

THE MAIN PROBLEMS AND PROSPECTS FOR THE DEVELOPMENT OF THE CHEMICAL COMPLEX OF UZBEKISTAN IN THE CONDITIONS OF INNOVATIVE DEVELOPMENT

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Abstract

This article examines the problems and ways to solve them in the basic branch of the economy of Uzbekistan - the chemical industry. Measures are proposed to improve the efficiency of the chemical industry. The strategic goals of development of the chemical and petrochemical industry of Uzbekistan at the present stage of development are defined. On the basis of review, the article concludes that there is an enormous need to eliminate the above-mentioned problems in the industry, which is the basic segment of industry, has a great influence not only on structural changes in the economy, but also on ensuring the food security of the republic.

Keywords: chemical industry, mineral fertilizers, investment, innovative scenario, diversification

INTRODUCTION

The chemical industry is the basic branch of the economy of Uzbekistan

The steady growth rate of the chemical industry in Uzbekistan is the result of a deeply thought out policy of large-scale reforms implemented since the first years of independence. The industry is a voluminous complex of industrial facilities specializing in the production of mineral fertilizers, organic and polymeric products, various types of reagents, calcined and caustic soda, as well as chlorine products. It includes research and design institutes, as well as an industry innovation center.

The chemical industry is one of the basic branches of the economy of Uzbekistan and was formed, proceeding from the needs of intensification of agricultural production, by creating enterprises for the production of mineral fertilizers - JSC "Maxam-Chirchik", JSC "Ferganaazot",

JSC "Navoiazot", JSC "Ammophos", " Samarkandkimyo "and" Kokand superphosphate plant "produce phosphorus fertilizers, ammophos, suprephos, simple ammoniated superphosphate, ammonium sulfophosphate and nitropolium phosphate. They are supplied with raw materials by the Kyzylkumphosphorite plant. jv-jscElektrochimzavod produces various types of chemical plant protection products.

Uzkimyosanoat JSC is the leading producer of ammonia, carbamide, ammonium nitrate, ammonium sulfate, ammophos and nitrophos, and the only producer of all three types of mineral fertilizers - nitrogen, phosphorus and potash. Since 2016, NPK-fertilizers have been added to this list.

To implement structural changes, modernize and diversify the chemical industry, provide deeper processing of rich mineral resources, expand the volume and range of finished export-oriented chemical products, and widely attract foreign investment for these purposes, the Chemical Industry Development Program was developed until 2021.¹The implementation of measures for the modernization and technical updating of the chemical industry, the introduction of modern innovative technologies and the creation of new industries based on modern energy and resource-saving technologies will provide a powerful impetus for Uzbekistan to enter new boundaries that will ensure the competitiveness of our country in the world market.

However, the systemic problems in the industry that have accumulated over the years still await their solution. So, in a difficult financial situation were industrial enterprises for the production of mineral fertilizers.

The costs associated with mineral fertilizers for agricultural needs are not covered. As a result, chemical enterprises are limited in their ability to pay for the consumption of natural gas, electricity, phosphate raw materials, sulfuric acid and other types of goods and services consumed, and their accounts payable.

However, there are shortcomings in reducing the cost of mineral fertilizers and increasing the profitability of the industry. In particular, 67% of the cost of nitrogen fertilizers are energy costs. Ferganaazot, Dekhkanabad Potash Fertilizer Plant, Kokand superphosphate plant, Ammophos-Maxam and Maxam-Chirchik companies finish in 2017 with low profitability, and Navoiazot with losses. In such conditions, enterprises are completely limited in the formation of their own working capital and are forced to solve problems by attracting loans at 16-18% per annum.

¹Resolution of the President of the Republic of Uzbekistan on August 23, 2017 No. PP-3236 On the program for the development of the chemical industry for 2017-2021.

Another problem that needs attention is the wear of the main process equipment. As a consequence, the technological process is disrupted, due to lack of funds, the equipment remains without current and major repairs.

The main problems that enterprises are experiencing today, privatized by means of corporatization, are associated with the placement of shares and the attraction of capital; excessive tax burden and heavy debt to the budget; high cost of raw materials, materials, energy carriers; low payment discipline; obsolete technical base; the poor organization of the sale of products, the underdevelopment of the marketing infrastructure.

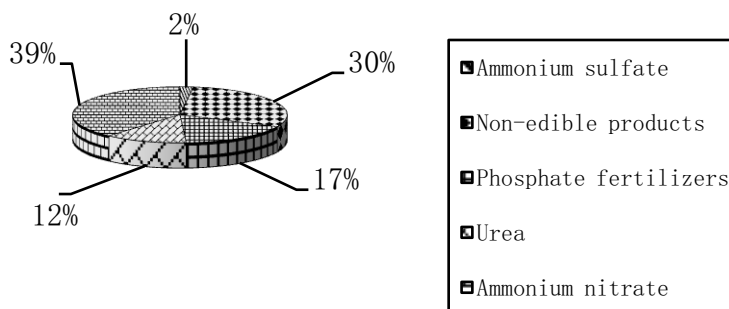
In the prevailing conditions, the question of finding sources of investment, both internal and external, that will make it possible to ensure the technical re-equipment of production, becomes especially urgent. In order to attract foreign investment in the processes of denationalization and privatization of industry enterprises, it is necessary to use an individual approach to the privatization of each individual production.

