

Shifting gears

Slovakia's automotive industry in a time of transformation

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Introduction

Slovakia, a landlocked country of just over five million people, has quietly become a global powerhouse in automobile manufacturing. Known as the world's largest car producer per capita, Slovakia manufactured over 1 million vehicles annually in the years leading up to the COVID-19 pandemic, and automotive production remains the backbone of its economy. The sector accounts for roughly 13% of GDP, over 35% of total industrial output, and nearly half of total exports.¹ Moreover, it directly employs over 177,000 workers, with indirect employment affecting many more across logistics, parts suppliers, and service sectors².

This remarkable industrial performance is not merely a statistical curiosity but a result of deliberate positioning within the European and global production networks. Since the early 1990s, Slovakia has courted foreign direct investment (FDI), particularly in high-volume, export-oriented manufacturing. The automotive sector emerged as the key beneficiary. Multinational giants such as Volkswagen, Kia, PSA Peugeot-Citroën (now Stellantis), and Jaguar Land Rover chose Slovakia for its central location, cost-competitive and skilled labour force, and access to the EU single market.

Yet this success story is now entering a phase of uncertainty and transformation. The global automotive industry is undergoing a profound shift driven by the transition to electric vehicles (EVs), increasing digitalization, and shifting geopolitical and supply chain dynamics. Slovakia's strong dependency on traditional internal combustion engine (ICE) car production raises urgent questions about adaptability, resilience, and the future competitiveness of its manufacturing base.

Furthermore, Slovakia's position at the crossroads of European and global developments—be it technological, environmental, or trade-related—makes its automotive industry a bellwether for the broader economic prospects of the Central and Eastern European (CEE) region. As the country navigates this transformative decade, the way it responds to these external and internal pressures will shape its role not only as a manufacturing hub but also as an innovator and policy shaper within the EU.³

In this article, we explore the trajectory of Slovakia's automotive sector through five lenses: the role of foreign investment and regional development; emerging challenges such as labour shortages and the green transition; policy responses at the national and EU level; and finally, a reflection on whether Slovakia can sustain its momentum in an industry defined by disruption and reinvention.

Foreign investment & local impact: global carmakers & regional development

Slovakia's ascent as a key player in the global automotive industry is inextricably linked to its strategic openness to foreign direct investment (FDI). Since the 1990s, the Slovak government has cultivated a business-friendly environment to attract multinational car manufacturers. Offering competitive tax incentives, EU-compatible legal frameworks, and a relatively low-cost yet highly skilled labour force, Slovakia became an ideal location for export-oriented production in the heart of Europe.⁴

¹ <https://www.oica.net/category/production-statistics/>

² <https://www.eib.org/en/projects/country/slovakia>

³ <https://www.cedefop.europa.eu/en/country-reports/slovakia-2025-skills-forecast>

⁴ <https://www.oecd.org/en/topics/sub-issues/economic-surveys/slovak-republic-economic-snapshot.html>

The arrival of major automotive giants transformed the industrial landscape. Volkswagen was the first mover, establishing operations in Bratislava in 1991. The company expanded significantly over the next three decades, turning its Slovak plant into a major hub for SUV and luxury segment assembly. This was followed by PSA Peugeot-Citroën (in Trnava, 2006), Kia Motors (in Žilina, 2006), and Jaguar Land Rover (in Nitra, 2018), all of which chose Slovakia for greenfield investments.

These investments had a profound multiplier effect. Beyond creating direct manufacturing jobs, they catalysed the growth of an extensive supplier network across western and northern Slovakia. Hundreds of Tier 1 and Tier 2 suppliers—producing everything from engine components to electronics and interiors—set up operations near these plants, deepening Slovakia’s integration into European supply chains. This supply chain density, along with modern transport infrastructure and EU single market access, has created a high degree of production efficiency and just-in-time delivery capability.

