
Evaluating the Impact of Russian Excise Duty on Oil Products on the Development of Oil Refining and Oil Industry

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Abstract:

The article analyzes the impact of excise duty on oil products in increasing the oil refining depth in Russia. A retrospective analysis of changes in the excisable goods types and the excise duty on oil products rate dynamics from 2001 to 2020 was carried out, which allowed for evaluation of the dominant state fiscal interests or economic incentives for the oil refining development through excise taxation in the different periods of the newest economic history of Russia.

The Russian oil refining excise taxation has undergone the most robust transformation three times - in 2007, 2014 and 2016. Moreover, in each case, the prerequisites for radical changes were different: in 2007, the fight against aggressive tax optimization and stimulation of technical re-equipment of refineries; in 2014, a massive tax maneuver in oil production; in 2016, fine-tuning of the excise taxation based on the results tax maneuver and the need to adapt to Russia's membership in the WTO and integration formations.

The analysis showed that often the stated goals of stimulating the development of the oil refining and petrochemical industries were devalued by the dominant state fiscal interests as a result of changes in the economic situation.

Keywords: *Excise duty on oil products, increasing the oil refining depth, tax incentives, environmental classes of motor fuels.*

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1. Introduction

It should be noted that over the past ten years, excise duty on oil products in Russia have changed most, compared with excise taxes on other product groups. This is connected both with environmental objectives, attempts at state stimulation of modernization processes in oil refining and petrochemical industry in Russia and with the need to combat aggressive tax optimization schemes. The revenues of excise duty on oil products in the consolidated budget of the Russian Federation in 2017 amounted to 559.5 billion rubles (The Statistical Tax Form, 2017) (Table 1), which is 27.6% more than in 2016 (438.5 billion rubles).

Table 1. *Income of excises on oil products produced in the territory of the Russian Federation in 2011 - 2017, billion rubles.*

Oil product	Excise tax incomes						
	2011	2012	2013	2014	2015	2016	2017
Gasoline	55.6	53.2	62.9	66.9	188.0	295.4	354.9
Diesel fuel	26.2	29.0	48.4	39.1	102.1	154.6	219.5
Engine oils	0.7	0.6	0.9	0.9	2.8	2.4	2.2
Jet kerosene					-9.0	-13.9	-17.1

The budget legislation (Art. 50 of the Budget Code of the Russian Federation) establishes the following standards for transferring excise taxes on oil products to the federal budget of the Russian Federation (The Budget Code, 2018):

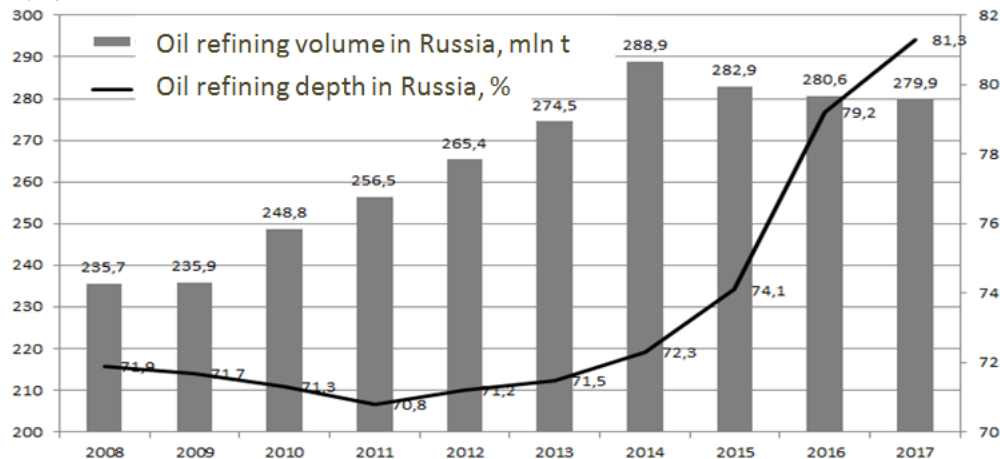
- Excises on automobile gasoline, straight-run gasoline, diesel fuel, motor oils produced in the territory of the Russian Federation - according to the standards established by Federal Law as of Nov 30, 2016 No. 409-FZ: in 2017 – 38.3%, in 2018 – 42.9%, in 2019 – 41.9%, in 2020 – 41.8%;
- Excise taxes on middle distillates produced in the territory of the Russian Federation - according to the standards established by Federal Law as of Dec 28, 2017, No. 434-FZ - 50%.