Prospects for privatization of enterprises in the industry should include: modernization, reconstruction and construction in exchange for the output of physically and morally obsolete facilities, including the production of mineral fertilizers and raw materials for them; ensuring the needs of the Republic's agriculture in mineral fertilizers; exporter and import substitution; saving raw materials and energy resources through the introduction of advanced technology; bringing the quality of products to world standards; ensuring financial recovery and improving the profitability of the enterprise.

In this regard, JSC "Uzkimyosanoat" developed a program of specific measures to reduce costs for the production of chemical products and increase its competitiveness in 2018-2019, which provides for the modernization and reconstruction of ammonia production, aimed at increasing production and reducing the cost of mineral fertilizers, increasing their competitiveness. It is expected that after the reconstruction the capacity of ammonia production at the company "Maxam-Chirchik" will be 420 thousand tons per year. At the same time, the cost of ammonia will decrease by 18.1%, and the natural gas consumption per 1 ton of ammonia by 0.4 thousand cubic meters. Modernization at JSC "Ferganaazot" should help to increase the capacity of ammonia production to 400 thousand tons per year. At the same time, the specific consumption of natural gas per 1 ton of ammonia, according to our calculations, will decrease by 236 cubic meters, electricity consumption by 64.5 kW / h, and the cost price by 22.5%.

Measures to improve the efficiency of the chemical industry will contribute to the achievement of sustainable development by expanding the scope of production (Fig. 1).

Figure 1 Structure of products in JSC "Uzkimyosanoat"



To date, Uzbekistan needs a high-tech chemical complex to address the most important national economic problems associated with the development of agriculture, light industry, housing and communal services, etc. Enterprises of the chemical complex are suppliers of raw materials, semi-products, various materials (plastics, chemical fibers, tires, varnishes and paints, dyes, mineral fertilizers, etc.) for all industries, and are able to have a significant impact on the scale, direction and effectiveness of their development. Lagging from the world level in the provision of chemical materials in these industries entails a loss of competitiveness of the products produced in them.

In this connection, the strategic goal of the development of the chemical and petrochemical industry in Uzbekistan at the current stage of development is to develop the competitiveness of the chemical complex and ensure the effective matching of production volumes, quality and assortment of chemical and petrochemical products with the aggregate demand of domestic and world markets. Implementation of the strategic goal implies the solution of the following tasks:

- technical re-equipment and modernization of existing ones and creation of new economically effective and environmentally safe production facilities;
- development of export potential and domestic market of chemical products;
- organizational and structural development of the chemical complex in the direction of increasing the output of high-tech products;
- increase of efficiency of research and development and innovative activity of the enterprises of a chemical complex;
- development of resource and raw materials and fuel and energy for the chemical complex;
- the development of the transport and logistics infrastructure of the chemical complex.

The main problems of the chemical complex

It should be noted that at present the chemical industry of Uzbekistan is far from achieving its strategic goal. The starting conditions seem to be low due to the lack of an adequate production and technological base for the needs of the market (currently the service life of a significant part of the equipment of the chemical complex is 20 years or more), the presence of infrastructure constraints, and insufficient investment directed to the industry.

The main problem of the chemical complex is that there is a gap between the development of the chemical market and the development of the domestic chemical complex, which in the future can reach a critical size due to a gradual loss of existing ones and a lag in the formation of new competitive advantages. The main causes and factors for the appearance of this problem include:

- high resource and energy intensity;
- the maximum level of capacity utilization of the most important types of chemical and petrochemical products, technological backwardness and high depreciation of fixed assets;
- infrastructure and resource and raw materials restrictions;
- low innovative activity of chemical enterprises;
- Inefficiency of investment process.

The main reason for this state of affairs is the situation in the last 15-17 years, when during the transition period, in the conditions of multiple compression of domestic demand, only the export of goods with a low degree of processing was effective. As a result, by the present time, resource-intensive large-tonnage production dominates in the production structure of the domestic chemical complex, at the heart of whose competitiveness is low cost, compared to the price level in world markets, natural resources (primarily fuel and energy) resources. Favorable conjuncture in the world energy market deprives exporters of incentives to improve the quality of products, restraining the development of the chemical complex.

Among the main inhibiting factors of the industry development is the inconsistency of the structure of production of the chemical complex of Uzbekistan with the current trends in the chemical industry of developed countries:

- the basis of production of the chemical complex of Uzbekistan is products with a low degree of redistribution of primary raw materials;
- The technological equipment installed at the enterprises is extremely backward (the service life of a considerable part of it is 20 years or more, the level of depreciation of fixed assets is about 42%).

