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State regulation measures and existing state strategy for the development of petrochemical industry in Russia

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Abstract. Development of petrochemical industry, in particular the increase in the efficiency and quality of refined products, necessitates high long-term capital expenditures from oil companies. Today the process of petrochemical industry modernization is facing certain difficulties, which include lack of high-quality modern technologies and engineering, instability of tax policy, lack of qualified personnel, underfunding of projects, low profitability of oil refineries, high dependence on imports of the industry, etc. Complexity of the domestic petrochemical industry development underpins its support from the state. Currently, the development of petrochemical industry is enshrined in three state program documents. These documents include general scheme for the development of oil industry for the period up to 2020, the plan for the development of gas and petrochemicals in Russia for the period up to 2030 and the strategy for the development of chemical and petrochemical complex for the period of up to 2030. This article examines state regulation measures and existing state strategy for the development of petrochemical industry in Russia, as well as the impact and consequences of this regulation reflected on the activities of corporations.

1. Introduction

Complexity of domestic petrochemical industry development due to high technologies, complexity of the market, varying degrees of raw materials availability and many other factors necessitates its support from the state.

Petrochemical industry is under the jurisdiction of the Ministry of Energy of the Russian Federation and includes the production of large-scale plastics, rubbers, products of basic organic synthesis, which in turn are a material resource for redistribution in the chemical industry.

2. Methods

In the course of study, the authors assessed feasibility of the current state strategy for the development of petrochemical industry in Russia. The analysis was made based on specialized literature with a high citation index on the topic indicated in the title of the article, and founded on the data from the



Industry Development Fund and the official website of the Ministry of Energy of the Russian Federation [1-6].

3. Results and discussion

At present, Russia has all the necessary fundamental factors capable of ensuring the competitiveness of petrochemical enterprises in the world market. However, their actual position testifies to the incomplete use of the potential formed by the factors due the following problems:

- 1) lack of the needed assortment of raw materials and high prices;
- 2) high level of service wear of production technical base;
- 3) high capital expenditures for the construction and inputs of new petrochemical plants;
- 4) limited transport and logistics infrastructure, complexity of its expansion and access to it;
- 5) high tariffs for electricity and rail transportation;
- 6) lag in the development of scientific and technological potential of petrochemical complex;
- 7) insufficient development of the quality control system for petrochemical complex products and the system of technical regulation, industry standards;
- 8) insufficient capacity of the domestic market;
- 9) immaturity of human resources and high-performance jobs.

Development of the petrochemical industry is enshrined in three state program documents (figure 1).

