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The New Trends in Automobile Industry — Opportunities and Challenges for Bulgarian Participation in its Supply Chain

Abstract: The study is relevant because the global automotive industry is being reshaped by green transition, digitalisation, automation, protectionism, nearshoring, and the rapid expansion of electric and hybrid vehicles. The main research problem is whether Bulgaria can strengthen its position in the automotive supply chain despite not having national or foreign OEMs producing complete vehicles in the country. The novelty of the study lies in the author's adaptation of the EPIC framework to assess Bulgaria specifically as a component-supplier country within the automotive supply chain. The subject of the study is the set of economic, political, infrastructural, and competence-based factors that influence Bulgaria's integration into the automotive supply chain. The object of the study is the Bulgarian automotive sector in the context of current global transformations in automobile production and supply chains. The study aims to evaluate the opportunities and challenges for deeper Bulgarian participation in the automotive supply chain under the influence of recent global industry trends. The study applies analysis, induction, deduction, comparison, time-series analysis, factor analysis, and extrapolation based mainly on secondary statistical and institutional data. The literature review shows that the EPIC framework, alongside classical models of business environment and supply chain analysis, is the most suitable theoretical basis for evaluating Bulgaria's supply-chain potential. The study assesses Bulgaria through the adapted EPIC dimensions of economy, politics, infrastructure, and competence, showing favourable conditions such as low labour costs, tax stability, EU market access, developed logistics, and strong technical education. The author concludes that Bulgaria has significant prospects for stronger integration into the automotive supply chain, especially in electronics, components, EV-related production, and R&D, but must reduce dependence on European OEMs and diversify towards new investors, including Chinese companies in the region.

Keywords: automotive supply chain, EPIC model, Bulgarian business environment, professional engineering education.

Abbreviations:

ACB is Automotive Cluster Bulgaria,
EV is electric vehicle,
FDI is foreign direct investments,
HEV is hybrid electric vehicle,

ICEC is internal combustion engine vehicle,
IDB is Inter-American Development Bank,
IEA is International Energy Agency,
IPRI is International Property Rights Index,
LPI is logistics performance index,
MON is Ministry of Education and Science,
NEV is new energy vehicle,
OECD is Economic Co-operation and Development,
OEM is original engine manufacturer.

Introduction

The automotive industry has been undergoing significant transformation in recent years, especially since 2019. The most influential trend is the one brought about by the call for green transition. The emergence of EVs and HEVs has been followed by a sharp growth in their market share at the expense of ICEVs. After 2017, a decline in total car sales was observed, with an abrupt drop in 2020 during the Covid-19 pandemic. The rebound afterwards was not distributed uniformly between the three types of vehicles. Sales of ICEVs are still 30% lower than pre-pandemic levels, while global sales of EVs and HEVs in 2024 are more than 20% higher compared to their level in 2017 (*IEA, 2025*). What is more interesting for the goals of this study is the impact of the product transformation—the cars produced—on the configuration of the automotive supply chain and its leading participants. The most noticeable restructuring is observed among the main producers and exporters. In 2008, the global car-producing centres were Europe (25%), North America (25%), Japan (20%), China (10%) and South Korea (7%) (*IEA, 2025*). China's share of global production in 2025 is more than 40%.

Another well-expressed trend in the recent development of the automotive industry is the higher level of digitalisation and automation (*Russo et al., 2025*). In terms of supply chain configuration, the main semiconductor suppliers situated in South and Southeast Asia have come into focus. Their geographical position supports Chinese and Japanese car producers.

The car industry is also known for its considerable contribution to global GDP—1% direct and 3% indirect (*OEC, 2023*). Its share of national GDP has historically reached 3.0–3.5% for the USA and 7% of GDP for the EU (*OEC, 2023*). Given the great economic importance of the automobile industry in terms of its share in GDP, both globally and for leading car-producing countries, traditional producers from the EU and the USA are trying to protect their national production by imposing non-tariff and tariff measures. Non-tariff regulations now affect about two thirds of total world trade. Tariffs on trade in goods related to the automotive industry have surged from 2.9% to 7.3% globally (*UNCTAD, 2026*). The EU used predominantly non-tariff measures until 2024—a subtle expression of so-called "murky protectionism" (*Chitadze, 2022*). After 2024, open tariff measures were imposed as a counteraction to unfair practices in China. The EC added a new 17–20% to the standard 10% tariff on EV imports from major Chinese producers, whereas additional duties in the USA are much higher (*Reese, 2024*).

