

Postulations for Increasing the Export Potential of the Petrochemical Complex in the Modern Era

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ABSTRACT: The postulates of increasing the export potential of the petrochemical complex in the modern era were examined. The problems in the development of the petrochemical complex were explained and generalised. The role of the petrochemical sector in Azerbaijan's economic diversification was analysed. The importance of petrochemical export-oriented products in diversifying non-oil exports was substantiated. The importance of expanding the network of new competitive and export-oriented petrochemical enterprises was noted. It was considered important to increase the petrochemical complex's export potential through oil refining. Proposals were made to strengthen the export potential of the petrochemical complex in Azerbaijan in the near future.

KEYWORDS: Azerbaijan, petrochemicals, export, export potential, problems of petrochemical development, export potential of the petrochemical complex.

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Introduction

It should be noted that chemical and petrochemical products have many distinctive qualities. For example, these products can alter their quality indicators through chain reactions and serve as the basis for creating new products [1]. In general, chemistry is an important economic sector. The development of chemistry and petrochemicals plays an important role in the modernisation of the economy [2].

Along with this, chemical and petrochemical products are in demand in various areas of our lives and the economy, and the need for them is constantly increasing. On the other hand, in modern times, export potential plays a major role in strengthening the country's economic competitiveness and ensuring macroeconomic stability. Foreign exchange funds entering the country at the expense of exports are of strategic importance for ensuring financial stability [3]. Therefore, in addition to the export of oil and gas products, the development of non-oil export potential and increasing export volume are considered important issues facing our country in the current conditions [4].

Research Aim and Research Questions

The purpose of the study is to investigate the development postulates of the petrochemical complex, one of the important sectors of the economy, and to determine its export potential. The main methods of analysis, comparison, synthesis and generalisation were preferred.

Research Results

It should be noted that in recent years, efforts have been made to strengthen the export potential of the petrochemical complex, one of the non-oil sectors with significant export potential in Azerbaijan. In general, the production and export of non-oil products are priorities in our country [5]. For example, the commissioning of an important export-oriented enterprise - a high-density polyethene plant - in 2019 had a significant impact on the growth of our country's non-oil exports. At the opening of that enterprise, President Ilham Aliyev noted, "The production capacity of the plant will be 300 thousand tons. This means a 15% increase in our non-oil exports. Our main goal is to increase non-oil exports, diversify the country's economy, create new jobs and achieve the creation of modern technology enterprises in Azerbaijan".

Another high export potential: the polypropylene plant of "SOCAR Polymer" should also be noted; this plant is considered the first large company established in our country's petrochemical industry under a public-private partnership. The total investment capacity of this strategic export-oriented petrochemical enterprise was \$816 million. It is interesting that, during the operation of this plant, it is expected to generate \$6.3 billion in revenue, of which 30% will be attributed to the company's net profit. At the same time, as a result of this large export-oriented plant's activities, the export revenues of our country's non-oil sector will increase significantly [6]. Such measures and the creation of large production capacities are giving significant impetus to increasing our country's export potential. The strategic goals related to all this are reflected in the "Strategic Roadmap for the Development of the Oil and Gas Industry (including Chemical Products) of the Republic of Azerbaijan", approved by the President's decree dated

December 6, 2016. Currently, the implementation of this strategy is underway, with the main focus on the construction and commissioning of export-oriented production facilities equipped with modern technologies [7].

At the same time, more favourable conditions are being created for the transfer of high technologies in the petrochemical sector to our country through expanded relations with foreign companies. On the other hand, the problems of efficiently using the large technological capacities of the chemical and petrochemical complex currently in Azerbaijan should be solved [8]. Thus, increasing the productivity of such facilities and ensuring their operation in accordance with design parameters not only increases profitability but also enables the production of a greater variety and volume of export-oriented products. These problems have been the subject of discussion for many years, and cases of operation of many large facilities below their design capacities continue [9]. Therefore, approaches and relations in such issues should be based on progressive international experience, the amount of profit and added value that raw materials can provide in the production process should be investigated in more depth, necessary measures should be taken taking into account the demand and prices of final products in world markets, raw material supply should be strengthened, and measures to increase the production of export-oriented products should be expanded [10].

It should be noted that the country also faces challenges in developing the private sector in the petrochemical sector and in accessing raw materials. This is primarily because oil and gas raw materials in the country belong only to SOCAR. It is no secret that a large number of small and medium-sized private chemical and petrochemical enterprises and firms do not have access to the raw materials resources of this company. It is also possible to note the lack of transparency in the formation and distribution of raw materials in a wide range [11]. These are also related to the modern approach to the development processes of the petrochemical complex in a market economy and the issues of increasing its export potential [12].

