



*Original article*

## THE CRISIS IN THE EUROPEAN AUTOMOTIVE INDUSTRY AND ITS IMPACT ON SERBIA'S ECONOMY

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**Abstract:** *Since the 2008 Great Recession, the EU automotive industry has faced disruptions from technological changes, the COVID-19 pandemic, and shifting global regulations. These challenges weakened financially strained EU carmakers. In response, many pursued mergers, acquisitions, and outsourcing to lower-cost labor markets on Europe's periphery. While these countries benefited from foreign direct investment, the current EU automotive crisis is slowing their growth and forcing economic strategy reconsideration. Fiat's investment around 2010 triggered significant growth in Serbia's automobile production, with exports peaking in 2013. Although motor vehicle exports later declined, the sector remains vital to Serbia's overall exports and has been bringing substantial foreign investment, driven by relatively low labor costs. However, the initiation of electric vehicle production this year carries substantial promise, but its impact on Serbia's export performance and GDP growth in the foreseeable future remains uncertain due to adverse external conditions. Given the importance of Serbia's automotive sector in production and exports, attracting additional technology-intensive foreign direct investments is essential for long-term growth, innovation, productivity gains, and deeper integration into global value chains. This would accelerate economic growth and help Serbia converge with more developed countries.*

**Keywords:** *Automotive industry, Europe, Supply chain, Serbia, Crisis.*

### 1. INTRODUCTION

The third decade of the 21st century has accelerated the shift of economic influence from the former Triad countries (USA, Western Europe, and Japan) to emerging markets led by China. Emerging markets' automotive companies, have managed to position themselves in global industries where multinational corporations from developed countries previously dominated. These companies have evolved from being suppliers of low-price and low-quality products to becoming dominant players in the global 'value for money' segment (Williamson, 2010). It once seemed that many technologically intensive and asset-heavy industries, such as the automotive sector, were protected from this shift (Abbosh et al, 2017). However, due to regulatory changes, unpredictable rising political risks, the emergence of disruptive technologies, economic stagnation in domestic markets, and the rise of emerging competitors from China, EU automotive companies are now facing growing business and financial challenges.

Deterioration of market position of EU companies is gradually affecting other members of their business ecosystem. In recent years, the companies have been increasing their investments in countries on the periphery of Europe that economically gravitate towards the European market. This strategy aims to reduce costs, improve supply chain control, and decrease dependency—particularly on China. Among these countries, Serbia has stood out due to its network of free trade agreements, relatively good infrastructure, skilled and affordable labor force (Marković, 2023). As a result, Serbia has attracted a significant number of automotive suppliers and one global car producers, Stellantis. This has led to the development of an automotive industry business ecosystem dominated by foreign subsidiaries (from Germany, China, Japan, and South Korea), while market influence of domestic companies remains negligible.

Negative trends from European market have, with a certain time lag, spread to outsourcing locations. Serbia is particularly vulnerable to this risk, as it is economically strongly connected to developed European countries and has based its growth strategy on foreign direct investments. An additional problem is that certain municipalities almost entirely depend on automotive companies that produce low-value-added vehicle components, whose demand is declining in the market.

This paper aims to explain the causes of the crisis in the automotive industry, possible scenarios of further development, and how it may impact Serbia's economy. The goal is to highlight the necessity of creating a strategy for development of automotive industry, which until now has evolved spontaneously. The government has focused on attracting investments from automotive suppliers investing in labor-intensive projects with low added value.

## 2. RESTRUCTURING OF EUROPEAN AUTOMOTIVE

The automotive industry is one of the key industries in Europe. Its significance stems from its contribution to employment, exports, innovation, and economic activity. According to the European Commission, the automotive sector in the EU generates approximately 13.8 million jobs and accounts for around 7% of the EU's GDP (European Commission, 2025). However, since the Great Recession of 2008, EU automotive industry has been in constant vibrancy, leading to changes in market structure. To analyze European automotive industry, we will use an extended version of Porter's Five Forces model (Porter, 2008), which, in addition to bargaining power of suppliers and customers, competitive rivalry, threat of new entrants and substitutes, also includes the impact of regulation and technology.