The main goal of this study is to establish the effect of the trends described above on Bulgarian participation in the automotive supply chain and to reveal the opportunities for more intensive integration and the obstacles to be overcome. In order to achieve this objective, the

main concepts of supply chain configuration will be explored so that the most important conditions for positioning a facility or choosing a subcontractor from a certain country can be identified. At the core of the study is the assessment of a system of factors that can affect decisions on procurement, manufacturing, warehousing, logistics, distribution, and sales for the automotive industry in Bulgaria. This is done through the author's adaptation of the EPIC framework according to the peculiarities of the automotive supply chain and Bulgaria's place in it.

The results reveal potential opportunities and possible challenges for the industry's development, which can be of use to government bodies and industrial organisations in Bulgaria in adopting appropriate strategic measures.

Methods

The general scientific methods applied in the study include analysis, induction, and deduction. Through the analysis of the literature on supply chain configuration, the most appropriate instrument for conducting this research is chosen. The evaluation of the statistical data is carried out through comparison and time-series analysis.

Using the theoretical framework of the EPIC model, the author has adapted it in order to evaluate the growth potential of the automotive sector in Bulgaria. The variables are chosen on the basis of the general scientific methods of induction and deduction. The EPIC framework is adapted on the basis of the most important influencing factors for the development of the automotive supply chain in Bulgaria and its role in the studied supply chain configuration. Most of the included indicators derive from the standard framework but are modified (*Table 2*) so that they can portray the place of Bulgaria in the automotive supply chain over the last 10 years. In the economic dimension, indicators belonging to three groups are included: costs of doing business, the economic importance of the industry for Bulgaria, and currency stability. The political dimension includes indicators concerning political stability and the regulatory framework. Tax rates, such as corporate income tax, VAT, and tariffs on trade, are chosen as the most relevant for presenting the regulatory framework. The composite index—the IPRI, especially with the sub-index—is chosen as the most indicative.

The automotive companies in Bulgaria act as second-tier suppliers producing parts and components. There are neither national nor foreign OEMs in Bulgaria, so ready-made cars are not produced in Bulgaria, and the national market is also not targeted in terms of sales volume. More important are the costs of doing business in Bulgaria—namely labour wages, energy costs, and the purchase or rental price of industrial estates. The automotive companies in Bulgaria are mostly subsidiaries of foreign companies, and almost 100% of their manufacturing is exported.

The development of foreign direct investment in the automotive industry, the number of companies and employees, as well as the trend in the industry's share of GDP, describe its economic importance for the national economy and how it has changed over the last 10 years. The conditions favouring the development of the sector are the basis of the indicators associated with the costs of business, the legal and regulatory framework, the level of infrastructure and connectivity development, and the level of professional and logistics competence.

The information for the variables in the studied period mainly consists of secondary data gathered from official international, national, and industry-specific references, as well as studies

by national agencies and industrial organisations. Time-series analysis is applied so that the trends in the development of the industry can be clarified. Factor analysis is carried out considering the influence of industry-specific trends in global development and the potential of the Bulgarian environment for tighter integration into the global automotive supply chain. Considering the positive interaction between the recent forces driving the industry and the conditions of the business environment, a prognosis for the sector's development in Bulgaria is drawn using the technique of extrapolation.

Literature Review

The theory on the strategic building of production, procurement, and distribution networks by multinational companies has developed increasingly with the spread of globalisation at the end of the 20th and the start of the 21st century. Academic insights are constantly provoked by increasing global competition in different industries and the constant challenge of achieving higher competitiveness among companies. Traditional models for the analysis of the business environment, such as PESTLE, Michael Porter's Diamond (*1980*), and Porter's Five Forces (*1979*), are fundamental for assessing the most influential environmental factors for successful business development. Bartlett and Ghoshal (*1989*) contribute to the body of concepts on international development through their idea of gradual evolution in the role of foreign subsidiaries. They also reveal the key role of the interaction of opposing driving forces for adaptation and globalisation so that the most appropriate strategy for a company's international development can be chosen. Ferdows (*1997*) concentrates on the different roles that foreign factories can perform and evaluates them in terms of enriching their activities both quantitatively and qualitatively by moving up to more value-added ones. In the works of Bennett (*2001*) and Vereecke and Van Dierdonck (*2006*), a general observation is that a wisely structured network of factories provides better global competitiveness for a company.

