

TAX REGULATION MECHANISM FOR PETROCHEMICAL INDUSTRY COMPANIES INNOVATION DEVELOPMENT

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Abstract. This paper considers the problems of taxation and the dynamics of development of investment activities of oil companies in the Russian economy. The issues of petrochemical industry taxation, restoration of mineral reserves, evaluation of Russian oil production optimum size as well as the upward rise in petroleum product prices remain to be the most pressing and debating points. The study consists of several stages and is based on data published on the official websites of companies Gazpromneft, Lukoil, Tatneft, Rosneft, Surgutneftegaz.

Within the scope of the given study the authors carried out a factorial analysis of the company "TATNEFT" investment activities. The amount of investments into petrochemical vector of the company's development was taken in the quality of the resultant indicator. Several factors including taxation, net profit, a company's expenses connected with product manufacture and realization, long-term obligations size and others were considered as variables. These data were reported within the period of 2004-2016

Keywords: oil production, taxes, investments, innovations, education, competition, profitability, oil companies.

2. Introduction

The dynamics of the Russian economy development is indicative of the increasing complexity in solving problems accumulated in the industry. Despite the fact that the country's petrochemical complex remains to be the main source of profit generation, the financial resources for large-scale investments to upgrade its technological base are much to be seek.[1,2]. At present Russia is the second largest oil-producing country in the world and this fact contributes to certain preconditions for further development of petrochemical industry companies. So, to provide incentives for the development of companies through innovation and investment in raw materials further processing turns to be an overarching goal.[3-5]. The processed product prices show upward/downward movement in accordance with changes in the price of crude oil; however, one can see certain differences in price relation between processed products and crude oil, as well as between different types of products. The given differences are essential for refineries since they significantly affect the profit to be possibly gained by individual oil-processing plants in the course of oil processing activities implementation. [6-8]. In consequence of the prolonged work to improve legislation in the sphere of subsoil use, where TATNEFT Company took active participation, the Federal Law on oil and gas production tax differentiation (NDPI) was adopted and carried into effect on January 1, 2007. The Law stipulated the differential taxation of crude-oil production depending on the depletion of reserves. Petroleum recovery in "Romashkino" and other oilfields of OAO (OJCS) TATNEFT is subject to taxation with the diminishing coefficient to tax rate according to NDPI.[8-12]

3. Materials And Methods

The data from the on the official websites of companies Gazpromneft, Lukoil, Tatneft, Rosneft, Surgutneftegaz served the material for work. The significance of the taxation mechanism in regulation of the investment and innovation activities is determined by the fact that the main source of investment for companies in petrochemical complex remains to be own funds of enterprises.

Table 1 Profitability performance profile (ROI) for the largest oil companies in Russia in 2015

| Oil Companies | Revenue, billion rub. | Tax payments excluding crude export duties | Tax – revenue ratio | Return on sales | Return on equity |
|----------------|-----------------------|--|---------------------|-----------------|------------------|
| ROSNEFT | 3 831,1 | 1277 | 0,33 | 13% | 17% |
| LUKOIL | 5750 | 1194,36 | 0,21 | 82% | 25% |
| SURGUTNEFTEGAS | 1 002,6 | 521,277 | 0,51 | 24% | 24% |

| Oil Companies | Revenue, billion rub. | Tax payments excluding crude export duties | Tax – revenue ratio | Return on sales | Return on equity |
|---------------|-----------------------|--|---------------------|-----------------|------------------|
| GASPROMNEFT | 1467,943 | 382,397 | 0,26 | 2% | 7% |
| TATNEFT | 552,7 | 217,048 | 0,39 | 26% | 16% |

As is clear from Table 1, the earning capacity of TATNEFT stands on quite acceptable level in comparison with its business rivals. At the same time, TATNEFT carries the highest tax burden. Tax rate for oil and gas production (NDPI) in 2015 has been marked up by 8, 3 % at preserving all allowances against tax (reduced tax rate of NDPI in oilfields with a high degree of depletion, reduced tax rate of NDPI on small production fields, zero rate in fields with super-viscous oil, reduced tax rate of NDPI in relation to hard- extracted reserves). This fact stipulated the decrease in NDPI – revenue ratio in 2007 what is shown in Fig.1

