

Petroleum Tax Policy in Russia¹

Petroleum complex is Russia's basic economic sector which is playing a leading role in providing the state budget revenues. This paper is dedicated to the main issues of the government petroleum tax policy in Russia. The author analyses the outcome of the implemented petroleum tax reform and possible measures designed for further taxation improvement in this sector.

Petroleum and mining taxation policy conducted by the government considerably affects distribution of revenues obtained from the extraction of natural resources and on decision taking with regard to investment. At the same time, international experience demonstrates that setting up of efficient petroleum and mining taxing system represents a rather difficult task. Petroleum and mining taxing system, as a rule, is viewed as conceptually different one from tax system existing in other sectors of the economy due to contribution of significant volume of rent income and exceptional investment risks. Rental payments made as a result of the extraction of petroleum and mineral resources, as a rule, are determined by additional revenues obtained from an oilfield after all production costs including "normal" investment rate-of-return were reimbursed. Main principle applied in this event consists in the fact that the owner of the natural resources (more often the state) must receive major part of this additional revenue. At the same time, certain risks are residing in the extractive industry which is somewhat different in size and character from the risks existing in other sectors of the economy. They are linked with exploration and appraisal works, high level of capital intensity, large time gap existing between costs incurred and production, as well as considerable price fluctuation on mineral and petroleum resources.

Governments, as a rule, aim at developing petroleum and mining tax systems which correspond to the following requirements: ensure that the state will get major part of petroleum and mining income receipts especially in the wake of high prices periods, can be easily administrated, require small tax collection costs and present minimum chances for tax evasion; maximize actual volume of revenues in the course of first production years; withdraw super profits in the course of projects' implementation which are characterized by exceptionally low costs; are neutral and stimulate economic efficiency. However, international experience has not revealed any ideal international fiscal systems applicable in all cases and regimes for petroleum and mineral resources. That is why, petroleum and mineral resources taxing system in every country takes into consideration its peculiarities, priority socio-economic goals set for that country's development and existing constraints².

Russia's petroleum and mineral resources taxation reform was directed at the development of a new fiscal system structure, which, on one part, would ensure the state to

¹ Certain parts of the paper were published in: Yu. Bobylev. Reform Should Be Continued. *Oil of Russia*, 2008, № 1.

² See: Baunsgaard Th. *A Primer on Mineral Taxation*. Washington: IMF, 2001; Garnaut R., Clunies Ross A. *Taxation of Mineral Rents*. Oxford: Clarendon Press, 1983; Goss Chr. *Petroleum and Mining Taxation*. Gower, 1986; Johnston D. *International Petroleum Fiscal Systems and Production Sharing Contracts*. Tulsa: PennWell Publishing Co, 1994; Nellor D. *Taxation of Mineral and Petroleum Resources*. – *Tax Policy: Handbook*. Washington: IMF, 1995, p. 237-241; *World Fiscal Systems for Oil*. New York: Barrows, 1994; *World Petroleum Arrangements*, 1997. New York: Barrows, 1997; Otto J., Andrews C., Cawood F., Doggett M., Guj P., Stermole F., Stermole J., Tilton J. *Mining Royalties: A Global Study of Their Impact on Investors, Government, and Civil Society*. Washington: The World Bank, 2006; Johnston D. *International Oil Business: Tax Systems and Production Sharing Agreements*. Moscow: Olimp-Business, 2003; Bobylev Yu. *Reformation of the Mineral Sector Taxation*. Moscow, IET, 2001; Bobylev Yu. *CIS Countries Experience in Taxation of Extracting Industry*. – In: *Socio-Economic Transformation in CIS Countries; Achievements and Problems*. Moscow, IET, 2004. pp. 431-450.

obtain natural resources rent, on the other part, leave sufficient incentives for investors in its development. Russia's petroleum and mineral resources tax system effective till the year 2002 could not be considered efficient from the point of view of aforesaid goals. That tax system was based on four specific taxes designed for withdrawal of natural resources rent: royalty, mineral replacement tax, excises and export duties levied on petroleum and mineral resources³.

Implementation of standard internationally accepted ad valorem taxes in Russia's oil industry which are based on oil sale price confronted with transfer prices issue. In the course of market oriented reforms, thirteen vertically integrated petroleum companies were set up. These companies combined enterprises on petroleum extraction and refining, sale of oil and oil products. Later on the number of vertically integrated petroleum companies decreased down to nine due to the fact that minor vertically integrated petroleum companies have been merged with large petroleum companies. About 90% of the overall petroleum extraction and oil refining volume in the country are accounted for vertically integrated petroleum companies. Due to the use of transfer (internal corporate) prices, oil prices which were used for calculating taxes in petroleum extraction considerably differed from its real market price.

Transfer prices which vertically integrated petroleum companies paid for the oil purchased from their subsidiary oil extracting enterprises, as a rule, were fixed at the level which minimized taxation at the level close to the level of current costs incurred by extraction enterprise. As a result, the price which served for calculating and paying taxes in petroleum extraction sector (royalty, mineral replacement tax, corporate profit tax, etc.) turned out to be considerably lower both oil export price and domestic market oil price. According to our calculations, in 2000-2001 transfer prices accounted for about 50-60 % of the real market oil prices. At the same time, the country lacked operable legal system which could clearly define taxation base in cases of transfer prices and developed mechanisms of commodity exchange trade whose prices could have served as a benchmark for taxation.

At the same time, predominance of petroleum output tax and gross revenue tax in the old petroleum fiscal system exert strong regressive effect. Major part of tax payments in those conditions in reality did not depend on financial performance of enterprises. Negative consequences of the regressive taxation structure became especially evident when world petroleum and mineral resources prices went down. Precisely this situation was true as of 1998. According to World Bank calculations, in 1998 (prior to Ruble devaluation) in the circumstances of sharp fall of the world oil prices and production profitability reduction, the level of tax withdrawals in the oil sector reached 99 % of net income.

Efficiency increase of petroleum and mineral resources tax system and its bringing into line with international practice required implementation of fundamental changes in that system. Main aspect of tax reform in Russia's petroleum and mineral resources sector was the introduction from 2002 of a new tax – the mineral extraction tax (MET) and its equivalent, the oil extraction tax which is applied to oil extraction, and which replaced royalty, mineral replacement tax, and petroleum excise tax.