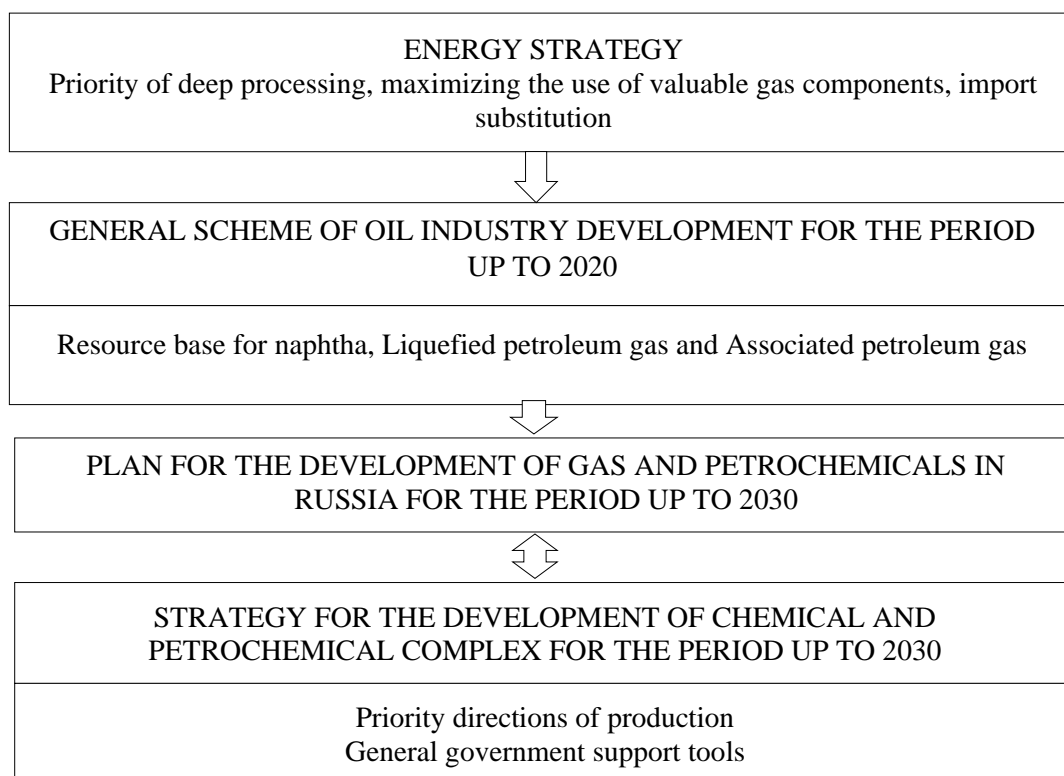


Figure 1. Relationship between key strategic documents of petrochemical industry.

In practice of leading petrochemical countries, creation of a comprehensive incentive system took place with the active participation of the state. State support included implementation of such tools as infrastructure development within the framework of petrochemical clusters, measures to stimulate domestic demand and exports, assistance in renewing worn-out facilities, as well as the elimination of administrative barriers, tax and financial incentives. Major tools of state support for the development of domestic petrochemical industry are shown in figure 2.

