

Lyubomyr Sozanskyy

State Institution “Institute of Regional Research
n.a. M.I. Dolishniy of NAS of Ukraine”, Lviv (Ukraine)
Department of Problems of Real Sector of Regions Economy
orcid.org/0000-0001-7854-3310
email: ls.ird2@ukr.net

Problems of the development of the Ukrainian automobile manufacturing

***Abstract.** The article identifies key trends in the development of the automotive industry in Ukraine during the period of 1991-2021. The author demonstrates the effectiveness of tools of state protectionism in supporting the Ukrainian automobile industries and compares the share of imports in the total consumption of machine-building products in Ukraine and Poland. The causes of destructive transformations in Ukrainian mechanical engineering are identified and directions for their elimination are outlined.*

***Keywords:** sectors of mechanical engineering, automotive industry, production, stimulation, development*

1. Introduction

In terms of contribution to the economy, Ukrainian engineering lags behind most EU countries, and in absolute terms, the volume of GDP generated in this segment is comparable to its counterpart in such a small country as Slovenia. Nevertheless, mechanical engineering was and remains a basic segment of the economy of Ukraine and its industrial sector in particular, as it has sufficient production and resource potential and human capital for effective functioning and provision of the economy's needs with the necessary assortment of mechanical engineering products. Ukrainian machine-building enterprises have considerable experience in the production of airplanes, wagons, buses, sea vessels, cars and trucks, tractors, agricultural equipment and machinery, household appliances, rocket-space and defense-industrial products.

2. Analysis of research and publications

The prospects of Ukrainian machine-building under the influence of economic globalization, especially after the signing of the Free Trade Agreement with the EU, were studied in detail by a team of scientists led by Academician of the National Academy of Sciences of Ukraine V.M. Geets (Geyets & Ostashko, 2016). In particular, highlights the advantages caused by the possibility of using the scientific and technical achievements of European countries for the modernization of domestic production processes, as well as the risks associated primarily with the increase in the import of products of final and intermediate consumption of machine-building industries into Ukraine. Other, internal problems of the Ukrainian engineering industry, which are dominated by high depreciation of fixed assets, insufficient working capital, low innovativeness and, as a result, low competitiveness of Ukrainian engineering products on the domestic and foreign markets, financial, economic and political instability, dependence on the import of components are highlighted in reference literature (Ishchuk, 2021; Amosha & Bulyeyev, 2017; Smerichevsky et al., 2017; Sokolova & Stoyka, 2019; Hurochkina & Menchynska, 2020).

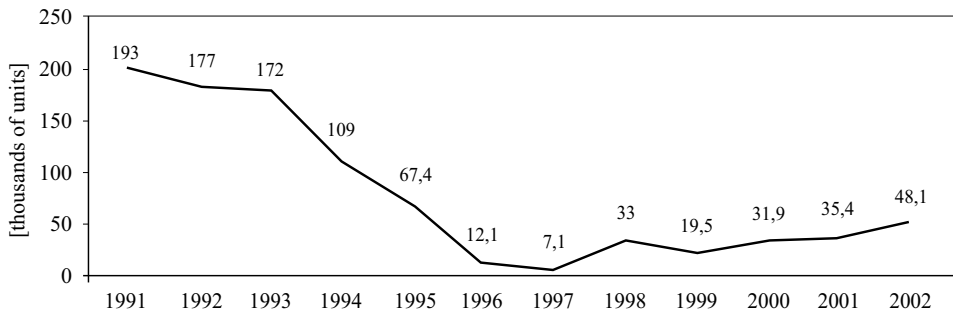
Similar problems of the development of the automobile industry, as one of the basic segments of mechanical engineering, are also characteristic of the countries of Eastern Europe. Thus, it was noted that the main problem of the competitiveness of the automotive industry in the Czech Republic, Slovakia, Poland and Hungary is the shortage of qualified and relatively cheap labor force (Hlušková, 2019). In addition, high export orientation with the growth of protectionist policies and trade tensions pose a serious threat to the functioning of this industrial sector. A detailed assessment of trends and prospects, as well as internal and external factors of the functioning of mechanical engineering in the transport sector of Poland is presented in book of Miłosz Łuczak and Łukasz Małys (2016).

The purpose of the article is to diagnose the problems of the development of the automobile industry in Ukraine.