The automotive industry is one of the few industries that are asset-heavy, labor-intensive, and technology-intensive. For decades, traditional competitors from Europe, Japan, and the United States have dominated the industry. Due to these characteristics, some authors have argued that entry barriers are so high that the emergence of new competitors is unlikely (MacDuffie and Fujimoto, 2010), but since the Great Recession the situation has changed.

Due to the Great Recession of 2008 Ford was forced to sell its premium brands in Europe: Jaguar-Land Rover and Volvo. This created an opportunity for India's Tata and China's Geely to acquire valuable brands, allowing them to enter the premium segment in Europe. By combining their low-cost manufacturing expertise with acquired technology, brands, supplier networks, and management know-how, challengers from China and India successfully captured market share from European competitors (Marković, Rakita, and Filipović, 2015).

Another challenge for EU-based companies has been the rapid expansion of vehicle electrification. Although the European Commission adopted an agenda promoting the development of "green vehicles," European automakers lagged behind in embracing this technology. Meanwhile, Chinese challengers mastered electric vehicle technology and vertically integrated their supply chains, resulting in production costs in China being 30% lower than in Europe. Due to technological lag in electrification, EU companies lost 6 percentage points of market share in Europe and 5 percentage points in China between 2019 and 2022 (McKinsey & Company, 2023). Additionally, regulatory changes in the U.S. have posed further challenges for EU premium vehicle manufacturers, as the American market is highly important for them. In 2022, the Inflation Reduction Act was passed in the U.S., providing substantial financial subsidies for companies establishing manufacturing facilities within the country. On top of this, the announcement of increased tariffs on vehicles manufactured outside the U.S. in 2025 has made EU-produced cars entirely uncompetitive in this market.

European companies have not only lost ground in China and the U.S. but also in European market. Due to the war in Ukraine, European companies lost access to the Russian market, which accounted for 1.8 million vehicle sales before the pandemic (OICA, 2025). The most affected was Renault, which controlled Russia's leading brand, Lada, but was forced to transfer it to the Russian state for just 1 EUR. Additionally, sanctions policies prevented European companies from accessing cheap resources and energy from Russia, making their products even more expensive. The economic stagnation in Europe, which began with the pandemic, continued until 2025. During economic crises, consumers tend to postpone purchases of durable goods (Flatters and Willmott, 2009), leading to a decline in vehicle sales across the EU. The year 2022 was the worst for the European market since 1993, with sales reaching only 72% of pre-pandemic levels. Although sales began recovering afterward, by the end of 2024, they still accounted for only 84% of pre-pandemic sales, resulting in 3 million less vehicles sold. Alongside declining sales, the composition of vehicle sales changed, with a decreasing share of internal combustion engine (ICE) vehicles. By 2024, hybrid electric cars accounted for 31% of EU sales, battery electric cars for 14%, and plug-in hybrid electric cars for 7% (ACEA, 2025). The shift in demand structure is negatively impacting European manufacturers, as they lack expertise in electric battery production. In 2023, vehicles produced in China accounted for 20% of the battery electric vehicle segment in the EU, while Chinese brands represented 8% of the segment (ACEA, 2024).

**Table 1:** Sales of vehicles in EU 000 units (OICA, 2025)

2019.	2020.	2021.	2022.	2023.	2024.
18,424	14,081	14,141	13,296	15,179	15,409

Technological innovations have driven the development of the mobility services market, like ride-hailing, car sharing, etc. These services have become a true substitute for owning a personal vehicle. Consumer willingness to use these services is influenced by demographic factors and lifestyle, while fleet quality has a negligible impact on their decision (Hahn et al., 2020). Recognizing that this market will continue to grow in the future, many car companies have invested in this business, expecting that these services will compensate for the decline in revenue from vehicle sales.

Due to the development of digital and AI solutions, modern vehicle buyers expect them to always be connected, enhance safety, and provide various digital services. A challenge for car companies in Europe is that customers often do not perceive these services as additional and are not willing to pay extra for them (Deloitte, 2020). Another issue for EU car manufacturers is the changing structure of the value chain in the automotive industry. Some studies highlight that by the end of the second decade of the 21st century, hardware accounted for 90% of the perceived value of a vehicle, while it is expected that soon software and content will make up 60% of a vehicle's value (Xu and Liu, 2018).