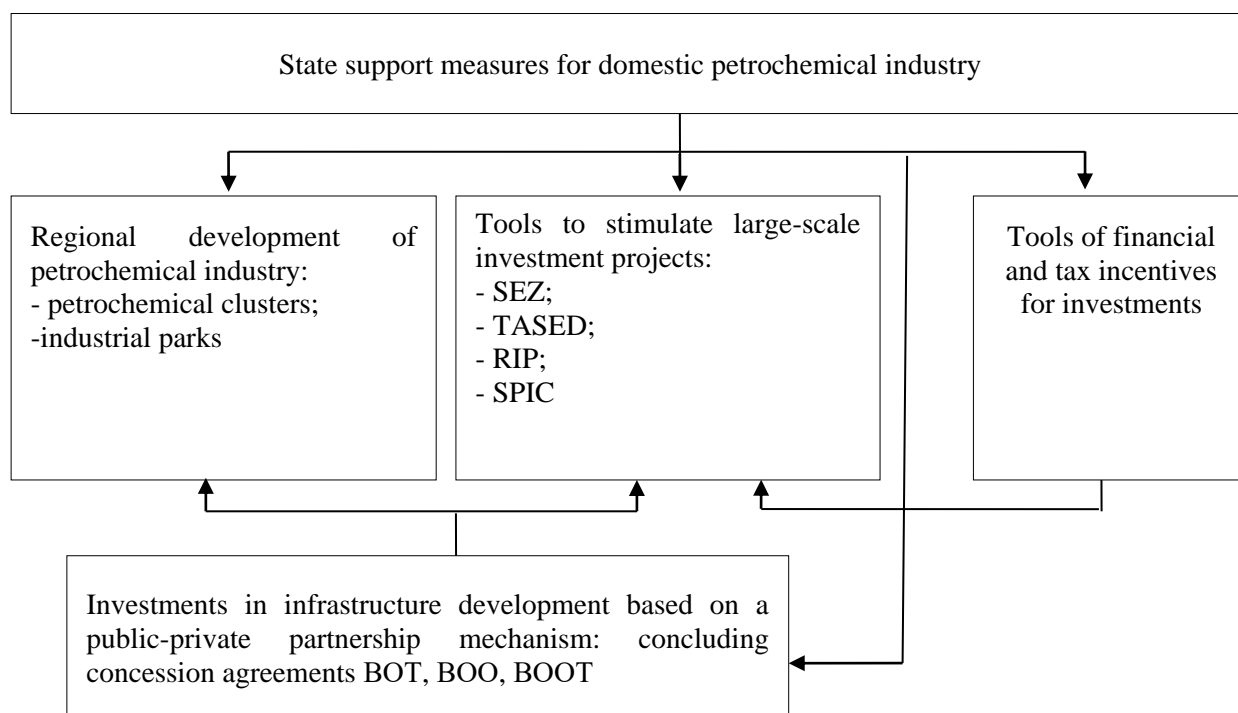


Figure 2. Measures of state support for domestic petrochemical industry.

The first comprehensive document that determined the future priorities and targets of petrochemical industry in the Russian Federation was “Plan for the development of petrochemicals up to 2030”. The development strategy chosen under 2030 Plan through creating clusters is the best option for the development of petrochemical industry. It involves formation of a complete production chain – from lifting to the output of final products, the advantage of which is the reduction of capital and organizational costs for logistics, as well as a more complete use of economies of scale.

Currently, formation of clusters is considered as the most effective form of industrial organization of petrochemical industry, which allows improving the relationship between producers and refiners and provides an increase in the competitiveness of the industry. In addition, this approach provides active participation of the state, not only in supplying benefits and subsidies to future enterprises, but also in creating clusters infrastructure. Thus, enterprises that are a part of petrochemical clusters have state support in form of simplified procedures for direct and foreign investments, increased availability of long-term loans, obtaining tax incentives, as well as state funding for infrastructure development.

In domestic practice, the placement of petrochemical clusters is carried out taking into account the specifics of the location of production facilities and consumption centers:

1) localization of companies near consumption centers (Volga cluster), in port zones (Far East and North-West clusters), as well as, if appropriate, on the basis of other petrochemical clusters (West Siberian, East Siberian, Caspian).

2) on the basis of large petrochemical enterprises located near domestic consumption centers, next to sectoral research institutes, on the territory of newly created special economic zones.

Efficiency of production cluster organization is confirmed by world practice, according to which the bulk of the increase in petrochemical production in recent decades has been accounted for not by individual enterprises, but by clusters. Innovative infrastructure of the latter is a catalyst for carrying out structural transformations in the economy and the development of both the region and the country as a whole.

An important role in the development of domestic petrochemical industry is assigned to the Volga, Caspian, North-West, West and East Siberian, as well as the Far East petrochemical clusters. The core

of these clusters is pyrolysis facilities, around which the production of plastics and rubbers is formed.

The key condition for the development of petrochemical clusters and involving the residents is availability of an effective engineering, transport and logistics infrastructure. Investments in construction and modernization of infrastructure as a rule occur based on public-private partnerships, via concluding concession agreements between BOT, BOO, and BOOT for state co-financing of infrastructure creation costs. (BOT (Build — Operate — Transfer). The concessionaire carries out construction and operation (mainly on the basis of ownership) for a certain period, after which the object is transferred to the state; BOO (Build — Own — Operate). The concessionaire builds the facility and carries out subsequent operation, possessing it on the basis of ownership, the duration of which is not limited; BOOT (Build — Own — Operate — Transfer). The ownership and use of the constructed object on the basis of the right of private ownership is carried out within a certain period, after which the object becomes the property of the state).

As measures to stimulate cluster development, the Ministry of Economic Development of Russian Federation envisages organization of industrial parks, on the territory of which manufacturers of priority product lines will operate. In turn, they will be able to receive standard benefits for production. In order to attract small and medium-sized enterprises to technology parks, it is planned to use additional measures of state support, in particular, subsidies from the federal budget to the budgets of the Russian Federation subjects.

Development of petrochemical industry is impossible without implementation of large investment projects, which are characterized by high capital intensity and a long payback period. Not a single Russian petrochemical company can afford simultaneous financing of large infrastructure and production projects, which is why, in particular, large investment projects are extended or canceled (see table 1).