3. Results of the research

On early 90s 20th century mechanical engineering accounted for a third industrial products of Ukraine, and significant part machine building products almost fully was provided domestic manufacturers. However, during 1991-1998, the share of mechanical engineering in industrial production in Ukraine decreased by 23.6 p.p.: from 38.7% to 15.1%. Subjectively, these negative changes are illustrated by the statistical data of the automobile industry as one of the key sectors of engineering. In particular, according to the data of the DSSU, the production of

Chart 1. Production of cars in Ukraine in 1991-2002



Source: own elaboration according to State Statistics Service of Ukraine, 2022.

cars during the specified period decreased by almost half: from 193 thousand units to in 1991 – up to 7.1 thousand units in 1997 (Chart 1).

Starting from 1998, a certain recovery of positive trends in the mechanical engineering sector began in Ukraine. To a large extent, the recovery of the positive trend was facilitated by the active measures of the state protectionist policy stimulating the development of the automobile industry. For example, in 1995, by a Resolution of the Verkhovna Rada of Ukraine, turnover from the sale of cars and passenger cars of domestic production was exempted from payment of excise duty and value added tax, and since April 1998, a ban was introduced on the import of cars older than 5 years, as well as on a car worth less than USD 5,000. USA (Laboratoriya zakonodavchykh perspektyv, 2003).

During 1997-2008, the Law of Ukraine “On Stimulating the Production of Automobiles in Ukraine” dated September 19, 1997 was in force, according to which until January 1, 2008, components for the construction and production activities of enterprises were exempted from import duty, VAT, and income tax on the production of cars and spare parts for them. Automobile enterprises were exempted from fees to the State Innovation Fund of Ukraine. The law provided that “resident manufacturers must register an investment program with the Cabinet of Ministers of Ukraine (hereinafter referred to as the CMU), which provides for the step-by-step verification of the degree of localization of the production of the component parts of such a car, at least 70% of its estimated cost at the end of the tenth year from the start of the investment program implementation.” The localization of production was understood to mean “the introduction of the production of individual car components in the customs territory of Ukraine using the labor of Ukrainian citizens, who must make up at least 90% of the average number of employees in such production.”

In 2001, the Law of Ukraine “On Amendments to Certain Legislative Acts of Ukraine Regarding State Support of the Automotive Industry of Ukraine”

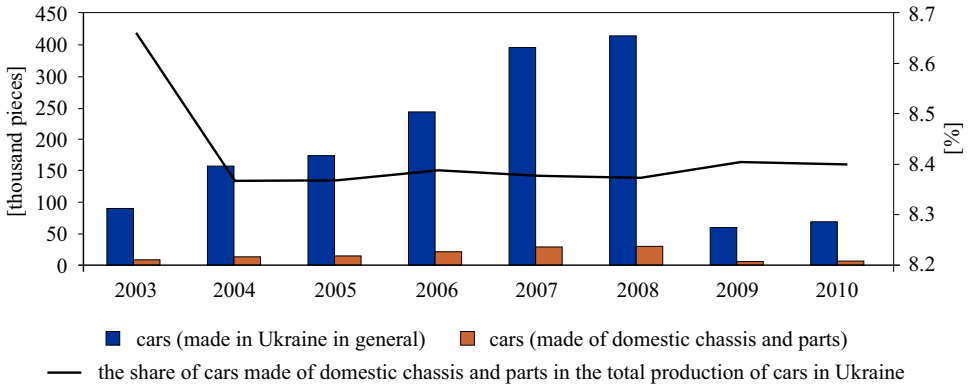
was adopted (2014). This law extended preferential taxation to the production of trucks and buses (minimum investment amount – 30 million USD), production of components for cars and buses (minimum investment amount – 10 million USD); established the need to register an investment program with the CMU in order to receive the relevant preferences; established higher customs tariffs for the import of cars that were in use (the import duty for cars up to five years old increased by two times, more than five years – by three times). In addition, the ban on the import of used cars was extended to only those older than 8 years, and the minimum value of an imported car was abolished. Taken together, these measures made it possible to effectively protect the domestic market from the mass importation of old cars.

