Journal of Chemical Technology and Metallurgy, 59, 5, 2024, 1263-1268

ANALYSIS AND EVALUATION OF TRADE WITH CHEMICAL PRODUCTS

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Received 17 March 2024
Accepted 15 May 2024
DOI: 10.59957/jctm.v59.i5.2024.30

ABSTRACT

The purpose of this article is to analyse the trade with chemical products based on statistical data. The analysis and assessment were carried out on a database for the period 2015 - 2021 related to production, import, export in the "Chemical Products Manufacturing" sector. The main export and import partners by country are presented. Based on the analysis, conclusions were drawn regarding production of chemical products, the main export and import partners by country, and the importance of the considered industry for the development of the country's economy.

Keywords: chemical products, import and export, production, realization.

INTRODUCTION

The chemical industry is one of the important sectors of industry in Bulgaria. It is of great economic importance, because its production includes both basic inputs for other economic sectors in the country, as well as an extremely large number of products for final consumption. The chemical industry is closely technologically and economically linked to a few sectors of heavy industry and supports the development of other sectors, such as the food and metallurgical industries. This is the sector in which the latest scientific achievements are very quickly applied. Some of them, after their improvement in the process of chemical production, are also used in several other economic sectors [1]. Chemical technology is divided into technology to produce inorganic substances and technology for the production of organic substances.

EXPERIMENTAL

The "Production of chemical products" sector includes the production of basic chemical inorganic and organic substances, pigments, perfumery and cosmetic products, artificial and synthetic fibres, paints, varnishes, agrochemicals and others. It provides substitutes for natural raw materials, which preserves and the natural balance [2, 3]. It processes significant amounts of raw materials and creates finished products with high added value, which constantly finds application in new areas and paves the way for progress and innovation in other sectors.

In the Table 1 the number of enterprises operating in the "Manufacturing of chemical products" sector is presented. It shows that the number of enterprises in this industry sector is constantly increasing, from 608 in 2015 to 751 enterprises in 2021 , which is an increase of 1.2 times . Among the companies with employment of over 250 people, the following can stand out: Balev Corporation EOOD, Agria AD, Mekson OOD, Orgachem AD, Dzobele Bulgaria EOOD, Agropolychem AD, Solvay Sodi AD, Neochem AD Fikosota Ltd., with the majority of enterprises located in the South Central region [4]. The companies in this sector are owned by both Bulgarian and foreign investors. Their main activity is related to the production, import, export of chemical products.

Essential importance for the development of

Table 1. Number of enterprises in the "Manufacturing of chemical products" sector.

Years	2015	2016	2017	2018	2019	2020	2021
Production of chemical products	608	628	667	674	702	739	751

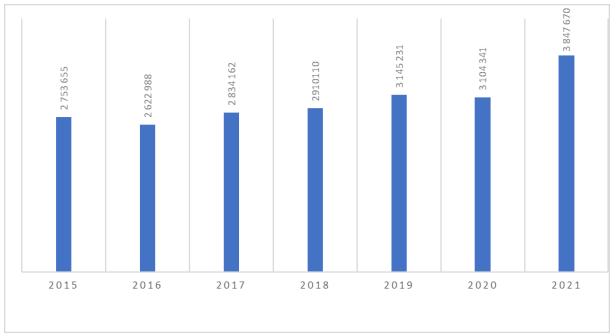

Fig. 1. Produced output of industrial enterprises in the "Manufacturing of chemical products" sector (thousand BGN).

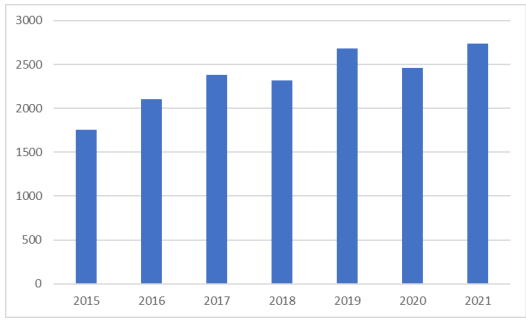

Fig. 2. Import of products of the chemical industry (thousand t.).

