

BARMETAL



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IAQ

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Digitalisation, Automatisisation and Decarbonisation: Current trends in Europe and expected labour market effects

Barmetal: Online conference for experts, social partners and policy stakeholders

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Difference between structural change and transformation

Structural change

- Shift of employees between sectors: the result of many independent market decisions

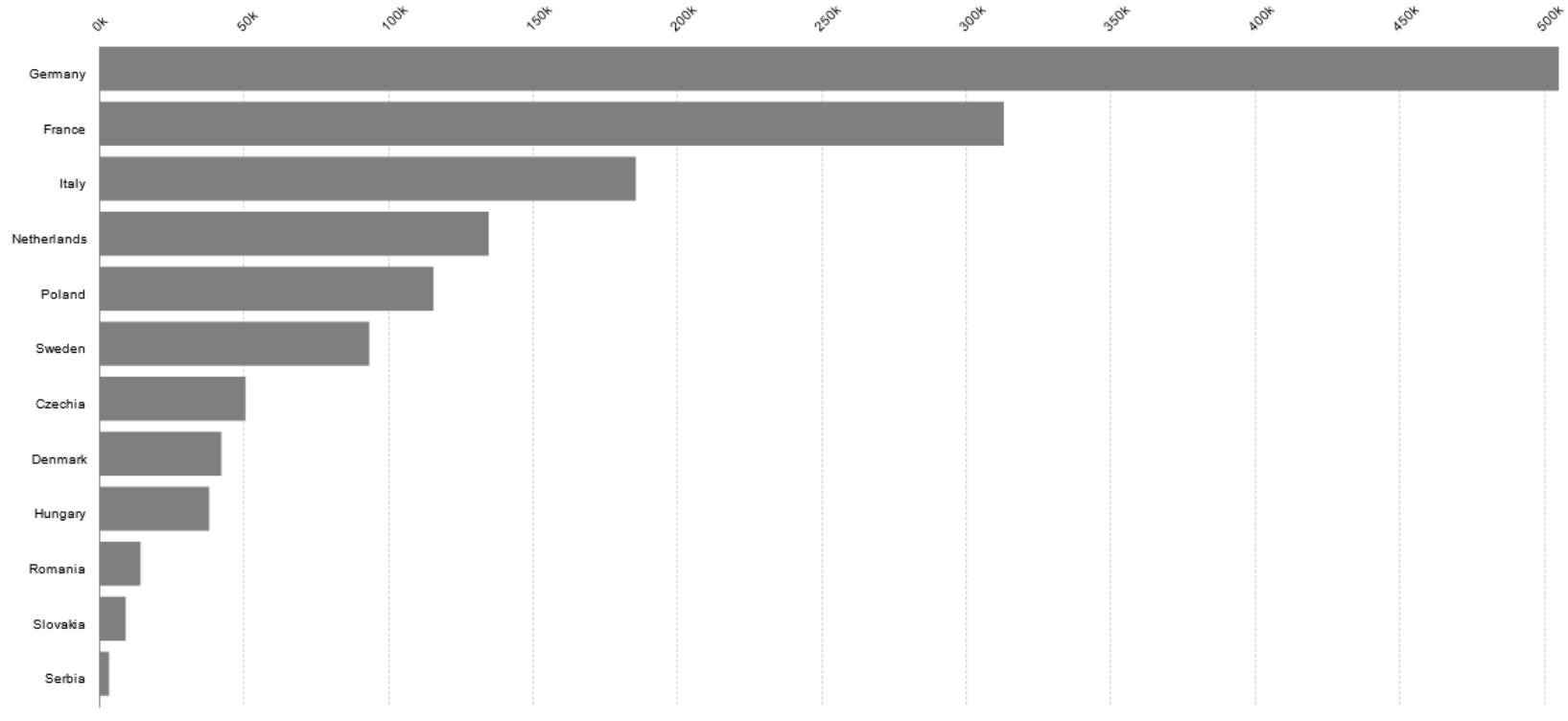
Transformation

- Upheaval due to several simultaneous trends: digitalization, automatization and decarbonization (and in EU demographic change)
- Intended and thought from the end: based on policy goals, decisions and regulations: *Reduction of CO2 emissions by 2050: requires complete restructuring of the economy with new regulations and huge investments in an increasingly competitive environment*
- Long planning lead, more opportunities and more time for decisions on national, regional, company and plant level
- Affects several generations of employees, many of them not yet in the labor market