In 2017, following the data of sectoral reporting by the Ministry of Energy of Russia, refining of oil and gas condensate in Russia and industrial production from all types of crude oil commodity oil products were carried out by 80 specialized refineries. In 2017, the total amount of primary processing of crude oil at oil refineries in Russia slightly (by –0.2%, or –0.7 million tons) decreased compared to the same indicator last year and amounted to 279.9 million tons. The depth of oil refining in 2017 in Russia was 81.3% (Figure 1).

2. Methodology

The basis for the study was a hypothesis on the desirability of considering excise duty on oil products as one of the state incentives tools in the field of oil refining and petrochemical chemistry.

Figure 1. Volume (million tons) and depth (%) of oil refining in Russia in 2008–2017



The task is set to conduct a retrospective analysis of the development of the mechanism of excise taxation of the production and sale of oil products in Russia regarding changing types of excisable goods and tax rates. For this purpose, it is supposed to conduct a decomposition and analysis of changes in tax legislation regarding excise duty on oil products from 2001 to 2020.

The impact of excise taxes on oil products on the development of companies in the oil refining and petrochemical industries in Russia will be assessed through an assessment of the tax burden on these industries. The tax burden will be assessed by calculating the share of taxes in the final price of fuel at Russian gas stations. The data source will be state tax statistics, data from the Ministry of Energy of Russia and the Ministry of Finance of Russia, reports of issuers - the largest Russian oil and gas and petrochemical companies, materials from leading consulting companies, as well as the OECD database iLibrary, Bloomberg, ProQuest Research Library, World Bank, ISI Web of Knowledge. Based on the analysis, it is supposed to conclude the effectiveness or non-effectiveness of measures of state stimulation of the production of oil products of higher ecological classes and introduction of deepening processes in petrochemistry implemented in excise taxation.

3. Results and discussion

Let us consider the system of excise taxation of oil products in Russia. Under Art. 181 of the Tax Code of the Russian Federation, excisable goods include the following types of oil products: automobile gasoline; diesel fuel; engine oils;

straight-run gasoline; middle distillates; benzene, paraxylene, orthoxylene; aviation kerosene (The Tax Code, 2000). The procedure for calculating excise taxes on oil products has changed significantly twice - from Jan 01, 2007 (amendments, presented by Federal Law No. 134-FZ as of July 26, 2006), and as of January 01, 2016 (Amendments made by Federal Law No. 323-FZ as of November 23, 2015).

Tax legislation does not establish that it refers to excisable oil products (except for straight-run gasoline, middle distillates, benzene, paraxylene, and orthoxylene). Therefore, according to Art. 11 of the Tax Code of the Russian Federation in the determination of automobile gasoline, diesel fuel, motor oils, and aviation kerosene should be guided by the regulations of other branches of the law (The Tax Code, 2000). The list of products, including the listed types of oil products, is enshrined in the All-Russian Classifier of products by type of economic activity OK 034-2014 (Classification of Products by Activity 2008), approved by Order of Rosstandartas of January 31, 2014 No. 14-st (Bushmin, 2010).

The definition of straight-run gasoline, middle distillates, benzene, paraxylene, and orthoxylene, in contrast to the "classic" oil products discussed above, is explicitly provided for in the calculation of excise tax in paragraphs 10-12 p. 1 of Art. 181 of the Tax Code. All listed oil products, including automobile gasoline and motor oils, are excisable goods regardless of their intended use.

Thus, automobile gasoline, diesel fuel, and motor oils, as excisable oil products, are determined under the All-Russian Classification of Products by Activity type OK 034-2014, and straight-run gasoline, middle distillates, benzene, paraxylene, and orthoxylene, under the definition contained in art. 181 of the Tax Code of the Russian Federation. Taxpayers of excise taxes are organizations and individual entrepreneurs engaged in operations that are recognized as subject to excise taxes, as well as persons recognized as payers of excise taxes in connection with the import and export of goods. Under Art. 182 of the Tax Code of the Russian Federation taxable operations with excisable oil products can be divided into four groups:

- 1) Performing ordinary operations (sales, transfer of oil products);
- 2) Sale by authorized persons of confiscated, ownerless, transferred in favor of the state, subject to conversion into state ownership, excisable oil products;
- 3) Recognition of oil products;
- 4) Import of oil products into the customs territory of the Russian Federation.

