

# The future of work and inclusive growth

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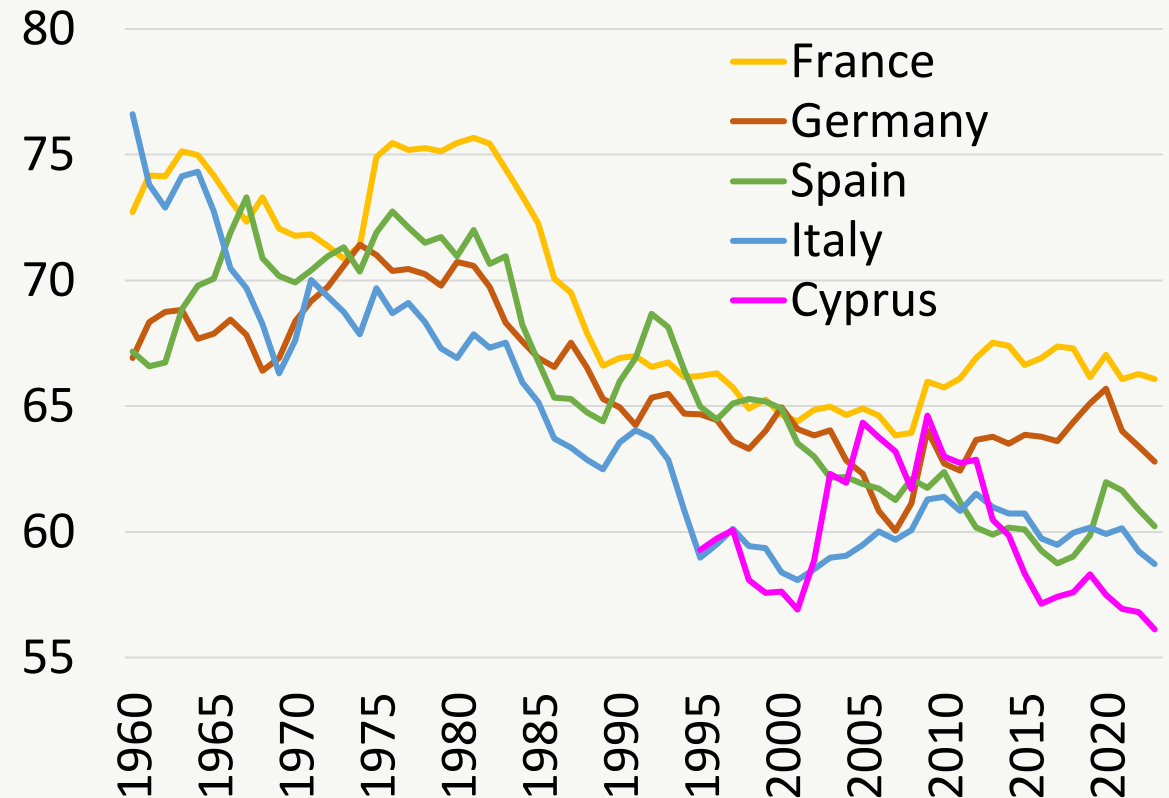
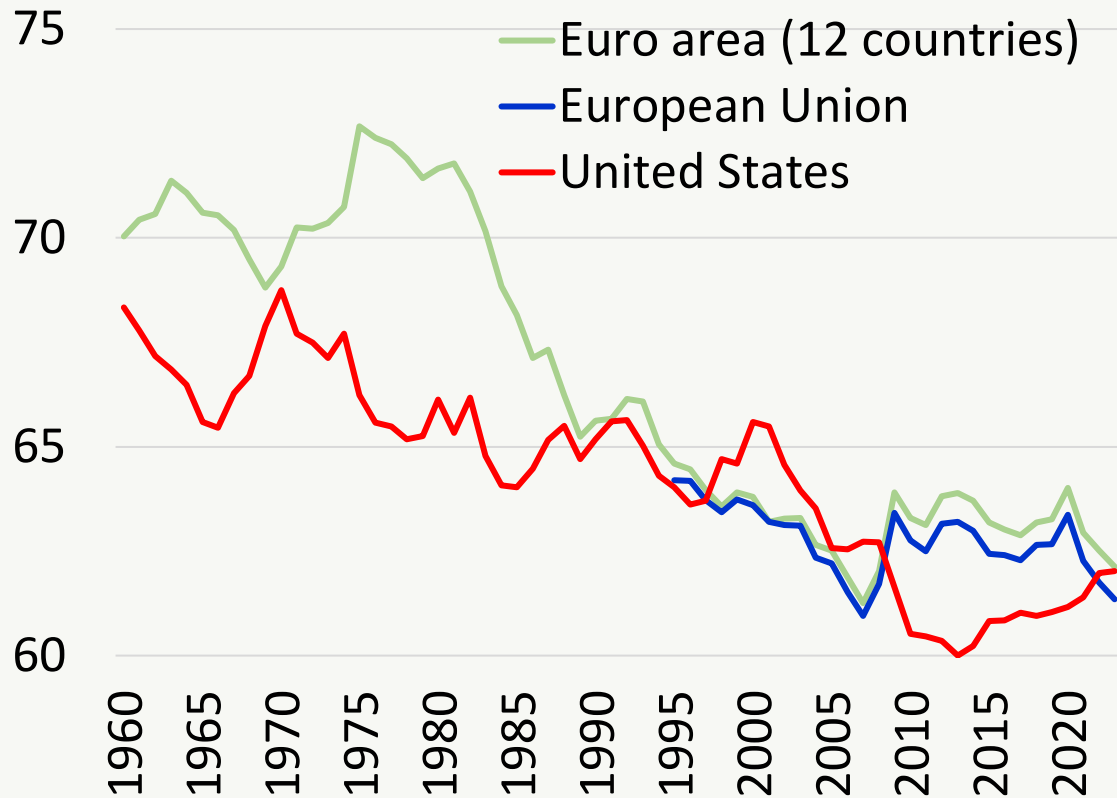
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# Questions