Automotive industry supply chain restructuring is driven by vibrant startups working on the development of innovative digital solutions. Making business contacts with traditional automotive companies, emerging startups struggle to preserve their innovative solutions and impose them as the industry standard (Ferrás-Hernández, Tarrats-Pons, and Arimany-Serrat, 2017). In this way, innovative digital suppliers are becoming increasingly important in the supply chain and gaining a better bargaining position compared to bureaucratic traditional automotive companies. An additional challenge is that innovative digital suppliers are displacing traditional suppliers from the supply chain, which may lead to a wave of consolidation.

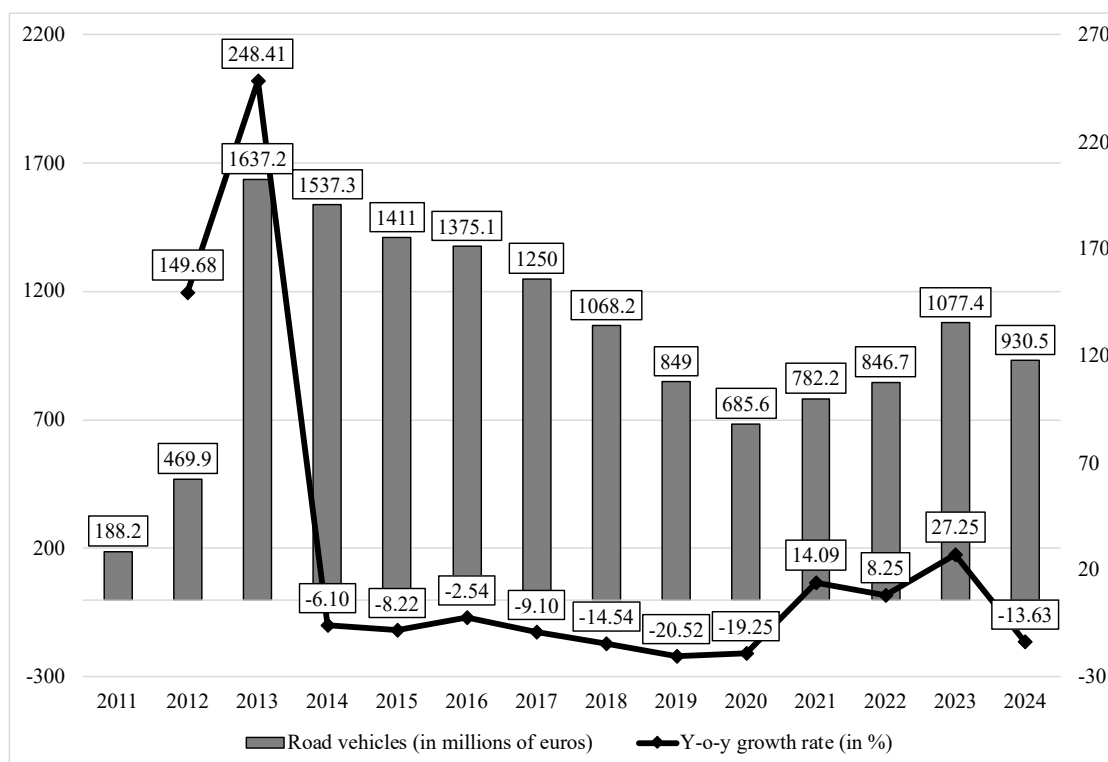
The analysis has shown that the EU automotive industry is at a turning point in its further development. Technological innovations that traditional EU competitors have not mastered, combined with unpredictable political events, have led to an increased negative impact of each of the five competitive forces on the profits of automotive companies. As a result, in 2024 EU vehicle production dropped by 19% compared to 2019 (OICA, 2025a). In the same year, over 30% of production facilities in Europe had a capacity utilization rate below 50% (Bloomberg, 2024). These negative trends in the EU automotive industry are gradually spilling over to outsourcing locations on the periphery of Europe.