The development of the petrochemical complex in Azerbaijan is directly related to the oil industry and serves as an important part of its processing chain. After World War II, the petrochemical complex, as a processing industry sector that has undergone extensive development in Azerbaijan, along with the oil industry, has developed strong potential. On the other hand, this sector's role in the republic's economic development has been of strategic importance at all times [13]. It is no coincidence that during the former USSR, Azerbaijan's petrochemical complex was considered one of the strongest centres of the country's chemical and petrochemical industry. A wide range of products was exported from large petrochemical enterprises, mainly located in Sumgayit, to more than 400 cities of the former USSR, as well as to dozens of other countries worldwide. These products were especially in the spotlight at the time for their potential to bring foreign exchange resources to the country [14]. In addition, among the important chemical and petrochemical products, chlorine and caustic soda, sulfanol, superphosphate fertilizers, synthetic rubbers, polyester and epoxy resins, propylene, polyethylene, butadiene, propylene glycol, propylene oxide, dichloroethane, isobutylene, polyisobutylene, epichlorohydrin, styrene,

isopropyl alcohol, nitrile rubber, nitrile latexes, chloroparaffins, sulfuric acid, household detergents, tires, rubber-technical products, glass fibers, plastic products, pharmaceutical products, etc. were produced. Times have indeed changed; most of the factories that produced these products have been closed, and not even a trace of their location remains. In a good sense, a network of new competitive enterprises based on modern technologies - technoparks and industrial parks - has been created in their place [15]. However, despite the possibility of restoring a significant part of the profiles and directions in which the production of petrochemical products was suspended, that is, creating enterprises based on new technologies, it is impossible to note that the processes in this direction are not very intensive [16]. To do this, it is enough to look at the structure of chemical and petrochemical products currently produced in our country, including the range of exported products, and the number of such products is not very large.

In modern times, the role of foreign exchange reserves and foreign exchange funds in stabilising macroeconomic and macrofinancial indicators, ensuring the stability of the country's financial system, and maintaining a stable exchange rate of the national currency is undeniable [17]. These problems are also considered quite characteristic of our country. In addition, the fall in oil prices on the world market in 2015-2016 and the associated double devaluation of our national currency, the manat, should not be overlooked. It was at that time that our country saved the national currency from complete bankruptcy by losing a significant portion of its foreign exchange reserves, and the shocks to the national currency from devaluation were eliminated within a short period. In view of these factors, the diversification of the country's economy and the expansion of non-oil export potential are characterised as strategic goals. It should be noted that the work done in these areas in recent years is bearing fruit, albeit to a small extent, and new sources and directions for non-oil exports are already emerging [18].

In addition, importance is being placed on logistical approaches to supplying raw materials to petrochemical enterprises. At the same time, the mechanisms for financing measures and reconstruction work to increase the export potential of petrochemical complex enterprises in the country are also being improved [19]. The chemical complex, one of the country's most important sectors, has almost reached a new stage of development. Along with the increase in petrochemical production capacity, their export potential is also expanding [20]. Along with state-owned chemical and petrochemical enterprises, the activities of private petrochemical enterprises are also attracting attention, and the state's measures to develop business relations and support export opportunities are also positively impacting these activities [21].

It should be noted that the share of exports in petrochemical production is increasing. For example, in recent years, more than 80% of the products produced by the country's largest petrochemical enterprises, the "Azerkimya" Production Association and Socar Polymer, have been exported to various countries worldwide. In this regard, the possibilities for increasing the production and export volume of export-oriented products should be analysed and assessed. Thus, the fact that the structure of the costs incurred in connection with the process of obtaining ethylene-propylene products at the "EP-300" unit,

the main processing unit of the Union's Sumgayit "Ethylene - Polyethylene" plant, together with raw materials and materials, as well as transportation costs, account for more than 65%, and costs for energy and fuel resources account for 25%, etc. can be evaluated as the main argument for the importance of organizing the efficient operation of the logistics system. The cost indicators of polyethylene, which is the main sales and export product at the Sumgayit "Ethylene - Polyethylene" plant, have the potential to form and determine a competitive price, both the sales price in the local market and the export price in world markets, taking into account sufficient profitability [22]. For this, more attention should be paid to the issues of organising and managing marketing approaches at the enterprise. During 2013-2019, the volume of investments in fixed capital at enterprises operating in the petrochemical complex amounted to 300 million manat. As a result, given the commissioning of several large export-oriented petrochemical enterprises, continuous work is being carried out in this direction. The main products of the SOCAR Polymer and SOCAR Carbamide plants, which have already been put into operation in Sumgayit, in addition to local demand, have high export potential, and the combined export potential of these two plants is 300-400 million US dollars per year. These production capacities and export-oriented enterprises operate in the Sumgayit Chemical Industrial Park.