Nevertheless, despite the complexity of the situation in the chemical industry, there are prerequisites and opportunities needed to create a developed, diversified industry, among which are: significant energy-raw materials, water and other natural resources on which the development of the chemical industry is based; availability of a capacious fast-growing domestic market, with the potential for import substitution; the presence in the industry of a sufficiently powerful production and scientific and technical potential.

Taking into account the importance of the development of the chemical complex, the Program for the Development of the Chemical Industry for 2017-2021 was developed.².

The program for the development of the chemical industry for 2017-2021 envisages the implementation of 43 investment projects with a total cost of \$ 3.1 billion, to increase industrial production by 2.4 times, their exports - 2.7 times, to increase the share of localized products to 42.5% and master the production of 43 new products.

To regulate the export-import activities of the industry, increase the volume and expand the geography of sales of chemical products in the foreign market, the limited liability company "Uzkimyoipek" was organized. The reforms implemented have a positive effect on the chemical industry.

According to the innovative scenario, it is expected to increase the production of chemical products, raise the level of domestic chemical products to the world level thanks to the development of science and engineering, the successful organization of production of high-tech, science-intensive chemical products with high added value. As a result, by 2019, qualitative changes will be made in the sectoral and species structure of the chemical complex: it is projected to achieve a specific weight of technologies in chemical products of the order of 30-50% (which corresponds to the world level), as well as a significant increase in production. On this basis, it is planned to implement effective import substitution, reduce the dependence of the domestic market on foreign companies, ensuring economic security for domestic producers.

CONCLUSION

The implementation of an innovative scenario and the achievement of the goals of scientific and technological development of the chemical industry presupposes the need to form a number of internal and external conditions.

²Resolution of the President of the Republic of Uzbekistan on August 23, 2017 No. PP-3236 On the program for the development of the chemical industry for 2017-2021.

The necessary external conditions for the sector include:

- 1) the accelerated development of the economy of Uzbekistan, corresponding to the innovative development option according to the Strategy for the Further Development of the Republic of Uzbekistan³;
- 2) improvement of the structure of the industry, incl. due to stimulation by the state, improvement of alignment of oil and gas chemical holdings for solving two issues:
 - a) Providing the relevant productions with raw materials at prices conducive to retaining competitiveness in the domestic and foreign markets;
 - b) concentration of financial resources to facilitate financing of large long-term investment projects; development of public-private partnership mechanisms through which existing companies could realize the existing advantages, in particular, to integrate the significant scientific potential of the industry into the system of the reproductive mechanism for the development of the chemical industry as a whole;
- 3) stimulation of investments in the development of the chemical complex through the application of regulatory functions of the state on the basis of public-private partnership;
- 4) development of the system of training and retraining of industry personnel.

Necessary conditions that must be created within the industry, such as large-scale technological modernization of production, the introduction of resource and energy-saving technologies, including through the use of both own and existing foreign scientific, technical and production-technological potential (by attracting direct foreign investments, purchase of licenses for highly efficient new technologies, etc.); reduction of specific consumption of raw materials, fuel and energy and labor resources (by 12-15%) for the production of chemical and petrochemical products; improvement of the structure of export supplies in the direction of increasing the share of deep processing products; development of import-substituting industries; deepening of processing of hydrocarbon and mineral raw materials on the basis of the newest technologies, development of nanotechnologies and expansion of their use for obtaining materials with specific operational properties (super strength, hardness, chemical-heat resistance, chemical and catalytic activity, etc.) widely used in practically all spheres of activity; the maximum implementation of the results of domestic developments and the use of the latest equipment of domestic machine-building enterprises in the reconstruction, technical re-equipment and construction of new industries, the concentration of innovative activities in the chemical complex

³Decree of the President of the Republic of Uzbekistan No. UP-4947 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" of February 7, 2017

in the development and implementation of new technological processes characterized by a limited number of operations, waste-free, deep redistribution of raw materials.

In addition, for the further sustainable development of the chemical industry in Uzbekistan, production diversification is necessary. The course on accelerated modernization of the economy adopted by the Government of the Republic of Uzbekistan assumes a radical change in the role and importance of the chemical industry in the development of industrial production and its contribution to the country's GDP. The diversification of production, which applies to the chemical complex, involves the implementation of measures to improve the product structure of production, on the basis of increasing the level of processing of raw materials, the development of infrastructure, the transformation of logistics links, overcoming the monopolization of production and improving the management strategy will help to achieve this goal.

Taking into account the above, there is an enormous need to eliminate the above-mentioned problems in the industry, which is the basic segment of industry, has a great influence not only on structural changes in the economy, but also on ensuring the food security of the republic, has a significant macroeconomic effect and determines the level of national competitiveness, and affects the pace of economic growth in general.

REFERENCES

Decree of the President of the Republic of Uzbekistan No. UP-4947 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" of February 7, 2017

Resolution of the President of the Republic of Uzbekistan on August 23, 2017 No. PP-3236 On the program for the development of the chemical industry for 2017-2021.