Thus, at the current moment, the planned projects are either postponed to a later date, or canceled. The exception is the ZapSibNeftekhim project of PJSC “SIBUR Holding”, which was launched in the spring of 2019. The terms of the project implementation by PJSC “Nizhnekamskneftekhim” have been postponed to 2022 and 2025.

Table 1. Investment projects foreseen for implementation under the Strategy.

Enterprises	Increase in production capacity (for ethylene), thousand tons / year	Introduction year
PJSC “SIBUR Holding” / PJSC “Gazprom”	2000	2021-2024
PJSC “SIBUR Holding”	1500	2019
PJSC Oil company “Rosneft”	1300	2022
PJSC Oil company “Rosneft”	156	2021
PJSC “Nizhnekamskneftekhim”	600	2019
PJSC “Gazprom”	420	2017
PJSC Joint-Stock Oil Company “Bashneft” (PJSC Oil company “Rosneft”)	80	2019
PJSC “Nizhnekamskneftekhim”	600	2024
CJSC GC “TITAN”	20	2017

In world practice, infrastructure projects are usually financed either by the state or by specialized midstream companies. Russia, among the tools for stimulating large investment projects that can significantly improve the economy of the petrochemical industry, identifies the following:

- special economic zone (SEZ),
- territories of advanced social and economic development (TASED),
- regional investment project (RIP),
- special investment contract (SPIC).

These tools cover major volumes of tax payments, while the amount of subsidies does not exceed the potential volume of budget revenues.

Thus, SEZ was the first (2005) and the most ambitious tool for stimulating creation of certain territories for the development of industry. This is a significant mechanism for attracting investors to priority sectors of economy, which is understood as a part of the territory of a constituent entity of the Russian Federation. It is provided with a special operating regime in form of general benefits system provided to its residents (including a free customs zone regime, tax, financial and administrative benefits).

SEZ activities in the Russian Federation are regulated by Federal Law No. 116-FZ “On special economic zones in the Russian Federation” dated 22.07.2005 and is formalized by a decree of the Government of the Russian Federation. The criteria for creating SEZ are enshrined in the decree of the Government of the Russian Federation No. 398 “On approval of the criteria for creating a special economic zone” dated 26.04.2012.

Nine industrial-type SEZs functioned in the Russian Federation to the date of July 1, 2018. According to the report on the results of functioning of special economic zones, presented on the website of the Ministry of Economic Development of the Russian Federation, the activities of industrial special economic zones since the beginning of operation, as well as for 2018, are effective (89% and 100%, respectively).

Table 2. Performance indicators for the functioning of special economic zones of industrial production type for 2018 and since the beginning of special economic zones functioning (Otchet, 2019).

SEZ name	Period	Estimated performance indicators reflecting			Consolidated calculated indicator, %
		activity of SEZ residents, %	profitability of investments from the federal budget, the budgets of the constituent entities of the Russian Federation and local budgets in creating SEZ infrastructure facilities, %	activity of SEZ governing bodies, %	
SEZ “Alabuga” in the Republic of Tatarstan	2018 since the beginning of operation	186.98	282	117	100
SEZ “Lipetsk” in the Lipetsk region	2018 since the beginning of operation	135.87	191	101	100
SEZ “Togliatti” in the Samara Region	2018 since the beginning of operation	173.9	266	158	100
SEZ “Titanium Valley” in Sverdlovsk	2018 since the beginning of operation	123.38	138	109	100
		28.60	146	91	77
		45.85	110	95	83
		74.07	81	155	85
		45.11	92	100	80

Region	operation				
“Moglino”	2018	15.75	34	117	48
SEZ in	since the	13.45	25	104	44
Pskov	beginning				
Region	of				
	operation				
“Stupino	2018	139.55	1664	244	100
Square”	since the	60.25	3254	381	88
SEZ in	beginning				
Moscow	of				
Region	operation				
“Uzlovaya”	2018	113.15	671	106	100
SEZ in	since the	80.65	314	100	94
Tula	beginning				
Region	of				
	operation				
“Lotos”	2018	97.24	69	82	83
SEZ in	since the	54.40	102	88	84
Astrakhan	beginning				
Region	of				
	operation				
“Kaluga”	2018	229.64	50	70	74
SEZ in	since the	85.93	117	88	93
Kaluga	beginning				
Region	of				
	operation				
Total	2018	105.89	172	114.05	100
	since the	64.49	159	116.48	89
	beginning				
	of				
	operation				