The idea of mineral extraction tax consisted in substituting of three old taxes with a uniform (undifferentiated) tax which ensured state tax proceeds at the level corresponding to the aggregate amount of resource payments transferred to the budget. Second part of RF Tax Code was supplemented with Chapter "Mineral Extraction Tax" by the Federal Law № 126-FZ as of 8 August 2001. That Law also included amendments connected with the introduction of this tax into other legislative acts of the Russian Federation. Mineral extraction tax rates were fixed according to the types of natural resources in Rubles per unit of measure of

³ See: Yu. Bobylev. Taxation in Petroleum and Mineral Resources Sector. – In: Taxation reform in Russia: Analysis of First Outcome and Development Prospects. Moscow, IET, 2002. pp. 153-221.

produced mineral (for petroleum and later on for the natural gas as well) either in % from the value of mineral resources.

Tax rates were determined on the basis of the average actual royalty rates paid for the right to use subsoil resources and half of the then effective rates of mineral replacement tax; with regard to petroleum, fixed tax rate also took into account the excise rate. Originally, the petroleum extraction tax rate was calculated on the basis of weighted average oil sale price recorded on the internal and external markets. It means that its rate took into account resources payments obtained from the part of export oil price which surpassed transfer oil sale price, and which the budget failed to get before.

The oil extraction tax rate is adjusted taking into consideration the level of international oil prices and Ruble exchange rate fluctuations by way of applying special world price dynamics coefficient (*Table 1*). The use of such coefficient allows ensuring petroleum tax progressiveness which rate is fixed in absolute terms.

Table 1

Oil extraction tax rate in 2002-2007

	2002	2003	2004	2005	2006	2007
Oil extraction tax base rate, Rbl./t	340	340	347	419	419	419
Coefficient characterizing world oil price dynamics (K_{ω})	$(\Pi-8) \times P / 252$			$(\Pi-9) \times P / 261$		

Definitions: Π – average Urals price in US dollars per barrel for a tax period; P – average USD/Rb exchange rate for tax period, set forth by the Central Bank of Russia.

Source: the RF Tax Code, Federal Law № 151-FZ of 27.07.2006, Federal Law № 33-FZ of 07.05.2004, Federal Law № 126-FZ of 08.08.2001.

Implementation of the oil extraction tax permitted to considerably increase budgetary efficiency of the taxing system, to neutralize negative tax consequences of transfer prices, move Russia’s fiscal system nearer to the international standards. At the same time, unified oil extraction tax rate was designed primarily for the implementation in average circumstances and it did not take into account objective differences in oil production conditions due to mining and geological characteristics of the deposits, their location and the stage of their development.

The oil extraction tax uniform rate drawbacks have conditioned a search for possible differentiation of the oil extraction tax rate depending on mining and geological, and geographic factors which characterize real crude oil extraction conditions. In 2006 petroleum tax system was amended by the Federal Law № 151-FZ as of July 27, 2006. These amendments which came into force on 1 January 2007 are the following:

1. Rate-reducing coefficient for depleted deposits (K_B) has been introduced and is applied to the oil extraction tax base rate. It characterizes the level of oil reserves depletion at a given site of subsurface resources. Rate-reducing coefficient for depleted deposits is applied where the level of the initial recoverable oil reserves depletion comes to the range from 0.8 to 1. It is computed according to a certain formula and changes from 1 (under reserve depletion level of 0.8) to 0.3 (under reserve depletion level 1 or over).

2. For the new oil fields development located in East Siberian oil and gas province located within the borders of the Republic of Sakha (Yakutia), the Irkutsk oblast and Krasnoyarsky Krai zero oil extraction tax rate has been fixed prior to the aggregate volume of oil production of 25 million tons per site of subsurface resources where resources development life does not exceed ten years; for the period of ten years in case of a license given for the right to use subsoil resources for the purposes of exploration and production and for the period of fifteen years in case of a license given for the right to use subsoil resources

simultaneously for geological research (exploration and production) and production starting from the state license registration date.

3. Zero oil extraction rate has been stipulated in case of the superviscous oilfields development.

Adopted amendments are designed to provide incentives for the development of depleted and new oilfields. The oil extraction tax differentiation designed for depleted deposits will allow extending the life of depleted oilfields and also increasing the level of oil recovery. Extension in the development of depleted oilfields will ensure additional proceeds both from crude oil extraction tax (levied at a reduced rate) and from other taxes (profit tax, export duties, etc). The oil extraction tax rate reduction applied in case of new deposits will provide incentives for the development of East Siberian oil and gas province, set up a base for future state budget revenues.

At the same time, adopted amendments envisage that the oil extraction tax exemptions administered in case of new and depleted oilfields can be obtained only in the event where direct methods of recording oil production are applied on the site of subsurface resources, i.e. registration of the oil production with the help of special measuring instruments (means, devises). With respect to depleted oilfields this regulation considerably limits the sphere of implementation of tax privileges because on the majority of depleted oilfields (license areas) there is no direct registration of oil production.

In previous years there was no need for the direct registration of crude oil produced to be carried out on licensed blocks. That is why such registration was not envisaged by technical requirements (it should be noted that the majority of the effective oil production systems and oil delivery were built at the time of USSR. Registration of oil produced is carried out at a special commercial center situated at the exit from the oil treatment plant. Oil treatment plant collects oil from several license areas.

Since 2002 marginal customs tariffs related to oil exports and computing mechanism for export tariff marginal rate which is guided at the world oil price level were introduced by amendments to RF law "On Customs Tariff" adopted by the Federal Law № 126-FZ . In 2004 procedure for computing oil export tariff marginal rate was amended. More progressive scale for computing oil export tariff marginal rate was set up (*Table 2*). With the world oil price growth the share of tax withdrawals is progressively increasing (up to 65 % from each additional dollar of export earnings at a price over 25 USD/Barrel). Introduction of such mechanism ensured both required progressive nature and predictability of the tax burden.

Таблица 2

Marginal oil export tariff in 2002-2007

World price for Urals	Tariff rate, USD/Barrel	
	2002 – 31 July 2004	1 August 2004 – 2007
Up to 15 USD/bBarrel	0	0
From 15 to 20 USD/Barrel	0.35x(P-15)x7.3	0.35x(P-15)x7.3
From 20 to 25 USD/Barrel		12.78+0.45x(P-20)x7.3
Over 25 USD/Barrel	25.53+0.4x(P-25)x7.3	29.2+0.65x(P-25)x7.3

Source: Federal Law № 33-FZ as of 07.05.2004, Federal Law № 126-FZ as of 08.08.2001.