At the same time, it should be emphasized that the steps to stimulate and restore the domestic automobile industry with the help of separate instruments of state regulation (requirement for localization of production; exemption from payment of VAT, excise tax, land tax, income tax from enterprises, import duty; ban on the import of cars, that were used) were categorically not accepted and actively criticized by EU representatives, considered incompatible with the provisions of the Partnership and Cooperation Agreement between Ukraine and the EU and the provisions of WTO agreements on the elimination of barriers to international trade. However, despite external pressure, the Ukrainian state still managed to defend its national economic interests, although it had to make concessions in relaxing the ban on the import of used cars from 5 to 8 years old, as well as in canceling the requirement regarding the localization and minimum customs value of imported cars.

As a result of the state stimulation of the development of the domestic automobile industry during 1998-2008, the volume of production of passenger cars increased by 13 times (up to 402 thousand units). According to this indicator, Ukraine was among the ten largest manufacturers of automotive equipment in Europe. The share of domestic cars and buses manufactured in Ukraine in the total volume of registrations on the domestic market was 54%, and the share of the Ukrainian automobile industry in the country's GDP was 4% (Association of Ukrainian Automobile Manufacturers "Ukravtoprom," 2007).

Rapid growth in this period was also observed in the export of cars, which in 2007 amounted to 74.2 thousand units against 3.7 thousand units in 2003 (a 20-fold increase). At the same time, the import of cars grew rapidly, reaching 343.9 thousand units in 2007, against 154.1 thousand units. in 2003 (a two-fold increase). At the same time, it is appropriate to note that 99.4% of exports and 23.8% of imports of cars in Ukraine were accounted for by the Russian Federation. The key manufacturer in this period was PJSC "ZAZ," which accounted for 72.6% of passenger cars manufactured in Ukraine and 70.2% of cars in general. In addition, by 2008, there was an increase in the number of passenger cars manu-

Chart 2. Indicators of manufactured passenger cars in Ukraine in 2003-2010



Source: own elaboration according to State Statistics Service of Ukraine, 2022.

factured from domestic chassis and components (full-scale assembly) (Chart 2). In 2008, the volume of such cars in Ukraine reached 33.5 thousand units, which is 3.9 times more than in 2003 (8.5 thousand units).

The share of full-scale assembly cars in the total number of cars manufactured in Ukraine during this period was low (it did not exceed 8%), but stable. However, in 2009-2010, the production of passenger cars in general and according to the scheme of full-scale assembly in particular decreased by more than 6 times. The fall in production was caused primarily by the consequences of the global financial crisis (devaluation of the hryvnia), the difficulty of access to mortgage loans by manufacturers, and a decrease in business activity. In addition, in 2008, Ukraine joined the WTO, and as a result, the preferences of the automobile industry, provided for by the Law of Ukraine “On stimulating the production of automobiles in Ukraine,” ended. Thus, the liberalization of foreign trade (according to the agreement with the WTO) and at the same time the failure to develop other tariff and non-tariff, organizational, legal and economic instruments to support the development of domestic engineering became the determining factors of its subsequent recession, which intensified after the signing of the FTA with EU.

Starting from 2013, a number of new ones were added to the already mentioned destructive factors influencing the development of mechanical engineering in Ukraine, namely:

- partial loss of the production potential of the temporarily occupied territories of Donbass and AR Crimea;
- loss of the traditional sales market for products of domestic engineering in the Russian Federation;
- the difficulty of reorienting production and exports to the markets of developed countries due to the high level of competition and trade protection;

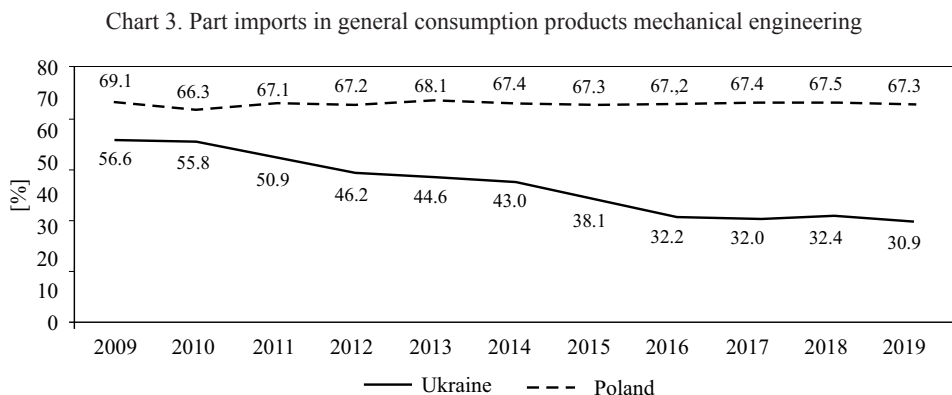
– the insufficient degree of development of the domestic market for the sale of machine-building products and the passive role of the state in solving this problem;

