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TAXATION IN THE OIL AND GAS SECTOR: CHALLENGES AND SOLUTIONS

A.G. Dykusova (a)*
*Corresponding author

(a) Irkutsk National Research Technical University, 83, Lermontov street, Irkutsk, Russia, sara_krapalik@mail.ru, 89027665284

Abstract

In current conditions, the Russian energy policies aim to enhance the efficiency of natural resources and potential of the energy sector, ensure a sustainable economic growth of the country, strengthen national economic positions on a global stage and improve living standards.

In the total structure of the fuel and energy industry, the oil and gas sectors are key national budget formation sources. Despite the intentions to reduce the dependency of the Russian economy on raw materials, this area will influence the structure of national revenues.

Taxation of oil and gas extracting industries is a problem of both the government and extracting companies. Oil companies are a basis of the Russian energy industry. Due to current political and economic conditions, the modern taxation system has some problems and drawbacks which prevent the industry from development.

At present, the issue of oil industry taxation is discussed at the government level and by experts who suggest different solutions.

Keywords: Oil and gas sector, revenue-added tax, adjusting factors, tax maneuvre, tax incentives.

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1. Introduction

Average oil revenues are about 50% of the total federal budget revenues, and its lion share is revenues from minerals extraction taxes and export oil duties.

In 2017, in execution of the International Agreement "On temporary oil extraction reduction by OPEC and other oil extracting countries including Russia", the Russian oil and gas sector reduced oil extraction.

It resulted in price increase which caused increase in export duties and mineral production tax rates. However, according to some experts, financial indices of the Russian companies improved which allowed them to preserve or even increase the volumes of investment in oil extraction and refining.

In January-September 2017, the specific oil volume in the total Russian export volume was 26.9%, in the energy products volume – 44.2% (in January-September 2016, the specific oil volume was 25.9% and 44.2% correspondingly) (Ministry of Finances of the Russian Federation, 2017).

Taking into account that for the last two years, oil prices are not stable and even critical (a so-called period of low prices), decrease in oil prices is highly probable. As a part of the program OPEC+, most countries except for the USA and Saudi Arabia will experience a serious decrease in oil extraction volumes. As for Russia, according to the predictions of the International Agency for Energy, oil extraction volumes will have decreased by 8% by the year of 2025.

Besides, according to Russian experts, oil production reduction in existing fields will be faster than oil production gain increase in new fields. According to the experts, the prediction will come true after 2025. In the coming years, oil production volumes will rise as some new projects are going to be launched. Meanwhile, tax and export duty rates are rising which increases the price of these projects and can become a hurdle for increasing a share of producing and refining companies.

However, in order to ensure a required volume of budget revenues with regard to asset wearing and limited access to new technologies because of sanctions of the European Union, the Russian government has to review the mineral extraction taxation policy and develop a relevant support program for the energy industry.

Mineral extraction taxes are one of the key public control tools in subsoil management, investment and antimonopoly policies.

2. Problem Statement

According to the Ministry of Finances, the Russian budget annually loses more than 300 billion rubles because of reduced tax rates. In 2017, the losses were about 370 billion rubles, and by 2019 they will have increased up to 440 billion rubles. Because of lowered export duties, in 2017, budget losses are 133 billion rubles, and in 2019, they will be 145 billion rubles (Newspaper Vedomosti, 2017).

To reduce a budgetary deficit level, the program "Key taxation policies for 2017 and the prospected period of 2018 and 2019" involves the increased tax load on oil companies in 2017-2019 by specifying the procedure of oil extraction tax calculation and including a new component in the oil tax formula which is 306 rubles for 2017, 357 rubles for 2018, and 428 rubles for 2019 (Ministry of Finances of the Russian Federation, 2017).

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It can decrease oil extraction volumes in traditional regions (Western Siberia, the Komi Republic) due to the increased tax load on the oil industry. In regions with developed infrastructures, significant oil volumes can become uninvolved in production processes.