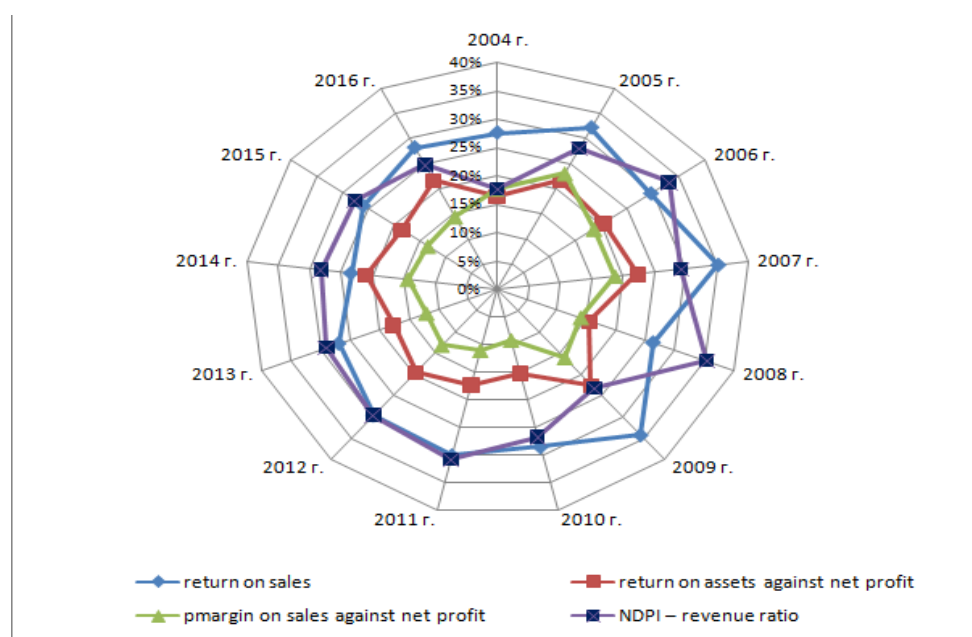


Fig. 1 – Dynamics of tax burden (according to NDPI) and earning yield in PAO TATNEFT's economic activities within the years of 2004-2016.

As is seen from Fig. 1, all profitability ratios have inverse relationship with the level of tax burden according to NDPI. It is particularly obvious in case of sales margin dynamics. As it appears from the given diagram, the year of 2007 was the most profit-making for PAO TATNEFT. The share of petrochemical industry sector mounts to 10% and even more in net sales of the largest oil and gas companies such as ExxonMobil, British Petroleum, Shell, Chevron-Texaco, Conoco-Philips and a number of others.

Since petrochemical industry market appears to be more and more globalized in terms of new technologies spreading, raw materials and sales areas availability, the companies operating in the industry face mutual problems such as legislative regulation, price formation and a reduction in quantity of "a heavier feedstock". Nevertheless, in view of various starting lines and historically developed weak and strong points, the prospects for petrochemical industry progress in the regions are marked far different.

It should be noted that if the profit of the enterprise is the main source of investment, taxation imposing a significant impact on the company's investment activity. To consider the dynamics of PAO TATNEFT investment activity let us examine Fig.2.

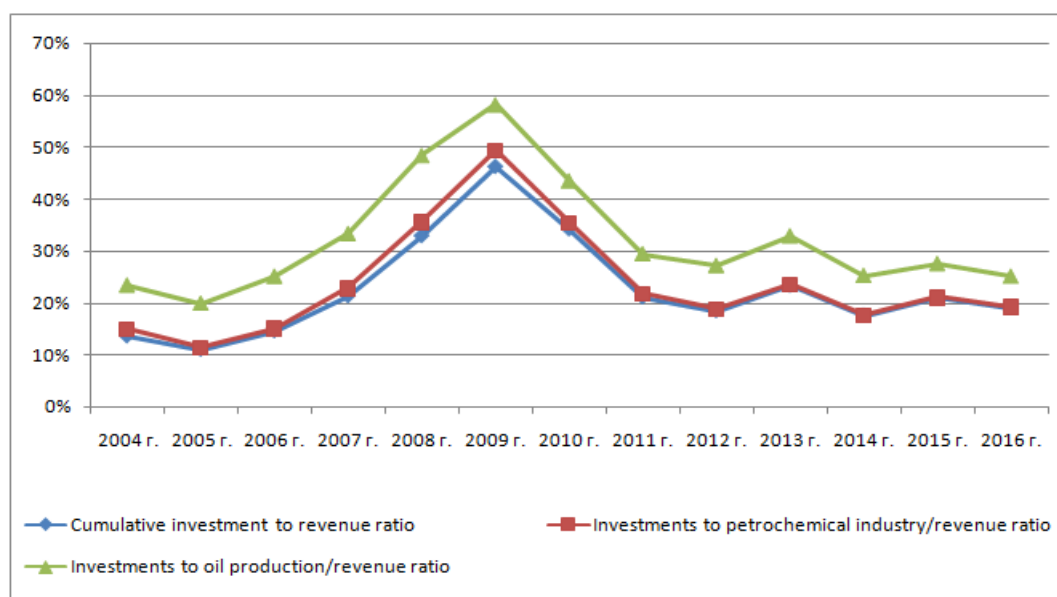


Fig.2 - Dynamics of PAO TATNEFT investment activities in 2004-2016.