In mid 1990s Russia's tax system was supplemented with production sharing taxing regime. In the circumstances of instability of tax and investment legislation in Russia, lack of sufficiently prolonged positive investment history, production sharing agreements were viewed, first of all, as a mechanism for attracting large direct investments to the oil and gas sector of Russia's economy.

Taxing system applied in production sharing scheme can be defined as a special tax regime according to which specific procedure for taxes and deductions payments is specified and collection of a number of taxes is substituted with production sharing between the state

and investor. Definition of parameters and conditions of production sharing which ensure the state resource rent extraction and ensure the investor to obtain acceptable rate of return remain a key issue at the negotiations on production sharing agreement. Production sharing regime will provide the investor with a stable tax regime for the whole period of the investment project implementation as well as individual approach to the development projects of certain deposits of mineral resources.

Federal Law № 225-FZ as of 30 December 1995”On Production Sharing Agreements” became basic legislative act which regulates production sharing regime. Later on special chapter of RF Tax Code was adopted. This chapter regulates implementation of this regime: chapter 26.4 “Taxing System Applied to the Implementation of Production Sharing Agreements.”

At present three production sharing agreements are effective in Russia: “Sakhalin-1”, “Sakhalin-2” (Sakhalin Oblast) and Khariaginskoe (Nenets Autonomous Region). All these production sharing agreements relate to hydrocarbon deposits and were concluded before Federal Law “On Production Sharing Agreements” took effect and chapter 26.4 of RF Tax Code was adopted. Actually these agreements are being implemented on conditions envisaged by proper agreements.

Where there are similar fundamental approaches to taxation, financial conditions of the effective production sharing projects in Russia have considerable peculiarities. For example, production sharing conditions of effective production sharing projects in Russia are characterized by the following parameters (*Table 3*).

Table 3

Division of profit oil according to production sharing agreements

«Sakhalin-1»		«Sakhalin -2»		Khariaginskoe deposit	
Internal rate of return	Share of the state	Internal rate of return	Share of the state	Internal rate of return	Share of the state
Less than 17.5%	15%	Less than 17.5%	10%	Less than 17.5%	47.7%
17.5 – 28.0%	50%	17.5 – 24.0%	50%	17.5 – 20.0%	52.9%
Over 28.0%	70%	Over 24.0%	70%	20.0 – 25.0%	63.4%
				Over 25.0%	73.8%

Source: the RF Ministry of Energy.

However, production sharing regime has not gained any momentum for fundamental development in Russia. From our point of view, this is conditioned by certain drawbacks inherent to this system which are connected with individualization of agreement conditions related to specified projects. In the circumstances of insufficient qualification and corruption of public servants this may lead to unjustified advantageous conditions for project implementation resulting in the state losing certain part of revenues from deposits development. Crude oil production on three effective production sharing agreements amounted to 1.1 % in 2006 and to 2.8 % in 2007 of the overall volume of crude oil production in Russia.

Introduction of the mineral extraction tax has allowed simplifying taxing system and moving it nearer to the international standards. Fixing of specified oil extraction tax has allowed overcoming major part of negative fiscal consequences related to transfer pricing. Advantages of this approach are: simplicity of its administration and increased taxation flexibility because this tax rate is directly tied to the level of world oil prices which determine major revenues of the oil producers. Fixing by legislation of marginal customs duties rates for oil exports which are changes together with world oil price level became an important element of tax reform in the oil sector.

Structural changes analysis which took place in the taxing system as a result of reform implementation testify to the fact that Russia's oil sector tax system is moving in the direction of contemporary international standards. From the international practice point of view effective mineral extraction tax performs a function of royalty – payment to the natural resources owner (the state) for the right to use subsoil resources. Royalty represents a rather widespread taxation form of natural resources extraction. This type of payment is easily administrated and can be viewed as a basic type of systematic payment which ensures earlier and more stable budgetary receipts than payments on profit. At the same time, standard fixed royalty rate is a rather inflexible taxing instrument. In order to increase flexibility of the taxing system royalty slide scales are used as well as modified formulas for royalty computation which allow taking into consideration the effect of certain factors in fixing the tax rate.

Oil export duties make Russian oil sector taxing system seriously differ from the international practice. Other serious differences which are inherent to Russia's taxing system are: the oil extraction tax rate is specific and its differentiation depending on the extraction conditions bears extremely limited character. At present, imposition of oil extraction differentiated rate is actually limited by the tax holidays used for East Siberian oil and gas province and the use of decreasing coefficient at the depleted oilfields where adoption of this tax privilege is seriously hampered by the rule requiring oil production direct registration on a corresponding block of subsurface resources.

Evaluation of the taxation reform outcome on the distribution of revenues in Russia's oil sector can be done on the basis of oil sector simulation model developed by IET experts. The oil sector comprises oil producing and oil refining branches of industry and part of trade and sale sector which exports crude oil and oil products as well as petrochemicals distribution on the territory of the Russian Federation. Calculations findings along oil sector simulation model which characterize distribution structure of gross revenue and tax burden on oil sector in the years 2000-2007 are given in *Table 4* and 5.

Table 4

Distribution of oil sector gross revenue in the years 2000–2007

	2000	2001	2002	2003	2004	2005	2006	2007
Revenue, overall, bn. Dollars	53.10	54.18	60.04	77.56	106.83	158.40	200.33	232.71
Capital, operational and transportation costs, bn. dollars	25.69	29.99	33.14	39.81	44.33	49.72	56.78	67.42
Taxes, overall, bn. dollars	14.82	16.91	21.28	28.35	47.05	86.52	118.16	136.29
Oil extraction tax, bn. dollars	2.49	3.19	7.88	10.45	16.15	30.19	38.70	44.31
Export duty, bn. dollars	3.93	5.62	5.46	8.67	17.75	37.63	55.24	61.01
Other taxes, bn. dollars.	8.40	8.10	7.93	9.23	13.15	18.69	24.23	30.97
Net revenue remaining at the disposal of enterprises, bn. Dollars	12.60	7.28	5.62	9.40	15.44	22.16	25.39	29.00
Capital, operational and transportation costs, in % to revenue	48.4	55.4	55.2	51.3	41.5	31.4	28.3	29.0
Taxes, overall, in % to revenue	27.9	31.2	35.4	36.6	44.0	54.6	59.0	58.6
Enterprises' net revenue, in % to revenue	23.7	13.4	9.4	12.1	14.5	14.0	12.7	12.5

Source: calculations of IET experts.