– the general increase in protectionist sentiments and trends in world trade while Ukraine maintains liberal access to the domestic market for foreign products (in accordance with the FTA agreement with the EU) and the lack of effective fiscal and economic tools to support and stimulate the development of domestic engineering.

As a result, during 2011-2016, the volume of production of the vast majority of products of the Ukrainian engineering industry in quantitative terms significantly and rapidly decreased. The biggest drop occurred in the segment of motor vehicles and high-tech components for them, agricultural machinery and tractors, as well as industrial equipment.

Despite some positive dynamics in 2017-2020, there is still a downward trend in the production of a significant number of important types of machine-building products. These are, in particular, tractors with an engine power of more than 59 kW, industrial equipment for sugar production, meat or poultry processing, and other types of machine-building products (Sozanskyy & Koval, 2021). Instead, the number of certain types of electrotechnical products (wires, electrical equipment), which are mostly manufactured by tolling operations or from imported raw materials, has increased. Therefore, the Ukrainian automotive industry reoriented itself from the production of vehicles to sets of wires for spark plugs, the aircraft construction sector – from aircraft to turbo engines for them, railcar construction – from rolling stock to wheelsets for locomotives and railway cars, agricultural engineering – from tractors to mounted mechanisms for them.

The result of global instability and the lack of effective and effective measures of state stimulation of Ukrainian manufacturers was the strengthening of import



Source: own elaboration according to State Statistics Service of Ukraine, 2022; CSOP, 2021.

dependence of the national economy in the segment of machine-building products. So, in particular, the share of the domestic component in the total consumption of mechanical engineering products in Ukraine in 2019 was 30.9% against 56.6% in 2009 (–25.7 p.p.), while, for example, in Poland this indicator was 67.3% in 2019 and decreased by only 1.8 p.p. during the analyzed period (Chart 3).

4. Conclusions

The main causes of destructive transformations in Ukrainian engineering (apart from the military aggression of the Russian Federation with the corresponding consequences) were:

- failure to take into account national economic interests (based on the position of international competitiveness and strategic importance of the development of mechanical engineering) primarily in agreements upon accession to the WTO and FTA with the EU, as well as other documents on the liberalization of foreign trade that concern this industry segment;
- ineffective state policy in terms of creating favorable, motivational and stimulating conditions for attracting capital investments in machine-building production and optimizing their connections with other sectors of the economy, in particular to meet domestic demand for relevant products.

The era of the COVID-19 pandemic has caused a significant increase in protectionist policies, particularly in developed industrialized countries. Under such conditions, in order to preserve and further strengthen its position as a traditionally significant player in the machine-building market, Ukraine needs to move away from the position of passive acceptance of liberal conditions and rules of foreign trade in the direction of full participation in the processes of forming these rules. Accordingly, the main goal of the state's protectionist policy should be to increase the competitiveness of domestic machine-building products of intermediate and final consumption, primarily on the domestic, as well as on foreign markets, and the restoration of internal intersectoral relations of this industrial sector of the economy.

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Problemy rozwoju ukraińskiego przemysłu motoryzacyjnego

Streszczenie. *W artykule przedstawiono główne trendy rozwoju przemysłu motoryzacyjnego na Ukrainie w latach 1991-2021. Wykazano skuteczność narzędzi protekcjonizmu państwowego we wspieraniu ukraińskiego przemysłu motoryzacyjnego. Porównano też udział importu w całkowitym zużyciu wyrobów maszynowych na Ukrainie i w Polsce. Ponadto zidentyfikowano przyczyny destrukcyjnych zmian w ukraińskiej inżynierii mechanicznej oraz wskazano sposoby ich eliminacji.*

Słowa kluczowe: *sektory inżynierii mechanicznej, motoryzacja, produkcja, stymulacja, rozwój*