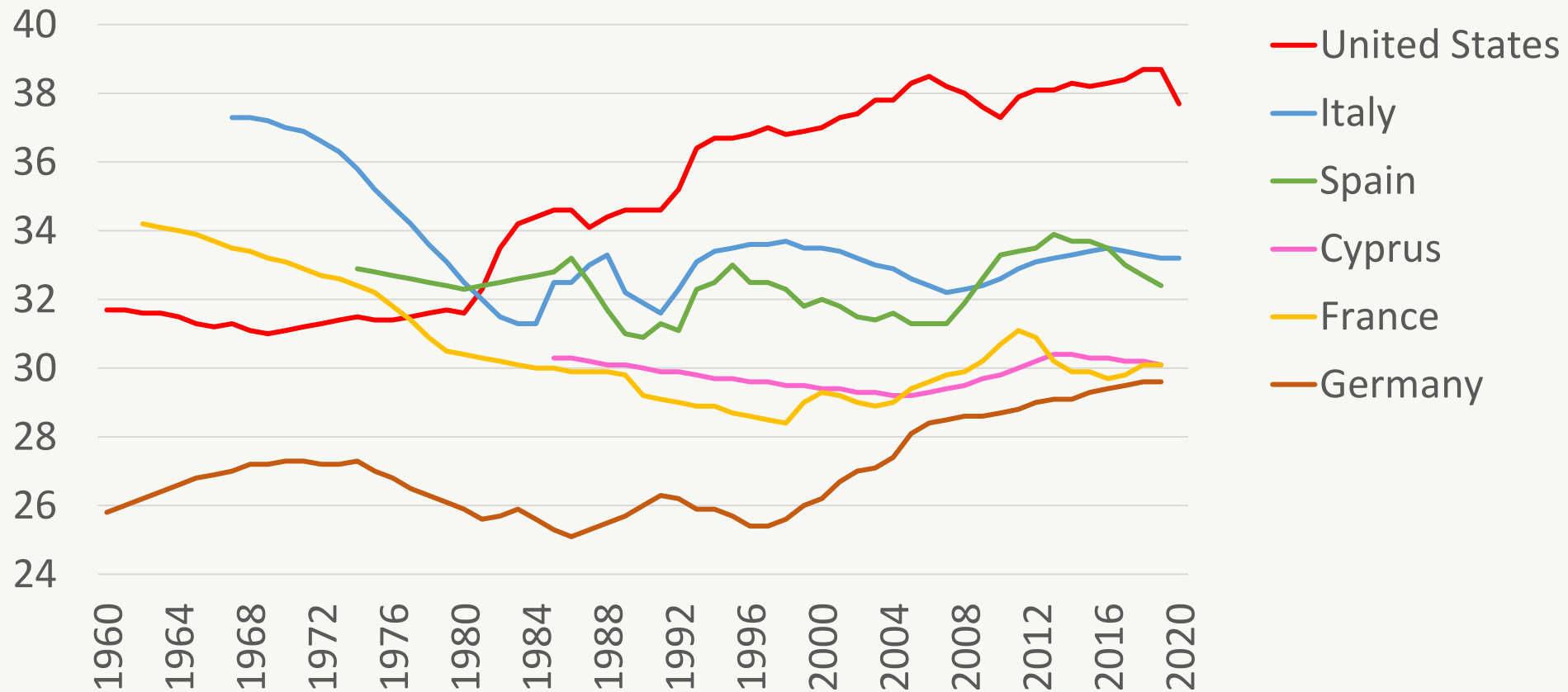
- The world of work: profound changes due to globalization, technological, demographic and environmental developments
  - How new technologies impact the nature of work and labour markets?
  - What are the impacts on earnings and income distribution?
  - What can explain the different labour market and inequality developments between the US and some EU member states?