Increase in oil revenues depends on the potential growth of export oil prices. Positive effects will exceed negative ones resulted from lowered USA dollar rate to the national currency and oil extraction and export volumes. The program "Key taxation policies for 2016 and the prospected periods of 2017 and 2018" says that the level of oil taxes to the Gross Domestic Product is unlikely to attain a level of 2014. First of all, oil revenues reduction to the GDP is due to relatively stable physical volumes of taxable oil extraction and export and the reduced share of the oil sector in the total GDP structure.

Second, since 2015 Russia has been applying "a tax maneuver" in the oil industry involving gradual oil export duties decrease and minerals extraction tax rate increase. Those measures affected the structure of oil revenues. At the same time, oil tax rates were increased. The tax maneuver effect on budgetary revenues was 40 billion rubles in 2015, 0 billion rubles in 2016, and 50 billion rubles in 2017.

It should be noted that simultaneous reduction of oil export duties (from 59% in 2016 to 30% in 2017) can increase petrol prices by 10% which increases the tax load on oil producing companies (Ministry of Finances of the Russian Federation, 2016).

Oil extraction cost development increased oil prices in the domestic market which increased petrol prices as far as producers included their losses on changes of prices and tax rates into petrol prices. It can result in fines imposed by the Federal Antimonopoly Service.

To restrain internal price increases, excise tax rates should be reduced. However, it can reduce revenues of the federal budget and regional road funds.

The existing oil taxation system should be modified by the government.

3. Research Questions

The Russian tax code stipulates the taxation system based on production-sharing agreements involving division of products into revenue and compensation parts. According to Paragraph 1 of Article 8 of the Federal Law "On production-sharing agreements", investors pay 11 taxes, including a mineral extraction one (Federal Tax Service of the Russian Federation, 2017).

According to the Tax Code of the Russian Federation, there are a lot of tax rates which are imposed on a differentiated basis for each type of a mineral. The tax itself is calculated by complex formulas.

Differentiation of tax rates depends on the following factors:

- types of capital intensity of minerals markets;
- levels of mineral extraction and transportation complexity;
- shares of minerals in the Russian economy.

The tax rates for different minerals are divided into the following categories:

- non-taxable minerals (Paragraph 1 Article 342 of the Tax Code of Russia);
- potassium salt (tax rates are stipulated by Subparagraph 1 of Paragraph 1 of Article 342 of the ax Code);

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- oil (Subparagraph 9 pf Paragraph 2 of Article 342 of the Tax Code) - 766 rubles (from January 1 till December 31, 2015); 857 rubles (from January 1 till December 31, 2016); 919 rubles (from January 1 till December 31, 2017);
- gas condensate (Subparagraph 10 Paragraph 2) – 42 rubles per ton;
- natural gas (Subparagraph 11 Paragraph 2) – 35 rubles per 1000 cubic meters;
- etc.

There are some special coefficients used when calculating mineral extraction taxes. Additional coefficients for oil extraction taxes reflect the level of exchange oil prices ($К_ц$), oil field depletion degree ($К_в$), amount of oil resources, characteristics of an oil extraction region, oil properties, oil extraction complexity degree ($D_м$), etc. (Coefficient added to fossil fuel extraction tax rates: FFET for the oil industry.

Using the data in Table 1, let us calculate the value of $К_ц$ and analyze the dynamics of tax rate changes in 2016-2017.

Table 01. Data used for mineral extraction tax calculation (2016-2017)