As calculations demonstrate taxation reform has let to a sweeping redistribution of revenues generated by the oil sector in favor of the state. The share of taxes in the oil sector gross revenues in the course of the period under review increase from 27.9% in 2009 up to 58.6% in 2007. Meanwhile, the role of the mineral extraction tax (MET) and export duties

have drastically increased their role in the structure of tax payments: the mineral extraction tax ratio (prior to 2002 – royalty, mineral replacement tax and oil excise) in the tax structure increased from 16.8% in the year 2000 up to 32.5% in the year 2007, export duties ratio in 2007 reached 44.8%. On the whole, the share of specific taxes (taxes paid only by oil companies) increased from 46.5% in the year 2000 up to 81.6% in the year 2007. The share of all types of taxes in the net revenues specified as gross revenue minus capital, operational and transport costs increased from 54% in 2000 up to 82.5% in 2007.

Correspondingly, the share of oil enterprises in gross revenue and net profit considerably decreased. Net profit portion which remains at the enterprises' disposal decreased from 46% in 2000 down to 17.5% in 2007, and with regard to revenue from 23.7% down to 12.5%.

Table 5

Main indices of oil sector tax burden in 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Revenue, bn. Dollars	53,10	54,18	60,04	77,56	106,83	158,40	200,33	232,71
Net profit, bn. Dollars	27,42	24,19	26,90	37,75	62,49	108,68	143,55	165,29
Taxes, overall, bn. Dollars	14,82	16,91	21,28	28,35	47,05	86,52	118,16	136,29
Specific taxes, bn. Dollars	6,89	11,10	15,55	21,44	37,57	72,27	98,85	111,18
Net profit remaining at the enterprises' disposal, bn. dollars	12,60	7,28	5,62	9,40	15,44	22,16	25,39	29,00
Taxes per 1 ton of crude oil, dollars/ton	45,85	48,58	56,05	67,28	102,56	184,08	245,92	277,40
Share of net profit in revenue, %	51,6	44,6	44,8	48,7	58,5	68,6	71,7	71,0
Share of taxes in revenue, %	27,9	31,2	35,4	36,6	44,0	54,6	59,0	58,6
Share of taxes in net profit, %	54,0	69,9	79,1	75,1	75,3	79,6	82,3	82,5
Net profit remaining at the enterprises' disposal, in % to net profit	46,0	30,1	20,9	24,9	24,7	20,4	17,7	17,5

Source: calculation by IET experts.

Oil sector taxation reform, growth of oil production, increase of oil and oil products export and growth of world prices on those commodities have led to a considerable expansion of oil sector's share in the state budget revenues. The ratio of the oil sector in the consolidated budget revenues rose from 18.6% in 2001 up to 29.6% in 2007. The portion of tax payments made by the oil sector has grown from 5.5% up to 10.6% in relation to GDP.

Taxation reform implemented in the oil sector allowed to considerably increase the budget efficiency of taxing system and move Russia's taxing system closer to the world standards. At the same time, introduced changes have not resolved all issues regarding development of an efficient taxing system in the oil sector. New taxing system based on a unified specific mineral extraction tax rate have not taken into account objective differences which consisted in the oil extraction conditions due to mining and geological characteristics of the oilfields, their location as well as development stage. It resulted in the oil production fall on the high-cost deposits. Selective choice of the most efficient deposits as well as early termination of depleted oilfields development was stimulated. Simultaneously, bringing into development of new high-cost deposits became complicated. Especially it was true about the regions with undeveloped and lacking infrastructure.

At that, oil production growth rates decreased considerably. If in 2002-2004 oil production growth including gas condensate reached 8.9%-11% annually then in 2005-2007 it amounted only to 2.1-2.2% per annum. At the same time, in 2007 oil production in Russia without the oil produced on production sharing agreements went up only by 0.4%. In 2008 for the first time over last years there was a reduction in oil production in Russia (by 0.6%).

Oil production and export growth is possible in the future only on condition of enhanced development of oilfields which are already under exploitation and rapid development of new oil deposits whose development in the majority of the cases is connected with high-cost investments, high operating and transport costs. Development of such oilfields require further improvements to be implemented in the current taxing system, carrying out of special tax policy which ensure necessary incentives for the investment in the oil production.

Deterioration of oil production conditions determines the need for a tax burden reduction applied to the development of new high-cost oil deposits. They require adoption of preferential tax treatment or the use of more flexible tax regimes. This will allow starting development of such oilfields which will secure additional oil production and additional tax revenues.

Let us analyze possible ways of tax policy with regard to the oil sector.

Reduction of the oil extraction tax rate by means of changes to be made in coefficient computing formula which takes into account the world oil prices dynamics. Reduction of general oil extraction tax rate will produce incentives for the oil sector development. Where there is a growth of oil production costs, it is expedient to increase tax-exempt price minimum in the coefficient of world price dynamics computing formula which is taking into account the world oil prices. This will lead to a relative reduction of the world price dynamics coefficient and, correspondingly applied tax rate. Moreover, conservation of oil extraction tax basic rate at the invariable level (419 Rubles/ton) in the circumstances of rather considerable inflation ensures oil extraction tax rate reduction in real terms.

In 2008 a decision was taken with regard to changing world price dynamics coefficient computing formula by means of increasing tax-exempt price minimum from 9 dollars/barrel up to 15 dollars/barrel. According to our calculations due to the change of world price dynamics coefficient computing formula as well as inflation, the oil extraction tax rate in real terms is decreasing in 2009 by about 25-30% in comparison with 2007 (depending on the world oil price level). Such a reduction of oil extraction tax rate will decrease tax burden on the oil sector and will permit the oil companies to get at their disposal additional financial resources, will increase investment yield from the development of new oilfields, will stimulate more enhanced development of depleted deposits.

Additional (in comparison with implemented) reduction of oil extraction tax rate is appropriate only in cases where it is necessary, namely, only in separate regions and separate categories of oilfields which are characterized by high-cost production. Decrease of the oil extraction tax rate should be differentiated, namely, different for separate categories of oilfields.