However, the benefits of this FDI-led growth have not been distributed evenly across the country. Western Slovakia, especially the Bratislava-Trnava-Žilina-Nitra corridor, has enjoyed robust employment and infrastructure upgrades. In contrast, central and eastern Slovakia have seen comparatively less automotive investment, leading to persistent regional inequalities in income, infrastructure quality, and employment opportunities.

Moreover, this heavy dependence on foreign-owned capital raises long-term questions about economic sovereignty and domestic value creation. Slovak firms play a relatively limited role in the higher-value segments of the supply chain, such as R&D, design, or strategic decision-making. While Slovakia is an indispensable manufacturing partner, its domestic innovation ecosystem in the automotive sector remains underdeveloped compared to countries like Germany or even Czechia.⁵

Still, the inflow of FDI has been instrumental in embedding Slovakia into the European industrial fabric. As the sector now moves into a new phase—centred around electrification and digital mobility—the same international firms that fuelled Slovakia’s growth may determine the pace and scope of its future transition. Whether these companies will expand their EV-related investments in Slovakia, and how domestic policy supports this shift, will be crucial themes explored in the next section.

Challenges ahead: labour market, green transition, and supply chain risks

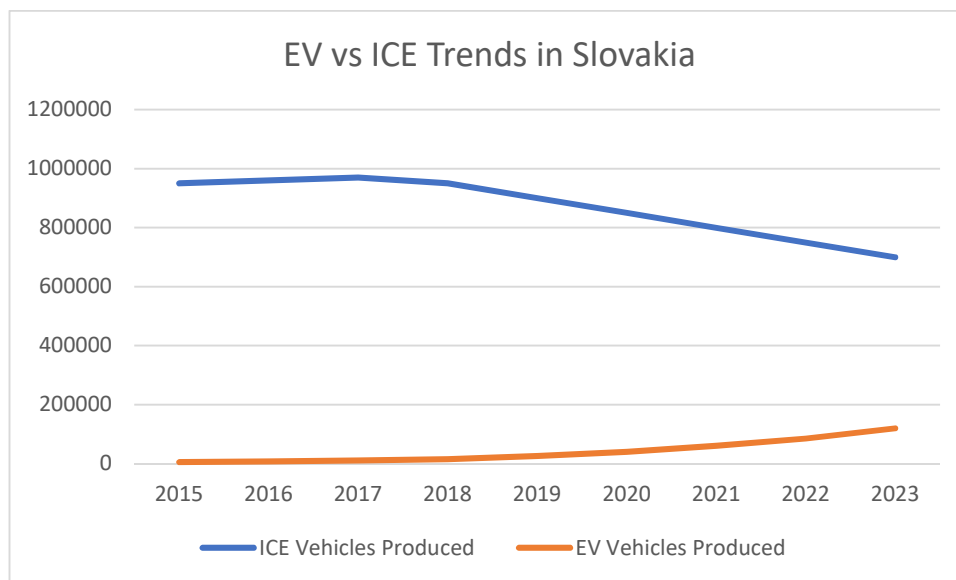
Despite its current industrial strength, Slovakia’s automotive sector faces mounting structural and strategic challenges that could threaten its long-term competitiveness. At the core of these challenges lie three interlinked issues: an increasingly constrained labour market, the complex and costly transition to electric vehicles (EVs), and heightened vulnerabilities in global supply chains.⁶

Slovakia’s booming automotive industry is colliding with demographic and educational limitations. With one of the fastest-aging populations in the EU and a historically high outflow of young skilled workers to Western Europe, Slovakia faces growing labour shortages, particularly in manufacturing and engineering roles. Employers are increasingly reliant on foreign labour from neighbouring countries, like Ukraine, and some others, such as Serbia as well, to fill gaps on production lines.

Moreover, the education system, while strong in certain technical fields, often lags behind in equipping graduates with the digital and multidisciplinary skills needed for advanced manufacturing and Industry 4.0 environments. The mismatch between labour market demand and education output limits Slovakia’s ability to move up the value chain into research, development, and innovation-driven segments of automotive production.