Payers of excise are those who perform the above operations with oil products (The Tax Code, 2000). The tax base is determined separately for each type of excisable goods. For excisable goods for which different tax rates are established, the tax base is determined for each tax rate (Bloschenko *et al.*, 2017). The tax base for the object of taxation arising in connection with the transfer of oil products is defined as the volume of oil products transferred in physical terms (in tons). The tax period is a calendar month.

According to Art. 193 of the Tax Code of the Russian Federation taxation of excisable oil products as of Jan 01, 2018 is carried out at the following tax rates (Table 2).

Table 2. *Excise rates applied for taxation of oil products in 2018 - 2020*

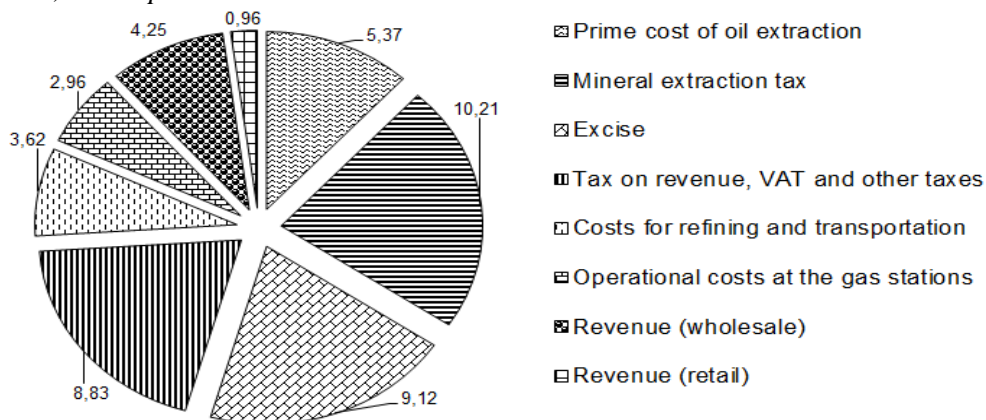
Excisable goods type	Tax rate, rubles per 1 ton			
	from Jan 1 till June 30, 2018	from July 1 till Dec 31, 2018	from Jan 1 till Dec 31, 2019	from Jan 1 till Dec 31, 2020
Automobile gasoline not complying with the 5th class	13,100	13,100	13,100	13,100
Automobile gasoline of the 5th class	11,213	11,892	12,314	12,752
Diesel fuel	7,665	8,258	8,541	8,835
Engine oils	5,400	5,400	5,400	5,616
Straight Run Gasoline	13,100	13,100	13,100	13,100
Benzene, paraxylene, orthoxylene	2,800	2,800	2,800	2,800
Jet kerosene	2,800	2,800	2,800	2,800
Middle distillates	8,662	8,662	9,241	9,535

The amount of excise tax on excisable oil products (including when imported into the territory of the Russian Federation) is calculated as the product of the corresponding tax rate and tax base. The total amount of excise tax on transactions with excisable oil products is the amount obtained as a result of adding the excise amounts calculated for each type of excisable oil products subject to the excise tax at different tax rates.

The amount of excise on excisable goods is calculated at the end of each tax period in relation to all transactions on the sale of excisable goods, the sale (transfer) date of which relates to the corresponding tax period and taking into account all changes that increase or decrease the tax base in the corresponding tax period.

Let us analyze the impact of excise taxes on oil products on the price of fuel in Russia (Maiburov and Leontieva, 2014). Let us consider the structure of the price of automobile gasoline AI-95 of the fifth environmental class as of September 2018 (Figure 2).