Many contemporary studies are devoted to the evaluation of factors affecting strategic supply chain design, e.g. (*Song & Sun, 2016*). The scientists from the University of Tennessee Knoxville's Global Supply Chain Institute developed a structured approach for assessing regions and national business environments in terms of supply chain activities taking place on their territories (*Srinivasan et al., 2014*). The framework is based on the evaluation of variables classified into four groups—economy (E), politics (P), infrastructure (I), and competence (C) (*Table 1*).

On the basis of data sources such as the World Bank World Development Indicators, the OECD, IDB, the IEA, etc., the scientists from the Global Supply Chain Institute calculated the EPIC index score for 64 countries that represent global trade and account for 94% of the world's gross domestic product in US dollars and 84% of the world population. The indexes for the studied countries for 2021 vary from 29.12 to 83.65. Bulgaria is not among these countries, and its index can only be inferred from those of the studied neighbouring countries: Romania (53.9), Turkey (62.56), and Greece (53). It is considered that the index for Eastern Europe varies between 50 and 60.

According to the scope and goal of this study, the EPIC model (*Srinivasan et al., 2014*) presents the most appropriate framework to be applied for evaluating the potential of Bulgaria for tighter integration into the automotive supply chain on the basis of recent trends developing in the industry.

Results

Economy: Costs of doing business

Major costs of the automotive manufacturing in Bulgaria are for land, energy and labour. The land costs in Bulgaria both to rent and buy vary widely across the country. They are highest in the big cities Sofia, Plovdiv, Varna, Burgas—from 30 to 80 EUR/sqm and much cheaper in the North-West Region, North-Central Region and in the southern parts of the South-Central Region and South-East Regions—from 10 to 35EUR/sqm (*Real estate BG, 2026*). Although the prices of industrial land increased considerably in the last year the estates in the industrial zones are still the most affordable in Europe (*Bulgaria Estate, 2025*).

The cost of labour is of greater importance for the foreign investors in the automotive industry where both staff with professional secondary education and high technological competence is needed. In 2024, the average labour costs per hour of 10.6 EUR reported in Bulgaria are almost 3,2 times lower than the average in EU. In 2024, average labour costs per hour were estimated at 33,5 EUR in the EU and at 37,3 EUR in the Eurozone (*BCCI, 2025*). The monthly minimum wage in Bulgaria has been increased from 477 EUR to 551, EUR as of 1st of January 2025 according to EU Directive2022/2041 of October 2022. Despite of the 15,4% increase the minimum wage in Bulgaria is still the lowest in Europe (*Table 3*).

Being a basic constituent of the costs in the production process, the energy prices will also be given attention. A considerable peak of business energy prices was observed in 2022–2023 as a result of geopolitical factors and sector transformation toward carbon emissions reduction. Despite the decrease with 1.5% in mid-2025 the business energy prices in Bulgaria remain among the highest in Europe—0.24 EUR per kWh, the highest price being that of Ireland—0.2726 EUR per kWh) and the lowest in Finland 0.0804 EUR per kWh. (*Eurostat, 2025*)

Macroeconomic stability

The analysed variable to describe the macroeconomic stability is inflation rate and currency stability. The inflation rate in Bulgaria is quite moderate (*Table 4*) with a peak in 2022-2023 provoked by the pandemic measures and energy crisis, factors with similar effect in all Europe. Over the studied period 2015–2025 Bulgarian lev has been pecked to the EUR which contributed to the macroeconomic stability. The final accession of the country to the Euro zone on 1st of January 2026 provides for smoother transactions with the European partners what are most of the customers and mother companies of automotive companies in Bulgaria.

Economic importance of the automotive industry for Bulgarian economy

The economic importance of the sector is principally associated with the fact that most of the activities in the process have a high value added. It also has a decisive role in providing employment both for highly trained engineers and professionals with technical secondary education. The increasing economic importance of the automotive industry for Bulgarian economy will be proved by portraying the trends in series indicators for the period 2015–2025. The chosen indicators are the share of automotive industry from Bulgarian GDP (*Table 5*), the growth rate of FDI in the industry (*Table 6*), the number of companies (*Table 7*) and number of employees (*Table 8*). The share of the studied sector from Bulgarian GDP shows regular

expansion which is more than 3 times for the period 2015–2024. The reason for this can be found in the steady growth in FDI in the sector (*Table 6*).