Major part of oil production in Russia is carried out on quite profitable developed oilfields (investments made and advanced stage of production has not yet come). At present, there are no evident reasons for additional considerable reduction of tax burden with regard to those oilfields.

Need for additional reduction of the oil extraction tax rate obviously exists only with regard to depleted and much of new oilfields which development requires higher volume of capital, excessive operating and transport costs.

With regard to depleted oilfields the problem should be solved by way of adoption of rate-reducing coefficient for depleted deposits (by means of waiving the rule requiring "direct registration" of oil production).

With regard to new oil deposits the problem can be solved by means of introduction of "tax holidays" or decreasing coefficients applied to the oil extraction tax rate for separate regions (including continental shelf) and certain categories of deposits (small deposits).

Solution of all problems by means of reducing general oil extraction tax rate will lead to an unjustified reduction of tax burden on profitable oilfields and sharp fall in tax revenues.

Widening possibilities for application of oil extraction tax privileges on the oil deposits with high level of depleted reserves. At present possibilities for adoption of effective privileges on the oil extraction tax, first of all rate reducing coefficients to the oil extraction tax rate for depleted deposits, are considerably limited by a rule requiring imposition of a direct registration of the oil production volume in its effective form. Implementation of technical measures ensuring direct registration of oil production volume on the depleted deposits in the majority of the cases is economically inefficient which does not allow applying fixed benefit with regard to the oil extraction tax. This results in premature termination of oil deposits exploitation and subsequent loss of oil.

Since 2007 amendments to Chapter 26 “Mineral extraction tax” of RF Tax Code with regard to benefits of the oil extraction tax took effect (Federal Law as of 27.07.2006 № 151-FZ). These amendments set forth tax benefits for depleted deposits and new oilfields which can be received by users of subsoil resources has been stipulated by the rule requiring direct registration of the oil production on a corresponding license area. Adoption of special rate-reducing coefficient for depleted deposits to the oil extraction tax rate has been envisaged by these amendments designed for depleted deposits with the reserve depletion level of over 80%.

However, as was mentioned above, at present in the majority of the cases direct method registers crude oil produced on several license areas and which passed primary treatment, i.e. dry and clean oil. The volume of oil production with regard to certain license areas actually is determined by an indirect method (computational method with the use of take-off data at different stages of produced oil delivery (oil-bearing liquid) from the oil well to the commercial registration unit).

Setting up direct registration of the oil production immediately on the license area requires considerable investments. With regard to oil deposits implementation of technical measures aimed at establishing direct registration of the oil production immediately on the license area in the majority of the cases is economically inefficient. As a result, only in isolated cases it turns out to be possible to obtain such tax exemptions. In 2007 the volume of oil production taxed by means of rate-reducing coefficient for depleted deposits amounted only to 28.4% of the overall oil production on the oil deposits with depletion at over 80%.

Waiving a rule requiring direct registration of the oil production and providing an opportunity for the oil extraction tax benefits imposition on the basis of the effective system designed for produced oil volume registration across separate blocks of subsoil resources will allow extending given tax exemptions on all depleted deposits which will ensure prolongation of their exploitation, additional oil production and extra tax revenues.

This will also allow ensuring the oil extraction tax exemption (tax holidays) on the new small oil deposits of East Siberian oil and gas province and other regions (development of such deposits where there are no the oil extraction tax benefits are economically inefficient in the majority of the cases).

It is worth noting that the use of the effective oil production registration system for taxation purposes provide certain incentives for the oil companies to maximize the size of the obtained benefit by means of manipulating distribution of the produced oil volume across separate license areas. In this connection the government bodies should ensure required control over the reliability of such registration.

Extension of “tax holidays” with regard to the oil extraction tax. At present “tax holidays” mechanism with regard to the oil extraction tax has been chosen for the purposes of stimulating the development of new oil deposits located in East Siberian oil and gas province. At the same time, two criteria have been specified for the oil extraction tax exemption: the volume of aggregate oil production (25 million tons) and certain time period (10 or 15 years depending on the license type issued for the use of subsoil resources).

Setting up of two criteria for the oil extraction tax exemptions have certain grounds. Where only the production volume is determined as an exemption criterion then across small oil deposits this exemption can be extended over a prolonged period of time (right up to the oil extraction tax exemption for the whole period of deposit development in case of small enterprises).

If as a criterion we set only the timeline for zero rate, it will create strong incentives for enhanced oil production in the course of first years of the deposit development which will result in a reduced level of final oil recovery. Setting up a “ceiling” for the aggregate produced oil in the amount of 25 million tons over which the effect of the tax exemption is terminated does not create incentives for excessive oil production at rather large oil fields.

At the same time, with respect to small oil deposits where oil extraction within first ten years under normal production rate will be appreciably lower than 25 million tons availability of such criteria creates strong incentives for enhanced oil production aimed at achieving exemption from tax of a maximum volume of produced oil. It results in the reduction of tax revenues for the state budget and final oil recovery level goes down.

Computations made with the use of IET simulation model designed for the development of East Siberian standard oilfield show that the introduction of tax holidays and imposition of rate-reducing coefficient for depleted deposits will allow ensuring a required investment yield from regional oilfields development: under a long-term world oil price for Urals at 60 dollars per barrel and over, internal rate of investment yield surpasses 20% (*Table 6*).

Table 6

Internal rate of return on investment with regard to the development of East Siberian standard oilfield, in %

Tax regimes	Price for Urals, dollars/barrel			
	40	60	80	100
1. Effective tax system without oil extraction tax exemptions	4	11	16	22
2. Effective tax system taking into account tax holidays and rate-reducing coefficient for depleted deposits	11	23	33	44

Source: calculations of IET experts.

At the same time, besides East Siberian oil-and-gas province, there are other regions in Russia where development of oil deposits is connected with excessive production costs. Timano-Pechora oil and gas province is one of them.

Computations made with the use of IET simulation model designed for the development of standard oilfield show that reduction of the oil extraction tax rate by means of increasing oil extraction tax-exempt price minimum from 9 dollars per barrel up to 15 dollars per barrel increases oilfields development profitability in Timano-Pechora province. However, it is insufficiently enough to ensure a required rate of return on investment. In order to achieve it, it is necessary to adopt additional measures of tax stimulation in the form of tax holidays on the oil extraction tax or imposition of rate-reducing coefficient for depleted deposits. Computation results of the internal rate of return on investment with regard to the development of Timano-Pechora oilfields are given in *Table 7*.