As is clear from Fig. 2, the company's investments have given a significant growth since 2007, i.e. since the time when preferential taxation system according to NDPI was brought into force. Dampening of the company's investment activity started from 2009 and continued in 2014/2016.

The development of oil processing, chemistry and petroleum chemistry has a particular significance in the oil companies' investment structure. In some measure this is connected with the given industry development progress in terms of the world economy. Table 2 presents the main actual and estimated figures for oil and gas section prospects in the global economy.

Table 2. Main actual and estimated figures of Russian petrochemical industry in the global economy

| Characteristic | 2007 | 2008 | 2015 | 2020 |
|---|------|------|------|------|
| The share of the industry in global GDP, % | 3,2 | 2,9 | 4 | 5,3 |
| The share of petrochemical product global export in the world export, % | 10,9 | 7,7 | 13 | 15 |

As it is obvious from table 2, the share of the industry in global GDP will definitely be on the increase and, consequently, the share of petrochemical product in export structure will grow up too. The chemical industry in Russia comprises 20 sub-branches and produces 16 thousand items in 7. 6 thousand enterprises using for the purpose about 5% of the total oil and gas resources being processed in the country. The aggregate capacities of companies in the economy petrochemical segment are inferior to manufacturers from the developed countries. But in part of ethylene production the Russian Federation takes the lead over such states as the USA, Japan, Canada and China.

4. Results And Discussion

Despite the significant potential and cheap cost of raw materials, Russia occupied the 12-th place in the world according to production of chemical products - Russian enterprises produced about 2.5 % of world chemical output. But so far these figures are not high enough. In these circumstances, it is necessary to increase investments in petrochemical industry and the production of goods with a higher added value.

Within the scope of the given study the authors carried out a factorial analysis of TATNEFT investment activities. The amount of investments into petrochemical vector of the company's development was taken in the quality of the resultant indicator. Several factors including taxation, net profit, a company's expenses connected with product manufacture and realization, long-term obligations size and others were considered as variables. These data were reported within the period of 2004-2016.

The equation of correlation- regression model is as follows:

$$y=4607,9753-0,012092*x_1-0,003505*x_2, \text{ where}$$

y – amount of investments into petrochemical direction for the development of TATNEFT company;

x1 - costs of TATNEFT outputs production and realization;

x2 – volume of TATNEFT long-term liabilities.

Thus, the investments into TATNEFT petrochemical production enterprises primarily depend on the company's expenditures and long-term liabilities size, i.e. on the possibility to attract long-term loans for investment projects financing. This situation is obviously illustrated in Fig. 3 and 4.

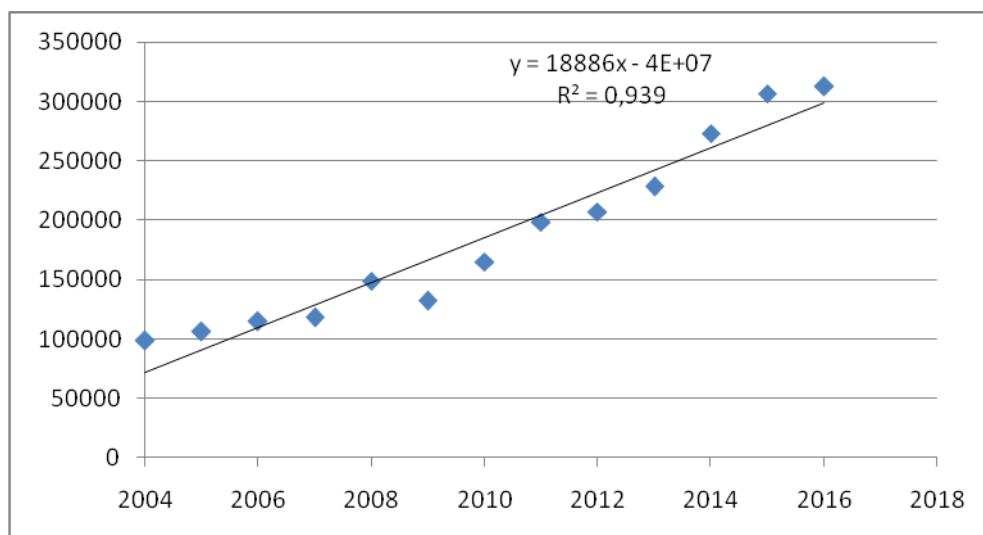


Fig. 3. Dynamics of expenditures connected with TATNEFT produce realization and sales within the period of 2004-2016.

As can be seen from figure 3, the coefficient of determination is quite high, this means that the regression equation is possible to be used for forecasting by exponential smoothing method which is the most effective in the development of medium-term forecasts.

Fig. 4 presents the change in dynamics of the second factor affecting the amount of investments into petrochemical products in TATNEFT group of companies.