Figure 2. Structure of AI-95-K5 automobile gasoline price in Russia in September 2018, rubles per litre

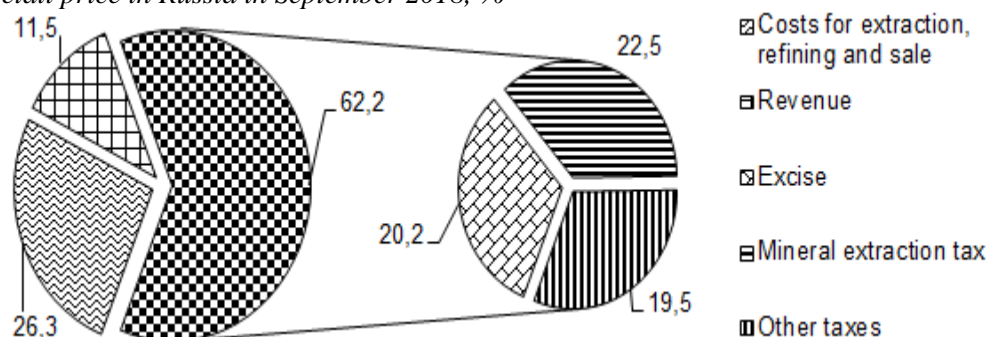


As of September 2018, the average Russian price of one liter of AI-95-K5 gasoline is 45.32 rubles per liter, and consists of the following components:

- The cost of oil production, refining, and transportation - 8.99 rubles;
- Sales costs - 2.96 rubles;
- Profit (wholesale and retail segments) - 5.21 rubles;
- Taxes - 28.16 rubles (including excise tax - 9.12 rubles, mineral extraction tax - 10.21 rubles, other taxes - 8.83 rubles).

Thus, the share of taxes in the price of gasoline of the analyzed brand is 62.1% (Fig. 3), including the excise tax on automobile gasoline class 5 - 20.1%.

Figure 3. Share of aggregated components of the AI-95-K5 automobile gasoline retail price in Russia in September 2018, %



Let us analyze the change in types of oil products, which were excisable goods and the dynamics of excise rates on them for the period from 2001 to 2020 (Table 3). This table allows for evaluating the dominant state fiscal interests or economic

incentives for the development of oil refining through excise taxation, in different periods of the newest economic history of Russia.

The types of oil products subject to excise taxes remained unchanged from 2001 to 2010: automobile gasoline with octane numbers up to "80" inclusive, automobile gasoline with other octane numbers, diesel fuel, engine oils. The exception is the taxation of straight-run gasoline - until 2004, these types of oil products were not subject to excise tax, in 2004-2005 - the zero rate was applied, since 2006 - the rate was leveled to automobile gasoline with octane numbers up to "80" inclusive (Vandyck and Can Regemorter, 2014). This example is an illustration of the state's struggle against aggressive tax minimization schemes when wholesale gasoline was issued as straight-run gas and was withdrawn from taxable items (Safonova *et al.*, 2016). The most successful example of stimulating the qualitative development of oil refining and petrochemical industry in Russia, the growth of investment in deepening processes and advanced technologies, took place in 2011 (Bloshenko, 2011) when two general directions were firmly implemented, closely related to each other:

- Introduction of technical regulations for engines and motor fuels;
- Differentiation of excise rates on gasoline and diesel fuel according to environmental characteristics.

The system of measures regarding differentiation of excise taxation of oil products, depending on the quality of the latter, was formalized by the Federal Law as of Nov 27, 2010. No. 306-FZ *"On Amendments to Part One and Part Two of the Tax Code of the Russian Federation and the Law of the Russian Federation on Tax Authorities of the Russian Federation"*.

This combination of measures has made it relevant to invest in improving the quality of oil products (Kosov *et al.*, 2018). From a production point of view, the initiatives indicated meant the implementation of quite specific technological chains at oil refineries. Thus, mass construction and commissioning of hydrocracking complexes allowed for producing the additional quantity of high-quality diesel fuel from tar gas oil (straight-run fraction with boiling points of 350-500°C) and tar. In turn, the catalytic cracking of vacuum gas oil allowed for producing the high-octane component of gasoline. Due to this, the output of fuel oil decreased at the refinery, and the output of motor fuels increased (Leontieva and Maiburov, 2015).