Period	Mean level of Urals brand oil prices, USA $ / barrel	Mean value of the USA dollar rate	Value of $К_ц$	Value of the tax rate, ruble/ton	Tax rate with regard to $К_ц$, ruble/ton
10.17	56.36	57.7305	9.1484	919	8407.3796
09.17	54.63	57.6953	8.7604	919	8050.8076
08.17	51.15	59.6497	8.2618	919	7292.5942
07.17	47.80	59.6707	7.4988	919	6891.3972
06.17	45.41	57.8311	6.7381	919	6192.3139
05.17	48.96	57.1720	7.4389	919	6836.3491
04.17	50.91	56.4315	7.7642	919	7135.2998
03.17	49.61	58.1091	7.7056	919	7081.4464
02.17	53.30	58.4	8.5698	919	7875.6462
01.17	53.03	59.9583	8.7365	919	8028.8435
12.16	51.90	62.2006	8.7939	857	7536.3732
11.16	43.53	64.3558	7.0358	857	6029.6806
10.16	47.74	62.6810	7.8627	857	6738.3339
09.16	44.22	64.6012	7.2324	857	6198.1668
08.16	43.69	64.9292	7.1372	857	6116.5804
07.16	43.31	64.3432	6.9790	857	5981.003
06.16	46.23	65.3124	7.8150	857	6697.4550
05.16	44.59	65.6680	7.4449	857	6380.2793
04.16	39.34	66.6921	6.2195	857	5330.1115
03.16	36.37	70.5101	5.7732	857	4947.6324
02.16	30.34	77.2298	4.5391	857	3890.0087
01.16	28.53	76.3127	3.9560	857	3390.292

Source (Ministry of Finances of the Russian Federation, 2017)

$К_ц$ characterizes the dynamics of the world prices. It is monthly calculated by a tax payer by multiplying mean Urals brand oil prices in USA dollars (P) for a tax period increased by 15 by a mean

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value of the USA dollar rate to the Russian ruble set by the Central Bank of the Russian Federation (R) and dividing it by 261:

$$K_{ц} = (P - 15) \bullet \frac{R}{261} \quad (1)$$

For example, in October 17, 2017, the mean Urals brand oil prices in Mediterranean and Rotterdam oil markets were 56.36 USA dollars per barrel (Business magazine Neftegas.ru, 2017); the mean USA dollar rate to the Russian ruble was 57.7305. Then, the value of $K_{ц}$ is

$$(56.36 - 15) \bullet \frac{57.7305}{261} = 9.1484$$

The value of the coefficient will change in relation to the oil price dynamics. Taking into account that since the beginning of 2017, the mean Urals brand oil price increased by 27%, the federal budget got 600 billion rubles as extra oil export revenues. (Mean price for oil Urals since the beginning of 2017 has increased by 27% and is not lower than the price for oil Brent. (Business magazine Neftegas.ru, 2017).

In 2017, the mineral extraction tax is calculated using an increased rate in comparison with the previous year. Rate increase is a result of the oil price fall which seriously affected the national economy. At present, in relatively stable conditions, oil tax increase has less significant negative effects on the profit of oil companies.

Calculated coefficients are also adjusted to the needs of the state and extracting companies. The coefficient formula $D_{м}$ was modified (redrafted Tax Code from December 28, 2016). An additional value of $K_{к}$, was introduced. For the period from January 1 till December 31, 2017, $K_{к}$ is 306, for the period from January 1 till December 31, 2018, it is 357, for the period from January 1 till December 31, 2019, it is 428, and for the period from January 1 till December 31, 2020, it is 0 (Tax code of the Russian Federation. Chapter 26^{4}, Article 346^{35}, 2017).

Thus, the tax rate calculation mechanism with regard to the coefficients can influence the level of well-being of producing companies and the whole nation.

Table 02. Main parameters of the federal budget project for 2015-2017

Main parameters/ year	**2013**	**2014**	**2015**	**2016**	**2017**
Gross domestic product volume, billion rubles	66755	71493	76077	82303	89834
Urals brand oil price in USA dollars / barrel	10.,9	104.0	100.0	100.0	100.0
Taxable oil extraction volumes, million tons	453.8	465.3	455.8	444.3	436,.2
Oil export volume, million tons	236.6	230.0	229.7	229.7	230.7
Oil products volume, million tons	151.4	153.0	148.5	145.0	142.2
Taxable oil export volumes, million tons	196.4	197.7	195.4	193.4	193.6
Oil and gas revenues, including:	6534.0	7480.2	7226.6	7516.1	7690.9
Mineral taxes	2514.5	2917.1	3052.4	3209.6	3251.5
Export duties	4019.5	4563.1	4468.2	4306.5	4339.4
Non-oil and gas revenues	6485.9	6758.6	7403.3	7933.1	8681.8

Source (Ministry of Finances of the Russian Federation, 2016)

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If we compare the data of the federal budget project for 2015-2017 with real indices, the situation will be different. 2014 was the last year when oil and gas revenues increased significantly. According to the budget laws, in 2015-2016, oil and gas revenues decreased by up to 6.8–6.85 trillion a year.