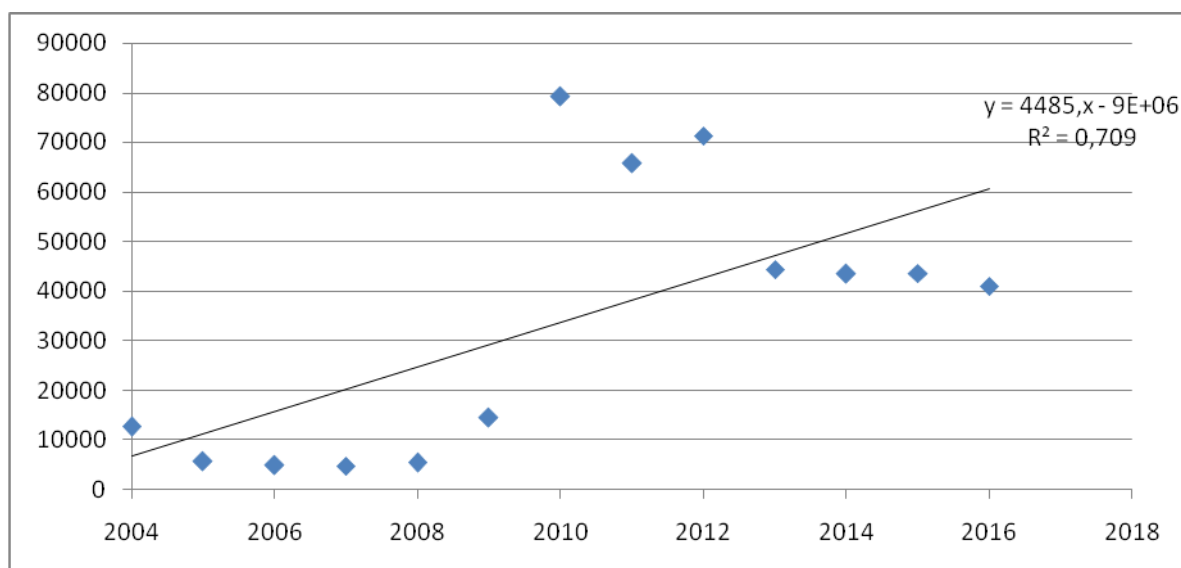


Fig. 4. Dynamics of expenditures connected with TATNEFT products manufacture and sales within the period of 2004-2016.

Fig. 4 demonstrates that the accuracy of the model being characterized by determination factor makes possible to apply this model for medium-term forecasts.

The existing taxation system also sets itself a task to stimulate the upgrading of the petroleum refineries in operation and to enlarge the output of light oil products.

5. Summary

Budget revenues in many developing economies as well as in Russia are inextricably linked with hydrocarbon extraction production output since they constitute oil and gas budget income. Such status is considered to be of little promise for foreign investments attraction. In several countries oil and gas revenues may amount to 70% of the whole budget, so in Saudi Arabia they make 75%. Oil and gas revenues exceed 50% in Venezuela, Algeria and Ecuador. Such ratio reflects susceptibility of underdeveloped countries to oil price shocks sometimes happening in the world market.

Oil and gas industry in Russian economy appears to be one of the main subcomponents ensuring functioning of the other sectors and standard of living among the population of the country. The significance of the industry bases on

systematic development the country's economy, its safety and absence of the dependence in power engineering, in agricultural and other sectors.

6. Conclusions

The analysis made us to arrive at the following conclusions. The closest affinity between the resultant indicator and such factors as the expenses connected with product manufacture and sales as well as long-term obligations amount has become obvious. The trends of indicators fluctuation are unidirectional and demonstrate steady growth throughout the duration of the whole period under consideration. At the same time, pace of growth in investments deposited into petrochemical production enterprises fails to keep up with the rates of the taxation burden and expenses elevation.

The most important distinguishing feature of the Republican industrial policy is that the complex of branches of oil production, oil refining, chemical and petrochemical industry is considered as an integral object of state regulation. Therefore, elaboration of the certain branches development strategy is traditionally put into practice in the context of petrochemical complex in whole.

It should be emphasized that such an approach for Russia is not indicative at all. Though the condition of chemistry and petrochemistry having been improved, for the time being, however, the industry in whole does not occupy the first lines in petrochemical complex development strategy of Russia. The investments aimed at development of oil producing industry, fuel refinery, pipeline transportation are incomparable with the injections planned to be invested into chemistry and petroleum chemistry.

Accordingly, there arises a need in a balanced taxation policy in relation to investments. In this respect it would be nice to support the following measures: preferential taxation in part of oil companies' profit invested by the enterprise into the development of innovative petrochemical industries; elimination of customs duties on imported technological equipment produced not in Russia; taxation system optimization in part of tax on the extraction of minerals.

7. Acknowledgements

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