According to the results of national rating viewing, the investment attractiveness of Russia’s industrial special economic zones, “Alabuga” SEZ is the best zone of the industrial-production type. Its main competitive advantage is its developed world-class industrial infrastructure. In addition, it is worth mentioning the low level of land prices, free connection to utilities and availability of their own customs post, which allows residents to carry out all customs procedures at Alabuga site (Golubkin, 2017).

Federal Law No. 473-FZ “On territories of advanced social and economic development in the Russian Federation” dated December 29, 2014 introduced the concept of a territory of advanced social and economic development (TASED), the creation of which is aimed at attracting investment and accelerating economic development by providing anchor enterprise. This tool, like SEZ, is a special legal regime for carrying out entrepreneurial and other activities in a certain territory of the region, thereby classifying the TASED as a specific category of special economic zones.

In fact, the whole variety of economic zones (including TASED) and the definitions given to them, come down to the following: special territories are formed in some regions of state. They are provided with a preferential tax regime, a duty-free regime for the import and export of goods and services, with a certain isolation of trade and monetary and financial relations with respect to the rest of the territory of Russia. The result of creation of such economic zones is formation of close ties with world markets and active attraction of foreign capital.

The next tool created in 2014 to stimulate certain capital-intensive projects in the constituent

entities of the Russian Federation is Regional Investment Project (RIP). Its purpose, according to Art. 25.8 of Part 1 of the Russian Federation Tax Code is a production activity for the manufacture of goods that meets the requirements established by law, in respect of which tax benefits are applied. Key issues related to the regulation of this status are defined in Chapter 3.3 of the Russian Federation Tax Code. Provided by Art. 25.9 of the Russian Federation Tax Code, income tax benefits could provide a significant increase in the economic efficiency of high-margin petrochemical industries. However, the limited effect of these benefits in 2028 will not allow petrochemical projects to receive subsidies in full volume.

Like a regional investment project, a special investment contract (SPIC) is a form of public-private partnership, the purpose of which is to stimulate investment in industrial production in the Russian Federation. SPIC implies conclusion of an agreement between an investor and the state, establishing investor’s obligations to develop production in Russia directly related to or contributing to the introduction of new technologies, as well as the state’s obligations to maintain stability of tax and regulatory conditions during the period specified in the contract [7]. According to the Industrial Development Fund, during the period of SPIC existence, 45 contracts were concluded in various industries worth RUB 807.8 bn, which, on the one hand, indicates success of the project and solution of its main task – investing in the real sector of the Russian economy. At the same time, there were certain difficulties that businesses faced when using the SPIC institute, in particular, limitation of the list of industries and high amount of investment (750 million rubles) to be able to conclude SPIC. In this regard, in August 2019, the President of the Russian Federation signed three federal laws aimed at improving the mechanism of SPIC 1 and appearing of SPIC 2, the comparative characteristics of which are shown in table 3.

Table 3. Comparative characteristics of SPIC 1.0 and SPIC 2.0.

	SPIC 1.0	SPIC 2.0
Initiator	Investor was the only initiator of the contract	Investor, the Russian Federation, constituent entity of the Russian Federation together with the municipal formation are the initiators of the conclusion of the contract
Investment requirements	750 million rubles	Any amount of investment
Validity	10 years	15 years with an investment amount of up to 50 billion rubles 20 years with an investment amount of over 50 billion rubles
Participation of a constituent entity of the Russian Federation	Possibility of concluding a federal or regional contract	Mandatory participation of all levels of government
Document flow		Electronic process of concluding and registering implementation of the entire project via state information system of industry
Changes made to the Tax Code of the Russian Federation	Duration of income tax benefits until 2025 Providing concessionary income tax rate only in case of exceeding the threshold of 90% of revenues	Validity period of tax incentives is not limited Termination of budgetary investments in the project in case of exceeding 50% of the investor’s investments in the SPIC

The listed tools for stimulating large investment projects are reduced to structuring special conditions with a preferential tax regime, examples of which are shown in table 4.