Table 7

Internal rate of return on investment with regard to the development of Timano-Pechora standard oilfield, %

Tax regimes	Price for Urals, doll./bbl.			
	40	60	80	100
1. Effective tax system	5	10	13	17

Tax regimes	Price for Urals, doll./bbl.			
2. Oil extraction tax holidays				
5 years	8	17	26	34
6 years	11	22	33	45
7 лет	13	27	40	52
3. Decreasing coefficient applied to oil extraction tax rate:				
0.7	10	17	24	29
0.6	11	20	28	34
0.5	13	23	31	38

Source: calculations of IET experts

According to our computations, required rate of return on investment in the development of Timano-Pechora oilfields under a long-term oil price for Urals at 60 dollars per barrel (in real terms) is ensured where the timeline of the oil extraction tax holidays come to 6 years starting from the date of oil production or under decreasing coefficient applied to the oil extraction tax rate in the amount of 0.5-0.6.

Given that the minimum required period for the implementation of original investments and preparation of the oilfield for development comes to a year, tax holidays duration for Timano-Pechora oilfields should be set forth at 7 years as from the date of government license registration for the use of subsoil resources for the purposes of exploration and extraction of natural resources.

In respect to licenses issued for the right to use subsoil resources simultaneously for geological study (exploration) and extraction of natural resources tax holidays duration should be determined at 12 years starting from the date of government license registration.

Introduction of decreasing coefficients to the oil extraction tax rate valid for separate regions and continental shelf. As an alternative to tax holidays may become an adoption of rate-reducing coefficient applied to the oil extraction rate which is imposed in case of development of new oilfields in certain regions and continental shelf within the timeline of their development. The value of such coefficient can be determined by means of calculation in order to meet a requirement aimed at ensuring a necessary investment yield from oilfields development of corresponding territory (continental shelf zone). For example, for Timano-Pechora province the value of such rate reducing coefficient as was shown above can come to 0.5-0.6. Development of continental shelf oilfields requires significantly lower tax rate (down to zero rate).

Adoption of a decreasing coefficient to the oil extraction rate has a number of important advantages in comparison with the tax holidays scheme. It is to a greater extent directed at serving the state interests.

First, under such an approach the oil extraction tax is paid from the very start of the oil production and does not have a deferred character. During the timeline of the project implementation revision of the oil extraction tax general rate with the aim of cutting it down (for example, by means of further increase of the oil extraction tax-exempt price minimum), decrease of state tax revenues on the whole in the course of the project timeline will be relatively lower than in case of tax holiday imposition because in the first case the tax is fully paid in the course of the first production years. In the second case reduction of rate may to all payments along this tax (where revision of rate took place during tax holidays validity period).

Second, such approach does not create incentives for enhanced oil production within first years of deposits development trying to exempt from taxes maximum volume of produced oil. Thus, it does not produce distorting effect on users of subsoil resources, production profile and the oil recovery level.

Third, under such approach more enhanced level of oil deposits development is stimulated due to the fact that the oil extraction tax value at the later production stages is lower than where tax holidays scheme is implemented.

Fourth, as compared to tax holidays scheme such approach provides less advantage to the investor and more benefits to the state where there are higher oil prices.

Fifth, such approach is technically simpler to implement: tax holidays are set out by three parameters (two terms for tax holidays depending on the license type for the use of subsoil resources and additional limits set on the volume of aggregate oil produced) and decreasing coefficient is set up by one parameter (coefficient value).

Such decreasing coefficient is valid for all types of licenses (both for licenses on exploration and production and for licenses for geological study and production) and for oil deposits which are at different development stages (both for oil deposits prepared for development or which are at the initial development stage as well as for oil deposits which are not ready for development).

Continental shelf oil deposits which are most capital and operating intensive per a ton of produced crude oil, the oil extraction tax rate should stay at the minimum level. In the number of the cases, however, even the oil extraction tax zero rate does not ensure required investment yield. For instance, according to calculations done with the help of simulation model designed for standard oilfield development on the northern continental shelf, imposition of the oil extraction tax zero rate under the oil price at 60 dollars per barrel allows ensuring investment yield only at 10% level (*Table 8*).

Adoption of export duty zero rate on crude oil produced allows ensuring efficient development of such oil deposits. In this event, development of such oil deposits will be efficient even under adoption of decreasing coefficient 0.5 applied to the oil extraction tax.

Table 8

Internal rate of return on investments under decreasing coefficient applied to the oil extraction tax rate for continental shelf oil deposits, %

	Price Urals, doll./brl.			
	40	60	80	100
1. Effective tax system		1.3	5.4	8.4
2. Oil extraction tax = 0	4.1	10.4	15.1	19.0
3. Oil extraction tax with coefficient 0.5; export duty = 0	12.9	21.6	28.1	33.4

Sources: calculations of IET experts.

Introduction of decreasing coefficients to the oil extraction tax rate in case of separate categories of oil deposits. Along with territorial decreasing coefficients it is appropriate to adopt decreasing coefficients to the oil extraction tax rate in case of separate oil deposits which development is linked with excessive production costs. Among such oil deposits are small oil deposits which development, as a rule, is characterized by increased capital and operating costs per ton of oil produced and under general tax regime is economically inefficient.

As computation demonstrate in case of Timano-Pechora oil and gas province duration of tax holidays on average should last 6 years starting from the start of oil production and decreasing coefficient to the oil extraction tax rate should be in the range of 0.5-0.6, then in case of small oil deposit under the price for Urals at 60 dollars per barrel internal rate of return of 15% is achieved only where tax holidays last for 9 years from the moment of oil production and decreasing coefficient to the oil extraction rate comes to 0.2%. Internal rate of return in the amount of 20% under the price of oil at 60 dollars per barrel is achieved only under a zero oil extraction tax rate (*Table 9*).