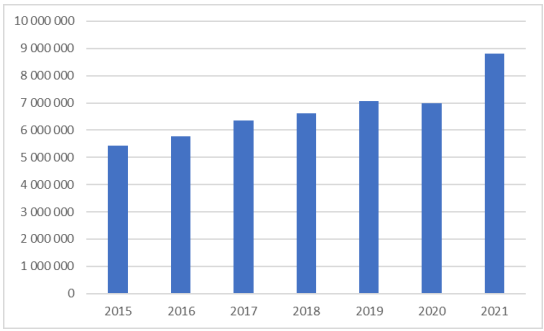

Fig. 3. Import of products of the chemical industry /thousand BGN/.

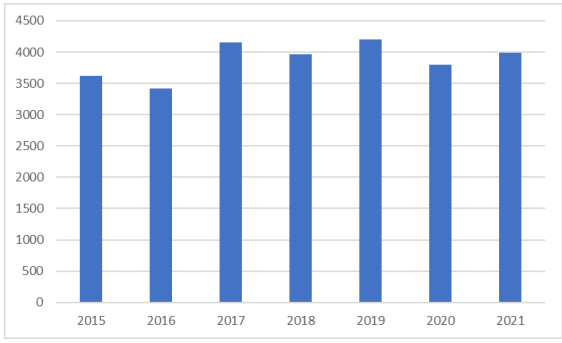

Fig. 4. Export of products of the chemical industry (thousand t.).

the sector is the volume of production in terms of value presented in Fig. 1. It shows that the volume of production has increased by about 1.4 times, from 2 753 655 in 2015 to 3 847 670 in 2021. Comparing the number of enterprises with production by year, an increase in the number of units of production is found from enterprises from 4 529 units in 2015 to 5123 units in 2021.

The import of chemical products in the sector by year is shown in Fig. 2 [4]. A smooth increase in imports is observed from it. We observe the largest number of imported products in 2021, reaching 2 738 thousand tons, which is a nearly 1.56 times increase compared to 2015.

In terms of value, there is a continuous increase in imported chemical products throughout the period considered (Fig. 3) [4]. Calculated based on the value of one conditional unit of production, there is a continuous decrease in value, which means that during this period there are imports of lower quality products. At the end of the studied period, an increase in the value of one conditional unit of raw material compared to the previous period was observed and this value remained until the end.

During the considered period, the export of chemical products in thousand tons has variable trends (Fig. 4) [4]. At the beginning of the period under

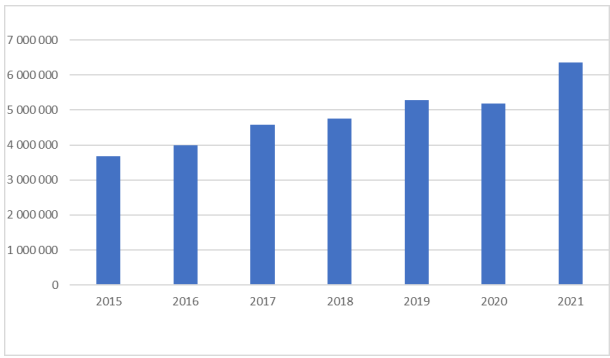

Fig. 5. Export of products of the chemical industry (thousand BGN).

review, a rate of decrease was observed, after which exports remained stable with upward trends at the end of the period, amounting to 3 993 in 2021, compared to 3 617 in 2015, which is an increase nearly 1.10 times since the beginning.

Exports in value terms follow the trend in kind, which means that the price of a notional unit of export output remains relatively constant throughout the considered period (Fig. 5).

In Fig. 6 the data on the export market of Bulgarian companies are presented, from which it is established that throughout the studied period there is a trend of increasing exports to Romania, reaching a value of BGN 1 030147 thousand in 2021. Other important markets for the country during the period under review are those of the Russian Federation, Germany, Italy, France and Greece. Exports to these countries for the period under study are positive and show steady growth. The total export of chemical substances and products in 2021 amounts to BGN 6 361445 thousand.

According to the presented data, the lowest exports are for Poland, Spain, Ukraine and the United States of America. These countries have no export data for a certain period.