Table 4. Tools for stimulating large investment projects.

Tools	Income tax		Property tax	Social payments
	Local part	Federal part		
Current system	17% (18% from 2021)	3% (2% from 2021)	2.2%	30%
SEZ	13.5% for the entire period	2% for the entire period	0% for 10 years from the date of profit	Current tax system
TASED	0% for 5 years from the date of profit, 10% for the next 5 years	0% for 5 years from the date of profit	0% for 5 years from the date of profit	7.6% for 10 years from the date of profit
RIP	0% for 5 years from the date of profit, 10% for the next 5 years	0% for 10 years from the date of profit	Current tax system	Current tax system
SPIC	0% for 10 years from the date of profit	0% for 10 years from the date of profit	Current tax system	Current tax system

Large reserves of mineral raw materials determined the role of petrochemical industry in budgeting of country revenues. Currently, petrochemical enterprises, along with general taxes, render oil payments which include the mineral extraction tax (MET) and export customs duties on oil and oil products (export duty). It should be noted that the tax on oil industry in Russia is the highest in the world; on average, its value is about 68% of the company revenue.

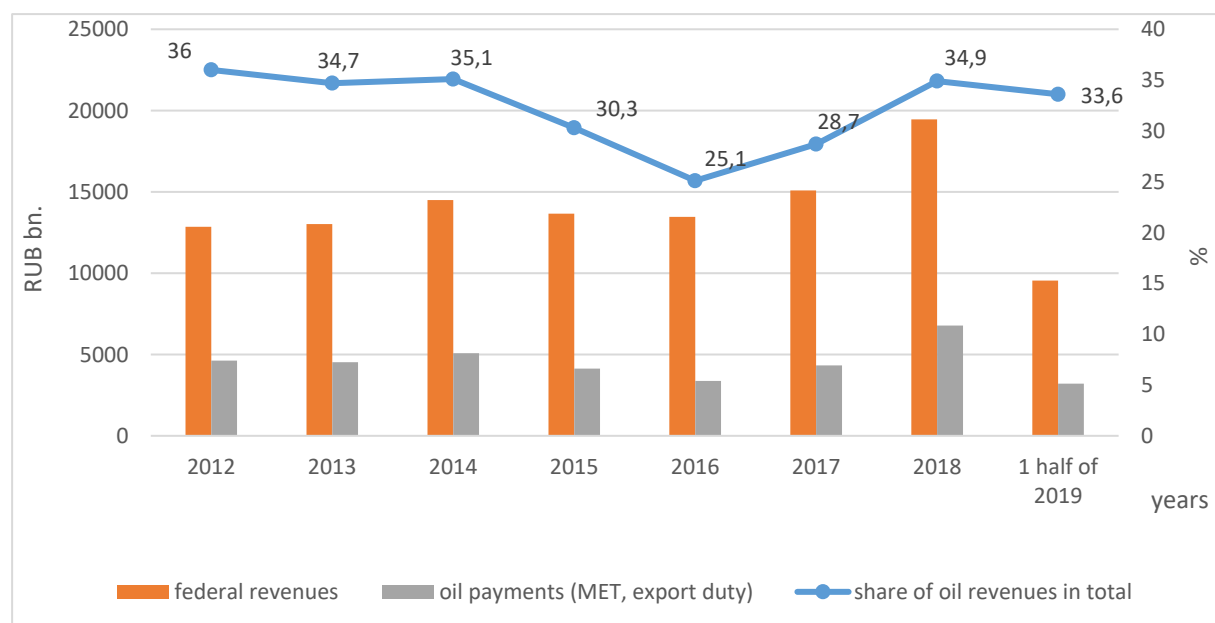


Figure 3. Dependence of federal budget revenues on oil industry.