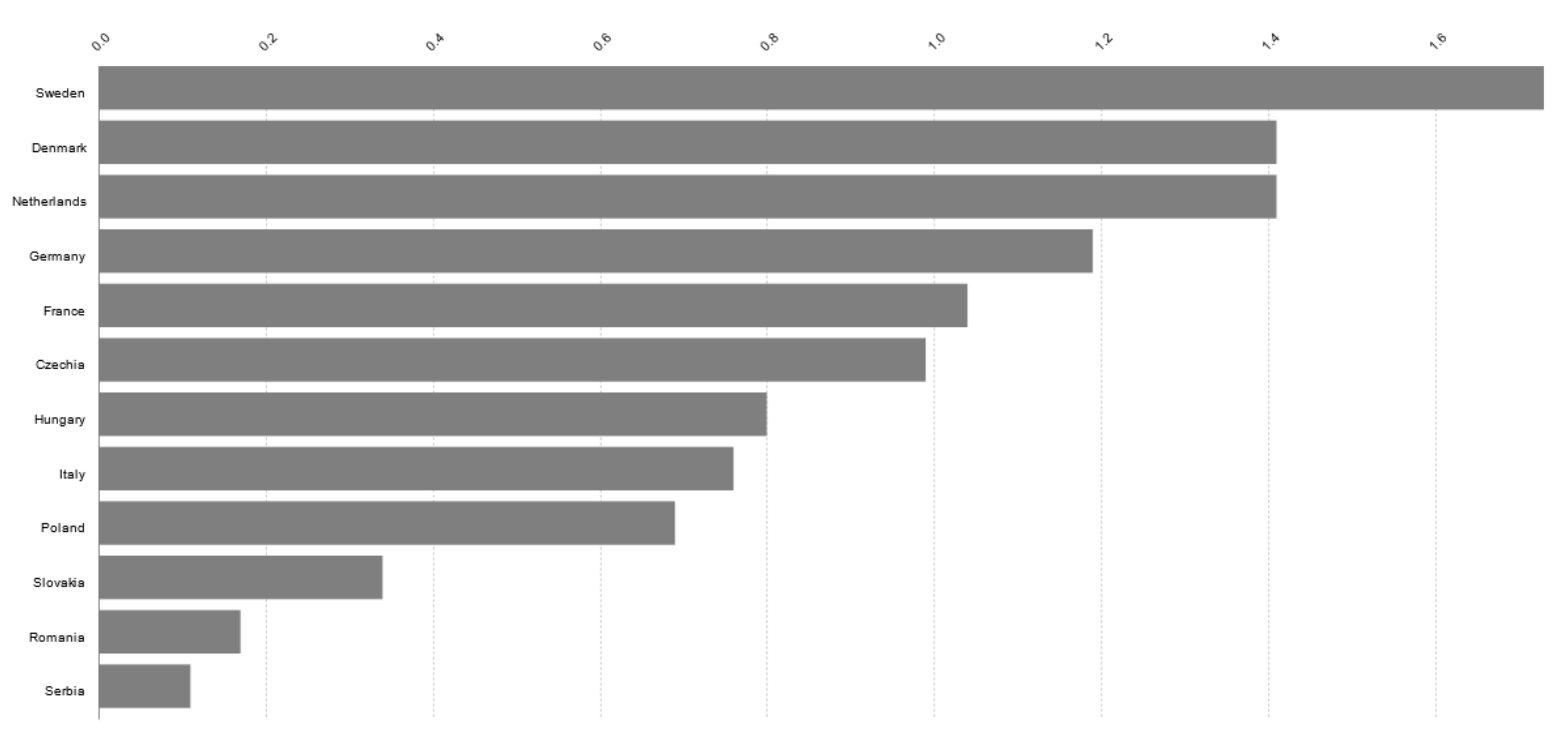
DAD has a strong impact on the manufacturing industry