⁵ <https://www.acea.auto/files/ACEA-report-vehicles-in-use-europe-2023.pdf>

⁶ <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/a-road-map-for-europes-automotive-industry>



As the EU advances toward its climate goals—such as banning the sale of new internal combustion engine (ICE) vehicles by 2035—Slovakia’s automotive model is being tested. The country’s production is still heavily skewed toward ICE-based models, with only limited EV production capacities currently in place. While Volkswagen produces some plug-in hybrid and EV models in Bratislava, Slovakia lags behind neighbours like Hungary, which has attracted significant investment in battery cell manufacturing and EV-specific assembly lines.⁷

The EV transition demands not only retooling of factories but also significant retraining of workers and upgrades in national infrastructure, particularly charging networks and smart grids. Without aggressive adaptation, Slovakia risks becoming a low-cost outpost for legacy production lines that may be phased out in the coming years.

The COVID-19 pandemic and Russia’s war in Ukraine have exposed the fragility of global supply chains. For Slovakia, which relies on the just-in-time delivery of components from across Europe and Asia, these disruptions have led to production stoppages and revenue losses. Critical components—such as semiconductors, batteries, and rare earth metals—are sourced from a limited number of global suppliers, making the sector vulnerable to geopolitical tensions and logistical bottlenecks.

In response, some multinational manufacturers are exploring “nearshoring” or “friendshoring” strategies, which could work in Slovakia’s favour if leveraged proactively. However, without domestic capacity in critical technologies such as battery cell production, Slovakia remains a second-tier node in the evolving automotive value chain.

These challenges underscore the need for a comprehensive strategic response that links industrial policy, workforce development, and infrastructure investment. The following section explores how Slovak policymakers and EU institutions are responding to these pressures, and whether their actions are sufficient to safeguard Slovakia’s place in Europe’s automotive future.⁸

Policy & strategy: the Slovak Government’s response and EU context

Recognizing the strategic urgency of industrial transformation, Slovakia has begun to deploy a range of policy tools aimed at safeguarding and renewing its competitive edge in automotive manufacturing. However, the success of these efforts depends heavily on coordination with European Union strategies, effective execution at the national level, and the ability to attract high-quality investment into emerging segments of the mobility ecosystem.

⁷ https://www.transportenvironment.org/uploads/files/EU-Briefing-GTG-2025-1_2025-05-12-114624_irqj.pdf

⁸ <https://www.sario.sk/sites/default/files/2023-10/sario-automotive-sector-in-slovakia-2023-10-26.pdf>

Slovakia's national industrial strategy has placed increased emphasis on supporting innovation, digitisation, and sustainability. Government-backed agencies such as SARIO (Slovak Investment and Trade Development Agency) and the Ministry of Economy have introduced incentive schemes to attract investment in electromobility, battery production, and advanced manufacturing technologies. Specific projects include support for gigafactory development, EV component plants, and the retrofitting of existing assembly lines to accommodate hybrid and electric vehicle production.

Tax breaks, R&D subsidies, and infrastructure upgrades are part of the state's toolkit to maintain investor confidence. The government has also earmarked substantial EU Recovery and Resilience Facility (RRF) funds to support green industry transitions, including in transport and energy.⁹ However, criticism persists regarding bureaucratic inefficiencies, slow implementation, and limited institutional capacity to monitor outcomes.