According to the operational data of the Ministry of Finance, for the first half of 2019 the amount

of oil payments amounted to 3,210 billion rubles, the share in federal budget revenues is 33.6% (figure 3).

The graph (figure 3) clearly shows the following trend. After the decrease in the share of oil payments to the federal budget in 2015-2016, the role of export revenues from oil companies in budgeting process began to increase, as a result, by the end of 2018, oil revenues amounted to 34.9% of total revenues. At the same time, a positive trend in the share of oil revenues is also observed in 2017, although the average annual world oil prices were below the level of 2016.

At the same time, according to the statement of the head of the Ministry of Energy, oil production in the country, due to the lack of incentives, may fall by 44% by 2035 [8]. As of today, Russia, is heading towards the loss of its oil export potential in terms of easy-to-reach oil reserves, and is able to increase its production only for the period of the next two years, after which a sharp decline is expected. The reasons for this forecast are a decrease in the average flow rate of wells, an increase in capital costs, an increase in the cost of producing a ton of oil, current fiscal policy of the state in relation to petrochemical enterprises. Without additional stimulation of oil production the country budget starting from 2022 may receive less than RUB 3.3 trillion taxes; reduction in investments, in turn, may amount to RUB 1.3 trillion.

In this regard, an important measure of state support for the development of domestic petrochemical industry is financial and tax incentives for investments in its modernization.

To ensure the required modernization and optimization of oil refining volume, the Government of the Russian Federation made a decision to implement a tax maneuver providing reduction in export duties while simultaneously adjusting other taxes and duty ratios for oil and oil products to balance the interests of budget, oil industry and domestic market consumers.

As a result of the oil tax maneuver implementation, tax incentives more than doubled for companies in the petrochemical industry from 2013 to 2018 (RUB 0.5 to RUB 1.2 trillion), the share of preferential oil production doubled over five years from 26.7% in 2013 to 49.8% in 2018. Current tax breaks helped stabilize oil production and increase profits for oil companies (EBITDA in the industry increased by 2 trillion rubles), but did not give a comparable increase in investments, the value of which increased by only 33% (RUB 350 bn). The companies profits were usually used to purchase shares, pay dividends, pay off loans rather than implement new projects [9-10].

To change this situation, beginning from January 2019, legislative decisions on the phased completion of the tax maneuver and introduction of a tax on additional income from the extraction of hydrocarbons (Federal Law No. 199-FZ dated 19.07.2018) came into effect. This decision of the Government should help stimulate investment activity in terms of modernizing oil refining industry, reducing subsidies for domestic consumers and reducing Russian subsidies to other EAEU countries. In addition, in the period from 2019 to 2024 a gradual decrease to zero is provided in the rate of export duty on oil so that to compensate for the increase in the tax on mineral extraction during oil production and introduction of a negative excise tax on raw materials for a number of refineries. In accordance with parameters of the tax maneuver completion, refineries that meet one of the following criteria will be able to apply for negative excise tax:

- refinery is owned by a company that is subject to sectoral sanctions;
- refinery supplies naphtha and class 5 motor gasoline to the domestic market for petrochemicals in the amount of at least 10% of the refining level;
- refinery entered into a modernization agreement, according to which either the volume of investments will be at least RUB 60 bn, or after the completion of all measures, the share of auto gasoline production in the volume of refining will be at least 10%. At the same time, only refineries with a processing volume of more than 600 thousand tons in 2017 are entitled to conclude a modernization agreement.

4. Summary

The restructuring of the current tax system (completion of the tax maneuver) is expected to significantly change the structure of the industry. Refineries that have entered into an investment

agreement will be forced to modernize under the threat of subsidies deprivation. Some independent refineries will be constrained to wind down their activities; accordingly, the others will be able to survive due to strong factors of competitiveness.

5. Conclusions

Thus, measures of state regulation and the existing state strategy for the development of petrochemical industry in Russia should contribute to its maintenance and development, but they cannot radically affect the efficiency of the industry. The main role of the state in this regard should consist in coordinating and linking the interests of all sectors-participants – from the extraction of raw materials to the sale of final products.

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