### **3. SERBIA'S AUTOMOTIVE INDUSTRY: PRODUCTION AND EXPORT UNDER EUROPEAN DISRUPTIONS**

FIAT's investments 15 years ago directly led to the beginning of a significant volume of car production and export. According to data for the export of road vehicles from the Statistical Office of the Republic of Serbia (SORS), the first "jump" in the value of the export of these products from Serbia was already noticeable in 2012. The biggest "boom" was achieved in 2013, when the export of road vehicles reached 1.64 billion euros, as much as 250% above the one in 2012. In the years that followed, there was a downward trend, until 2020, when, in the observed period, the minimum value of the export of these products of 686 million euros was reached. The start of the COVID-19 pandemic and the general global shutdown certainly partially contributed to this result in 2020. Although this export declined rapidly from 2013 to 2020, it recorded a value of over one billion euros during most of this interval (except for 2019 and 2020). The change in trend and the positive growth rate of the export of road vehicles were achieved in 2021<sup>1</sup>, 2022 and 2023. In 2023, exports again exceeded one billion euros, which is 27% higher than the year before. However, the slow economic growth of the countries of the European Union, increased geopolitical tensions and customs conflicts have had an unfavorable effect on the export of cars from Serbia. The value of this export in 2024 was 13% lower than in 2023, i.e. amounted to 930 million euros. The fact that since the beginning of 2025 there has been no significant recovery in the economic activity of European countries, and tensions continued and even intensified, does not indicate favorable opportunities for the production and export of cars manufactured in Serbia. This is confirmed by the very low value of road vehicle exports in the first three months of 2025, which is even 40% lower than in the first quarter of 2024.

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<sup>1</sup> In 2021, the merger of the Fiat Chrysler Automobiles (FCA) and Groupe PSA (Peugeot, Citroën, Opel, DS) automotive groups took place, creating the new multinational company Stellantis, the fourth largest car manufacturer in the world.



**Graph 1: Serbia: Value of road vehicle exports and annual growth rate, 2011-2024**

Source: Authors' representation based on data from SORS

Note: Including air-cushion vehicles

The share of the value of the road vehicles export in the total export was significantly reduced, from as much as 15% in 2013 to 10% in 2016, then to 5% in 2019. According to the latest data (for 2024), the export of road vehicles accounts for 3% of the total value of goods exported from Serbia. If we look at the entire sector of the automotive industry, the exports of the automotive industry in previous years averaged about 12% of the country's total goods exports. On average, motor vehicles accounted for about 30% of the total exports of the auto cluster, while electrical conductors, tires and other parts accounted for the remaining 70% in the period 2012–2024.<sup>2</sup>

Certainly, previous foreign investments in this sector and the inclusion of companies operating in Serbia in European production chains had a very positive effect on production and export results. In fact, according to NBS data, Serbia attracted 5.1 billion euros of foreign direct investment in the automotive cluster (which includes the production of motor vehicles, rubber and plastic products, batteries and other electrical equipment) in the period from 2012 to 2024, and foreign companies see relatively low labor costs in Serbia as key motive for these investments.<sup>3</sup> As a result, the export of this sector increased from 900 million euros in 2012 to 3.4 billion euros in 2024. The maximum result was reached in 2023, when the total export of the auto industry amounted to 3.6 billion euros.<sup>4</sup>

The start of serial production of the new electric model "Fiat Grande Panda" in February reflected the growth of the production of motor vehicles from the beginning of 2025. RZS data related to the growth in the production of motor vehicles, trailers and semi-trailers indicate that in 2024 a growth of 3.4% was achieved compared to 2023. Since the beginning of 2025, only in January has a lower level of production been registered in Production of motor vehicles, trailers and semi-trailers and in the Production of motor vehicles, while since February production activity has jumped sharply. In January, the production of motor vehicles, trailers and semi-trailers was 11.3% below that of January last year, i.e. 7.4% less compared to the average production of this area in 2024 (Table 1). Data for motor vehicle production indicates that it was particularly low compared to the average in 2024 - 73% lower. Already in February, there was a noticeable change in trend and a sudden

<sup>2</sup> NBS. *Inflation Report*, May 2025, p. 36.

<sup>3</sup> The average labor cost in the processing industry in Serbia in 2024 was 10.5 euros per hour, which is among the lowest in Europe (e.g. in Hungary and Poland the costs were about 15 euros per hour, while in the Czech Republic and Slovakia they were about 18 euros per hour). NBS. *Inflation Report*, May 2025, p. 38.