In 2016, according to the Ministry of Finances, the volume of mineral tax revenues decreased by 297.4 billion rubles in comparison with 2015 and was 2 929.4 billion rubles. That decrease was caused by decrease in the world oil prices (in 2015, the mean Urals brand oil price was 51.00 US dollars per barrel, in 2016, it was 41.65 dollars per barrel) (Yurichev, 2016). In 2017, the volume of oil tax revenues will be 429.4 billion rubles which is less than in previous periods assuming that the oil price per barrel was 68 dollars which is higher by 1.63 % in comparison with the price in 2016.

The cause of revenue volume reduction was decrease in the oil extraction growth and losses due to customs subsidies to oil refining plants. Besides, budget revenue losses were caused by lowered mineral tax rates. A significant share of lost revenues was expenditures related to a zero-rate due to the increase in the number of objects to which lowered tax rates are applied. Many regions in which tax incentives were used took leading positions by a profits tax gain (Krasnoyarsk krai, Irkutsk oblast, the Sakha Republic (Yakutia). However, rapid development of the oil industry resulted in oil dependency increase. Accordingly, repeal of the benefits will reduce budgetary tax revenues and increase mineral extraction taxes (Kozlovsky, 2015).

4. Purpose of the Study

The Russian oil taxation system is based on gross indices, while in many other countries it is based on economic indicators (profit, net present value, etc.). Besides, most developed countries stopped using royalties and impose only income taxes on oil companies.

The existing tax relief system will be efficient if it causes positive changes in investment decision making. Accordingly, the existing system of oil export duties increases the share of subsidies to the oil refining industry. Subsidy rates depend on oil prices. It is unreasonable in current economic conditions and can create a visible effect of expanding refining capacities.

Abolishment of export duties can decrease a cost-effective level of oil and gas refining. It will increase prices for Russian producers of oil products.

5. Research Methods

Research methods. When studying the issues of oil industry taxation, works of the authors dealing with this problem were analyzed. The focus was on the works of Russian authors who study taxation trends and challenges in the oil industry, mechanisms of differentiated rates, comparative advantages of the existing taxation system and possibilities to implement a new taxation scheme which would reduce risks and federal budgetary losses.

To assess an oil industry taxation system, it is necessary to analyze the taxation system for natural resources, amendments to the tax legislation for the last several years and effects of the world prices on the general structure of mineral extraction tax rate formation. The analysis helps assess the efficiency of amendments to tax laws in terms of federal budgetary revenues and determine the dynamics of tax load changes for oil production and refining companies.

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Payments for natural resources are a variety of taxes. One of the most significant payments is a mineral production tax controlling the relations between the government and companies having exclusive rights to mineral exploration and extraction.

There are two mineral extraction taxation systems. The contract system (Egypt, India, China) involves division of products between the government, a resource owner and a producing company. The concession system (USA, Great Britain, Canada, Norway) involves exclusive mineral exploration and extraction rights granted to a producing company and some specialized payments. Each system has its advantages and disadvantages. Therefore, most countries use mixed taxation systems**.**

6. Findings

The analysis identified a number of problems which can result in negative consequences for the whole industry and some companies: a lack of incentives for oil producing and refining companies (especially for those which want to implement innovation technologies); a lack of differentiated tax payments at the stage of reservoir development; frequent amendments to the tax legislation which make it impossible to assess the efficiency of innovations as they are middle-term, results can be achieved in 5-10 years.

Besides, each company has its own interests which are difficult to be taken into account. For oil refining companies, the price increase is not as critical as for extracting enterprises as they sell high-margin products. Accordingly, the tax maneuver is not efficient as far as oil extracting companies prefer to export crude oil rather than refine it.