- Manufacturing is the leading sector for the development of industry 4.0 and for decarbonization
- Far-reaching decisions on decarbonization in the metal industry already taken like *EU ban on the sale of new petrol and diesel cars from 2035* – requires reorganization of the whole value chain
- The 12 countries in our panel
 - have strong manufacturing industries
 - in nearly all countries the automotive industry **most important** subsector
 - main difference: DE, FR, IT, SE have its own OEMs, Central and Eastern European countries belong to the “integrated periphery in the automotive industry” with high foreign ownership
- Central and Eastern European countries mostly “production hubs” with high shares of blue-collar workers
- Concentration of strategic services like R&D and high value-added products in countries of origin of the OEM

R&D personnel and researchers in business enterprise sector in manufacturing in thousands



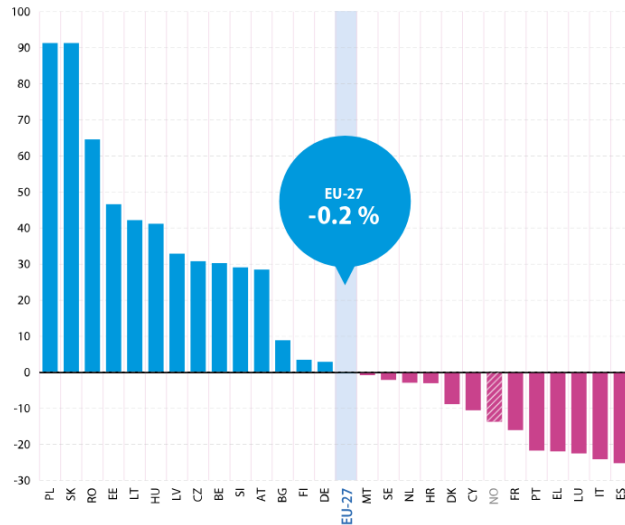
Share of R&D personnel and researchers in the business enterprise sector 2022 in %



Impact of DAD on employment levels

Overall change in the industrial production index

(%, 2005–2020)



Note: the index covers NACE Rev. 2 Sections B to D. IE: not available.

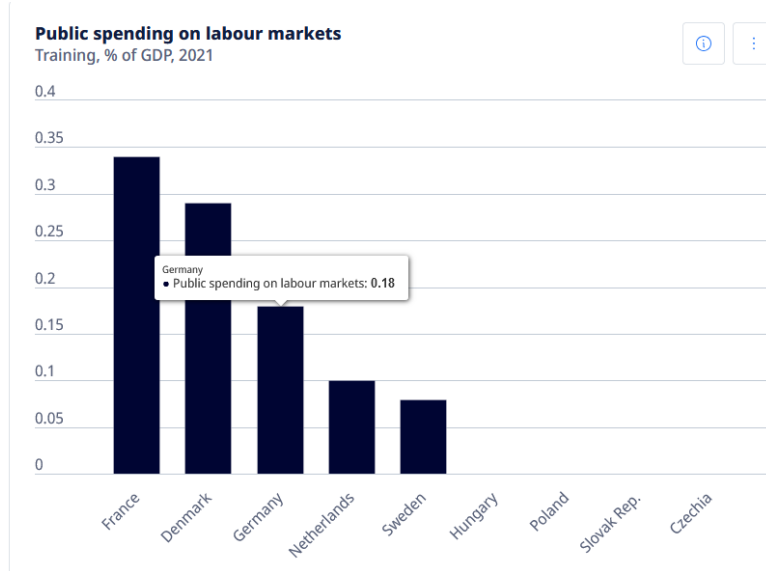
Source: Eurostat ([online data code: sts_inpr_a](#))