<sup>4</sup> NBS. *Inflation Report*, May 2025, p. 36.

increase in the production of motor vehicles, precisely as a direct consequence of the started production of electric cars. Growth indices indicate that the volume of motor vehicle production compared to the average level of production in 2024 was 9 times higher in February, almost 19 times in March and 22 times in April. (see Table 1). According to the data for the first four months of 2025, the year-on-year growth in the production of motor vehicles, trailers and semi-trailers, in accordance with this trend of growth in the production of motor vehicles, is 10% compared to the same period of the previous year, and 18% compared to the average production in 2024.

**Table 1:** Motor vehicle production, January-April 2025

	January 2025	February 2025	March 2025	April 2026	January-April 2025
	<i>Year-on-year indices</i>				
<b>Manufacture of motor vehicles, trailers and semi-trailers</b>	<b>92.6</b>	<b>109.8</b>	<b>120.3</b>	<b>111.1</b>	<b>110.7</b>
	<i>2024=100</i>				
<b>Manufacture of motor vehicles, trailers and semi-trailers</b>	<b>88.7</b>	<b>121.8</b>	<b>134.7</b>	<b>124.4</b>	<b>117.7</b>
<b>Manufacture of motor vehicles</b>	<b>26.6</b>	<b>986.5</b>	<b>1886.8</b>	<b>2250.3</b>	<b>-</b>

Source: SORS

In Serbia, a further increase in the production and export of cars, as well as other products of the automotive sector, is planned. Despite the challenges in the auto industry in Europe and the world, the inflow of FDI into this sector in Serbia continues. In addition to European companies, there are investments from companies from Asia too - primarily China, Japan and South Korea. Electric car production begins at the "Stellantis" factory in Kragujevac, and earlier production of the hybrid model is planned, as well as the possibility of production of the "Citroen C3" model. In addition, at the end of 2023, serial production of car tires was launched at the "Ling Long" factory in Zrenjanin, with an expected increase in volume during 2025. All this, barring major delays in production and export, will have a positive effect on the export of road vehicles, the export of the entire automotive sector, and will also be reflected in the growth of the gross domestic product.

The automotive sector of Serbia is currently facing uncertainty regarding the possibility of planned production and growth in the current external circumstances of unfavorable trends in the international market. The problems that the auto industry in Europe is currently facing, as well as the new 25% tariffs that the US has imposed on cars and parts, are likely to reduce the exports of the Serbian auto cluster. However, the production of a new electric model and the increased production of car tires should mitigate these negative effects. Although these production activities are expected to contribute positively to exports and accelerate GDP growth in the second half of 2025 compared to the beginning of the year, the question arises whether this potential will be realized. Despite the significant potential of starting the production of electric cars in Serbia, it is particularly uncertain to what extent this production will be able to contribute to Serbia's export performance and GDP growth in the coming years. The basis for such doubts arises from unfavorable external conditions, including geopolitical tensions and economic instability and turbulence in important export areas, above all in the European market, primarily Germany, since the local supplier sector is dominantly linked to that market. All this together represents a risk and imposes restrictions on the realization of the full potential of this new industrial initiative in Serbia.

#### 4. CONCLUSION

EU automotive industry has been facing constant disruption since the Great Recession in 2008. After the recession, negative trends have been underlined by technology disruptions, Covid-19 pandemic and radical changes in global regulation, resulting in erosion of competitiveness of financially exhausted EU automotive companies. Companies have tried to deal with these trends, realizing certain M&A and outsourcing some activities to cheap labor force locations in the European periphery. These countries have experienced significant economic benefits from inflow of foreign direct investments in automotive industry, but due to the current crisis in EU automotive industries, these economies face a decreasing rate of economic growth and must reconsider their economic model.

Problems in the automotive industry in Europe left a mark on the production and export of the Serbian auto industry, which, thanks to significant inflows of foreign direct investments, continued to strengthen its importance in the production and export sector. Despite certain unfavorable effects, this sector remains crucial for the domestic economy. Although intensive development is predicted in the coming years, the question is to what extent can these plans be realized considering adverse external factors, including geopolitical tensions, currently weakened performance of the automotive industry in Europe and global economic uncertainty.

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