Continuous and consistent measures taken in recent years in Azerbaijan regarding the export of non-oil products and supporting the export promotion of entities operating in this field have created favourable conditions for increasing the structure and volume of petrochemical product exports [23]. It is no coincidence that in recent years the export volume of our country's chemical products has doubled. The role of new large export-oriented petrochemical enterprises in this matter is great. For example, high-density polyethylene obtained at the newly commissioned facilities of "SOCAR Polymer" will, on the one hand, fully meet the demand for this raw material within the country, and, on the other hand, 75% of the produced product is exported [24]. The export geography of such products is also expanding; the volume of chemical products exported to dozens of countries, including Germany, is increasing. Alongside this, measures to more efficiently use the existing export potential should be deepened. The adequacy of state support mechanisms for stimulating the export potential of the non-oil sector, which is one of the important directions of economic development, should be assessed, and the directions of state regulation in this area should be improved.

Conclusions

Thus, we believe that in the near future, further improvement of approaches to the formation and development of the export potential of the petrochemical complex in Azerbaijan is required:

- In terms of modern challenges, taking into account the development factors in the world petrochemical market, new mechanisms for the effective use of the country's petrochemical complex's export potential should be developed.

- More advanced processing technologies should be preferred, measures should be taken to diversify the structure of production and exports, and new productive export potential should be created by expanding the petrochemical products processing network along the production chain.
- In addition to meeting local demand for the country's oil and gas raw materials, as well as useful ores and non-ores important as industrial raw materials, the process of creating a network of chemical and petrochemical product processing enterprises oriented towards an export-oriented strategy should be accelerated. Mechanisms for more intensive attraction of foreign investors, companies, and individuals to this area should be developed and applied.

References

1. Azerbaijan Republic Presidential Decree. (2016, December 6). *Azərbaycan Respublikasının neft və qaz sənayesinin (kimya məhsulları daxil olmaqla) inkişafına dair Strateji Yol Xəritəsi* [Strategic roadmap for the development of the oil and gas industry of the Republic of Azerbaijan (including chemical products)].
2. Aliyev, Sh. T. (2020). Problems of diversification of Azerbaijani economy in modern conditions. *Proceedings of the VIII International Scientific and Practical Conference "Current Problems of Social and Labor Relations" (ISPCPSLR 2020)*, Makhachkala, 38-44.
3. Salmanov, M. C. (n.d.). Azərbaycanda neft-kimya kompleksi müəssisələrinin ixrac potensialının artırılmasının maliyyə aspektləri [Financial aspects of increasing the export potential of petrochemical complex enterprises in Azerbaijan]. (необхідно додати: назву журналу або видавця, рік, сторінки)
4. Aliyev, Sh. T. (2015). *Vneshneekonomicheskaya politika Azerbaydzhana* [Foreign economic policy of Azerbaijan]. Sumgait State University Press.
5. Cabinet of Ministers of the Republic of Azerbaijan. (2016, October 6). *Qeyri-neft məhsullarının ixracı ilə məşğul olan şəxslərə ixrac təşviqinin ödənilməsi qaydası* [Procedure for payment of export incentives to persons engaged in the export of non-oil products] (Resolution No. 401, Annex 1).
6. Aliyev, Sh. T. (2008). Problemy konkurentosposobnosti real'nogo sektora ekonomiki Azerbaydzhana v usloviyakh globalizatsii [Problems of competitiveness of the real sector of the Azerbaijan economy in the context of globalization]. *Doklady NANA*, (6), 135-143.
7. Şəkərəliyev, A. Ş. (2017). İxracın strukturunun qeyri-neft məhsulları hesabına genişləndirilməsi istiqamətləri [Directions for expanding the export structure through non-oil products]. *Elmi Xəbərlər, Qərb Universiteti*, (1), 5-16.
8. Aliyev, Sh. T. (2017). Vazhnost' primeneniya novykh ekonomicheskikh instrumentov v ekonomike Azerbaydzhana [The importance of applying new economic instruments in the economy of Azerbaijan]. *Natsional'nye Interesy: Priority i Bezopasnost'*, 80-84.

