programs on utilization may lead to reduction of the level of emission of certain types of hazardous substances, it may also lead to increase of aggregate emission (mainly, due to emission of CO2). In such situation the optimum age for utilization of vehicle for each certain country shall be determined on the basis of relative importance of contaminations from various substances (including according to the determined geographical region) and presence of control systems.

Quite similar, the works by Alberini (1996) and Harrington & McConnell (2003), that consider efficiency of programs on utilization, note, that at increase of prices on second-hand cars, their owners provide longer operation, that often neutralizes the benefits, obtained from reduction of emission of contaminants due to utilization (due to the fact that emission of CO2 is not reduced).

The works by T. Zachariadis, L. Ntziachristos and Z. Samaras (2001) specify uncertain dependence of the total volume of emission on the age of a vehicle and its technological parameters (see Figure 3). An average age of the car park and factor of degradation of emission control systems increase the amount of emission per one kilometer. At this, in the course of aging of vehicle its average mileage is reduced (the car is used less), which reduces the total volume of emissions.

Generally, it may be noted that the results of the works performed specify the presence of positive interrelation between the age of a car and the amount of emission of contaminants into the atmosphere. It means that if we consider utilization tax as fee not only for car utilization, but as compensation for emission as well, then such tax should be positively depend on the age of vehicles.

At this, it is necessary to take into account that introduction of car utilization tax itself may distort behavior of consumers, that may result in total increase of emission due to more intensive operation of new cars and longer operation of second-hand cars.

RELATION OF ENVIRONMENTAL DAMAGE AND VOLUME OF VEHICLE ENGINE

Russian utilization tax growth with the increase of the engine volume. A number of investigations, the most part of which is devoted to solution of the task of determination of optimum age of car park for the purpose of further adjustment of control regulations, is devoted to inspection of dependence of environmental damage on the volume of engine.

Thus, in the work by Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras (2000) the authors established that the volume of engine is positively correlated with the amount of emission of main contaminants (HC, CO, NOX) per mile (see table 3).

Table 3

Weighted average of emission depending on the volume of engine (gram per mile)

Engine volume	HC	CO	NO_x
Small (less than 2050 cc)	0,134	0,948	0,195
Medium (2050-3425 cc)	0,171	1,682	0,206
Large (более 3425 cc)	0,214	2,026	0,311

Source: Jaime Echeverría, Nick Johnstone, Ronald Mejías and Ina Porras, The environ- mental effects of tax differentiation by vehicle characteristics: results from Costa Rica. Working Paper No 34, September 2000, page 10.

It is also shown that 10% increase of the relative price for vehicle with large volume of engine (in relation to vehicle with small volume of engine), at other equal parts, will lead to decline of the emission volume of CO by 5%, HC – by 2,5%, NO – by 1,5%.

Investigation by Françoise Nermy, Guillaume Leduc, Ignazio Monggelli, Andreas Uihlein, (2008) analyzes information for standards Euro-5, Euro-6, also specifying the presence of dependence of the emission volume on engine volume of vehicle (see Table 4).

The general conclusion of the specified works is the presence of positive dependence of emission on the volume of engine, that may be used as an argument for positive scale of utilization tax on the engine volume.

Higher capacity and, as a result, higher volume of burnt fuel and emission, i.e. higher fee for compensation of the appropriate environmental damage may be specified as the main reasons of this dependence.

Table 4

Information on the volume of emission with various engine volumes in the frameworks of standards Euro-5 and Euro-6

Euro-5						
		Engine volume	CO_2	CO	HC	NO_X
		cm3	g/km			
Gasoline cars	Average value	1 592	173	0,41	0,051	0,026
	Minimum	1 468	139	0,06	0,01	0,005
	Maximum	1 669	221	0,78	0,068	0,06
	Limits of emission under standard Euro-5			1,00	0,068	0,08
Diesel cars	Average value	1 944	160	0,14	0,027	0,178
	Minimum	1 753	120	0,01	0,000	0,126
	Maximum	1 998	205	0,48	0,377	0,18
	Limits of emission under standard Euro-5			0,5		0,18
Euro-6						
		Engine volume	CO_2	CO	HC	NO_X
		cm3	g/km			
Gasoline cars	Average value	1 944	160	0,14	0,027	0,08
	Minimum	1 753	120	0,01	0,000	0,08
	Maximum	1 998	205	0,48	0,377	0,08
	Limits of emission under standard Euro-5			0,5		0,08

Source: Françoise Nermy, Guillaume Leduc, Ignazio Monggelli, Andreas Uihlein, "Environmental Improvement of Passenger Cars (IMPRO-car)", European Commission Joint Research Centre Institute for Prospective Technological Studies, EUR 23038 EN, March 2008, page 56.

REGULATION OF IMPORT OF SECOND-HAND VEHICLES

The problem of growth of damage from a vehicle in the course of its aging is transmitted to the import control measures of second-hand vehicles. Let us bring the examples of such control in the international practice of developing and developed countries.

