

Slovakia: how to mitigate the Detroit syndrome in the automotive sector

Slovakia is the world leader in the production of vehicles per capita, with 198 cars produced per 1 000 inhabitants. The Automotive Industry Association is optimistic and expects further growth: 1.13 million vehicles in 2024 compared to 1.08 million in 2023. However, the Slovak Association for Electromobility is less optimistic and warns of a potential crisis if the sector fails to undergo transformative changes. Alongside challenges of growing competition from China and a shortage of skilled labour, the automotive sector needs to adapt its vocational education and training to changing industrial needs.

Monoculture in the national economy?

Directly employing over 170 000 people (255 000 including suppliers), the automotive industry has a significant presence. It accounts for 46.5% of total sales in industry, 41.4% of exports and 10% of the GDP. Yet, local automakers face difficulties in competing with Chinese cars, in terms of both pricing and quality in the market of small electric vehicles. It is uncertain whether the introduction of potential European customs barriers would be a solution or an obstacle to the further development of the country's five car producers within its small 5.4 million population.

A shift in workforce profile needed

Slovak citizens are traditionally skilled in tinkering with and repairing their cars, and have a strong background in working with metal, whether in machining or assembly. However, this familiarity with traditional automotive technology may explain why the population is not buying electric cars. The share of electric models owned by inhabitants is the lowest in the EU and the public charging network remains underdeveloped, with only 740 stations by the end of 2023. This conservative consumer attitude, coupled with the high flexibility of the workforce in adjusting to the production change creates the risk that Slovakia will continue producing cars with combustion engines on request as long as possible. This could result in massive e-car production later than other countries.

Change in the national curricula

Recognising the need for change, the National VET Council decided on two important changes at its meeting of 26 March 2024: reducing the number of VET programmes in mechanical engineering from 39 to 16 and approving a new national curriculum for the 'Autotronic' VET programme. The former change aims at reducing the pressure on students to specialise in the first year of their studies. The approval of the new curriculum follows a pilot involving 990 learners across 10 schools in the 2023/24 school year. This curriculum falls under the so-called K-type VET programme (ISCED 354), which also prepares graduates for entry into higher education. Graduates of the 'Autotronic' programme who are not interested in higher education can work as diagnosticians in car repair shops or technical control workplaces, as well as operators in car plants. The programme has common standards in the first year for the theoretical and practical components, and then offers the possibility of four specialisations over the next 3 years: cars, trucks and utility vehicles, one-wheeled vehicles, and electric cars. The new curriculum could also give new impulses to dual VET. The training company, be it a car manufacturer or a car repair shop, contracting VET learners will jointly decide on the content of VET. In the 2023/24 school year, 2 848 (24%) of the mechanical engineering learners are in dual VET. Although this is significantly more than in other sectors of the national economy, it is evident that the current dual VET model requires more flexibility to meet the needs of the future.

Changing mindset

A curriculum expert at the State Vocational Education Institute who developed the 'Autotronic' curricula specified that high flexibility in curricula already exists, but greater flexibility to support work-based learning (not only via dual VET, which is only one form of work-based learning) is still missing. However, the most urgent is supporting e-mobility via well-designed incentives from the State that will change mindsets and consequently the skills of the workforce. This is indispensable to prevent the Detroit syndrome.

Read more

- [Slovakia Automotive Industry 2.0: the time is now to retool for the e-mobility era](#)
- [A new structure of VET programmes in mechanical engineering \(in Slovak\)](#)
- [Piloted curricula \(school educational programme\) 'Autotronic' of VET school in Žilina \(in Slovak\)](#)

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