9. Abbasov, İ. M., & Əliyev, T. N. (2017). *Qeyri-neft sənayesinin iqtisadiyyatı* [Economics of the non-oil industry]. Elm və Təhsil.
10. Aliyev, Sh. T. (2012). Rol' spetsial'nykh ekonomicheskikh zon v razvitii predprinimatel'stva i investitsionnoy aktivnosti [The role of special economic zones in the development of entrepreneurship and investment activity]. *Rossiyskoe Predprinimatel'stvo*, (7), 180-184.
11. Əmiraslanova, D. Ə. (2016). Neftkimya müəssisələrində logistika siyasətinin müəyyənləşdirilməsi və tətbiqi [Determination and application of logistics policy in petrochemical enterprises]. *AMEA-nın Xəbərləri. İqtisadiyyat Seriyası*, 137-143.
12. Aliyev, S., Hasanov, R. I., Aghayeva, K., Gasimov, J. Y., & Ahmadova, S. E. (2024). The relationship between renewable energy consumption and economic growth: Insights from Iceland and Azerbaijan. *International Journal of Energy Economics and Policy*, 14(5), 229-235. <https://doi.org/10.32479/ijeep.16490>
13. Gambarova, R. M. (2019). Razvitie ekonomiki Azerbaydzhana i ego rol' v ispol'zovanii eksportnogo potentsiala [Development of the Azerbaijan economy and its role in the use of export potential]. *Ekonomicheskie Otnosheniya*, 9(2), 809-818.
14. Aliyev, Sh. T. (2020). Strategic role of Sumgayit in the development of petrochemical industry of Azerbaijan. *Proceedings of the International Conference on Actual Problems of Chemical Engineering (APCE 2020)*, Azerbaijan State Oil and Industry University, 430-435.
15. Ravilova, A. R., & Sadykova, R. R. (2019). Eksportnyy potentsial kak faktor konkurentosposobnosti predpriyatiya [Export potential as a factor of enterprise competitiveness]. *Bulatovskie Chteniya*, 5, 189-191.
16. Aliyev, Sh. T. (2010). The problems of the variety of formation and functioning of the special economic zones in Azerbaijan in the context of the world experience. *Marketing and Management of Innovations*, 1, 144-148.
17. Əliyev, Ş. T. (2018). *Azərbaycan iqtisadiyyatı* [Economy of Azerbaijan]. SDU Redaksiya və nəşr işləri şöbəsi.
18. Abbasov, İ. M., & Əliyev, T. N. (2017). *Qeyri-neft sənayesinin iqtisadiyyatı* [Economics of the non-oil industry]. Elm və Təhsil.
19. Əliyev, Ş. T. (2017). Azərbaycanca maliyyə sabitliyinin təmin edilməsi problemləri və maliyyə-kredit sisteminin inkişafının müasir aspektləri [Problems of ensuring financial stability in Azerbaijan and modern aspects of financial-credit system development]. *Audit*, (3), 26-40.

20. Abdullayev, M. (2016, August 3). Azərbaycanca kimya sənayesi yeni inkişaf mərhələsinə qədəm qoyub [Chemical industry in Azerbaijan has entered a new stage of development]. *Yeni Azərbaycan*. http://yeniazərbaycan.com/Iqtisadiyyat_e30056_az.html
21. Aliyev, S., Hasanov, R. I., Aghayeva, K., Gasimov, J. Y., & Ahmadova, S. E. (2024). The relationship between renewable energy consumption and economic growth: Insights from Iceland and Azerbaijan. *International Journal of Energy Economics and Policy*, 14(5), 229–235. <https://doi.org/10.32479/ijeep.16490>
22. Aliyev, Sh. T. (2008). *Problemy organizatsii i perspektivy razvitiya osobykh ekonomicheskikh zon* [Problems of organization and development prospects of special economic zones]. Nauka.
23. Aliyev, Sh. T. (2014). Modelirovanie innovatizatsii natsional'noy ekonomiki v sovremennykh usloviyakh [Modeling the innovatization of the national economy in modern conditions]. *Nauchnoe Obozrenie*, (6), 342–346.
24. SOCAR Polymer. (2019, February 18). "SOCAR Polymer" in yeni zavodu ölkədə yüksək sıxlıqlı polietilenə tələbatı tam ödəyəcək, məhsulun 75 faizi ixrac olunacaq [SOCAR Polymer's new plant will fully meet the country's demand for high-density polyethylene, 75% of products will be exported]. <https://caspianoilgas.az/az-opennews/7384.41.html>