Internal rate of return on investments in case of small oil deposit development in Timano-Pechora province, %

Tax regimes	Price for Urals, doll./bbl.			
	40	60	80	100
1. Oil extraction tax holidays:				
8 years		12	25	36
9 years		15	27	38
10 years		16	29	39
2. Decreasing coefficient applied to oil extraction tax rate:				
0.3		13	22	30
0.2	1	15	25	34
0.1	3	17	28	37
3. Zero oil extraction tax rate	5	20	31	41

Source: calculations of IET experts

Imposition of decreasing coefficient applied to the oil extraction tax rate for small oilfields can be implemented to a limited number of such oil deposits (for instance, for oil deposits with initial recoverable oil resources up to 5 million tons) and within certain geographical limits (for example, for separate regions located within Volga-Urals oil and gas province, which is characterized by depleted resources at large and medium-size oilfields).

This measure will allow involving into development small oil deposits which will ensure additional oil production and additional tax revenues. In the “old” oil producing regions drawing into production of such oilfields will also allow supporting employment.

Tax exemptions for small oil deposits are preferable to be granted in the form of decreasing coefficient applied to the oil extraction tax rate. As was noted above, such approach has a number of advantages in comparison with tax holidays scheme.

Application of crude oil export customs duty. Reform of the oil export duty represents an extremely serious economic measure which requires a complex approach including evaluation of far-reaching macroeconomic and microeconomic consequences. Oil export duty plays a rather serious fiscal role being one of the most important sources of state budget revenues. Moreover, oil export duties maintain a gap which exists between domestic and world oil prices and prices on oil products. In the event of rescinding of oil duties domestic prices on oil products and petrochemicals will increase by the volume of rescinded duties because precisely such level of domestic prices will ensure equal efficiency of oil supplies on domestic and world markets.

Growth of domestic prices on oil products and petrochemicals can negatively affect Russian consumers (industry, transport, agriculture, population) and lead to a reduction in competitiveness and profitability of economic activity in separate branches of the economy, reduction in tax revenues from those sectors. Along with an increase in domestic prices growth of crude oil and oil products export can be expected because rescinding of export duties leads to an upturn of export efficiency and more costly delivery schemes become efficient which may lead to a reduction in the physical volumes of oil products supply on the domestic market.

In the even of rescinding of oil export duty, negative effect is feasible for the oil refining industry because under the domestic oil price growth by the volume of customs duty profitability of Russian oil refining as computations demonstrate is falling sharply because acceptable economic effectiveness of subindustry is not guaranteed. Maintenance of

acceptable economic effectiveness of the oil refining industry requires domestic oil prices to stand below the world oil prices which are ensured by means of oil export duty.

Considerable drawback inherent to the oil export duty calculation right to the last months of 2008 consisted in significant time gap which was between the world oil prices dynamics and the rate of oil export duty. Actually oil export duty rate reflected the level of world oil prices for the last three months before setting up such rate (difference between mid-term for which the duty rate was fixed and mid-term of corresponding monitoring period of world oil price amounted to 3 months).

It resulted in serious fluctuations of the tax burden level on oil export. Thus, on average for the period 2005-2007 the volume of export duty constituted 40.1% in relation to the world oil price then monthly values of this indicator fluctuated in the range from 23.9% in March 2005 up to 58.6% in October 2006. Especially high tax burden developed in the circumstances of sharp fall of the world oil prices when oil prices and oil companies revenues decreased but the export duty rate stayed effective at the level recorded several months before in the wake of the high world oil prices level.

Thus, change of tax burden lagged considerably behind from the change in oil companies revenues and in the circumstances of sharp fall of prices the tax burden turned out to be excessive. In order to give more flexibility to such tax as oil export duty, at the end of 2008 there was a transition to a monthly fixing of export duty rate instead of doing it on a bimonthly basis. This has resulted in cutting the lag between the changes of world oil prices and changes of oil export duty rate. It has synchronized changes in oil companies revenues and the tax burden.

For the cases where imposition of tax holidays, decreasing coefficient applied to the oil extraction tax rate or zero rate for this tax do not ensure a required economic efficiency regarding new oil production projects (for instance, for the oil deposits on the continental shelf) one should study a possibility to reduce or set a zero rate for oil export duty regarding oil produced volumes from such projects. This decision will not tell on the level of domestic oil prices because it will cover relatively small (on a national scale) volumes of produced crude oil.

Excess profit tax. The excess profit tax may become a fundamentally new element of Russia's oil extraction tax system. The excess profit tax is a form of a special tax on natural resource rent which in the course of last decade became widespread in foreign countries including such ones, as Great Britain, Norway, and Australia. The excess profit tax concept has been embodied in the draft special chapter of the Second Part of the RF Tax Code prepared by the government in 1998-2002.

The excess profit tax has got a number of obvious advantages in comparison with the oil extraction tax. In contrast with the mineral extraction tax the excess profit tax is based on additional profit indices and R-factor which objectively reflect actual economic efficiency of certain oil deposit development. The excess profit tax directly takes into account mining and geological and geographic condition of hydrocarbons production because it is directly linked to the oil deposit profitability indices (additional profit and R-factor). The excess profit tax takes into account mining and geological conditions of production during the oil deposit development, i.e. its depletion (with resource depletion of additional profit and tax amount went down too). The excess profit tax provides incentives for the investment in the development of new oil deposits because the tax is not levied before the recoupment of capital investments and subsequent taxation volume corresponds profitability indices. In the event of highly efficient projects the use of excess profit tax ensured collection of resource rent for the state; simultaneously conditions for the implementation of low efficient projects are created.

At the same time, this tax is seriously more difficult with regard to tax administration and practical control over tax computations reliability. This creates potential chances for

underdeclaration by the producers of their tax liabilities and, as a consequence, reduces state budget revenues. The excess profit tax system as a tax system, based on defining additional profit and R-factor, potentially can stimulate investor to overstating costs in the course of the project development. With overstatement of costs the volume of taxable revenue and tax liabilities of investor is falling. R-factor value and the tax rate are also falling. Qualification of public servants who are supervising project’s implementation cost parameters and its objectiveness (absence of corruption) has a very big importance.

Adoption of the excess profit tax and procedure for its computation, from our point of view, should correspond to the following main principles.

Implementation of the excess profit tax is appropriate only in case of new oil deposits. At the old (which are already under development) oil deposits, as a rule, there is no system of registering revenues and costs regarding separate license areas which is required for the adoption of the excess profit tax. Moreover, on the developed oil deposits in the majority of the cases investments have been made that is why there is no need for their tax stimulation. Under new oil deposits we should understand all oil deposits where development and oil production will start after the Tax Code chapter on the excess profit tax becomes effective. Inasmuch as the majority of undeveloped oil deposits have got licenses, implementation of the excess profit tax should not be limited only to the oil deposits which are subject to licensing after the tax will come into effect. Tax liabilities regarding the excess profit tax payment should be determined separately.

