

*On the way to net zero mobility: What does this mean
for European automobile jobs?*

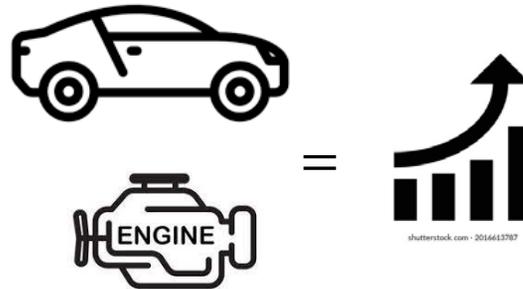
Main challenges for CEE locations at the example of Hungary

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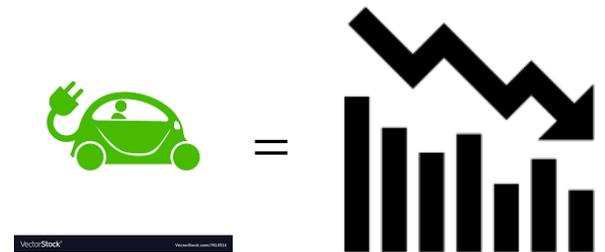
April 21st, 2022

Framing the problem

Historic role of the automotive industry



Disruption by transition to EVs ?



Role of Hungary play in the changing European automotive production chain? + Impact of automation and digitisation?
Closing existing capacities? Actors exiting the market?
Downgrading? Additional FDI inflows to create EV capacities?

Transition to Evs =
technological and structural lock-in for countries specialised in ICE-specific production?

Employment ?

Research approach

- Discourse analysis: 23 interviews with stakeholders

(1) companies specialised in ICE-associated manufacturing (OEMs and suppliers); (2) Hungary-based firms adapting to e-mobility; (3) new actors (e.g., battery manufacturers); (4) industry associations; (5) trade unions; (6) government; (7) experts