- DAD in the past no or low impact on productivity growth - Robert Solow (1987): „Productivity paradoxon“
- Production and employment in manufacturing grew in most of the 12 countries (except FR, IT, SE and DK)
- Forecasts show high job risks for producers of components for combustion engines. Open question: will they be avoided by replacement production (batteries)
- Job losses and gains in countries may also be the result of relocations and shrinking sales not only of DAD.
- Successful implementation of DAD prerequisite for job retention and creation
- All countries try to support companies in implementing DAD: The measures range from tax reliefs to direct subsidies, promotion of R&D, expansion of IT infrastructure, targeted regional policy, modernization of VET, and promotion of social dialog - with major differences between countries

New skill requirements

- **DAD project for several generations:** education and initial training as important as retraining
- **Main trends:**
 - Higher skill requirements – less demand for unskilled workers
 - New qualification profiles, in which several domains and existing occupations (metalworking, electrical engineering or information technology) are combined (like “*mechatronics fitter*”)
 - New skills in battery production: high-voltage electricians (licensed training)
 - But not everybody has to be retrained: broad skills often transferable
- **Revision of occupational profiles:** More organized in the Danish and German dual system of apprenticeship by the social partners, starting in other countries in sectoral, regional or national committees – in many countries lack of structured initial and further training
- **Skill requirements will continue to change:** Necessary **continuous modernization** of the training contents in coming decades
- **Overall labor shortages:** recruitment of foreign workers – Central and Eastern European countries turn to immigration countries

Who is paying for retraining?



- Job losses can only be avoided if those affected receive further training and are placed within the company or externally
- Only a few countries finance further training via labor market policy - smaller qualification programs via the EU Structural Funds
- Individualisation of costs: disadvantage for the low skilled and SMEs
- Technology transfer and transfer of training programs (e.g. Volkswagen battery academy) within OEMs but not necessarily to SMEs
- Regional networks and regional training centers crucial for transfer to SME's: Germany: 27 regional networks financed through the Automotive Industry Future Fund

The role of social dialog and CB? The case of Germany

High trade union density (40%) and coverage by collective agreements (66%, car industry 87%) in the German Metal industry

- Long tradition of industry wide collective agreements on job protection and retraining
- Recently new „Future oriented CBs“ for DAD: *Negotiated packages that include job guarantees, investment guarantees, training, and commitments to maintain locations.*
- IG Metall represented in the “National platform on Industry 4.0”: *Focus on work organization, job protection and training, and „Future Fund for the Automotive Industry”: financing 27 regional transformation networks with a total of 200 million euros from 2022*
- Modernization of occupational profiles in the German dual system of vocational training decided by the social partners not the state

Results: 1. Social partners main actors in the transformation. 2. Personnel measures negotiated and not unilaterally determined. 3. Priority given to internal change with further training. 4. Standardized training in broad occupational profiles. 5. Effects of regional networks and “Future Oriented CBs” not yet evaluated

But: impact of market changes: VW terminates the CA on protection against dismissals at the end of the year