The trend for increasing growth can be clearly seen at Figure 1. Given the am statistics on FDI in the automotive industry in Bulgaria it can be inferred that most of the companies are foreign companies. Among the leading ones being—Yazaki, Sensata Technologies, Montupet, Magna, Kostal, Festo, BHTC (Behr-Hella Thermocontrol), VOSS Automotive, Integrated Micro-electronics, ZS Europe, property of Shanghai Unison Aluminum Products. Most of them are European but investments from the east also present. At the moment there is no OEM-s operating in Bulgaria and the companies are the 2nd and 3rd tier suppliers in the automotive supply chain. They are producing parts and components, whose scope includes harnesses, sensors, connectors, PCB assembly, plastics, metal stamping, mechatronics. As per ACB (*2024*) 80% of European car sensors are produced in Bulgaria. The specialization focus is on cable assemblies (a national specialty), electronics subassemblies and interior components. In the recent years moving toward R&D and high-tech components is observed. This process is stimulated by the increased production of for EV-s by the OEM-s abroad.

The number of companies has grown more than 9 time in the studied period (*Table 7*) and the trend for growth is portrayed at (*Figure 2*) The number of the employed in the industry also expands (*Table 8*) which can be expected given the trends in the number of companies and relatively low level of automatization and robotization. An inherent feature of the automotive business is the requirement for high volume of production to be reached so that economies of scale to be achieved. So, it is natural the existing companies not only to grow in number but also to expand as separate units in order to be more effective.

Considering the fact that most of the companies are subsidiaries of foreign companies or Bulgarian companies supplies of foreign system integrators or OEM-s, it can be definitely stated that 100% of the manufacturing is exported. The share of total export is between 3 and 5% for the recent years depending on the exact products as per HS codes included in the calculation (*ACB, 2024*).

It can be concluded that the costs of doing business and the macroeconomic stability favours the development of the automotive sector in Bulgaria, which is expressed in the increasing economic importance of the industry for the national economy, in the growth of its share as percentage of GDP, in the increase in of FDI, in the number of companies and employees.

Politics: Taxes and tariffs

Bulgarian regulations on taxes—corporate and personal income tax as well as VAT distinguish with stability and low levels (*Table 9*). The flat-tax system on personal and corporate income taxes is introduced in 2007–2008 and hasn`t been changed since then. The VAT is set at 20% and has been reduced to 9% for certain more sensitive goods and services only during Covid-19 pandemic period. Bulgaria is said to be the 6th least tax burdened country in the EU by 2023. The overall tax-to-GDP ratio in Bulgaria is 29,9% in 2023, compared to an EU average of 40,6% (*EC, 2024*). The exemption from corporation tax in region with high unemployment rate is a strategies measure to attract investments in these regions. In 2024 about 61% of the

municipalities—162 (of total 265 in Bulgaria) had 25% higher than the average rate of unemployment.

Being an EU member, Bulgaria benefits from the common market and free movement of goods and services in the Union. So, there are neither tariff nor customs procedures for the delivery to the European customers of Bulgarian automotive suppliers which is of crucial importance for the smooth and fast deliveries to the European destinations.

International Property Rights Index (IPRI)

According to the compound index IPRI which is computed at 6.185 (*Property Rights Alliance, 2025*) Bulgaria shows improvement with 20.5% from previous calculation and is ranked 9th in Central Eastern Europe and Central Asia, where most of competitive suppliers of the automotive supply chain are situated. It is a compound Index and it includes the Physical Property Rights Index (7.81), Intellectual Property Rights (5.67) and Legal and Political Index (5.076). The indexes for Legal and Political Stability and for Physical Property Rights show increase by previous computing whereas the Intellectual Property Rights Index is decreased but only with 0.013 points (*Property Rights Alliance, 2025*).

Thus, it can be assumed that as long as the positive development continues and the negative is reversed, the legal and political environment in Bulgaria seems welcoming for new foreign investments.

Infrastructure: Transportation Infrastructure and Connectivity

The strategic geographic location of Bulgaria provides for its connectivity both to the rest of Europe, Asian countries and North Africa. The availability of sea port in Bulgaria and the proximity to the Greek ports ensures for the connection to the overseas destinations. The access to major transport corridors provides for the fast delivery to North Europe. The geographic proximity of Eastern Europe to major OEM-s in Europe is a good reason to redirect their supplies from China and other Asian Countries. The deliveries to Europe where the main customers are positioned, is performed mainly by truck transport with groupage and dedicated trucks. The logistics service is very well developed in Bulgaria. The spectrum of participants includes subsidiaries of leading international forwarders like—DSV, M+M, Kuehne and Nagel (*A&A, 2024*) a as well as national groupage operators like Unimasters, Transpress and many national carriers.