Table 3. *Dynamics of excise rates on oil products and changes in excisable goods from 2001 to 2020, RUB per ton*

Oil prod uct/e xcisa ble	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

good s type																			
Auto mob ile gas o line with octa ne num bers up to "80" inclu sive	1 3 5 0	1 5 1 2	2 1 9 0	2 4 6 0	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7	2 6 5 7
Auto mob ile gas o line with other octa ne num bers	1 8 5 0	2 0 7 2	3 0 0 0	3 3 6 0	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9	3 6 2 9
Auto mob ile gas o line not com plyi ng with class es 3, 4 and 5														5 9 9 5	7 9 7 5	1 0 1 0 0	1 1 1 1 0	7 3 0 0	
Auto mob ile gas o line of														5 6 7 2	7 6 3 2	9 7 5 0	1 0 7 2 5	7 3 0 0	

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the 3rd class																				
Auto mobile gasoline of the 4th class											5143	6822	8760	9916	7300					
Auto mobile gasoline not complying with the 5th class															12450	13100	13100	13100	13100	
Auto mobile gasoline of the 5th class											5143	5982.5	5446.5	6450	5530	9480	10130	11552	12314	12752
Diesel fuel (up to 2010)	550	616	890	1000	1080	1080	1080	1080	1080	1188										
Diesel fuel not compliant											2753	4199	5860	6446						

with the 3rd, 4th, and 5th class es																				
Dies el fuel of the 3rd class											2 4 8 5	4 0 5 7	5 8 6 0	6 4 4 6						
Dies el fuel of the 4th class											2 2 4 7	3 5 6 2	5 0 1 7	5 7 2 4						
Dies el fuel of the 5th class											2 2 4 7	3 2 6 2	4 4 1 7	4 7 6 7						
Dies el fuel															3 4 5 0	5 0 7. 3	6 8 0 0	7 9 6 1. 5	8 5 4 1	8 8 3 5
Engi ne oils	1 5 0 0	1 6 8 0	2 4 4 0	2 7 3 2	2 9 5 1	2 9 5 1	2 9 5 1	2 9 5 1	3 2 4 6	4 6 8 1	6 0 7 2	7 5 0 9	8 2 6 0	6 5 0 0	6 0 0 0	5 4 0 0	5 4 0 0	5 4 0 0	5 4 0 0	5 6 1 6
Strai ght Run Gas oline				0	0	2 6 5 7	2 6 5 7	2 6 5 7	3 9 0 0	4 2 9 0	6 0 8 9	7 8 2 4	1 0 2 9	1 1 2 0	1 1 3 0	1 2 4 5	1 3 1 0	1 3 1 0	1 3 1 0	1 3 1 0
Jet kero sene														2 3 0 0	3 0 0 0	2 8 0 0	2 8 0 0	2 8 0 0	2 8 0 0	2 8 0 0
Benz ene,														2 3	3 0	2 8	2 8	2 8	2 8	2 8

para xyle ne, and orth oxyl ene															0 0	0 0	0 0	0 0	0 0	0 0
Mid dle distil lates																5 0 0 7. 3	7 8 0 0	8 6 6 2	9 2 4 1	9 5 3 5
Furn ace dom estic fuel															5 8 6 0	6 4 4 6	3 0 0 0			

The meaning of the innovation was obvious: companies modernize factories (Holkova *et al.*, 2017), improve the quality of motor fuels produced on the domestic market and receive a discount in the form of a reduction in excise taxes (Ponkratov and Pozdnyaev, 2016), which partially covers costs (Kosov *et al.*, 2017).

4. Conclusion

The total investment in the transition to the production of the 4th class diesel fuel from the straight run diesel fraction in the Russian oil refining industry scale did not exceed USD 1 billion, and the investment cycle ranged from two to three and a half years. Every Russian refinery with a hydrotreatment unit, in a short period, completely switched to producing the 4th class diesel fuel and above. At the same time, the investment cycle for the transition to the production of the 4th class automobile gasoline and above was more than five years, and the total costs in the scale of the country's refining industry exceeded USD 42 billion. Besides, companies faced with problems of return on investment, if the refinery capacity is less than 6 million tons per year (Bloschenko, 2013). Differentiation of excise taxes on motor fuel, implemented in Russia in 2011, has become a good incentive for investments in the modernization of diesel hydrotreating units (Maiburov *et al.*, 2018).

The analyzed example of encouraging increased refining depth and more environmentally friendly products, by differentiating excise rates on motor fuels, can be considered successful and a fair cost sharing between the state budget and companies can be stated, which minimized the impact of this factor on the growth of retail prices for eco-friendly motor fuel brands (Ponkratov, 2014).

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