Chili. Import of second-hand cars in Chili is restricted, apart from certain types of specialized second-hand transport: ambulances, fire trucks, tow trucks, armored commercial vehicles, etc. Import tax of 9% is established for such vehicle categories. Some categories of citizens are free from payment of all taxes, charges and fees at import of second-hand cars, namely: citizens that returned from exile, after education abroad residing in the state of education for one year or after working abroad within the term established by the legislation. Also citizens of two free commercial areas in Chili – Iquique and Punta Arenas - may import second-hand cars, at this import is not imposed by tax or VAT.

India. Import of second-hand cars is subject to tax at the rate of 154.2% of the customs cost. Only cars with engine with operational volume up to 3000 thousand cubic centimeters, not older than 3 years and residual life term of no less than 5 years are permitted for import[3]. The importer is imposed with the liability on provision of supplies of spare parts and organization of technical maintenance.

China. Import of second-hand cars is prohibited.

Finland. Tariffs of the EU, which vary from 5.3% to 22% (passenger cars – 10%, electric cars – 12.5%, trucks – 11-22%) are applied in Finland. At this, vehicle registration tax, which is calculated from the value of carbon dioxide emission (g/km): 0.122% per each g/km, exceeding the value of 60 g/km, is added to the basic ratio (4.88%). Minimum rate – 12.2%, maximum rate – 48.8%.

Only passenger cars with the catalytic afterburning of exhaust may be imported to the territory of the country. An imported car or a bicycle shall come through special inspection before its operation. Authorization of customs service is relevant for car registration and its transfer inside the state.

France. EU tariffs are applied in France as well, though there is a special tax depending on the value of emission of carbon dioxide (with benefits for environmental compatibility and increase of the rate for second-hand cars) and engine volume. Tax for corporate cars, depending on the amount of CO2 emission, is calculated separately: from 480 euro (120g/km) to 1410 euro (141 g/km). Registration tax for any car equals from 200 euro (151 -155 g/km) to 2600 euro (over 240 g/km).

[3] URL: http://www.ecfor.ru/pdf.php?id=research/uz1_3

At first registration of a car in the territory of France, both new and second-hand one, it is necessary to pay a nonrecurring tax (eco-tax). In this case tax capacity is an individual characteristics for each car, that considers such values as quantity of consumed fuel, reducing transmission ratio engine/transmission, operating volume of engine and availability of gas generator.

Generally, the specified experience, as well as practice of other states show that import control of second-hand cars may take various forms – from complete prohibition to introduction of various types of taxes.[4] At this, both restrictions for import depending on characteristics of car, including age and emission volume, and tax stimulation of acquisition and operation of more environmental friendly types of vehicle are applied. Amounts of taxes/registration charges at this may depend on the engine volume, emission volume of cars, their age and mileage.

CONLCUSIONS

Utilization tax in Russia positively depends on the age and engine volume of vehicles. This mechanism is disputed by a number of partners in the DSB of the WTO, with a reference to the presence of hidden protectionism of the Russian automobile industry.

Displacement of protectionism and environmental motives at control of production and import of vehicles is quite typical in the international practice. The overview of the examples of other states shows that, as a rule, import control of second-hand cars is often viewed as restriction of import of contamination from more developed states in the course of technology, control and standard development. The specified restrictions, as a rule, balance between the necessity of protection of environment and protectionism for national manufacturers.

The degree of reasonability of this or that progressiveness of utilization tax in relation to vehicle age and engine volume depends on the structure of the car park, impact of the applicable control measures on the behavior of users.

Analysis of existing investigations shows that in a number of cases the growth of the tax amount depending on the age and volume of a car engine is justified. Particularly, alongside with the age growth, the number of contaminants grows too, utilization of certain components of vehicles becomes more complicated; and the volume of emission grows with the growth of engine volume of a vehicle.

Total environmental damage from operation of cars depends on other factors, such as peculiarities and conditions of operation, typical life cycle of vehicle, used fuel, availability of control systems of vehicle emission, etc. These parameters influence the amount of environmental damage and the cost of utilization, certain parameters of this dependence require calibration considering characteristics of the car park and operation peculiarities.

[4] Global Fuel Economy Initiative (UNEP). URL: http://www.unep.org/transport/gfei/autotool/approaches/economic_instruments/varied_registration_fees.asp

Additional arguments for positive relation of the amount of tax and the age include effects and costs, related to aging of cars:

☑ aging of materials, that leads to worsening of vehicle operation conditions (leakage of operational liquids, excessive operation of materials and increase of degree of their potential environmental risk, etc.) and worsening of utilization conditions (ageing and metal corrosion, etc.[5].

☑ application of out-of-date technologies in older cars, lower number and lower share of recycled materials in older cars, higher costs at preparation stage, because these cars are not fit for recycling or fit for recycling under lower standards.

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[5] According to the study by Françoise Nermy, Guillaume Leduc, Ignazio Monggelli, Andreas Uihlein, (2008), automotive shredder residue (ASR) are substances that are not subject to repeated recycling, - they make up from 20 to 25% of the weight of a vehicle. At this, various types of plastic, the share of which in ASR equals from 14 to 34%, are included into the ASR. The share of plastic in the course of production improvement is growing – if it used to be from 6 to 10%, then new models contain from 10 to 15%.

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