Slovakia has taken initial steps to reform vocational training and STEM education. Dual education systems, which combine classroom instruction with practical apprenticeships in firms, have gained momentum, especially in the automotive hubs. Still, these programmes remain under-scaled, and university-level R&D institutions have struggled to attract funding and international talent. The government has also launched retraining initiatives for workers expected to be displaced by automation and electrification, but long-term workforce planning remains fragmented.¹⁰

As a member of the European Union, Slovakia benefits from powerful structural policy alignment. The EU's Green Deal, Fit for 55, and European Battery Alliance all provide funding streams, regulatory guidance, and collaborative frameworks. Slovakia participates in several Important Projects of Common European Interest (IPCEIs), especially in battery value chain development, giving it access to state aid flexibility and cross-border partnerships.¹¹

Nonetheless, Slovakia's absorptive capacity—its ability to translate EU frameworks into effective national policy—is mixed. While neighbouring Hungary has aggressively marketed itself as an electromobility hub with strong ties to Korean and Chinese battery manufacturers, Slovakia has been slower to define a clear industrial narrative in this space. The upcoming Strategic Industrial Policy 2030, expected to be published by the Ministry of Economy, may provide a clearer roadmap for digital and green transitions.¹²

Slovakia is also part of regional coordination efforts under the Visegrád Group (with Poland, Hungary, and the Czech Republic), which share common industrial challenges and opportunities. Discussions have been ongoing about aligning automotive innovation, logistics infrastructure, and EV-related regulation. However, competition for foreign investment occasionally limits deeper cooperation, and industrial fragmentation across the region persists.

Overall, while Slovakia has made tangible efforts to adapt its industrial base and secure a position in the next phase of automotive development, it remains in a critical window of strategic decision-making. As EU policy frameworks tighten emissions standards and consumer preferences shift rapidly, delayed adaptation could mean industrial decline. The concluding section explores whether Slovakia's strengths are sufficient to carry it forward—or whether deeper transformation is required.

Conclusion

Slovakia's rise as a global automotive manufacturing hub has been one of the most remarkable industrial success stories in post-socialist Central Europe. Leveraging its strategic location, open investment climate, and skilled

⁹ https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility/country-pages/slovakias-recovery-and-resilience-plan_en

¹⁰ <https://unece.org/statistics/documents/2023/03/working-documents/vision-and-development-strategy-slovakia-2030>

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https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_158727.pdf

¹² <https://www.eba250.com/about-eba250/network/>

workforce, the country positioned itself at the heart of European car production. Yet, this very success has created a high-stakes dependency on a sector now facing profound disruption.¹³

The global transition to electric vehicles, increasing supply chain insecurity, and technological shifts toward digital and autonomous mobility challenge Slovakia's current model—built primarily on cost-efficient production of internal combustion engine vehicles. While Slovakia's established production infrastructure and integration into European supply chains offer undeniable strengths, they are no longer sufficient by themselves to guarantee continued relevance and resilience.¹⁴

To remain competitive, Slovakia must evolve from a low-margin assembly economy to a higher-value innovation-driven player. This means not only attracting new waves of foreign investment in battery and EV production but also fostering domestic innovation capacity, upskilling its workforce, and upgrading infrastructure for the green transition. It also means making strategic bets: investing in electromobility, deepening regional cooperation, and carving out niches in software, connectivity, or lightweight materials where Slovak firms and universities can add value.

Encouragingly, both national policies and EU-level support mechanisms are beginning to align around these objectives. However, time is short, and international competition is intensifying. Neighbouring countries are moving swiftly, leveraging state incentives and geopolitical partnerships to lock in next-generation manufacturing opportunities. Slovakia must act with similar urgency and strategic clarity to avoid being relegated to the margins of industrial Europe.¹⁵

Ultimately, the question is not whether Slovakia has the capability to adapt—it does. The question is whether it can mobilise the political will, institutional coherence, and societal consensus needed to do so. The decisions taken in this decade will determine whether Slovakia continues to thrive in the fast lane of European industry or risks being left behind on the hard shoulder of transition.

¹³ https://www.wto.org/english/res_e/booksp_e/00_gvc_dev_report_2021_e.pdf

¹⁴ https://www.bruegel.org/sites/default/files/private/wp_attachments/PC-26_2018_1.pdf

¹⁵ <https://www.weforum.org/publications/the-future-of-jobs-report-2025/>