Telecommunications and Connectivity

As far as the telecommunication connectivity is concerned, Bulgaria is among the 10 countries with fastest mobile connectivity globally (*MTC, 2023*) and 5G coverage reaching 60% of the population. This provides for the smooth communication between suppliers and their customers in the automotive supply chain as well as for digital integration and transparency.

It can definitely be stated that the well-developed road and air services provide for the "just in time" deliveries approach assumed by the automotive companies while the maritime services emphasize on the economy of transport costs and carbon emissions' reduction. The high level of telecommunication connectivity contributes for the integrity and transparency if the supply chains the country takes part in.

Competence: Logistics Competence

World bank (*2024*) calculates moderate LPI ranging from 3.2 to 3.3 for 20022 and 2023, the scale being from 1 to 5. The country's performance in tracking, tracing and infrastructure is determined as stable. For 2023 Bulgaria takes on 51st place among 160 countries (*BCCI, 2025*).

Level of professional technical education.

Bulgaria has a strong tradition in engineering and technical education which is being revived in the recent years through both governmental measures and business initiatives. The automotive companies in Bulgaria need both low and medium-skilled professionals as well as highly qualified specialists. At Table 10 (*Appendix*) are portrayed the number of secondary professional schools by cities. They are widely recognized vocational schools with technical profile whose students might be potential employees for the automotive industry. The positioning of most of these schools coincides with the clusters of the automotive industry in Bulgaria—Sofia, Plovdiv, Stara Zagora, Ruse, Lovech, Pleven. The universities providing highly qualified specialist are also concentrated in these regions (*Table 11*).

The ministry of Education and the different governmental institutions are well aware of the key role of providing properly educated professional staff for attracting investments in high value activities from the automotive supply chain. There are several programs and initiatives for improvement in both secondary and high/college education. The introduction of dual learning is such an initiative aiming to bridge the gap between education and industry needs. The building of STEM system is national program directed towards increasing the interest in engineering education from an early age. The Innovation strategy for Smart Specialization (IS3, ISSS, the Strategy) (*MII, 2015*) supports projects in engineering education for innovation in the production. The National card for the high education highlights the most needed engineering programs and encourages the universities to provide such. The ACB plays a crucial role in the cooperation between the business and educational institutions. There are also projects funded by European Structural and Investment Funds and managed by the MON directed towards modernization in the academic engineering programs e.g. Operational program "Science and Education for Intelligent Growth" (OP SEIG) which supports the engineering departments and provides scholarships for student in priority areas. The cooperation between business representatives and educational institutions is expressed in providing Summer Internship for high school and university students (ABB Bulgaria) and specialized courses e.g. Haycad Infotech operates the Haycad academy. The successful attracting of Bosch Automotive R&D centre in Sofia is a positive sign for climbing up the value-added chain in the automotive supply chain.

It can be concluded from the values of the studied variables in the different dimensions that the conditions of the business environment, governmental regulations and the labour potential favour the participation of the country in the automotive supply chain.

The upward trend for the future development of the studied sector in aspect of FDI can be extrapolated (*Figure 3*). The linear extrapolation assuming a constant growth presents a baseline scenario considering the potential risks and limitations concerning capacity limits and labour availability. The exponential extrapolation assuming a constant percentage growth represents rather the upper-bound, a boom forecast that is not so realistic. So, as per the linear extrapolation it can be expected the FDI in Bulgarian automotive industry to reach roughly 15–16 bn EUR by

2034 as long as there is no radical negative change in the four crucial dimensions of the adapted EPIC model or external shocks.

Discussion

As the main goal of the research is to estimate the impact of the new trends in the automotive industry on Bulgarian participation in the automotive supply chain, the influence of these trends will be discussed on the basis of the results in the previous subsection.

The well-expressed trend towards increased digitalisation and automation inevitably leads to a greater number of electronic components and more software development. Undoubtedly, this requires more subcontractors and the expansion of the manufacturing facilities of existing ones in order to meet the need for more components. Having proven traditions in educating IT specialists, Bulgaria has good chances of attracting more R&D centres. The well-expressed governmental position in encouraging engineering education is a local factor amplifying the impact of the trend towards automation and digitalisation in the automotive industry.