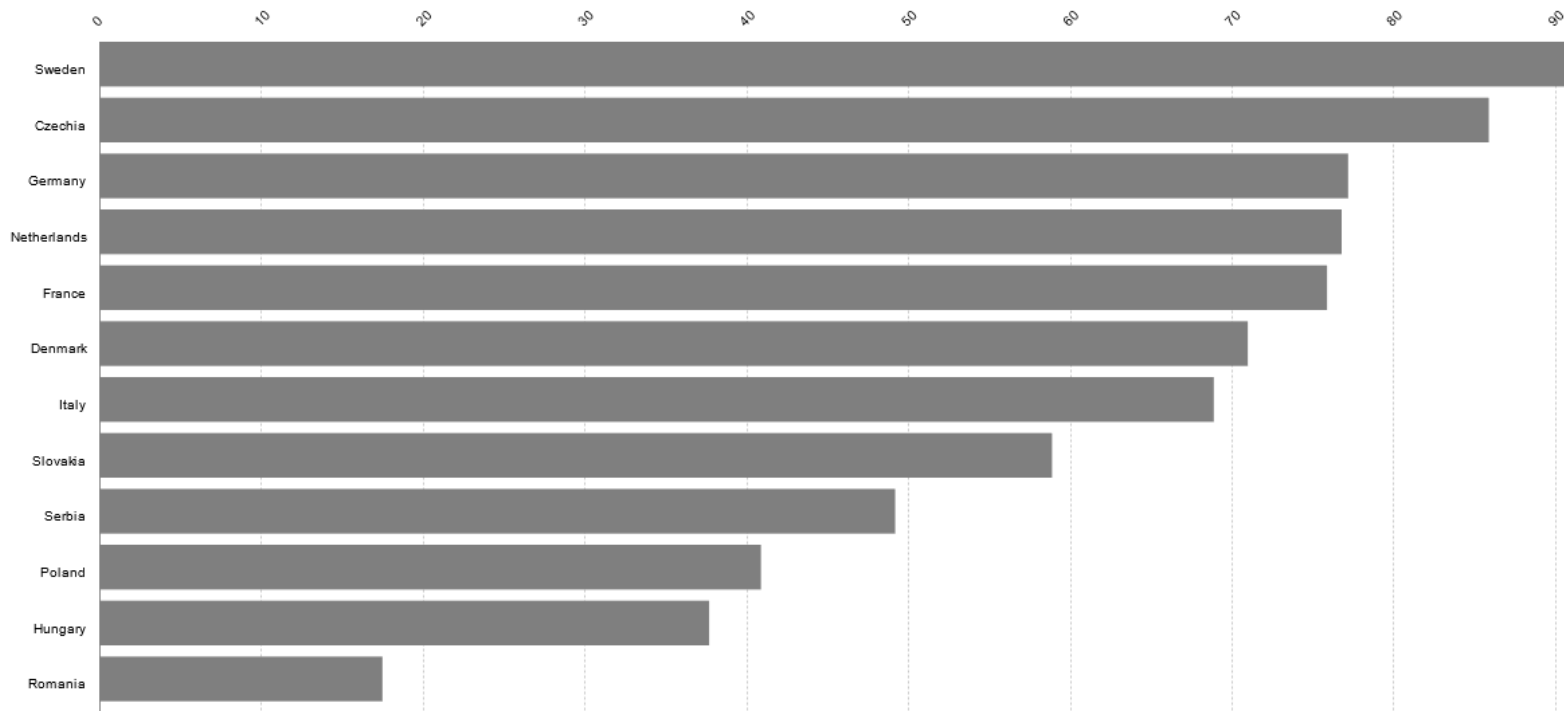
Conclusions

- **Just transition** in the common interest of employers, employees and the state:
 - necessary to ensure acceptance among employees,
 - avoid labor shortages and costly unemployment
- Long-term technological transformation requires planning lead time: this gives *time for early information* of all parties involved and planning of further training and replacements - In practice, however, company case studies often **show late information** about investments
- The costs of the transformation of companies are mainly borne by the companies that also benefit from them – transfer within companies across borders
- **State support** for retraining, replacement and technology transfer to SME's necessary
- Analysis of new skill requirements and updating of training contents together with **with social partners** more successful

Thank you for your attention

Annex

Enterprises providing training - % of all enterprises



Share of R&D personnel and researchers in total active population