Q: impacts, preparedness

- Data compilation
- Literature review + business press

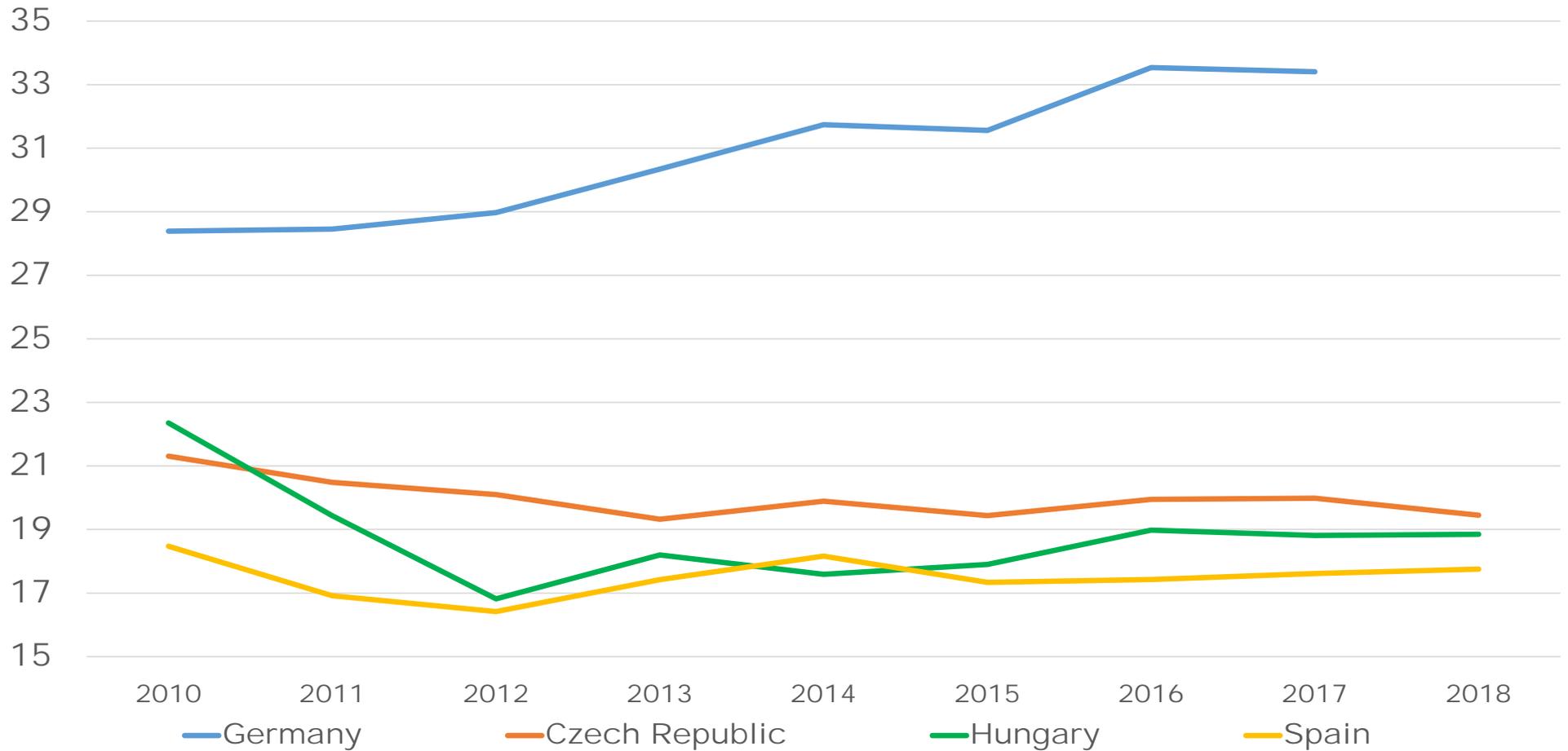
Snapshot of the industry

- GDP: 5-8%,
- Manuf. exports > 30% (total export: ~20%)
- FDI stock € 9.2 bn + new investments
- ICE-specialisation, but many non-drivetrain related components
- Industry is deemed to be in good shape, with good long-term prospects
- Employment: 2021=158.3k (2019=181.6k)
- Capital withdrawal (reduced equity: €600m in 2020) + declining investments (2020/2019 = 73 %)
- Low added value, even following decades of upgrading



Photo source: Audi Media Center
<https://www.audi-mediacycenter.com/en/audi-hungaria-zrt-5570>

D29: Value added / production (%)



D29 = Motor vehicles, trailers & semi-trailers

Source: Own calculations: OECD STAN Database

A leader in the battery race?

S&P Market Intelligence
predictions for 2025

Rank	Country	2021 Li-ion manufacturing capacity (GWh)		% of World Total
#1	China 🇨🇳	558	944	79.0%
#2	U.S. 🇺🇸	44		6.2%
#3	Hungary 🇹🇷	28	47	4.0%
#4	Poland 🇵🇱	22	70	3.1%
#5	South Korea 🇰🇷	18		2.5%
#6	Japan 🇯🇵	17		2.4%
#7	Germany 🇩🇪	11	164	1.6%

Results of a review of the business press reporting on automotive transactions in CEE

2018 – 2021 (03)



Employment

- Currently:
 - Tightness in the labour market (can worsen with BMW setting up shop)
 - Many temporary agency workers
 - Labour regulations have been weakened over time
 - Extensive automation already in-place
- Transition:
 - Demand for more skills
 - digitalisation triggered an order-of-magnitude increase in the knowledge-intensity of value creation



Photo source: Techmonitor, 2016, link:
<http://www.techmonitor.hu/piacmonitor/vilag-hir/meg-egy-gyarat-epit-kecskemeten-a-mercedes-benz-20160729>

Problems, risks, and opportunities

- Transition to be gradual, allows for adjustment
- Government strategy reflects a push towards EVs, especially support for Asian battery manufacturers
- Education system

Continuous institutional transformation, declining funding, ~~LLL~~, in-house training of the basics



Photo source: Partizán, 2021, link: https://www.youtube.com/watch?v=rFpGJ7sUz_U

Future-proof
education
system?

Hungary

Czechia

	2010	2020	2010	2020
Reading	17.6	25.3	23.1	20.7
Math	22.3	25.6	22.4	20.4
Science	14.1	24.1	17.3	18.8
Early leavers	10.8	12.1	4.9	7.6

Underachieving
15-year-old in
(%)

Policy recommendations

Policy misalignment

Survival, upgrading, and growth of the automotive industry



FDI attraction = suppressing wages + *investor-friendly* labour market regulations
Neglect of vocational and higher education



Policy consistency

Conclusion

~~No technological and structural lock in~~

Lock in a dependent model of capitalism

Transition to EVs

- requires massive (tangible and intangible) investments
- engenders industry concentration

Will existing investors **remain committed to making all these investments**
... in a host country that does its best to remain competitive ...

on the basis of low labour costs?



Thank you for attention!