The green transition also leads to a surge in the production of EVs, with electronic components and batteries needed for their manufacturing. This means more suppliers and, respectively, more suppliers from Bulgaria, given the country's good tradition and proven expertise in electrotechnics.

The trend towards nearshoring and regionalization in automotive supply chain configuration can also contribute to more active Bulgarian participation in it. Higher geopolitical risks, rigorous protectionist regulations, and ecological requirements for the reduction of carbon emissions are the main factors behind the recent inclination towards nearshoring. For the EU, this is expressed in a preference for outsourcing in Central and Eastern Europe rather than in Asia.

The protectionist measures by the EU towards Chinese OEMs lead to the establishment of production bases in Europe and in proximity to it by Chinese OEMs. BYD opens in 2025 a facility for the assembly of electric buses in Komarom, Hungary, and another one in Szeged, Hungary, for NEVs. Another production base in Izmir, Turkey, is expected to start manufacturing in March 2026 (*BYD, 2026*). This reconfiguration also creates opportunities for market diversification in the Bulgarian automotive sector. Attracting investment from Chinese companies and becoming suppliers to Chinese investors in Europe and the region represent important diversification of the customer spectrum of Bulgarian suppliers. It will help to balance the shrinking volume of orders from European customers in situations of cyclical recession, such as the one taking place in Germany since the second half of 2025. In fact, the suppressed economic activity of leading European countries, which are the main investors and customers of the automotive industry in Bulgaria, is the main challenge for Bulgarian participation in the automotive supply chain.

Conclusion

It can be concluded that there are good chances for increasing Bulgaria's integration into the automotive supply chain in the coming years, given the new trends developing in the industry. The contribution of this study is that it provides a specific adaptation of the EPIC framework for evaluating the strengths and weaknesses of the Bulgarian environment for

procurement and the enlargement of the production base related to the automotive industry. The major environmental factors crucial for positive development are outlined. The persisting line in tax policy, educational priorities in technical sciences, and connectivity development emerge as driving forces for further integration of the country into the automotive supply chain, which will contribute to growth in national GDP and improve its export position in international trade.

Being mainly a supplier of European OEMs, the Bulgarian automotive sector is threatened by a decrease in the volume of orders as a result of the crisis that European auto producers are undergoing. The pressure comes from strong Chinese competition, high energy costs, and insufficient domestic demand. In this situation, diversification of the customer spectrum towards Chinese investments in the region proves crucial for the development of the national industry.

A high strategic role will be played by the persistent efforts of government bodies, industrial organisations, and the academic community to produce engineering specialists so that high value-added activities in the automotive value chain can be successfully developed in the country.

Conflict of Interest

The author declares that there is no conflict of interest.

References:

A&A. (2024). Divergence — latest third-party logistics market results and outlook 2024. https://www.3plogistics.com/product/divergence-latest-third-party-logistics-market-results-and-outlook-2024/

Amling, A., Maguire, A., Rodrigues, A. M., Alexova, K., Scott, S. D., Stank, T. (2020). *EPIC Supply Chain Framework. Global Supply Chain Institute*. Tennessee: Knoxville.

Amling A., Rodrigues A. M., Hsu, S. (2024) *Global Supply Chain in the Era of Global Disruptions: EPIC index Update and Country Risk Report*. Institute Knoxville. Tennessee: Knoxville.

Automotive Cluster Bulgaria. (2024). Official Sector Overview. https://automotive.bg/about/

Bartlett, C. A., & Ghoshal, S. (1989). *Managing across borders: The transnational solution.* Harvard Business School Press.

Benett, D. (2001). *What Really Matters in International Operations?* UK: Bath.

Bulgaria Estate. (2025). Bulgaria's property market: the truth about prices. Sofia.

Bulgarian Chamber of Commerce and Industry — BCCI. (2025). Bulgaria in Figures. Economic Analysis and Policy Department. Sofia.

BYD. (2025). https://www.bydeurope.com/byd-group

Chitadze, N. (2022). World Politics and the Challenges for International Security. *IGI Global.*

Colliers International. (2019). Survey Automotive Industry in Bulgaria.

EC. (2024). EU Commission under Implementing Regulation (EU) 2024/2754.