In Fig. 7 the export by country of Bulgaria in natural terms is presented [4]. It shows that the export of chemical industry products has variable trends. At the beginning of the period, the largest quantity of products exported to Bulgaria in 2015 was to Turkey, which amounted to 747 thousand tons. At the same time, exports from Bulgaria to Romania increased, from 501 thousand tons in 2015 to 678 thousand tons for 2021, which is about 1.35 times more. Exports from Greece grew at a not high rate, but stable, and this was

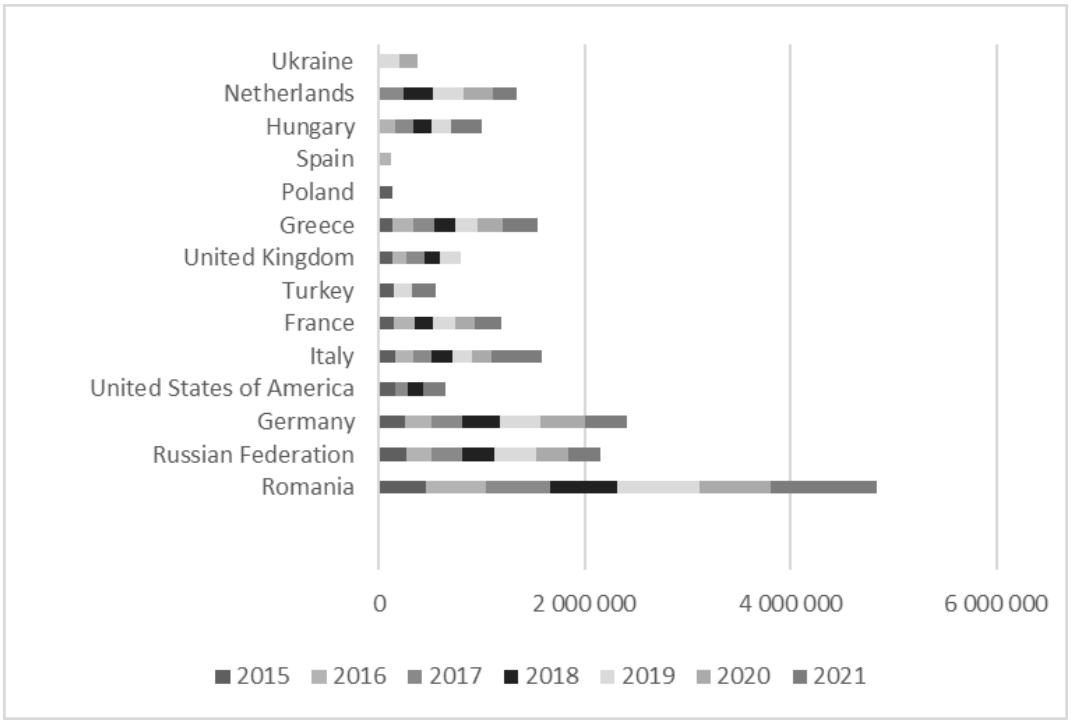

Fig. 6. Main countries in the export of Bulgaria-Products of the chemical industry (in thousand BGN).