Today Russia is a leader in oil reserves, extraction and export. However, it ranks 20th in the list of oil refining countries and there is a high probability that it will take a lower position. Refining capacities do not develop, most capacities are worn out and old, therefore most raw materials are not refined properly. As a result, Russia is not able to sell its oil products because of tough economic rules and extremely low demand for Russian products.

The government should stimulate the growth of refined oil products improving their quality by means of modern technologies and modernized equipment which will increase profits of refining companies and decrease petrol prices. It will have positive effects on the well-being of the Russian population and increase public and corporate investment in the oil industry. For the period of implementation and approbation of new technologies, preferential taxation should be used which will stimulate refining companies.

Besides, it is necessary to keep balance between mineral extraction taxes and export duties. It will increase budgetary revenues.

7. Conclusion

At present, the issue of gradual transition from the minerals extraction tax to the revenue-added tax is being discussed.

To stimulate new oil deposit development activities and rational use of existing oil deposits, the program “Key taxation policies for 2017 and the prospected period of 2018 and 2019” involves the implementation of a new tax – a revenue-added tax (RAT). The taxation system involves the decrease in

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the total amount of taxes which are dependent on gross indices and implementation of a RAT. It will increase the level of taxation flexibility due to the dependence of the tax amount on economical results of oil deposit development.

The main difference of a new taxation system is a fixed tax rate which is 50%. A RAT will decrease a corporate income tax base. Apart from that, the existing procedure for the corporate income tax calculation will not change.

RAT parameters aim to ensure a high level of budgetary revenues not worsening the conditions for existing oil deposits with regard to their preferences.

As a result, along with the RAT, minerals extraction taxes (MET) are preserved. Their rates are calculated by formula:

$$MET = (R - 15) \times 0.5 \qquad (2)$$

A standard import duty is preserved. When calculating a MET, it is deducted from the RAT. It makes it possible not to modify the MET formula in a new RAT system when using a tax maneuver. (Vygon, Rubtsov, & Ezhov, 2017).

The new taxation system involves preferences for those oil deposits which have no preferences according to the existing taxation system.

It is clear that the taxation system is not good for the whole industry and can cause budgetary revenue losses. As a result, taxation mechanism formation for the oil industry should be improved. RAT application with regard to set parameters for the whole industry without significant losses involves the MET relief system preserved for separate categories of deposits.

According to the new taxation system, the RAT will be imposed on four groups of deposits. The first group is new deposits in Eastern Siberia whose production level is less than 5%. The second group is deposits having export duty preferences. The third group is existing deposits in Western Siberia whose production level is 10-80 %. The fourth group is new deposits in Western Siberia whose production level is less than 5% c and total reserves are 50 million tons a year.

Gradual abolishment of oil and oil products export duties and simultaneous MET rate increase can become further government control measures in the oil and gas industry. Abolishment of oil export duties will be compensated for the oil and gas extraction tax increase. Instead of the abolished customs subsidy, a new compensation mechanism can be implemented. It ensures delivery reliability for quality oil products and oil refining efficiency enhancement.

Public measures also involve the modification of the base fuel equivalent unit value formula which is applied when calculating natural gas and gas condensate extraction tax rates. It will result in increase of federal budgetary revenues: in 2017 – by 170 billion rubles, in 2018 – by 125 billion rubles, in 2019 – by 130 billion rubles.

To achieve better results, a program aimed to increase gas prices and minimize negative consequences of the increase in energy prices in the global and domestic markets should be implemented.

Development of the Russia oil and gas sector is connected with the strategy of the national economic development and public political interests in the global market.

The significance of minerals taxation is connected with global economic issues, non-renewability of natural energy resources, and increase in their economic value (extraction and refining volumes).

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Rational combination of adequate government tax policies and interests of subsoil users can become a basis for increasing the potential of innovation development of the energy industry. The current taxation system is unilateral and fiscal. Amendments to the oil legislation constantly increase tax revenues by decreasing profits from investment expenditures of subsoil users (Tufetulov & Yartiev, 2016). .

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