Eurostat. (2025). Electricity price statistics. https://ec.europa.eu/eurostat/statistics_explained/index.php?title=Electricity_price_statistics

Ferdows, K. (1997). Making the Most of Foreign Factories. *Harward Business Review*, *75*. https://hbr.org/1997/03/making-the-most-of-foreign-factories

IEA — International Energy Agency. (2025). What next for the Global Car Industry. www.iea.org

MII (2015) Innovation Strategy for Smart Specialization the republic of Bulgari 2014–2020. https://www.mi.government.bg/files/useruploads/files/innovations/ris3_26.10.2015_en.pdf

MON, BG. (2026). https://ri.mon.bg/active-institutions

MTC. (2025). Bulgaria is in the top 10 countries with the fastest mobile internet in the world. https://www.mtc.government.bg/en/category/1/bulgaria-top-10-countries-fastest-mobile-internet-world

NSI — Bulgaria. (2025). https://www.nsi.bg/en/statistical-data/348/996

Observatory of Economic Complexity (OEC) (2023). https://oec.world/en/profile/hs/cars
Porter, M. E. (1979). How Competitive Forces Shape Strategy. *Harvard Business Review*, *57*(2), 137–145. https://doi.org/10.1007/978-1-349-20317-8_10
Porter, M. E. (1980). *Competitive advantage: Creating and sustaining superior performance; and competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.
Property Rights Alliance. (2025). https://internationalpropertyrightsindex.org/country/bulgaria
Real Estate BG. (2026). https://en.realestates.bg/obiavi/imoti-prodajbi/promishleni-pomeshtenia-skladove/?region_id=22
Reese, I. (2024). U.S. tariffs on Chinese electric vehicles and their effects. *Customs Compliance & Risk Management*, *27*. https://www.customsclear.net/en/articles/us-tariffs-on-chinese-electric-vehicles-and-their-effects-9d952cddbb44
Russo, M., Cetrulo, A., & Simonazzi, A. (2025). Digitalization and automation in the automotive sector: the manifold role of lean production. *Eurasian Business Review*, *15*, 1129–1165. https://doi.org/10.1007/s40821-025-00315-9
Song, G., Sun L. (2016). Evaluation of factors affecting strategic supply chain network design. *International Journal of Logistics Research and Applications, 20*(5), 405–425. https://doi.org/10.1080/13675567.2016.1267125
Srinivasan, M., Stank, T. P., Dornier, P. P., & Peterson, K. J. (2014). *Global supply chains: Evaluating regions on an epic framework*. McGraw-Hill.
Statista. (2025). https://www.statista.com/statistics/375187/inflation-rate-in-bulgaria/
UNCTAD. (2026).10 trends shaping global trade in 2026. https://unctad.org/news/10-trends-shaping-global-trade-2026
Vereecke, A., Dierdonck, R., & De Meyer, A., (2006). A typology of plants in global manufacturing networks. *Management Science. INFORMS*, *52*(11), 1737–1750. https://doi.org/10.1287/mnsc.1060.0582
World Bank. (2024). https://data.worldbank.org/indicator/LP.LPI.TRAC.XQ?locations=BG

Appendix

Table 1. EPIC Framework

Dimension	Indicators
Economy (30%)	GDP, GDP FDI Currency stability, Inflation rate Balance of trade
Politics (20%)	Ease of doing business score Strength of legal rights index Political risk index International property rights index
Infrastructure (30 %)	Transportation Infrastructure Utility Infrastructure Telecommunications and Connectivity
Competence (20%)	Labor Force, Unemployment rate, Education Level Logistics Competence, Customs and Security

Source: *Srinivasan et al., 2014*.

Table 2. Adaptation of EPIC framework

Dimension	Indicator
Economy	*Cost of doing business:* labor costs, energy costs, industrial estates costs *Economic importance:* share of automotive industry as % of GDP, growth of the industry 2015-2025, contribution to export, number of companies, number of employees *Macroeconomic stability:* inflation rate, currency stability
Politics	*Legal and regulatory framework:* tax rates, tariff rates, International Property Rights Index (Sub-indexes)
Infrastructure	Transportation Infrastructure Telecommunications and Connectivity
Competence	Level of Professional education Logistics Competence

Source: Author's adaptation of EPIC model.