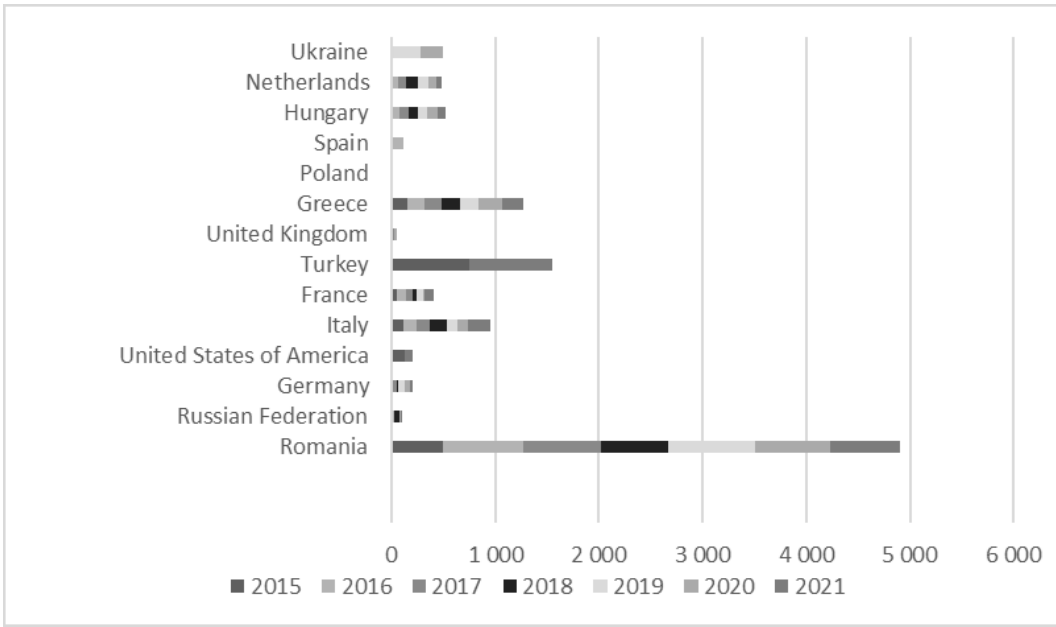

Fig. 7. Main export countries of Bulgaria - Products of the chemical industry (in thousands).

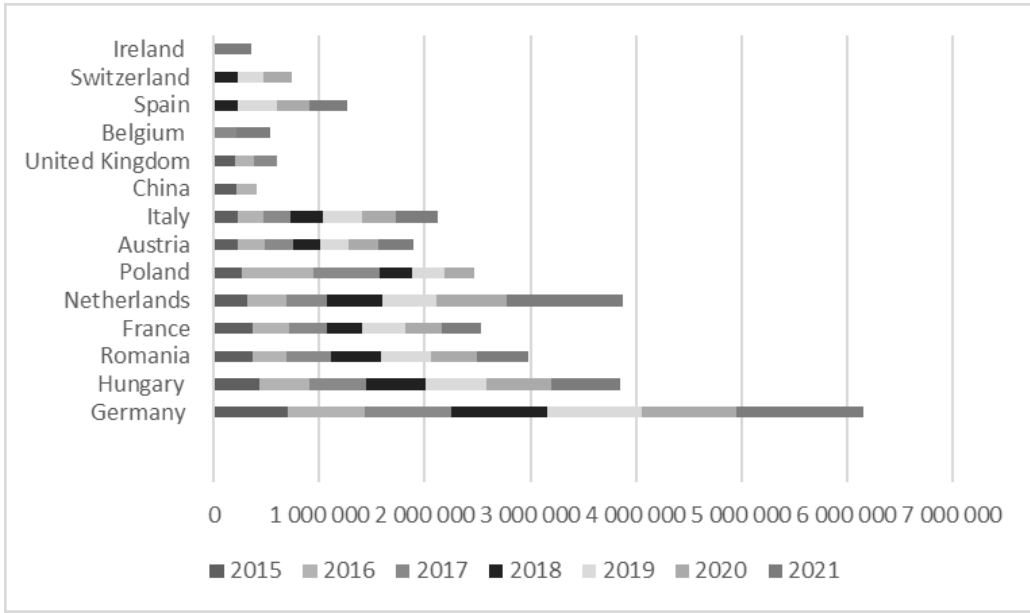

Fig. 8. Main countries in the import of Bulgaria-Products of the chemical industry (in thousand BGN).

observed throughout the considered period.

In 2021, the largest exporter of chemical substances and products is again Turkey, followed by our neighbour Romania, as well as Italy and Greece (Fig. 7). The export of them amounts to 1 914 000, respectively.

For other countries, such as Poland, Ukraine and the United Kingdom, there are no or significantly less data.

Regarding the import in terms of value of products of the chemical industry, the trend is also growing. For the first part of the period 2015 - 2017, a greater part of the products is imported from the member countries, while significantly less from third countries (Fig. 8). From 2015 to 2021, Germany takes first place, highlighting an increase of BGN 695 636, reaching BGN 1 196 496. Other important countries stand out: Romania, Hungary, followed by France and the Netherlands.