The excess profit tax base should be determined as the value of produced and soled hydrocarbons reduced by the production costs and product sale costs amount (minus depreciation) production capital investments and uncompensated costs of the previous taxing period. Calculated deductible costs uncompensated during previous taxing period should be indexed to the rate of inflation and interest expenses on credits and loans received for the production of produce sale purposes should not be deducted in computing of the tax base for the excess profit tax.

Tax rate should be determined by R-factor value which is calculated as a ratio of accumulated income raised from production and sale of hydrocarbons to accumulated investment and operating costs incurred for their extraction. Accumulated income which determines R-factor value should not be cut down by the oil extraction tax value. At the same time, all other taxes and mandatory payments should be deducted from the accumulated income.

It is appropriate to reduce the excess profit tax gradation scale. Government draft to the chapter of the Tax Code regarding the excess profit tax contains tax scale which includes six gradations (*Table 10*). Large number of such scale gradations creates additional incentives for overstating the costs as a result of which not only the tax base is cut down but the tax rate goes down as well (due to a decrease of R-factor value). Especially strong incentive to overstating the costs are created around R-factor threshold values because insignificant increase of R-factor leads in this case to a significant increase of tax liabilities.

Table 10

Excess profit tax rates

R-factor (t – 1)	Rate (t), %
From 1.00 to 1.20	15
From 1.20 to 1.30	20
From 1.30 to 1.40	30
From 1.40 to 1.50	40
From 1.50 to 2.00	50
Over 2.00	60

Source: Draft chapter of the RF Tax Code.

Unified tax rate in contrast with the progressive one does not create such incentives. However, it does not permit to take into consideration diversity of mining and geological, and geographical features regarding the development of Russia's oil deposits that is to say differences in projects' economic efficiency (in case of highly efficient projects this fact will result in the state to obtain considerably less resource rent volume than it should have got).

Possible solution to this issue can be, from our point of view, adoption of the excess profit tax scale consisting of four gradations. For example, in the version presented in *Table 11*.

Table 11

Excess profit tax rates

R-factor (t – 1)	Rate (t), %
From 1.00 to 1.20	15
From 1.20 to 1.50	30
From 1.50 to 2.00	45
Over 2.00	60

Source: IET.

However, it should be noted that implementation of any addition income tax rate gradation scale will lead to an objectionable cost effect linked with spasmodic tax rate volatility. In that case the user of subsoil resources will find it more profitable to make additional investments (in other words, to increase costs by all means) than to pay tax at a significantly higher rate. In order to avoid such effect, it is expedient to apply for tax rate calculation a constant relation of tax rate to R-factor which is described by one or another formula. From our point of view, the formula given in for tax rate calculation *Table 12* can be applied to achieve this goal.

Table 12

Excess profit tax rates

R-factor (t – 1)	Rate (t), %
From 1.00 to 2.00	$100 - 100/R(t - 1)$
Over 2.00	60

Source: IET.

Proposed formula is sufficiently simple and is easily explained: $100/R$ value in the given formula corresponds to the investor's share in the additional income (given share is inversely proportional to R-factor value), $100-100/R$ value – state's share. Tax rate values obtained by means of this formula are rather close to the given above table values. For instance, under R-factor value of 1.20 the rate equals 16.7%, under R-factor value of 1.50 the tax rate equals 33.3%, and under R-factor value of 1.80-2.00 the tax rate equals 44.4-50%.

However, even in this case there remain certain incentives for costs increase because their growth leads to a cut down of R-factor value and, correspondingly, the tax rate. On the other hand, this can provide incentive for additional investments in the enhanced development of oil deposits, in particular, implementation of different methods directed to increase reservoirs recovery.

In capacity of a special tax regime excess profit tax can be implemented on the continental shelf oil deposits. Development of such oil deposits is characterized by exceptionally high costs and can not be carried out in the circumstances of current taxing system. According to calculations done with the help of simulation model designed for standard oilfield development on the northern continental shelf required investment yield from such oil deposits' development is not guaranteed under current taxing system: under the world oil price is around 60-80 dollars per barrel internal rate of return amounts to 1-5%.

Cutting down the oil extraction tax rate (right up to zero) rate of return, but does not allow turning such a project into an investment-attractive one. Replacement of the oil extraction tax with the excess profit tax (under excess profit tax rates which correspond to 2002 bill) does not permit either to guarantee required investment yield from such oil deposits development. Required investment yield from the continental shelf oil deposits development is guaranteed by implementation of the excess profit tax and zero oil export duty rate (*Table 13*).

Table 13

Internal rate of return on investments under excess profit tax applied to the development of continental shelf oil deposit, %

Tax regimes	Price for Urals, doll./bbl.			
	40	60	80	100
1. Effective tax system		1.3	5.4	8.4
2. Excess profit tax (2002)	5.5	10.5	13.8	16.0
3. Excess profit tax (2002); Export duty = 0	13.4	19.6	24.2	28.0

Source: calculations of IET experts.

Imposition of the excess profit tax envisages the use of market prices for tax calculation (otherwise excess profit tax implementation is inefficient because it creates possibilities for the taxpayers to understate their tax liabilities by means of sale of produced oil at cut-down prices). Determination of oil market prices is connected, however, with a number of serious issues conditioned by the structure of Russia's economy oil sector and the lack of the developed market infrastructure. Russia's crude oil market is characterized by high concentration of production and refining in the hands of vertically integrated companies and domination of transfer prices which can not serve as a basis for taxation.

At the same time, prior to the formation of a developed crude oil market required for the tax calculation, reference (settling) crude oil market prices can be applied which are determined by means of special method built on the world crude oil prices. Given that crude oil price on the free domestic market (market segment where crude oil is soled not at transfer prices) is actually determined by its world price. Reference crude oil price for the taxation purposes can be calculated on the bases of price for Urals on the world (European) market minus effective oil export duty and crude oil export delivery costs.

Implementation of excess profit tax allows ensuring differentiation of tax burden and creates required conditions for the new high operating costs oil deposits development. At the same time, transition to such form of taxation requires creation of certain conditions, first of all, determination and application of crude oil prices for tax calculation and income and costs control during oil extraction (license areas).