Table 3. European countries with minimum wage below 1000, EUR in 2025

Country	Monthly minimum wage in EUR
Bulgaria	551
Hungary	707
Latvia	740
Romania	814
Slovakia	816
Czechia	826
Estonia	886
Malta	961
Greece	968
Croatia	970

Source: Eurostat (*2025*)

Table 4. Average inflation rate in Bulgaria 2015-2025

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
-1.07	-1.32	1.19	2.63	2.46	1.22	2.84	13.02	8.6	2.6	3.64

Source: Statista (*2025*)

Table 5. Share of automotive industry from Bulgarian GDP

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
3.5%	4%	5%	5.5%	6.5%	8%	9%	10%	10%	11%

Source: Automotive Cluster Bulgaria (*2024*)

Table 6. FDI in automotive industry in Bulgaria in billion EUR

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
2.88	3.43	3.4	3.88	4.21	5.26	6.09	8.26	8.40	9.39

Source: NSI, BG (*2025*)

Table 7. Number of companies in the automotive industry in Bulgaria

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
40	100	130	190	250	300	310	320	370	380

Source: Automotive Cluster Bulgaria (*2024*)

Table 8. Number of employees in the industry

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
33000	33000	50000	65000	65000	67000	67000	75000	75000	80000

Source: Colliers International (*2019*)

Table 9. Corporate income tax and VAT tax in European countries in % for 2024

Countries in Europe	Corporate tax	VAT TAX
Bulgaria	10	20
Rumania	16	19
Hungary	10.8	27
Czech Republic	19	21
Estonia	20	22
Cyprus	12.5	19
Lithuania	15	21
Slovakia	21	23
Latvia	20	21

Source: European Commission (*2024*)

Table 10. Secondary Professional Technical Schools by Region

City/Region in Bulgaria	Number of technical schools
Sofia	8
Varna	3
Stara Zagora	3
Plovdiv	4
Veliko Tarnovo	3
Pleven	3
Other cities	More than 10

Source: MON, BG (*2026*)

Table 11. Technical Universities and Universities with Strong Technical Programs

Public Technical Universities	General Universities with Strong Technical/IT Programs	Other Universities with Technical/IT-Relevant Programs
Technical University, Sofia Technical University, Varna Technical University, Gabrovo University of Chemical Technology and Metallurgy (UCTM)	Sofia University "St. Kliment Ohridski", Sofia Plovdiv University "Paisii Hilendarski", Plovdiv Ruse University "Angel Kanchev", Ruse	New Bulgarian University, Varna Free University, Burgas Free University

Source: MON, BG (*2026*)

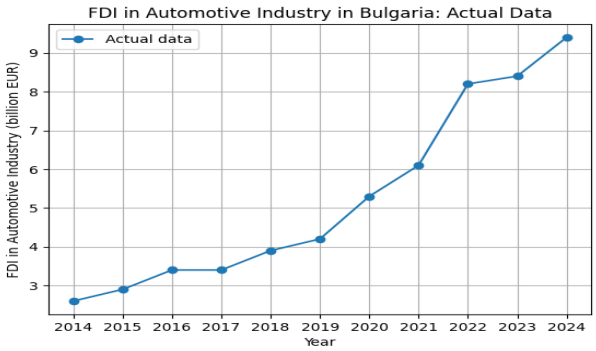

Figure 1. Trend in the FDI in Automotive Industry in Bulgaria

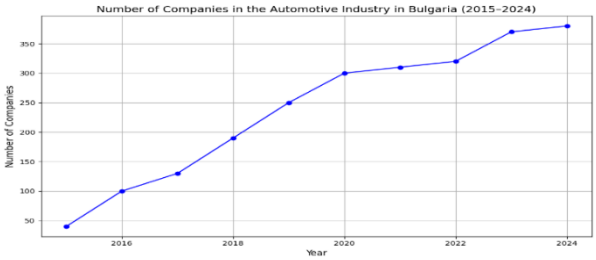

Figure 2. Trend in the number of the automotive companies in Bulgaria

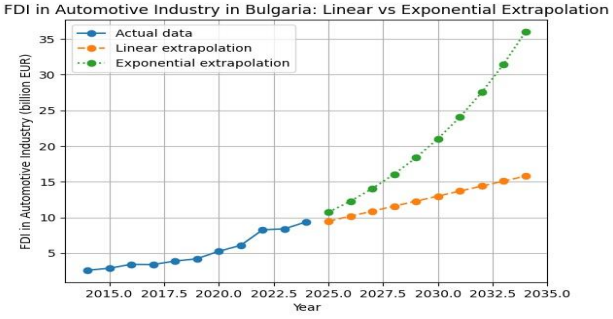

Figure 3. Projection for FDI in the Automotive sector in Bulgaria
Source: Autor's elaboration