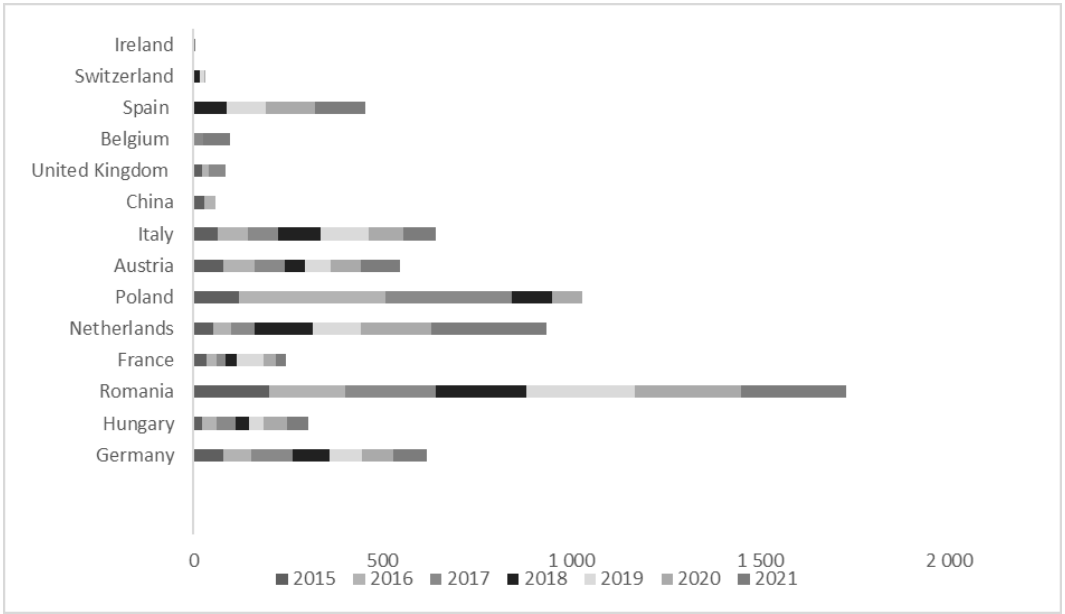

Fig. 9. Main countries in the import of Bulgaria - Products of the chemical industry (thousand BGN).

The import of products of the chemical industry in thousand tons is shown in Fig. 9 [4]. There are variable trends during the period under review. Since the beginning of the considered period, an increase in imports from Romania has been observed from 199 thousand tons in 2015 to 278 thousand tons in 2021, which is 1.4 times more. Another importing country is Poland. With it, we observe rates of increase until the middle of the studied period, with a subsequent decrease at the end of the period, and for the last year there is no data on the amount imported. From the beginning of the study period, Italy displaced the Netherlands, and from the middle of the study period after 2018, the Netherlands saw an increase in the number of imported products by more than 5 times from the beginning, and this trend was maintained until the end of the period.

CONCLUSIONS

The analysis shows that the Bulgarian chemical industry is undergoing development for the period 2015 - 2021. In this aspect, there is an increase in the number of companies operating in the sector. Regarding the volume of chemical products produced, the data show that the production of chemical products in value terms has been increasing in recent years, and for 2021 it has grown by 1.4 times compared to 2015. This may be due to an increase in consumer demand, as well as under the influence of the trends of the last three years related to the global situation, as well as the Covid-19 pandemic, due to an increase in the prices of raw materials worldwide.

From the presented data on the export market of Bulgarian companies, it shows that throughout the studied period there is a trend of increasing exports, which is primarily aimed at the EU member states. Romania, Greece and Italy are the largest consumers, significant quantities are also exported to Turkey. Total exports for 2021 amounted to 3 993 thousand tons, which is more than 1.10 times more than in 2015, when it was 3 617 thousand tons.

From the data presented, variable trends are observed in the import of Bulgaria as a partner country. Since the beginning of the considered period, Romania has been confirmed as the main import partner. Another main partner of the country is Poland. With it, we observe rates of increase until the middle of the studied period, with a subsequent decrease at the end of the period, and for the last year there is no data on the amount imported. From the beginning of the study period, Italy displaced the Netherlands, and from the middle of the study period, an increase in the number

of imported products was noticed for the Netherlands. As the total volume has grown nearly 1.56 times since the beginning of the research period.

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