# Labour income share declined for decades, but started to recover in some countries

## The adjusted labour income share (% GDP at factor prices)



# Disposable income inequality increased in many countries



Source: Standardized World Income Inequality Dataset version 9.3. Note: Cyprus has the 10<sup>th</sup> highest inequality among the 27 EU countries.

# Drivers of labour share, earnings, inequality

- Technological change
- Rise of “superstar firms”
- Globalization
- Compositional shift in employment
- Financial markets
- Reduction of minimum wages relative to median wages
- Declining union density and the bargaining power of labour
- Size of the welfare state

# Automation and job displacement

- 19th and 20th centuries: mechanisation has led to the decline in demand for **routine manual tasks** performed by agricultural and industrial workers
- Past 40 years: digital technologies (IT & AI) can replace **routine cognitive tasks**
- Looking forward: digital technologies will likely be able to replace **non-routine and manual cognitive tasks**
- However, while some tasks and jobs are automated, the overall impact of automation on jobs depends on several factors

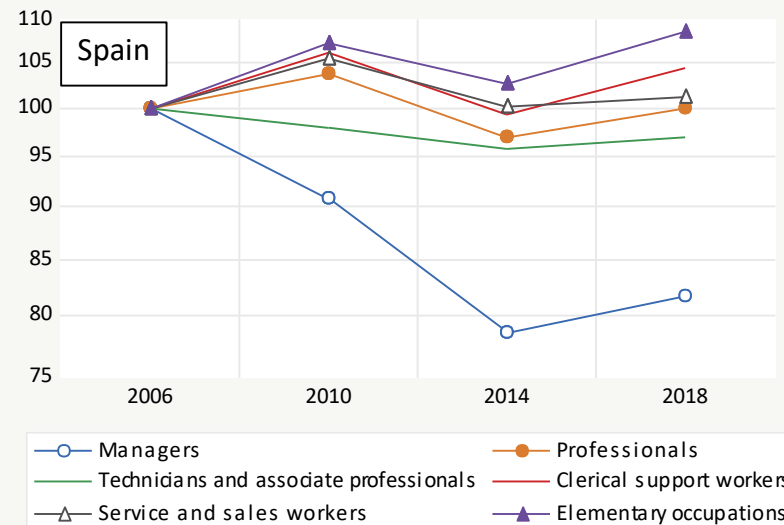
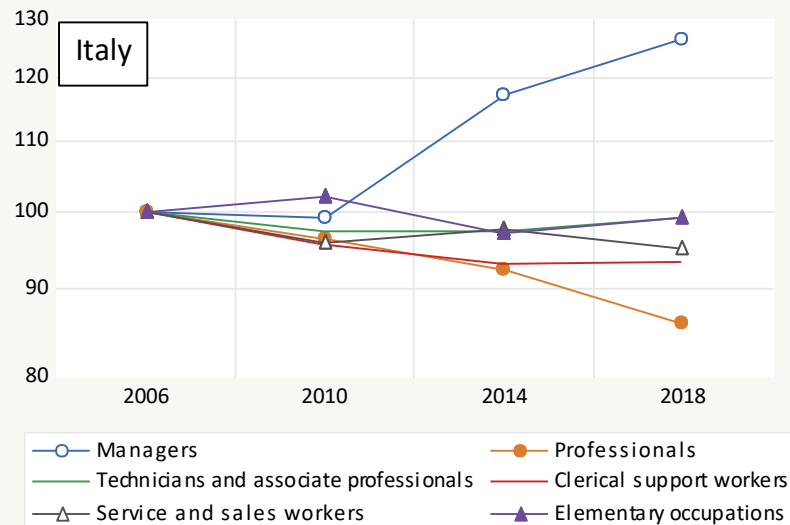
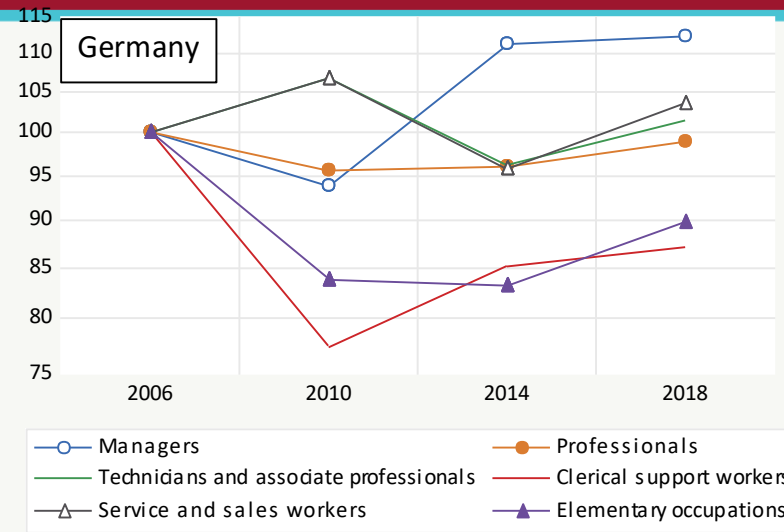
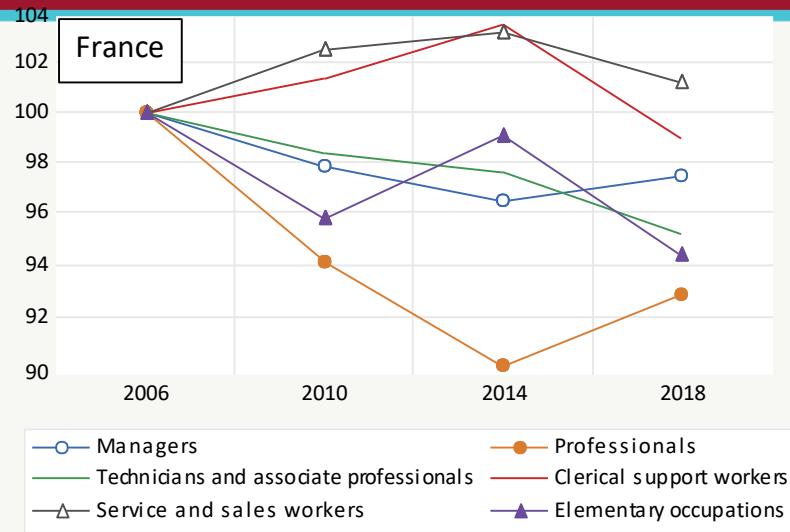
# Distributional impacts of automation depends on whether:

- automation substitutes capital for labour or automation complements labour and creates new tasks,
- automation changes the relative wages for different tasks,
- automation changes the composition of employment,
- automation in a particular sector creates jobs in other sectors.

## ➤ Literature: mixed results

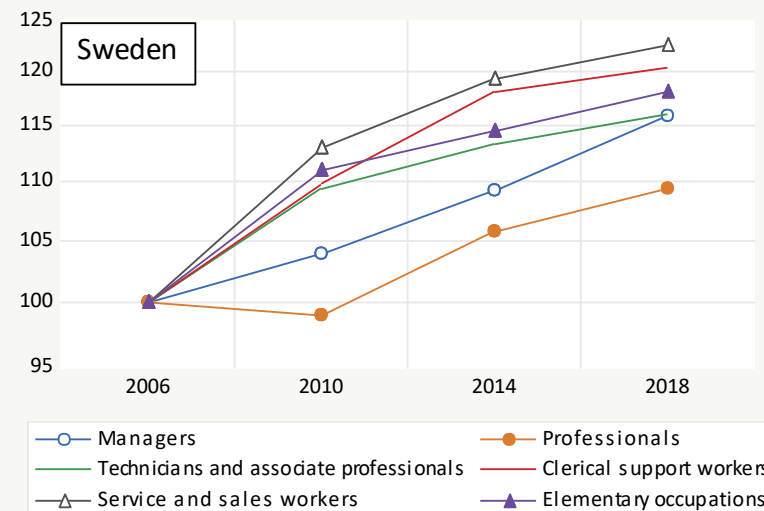
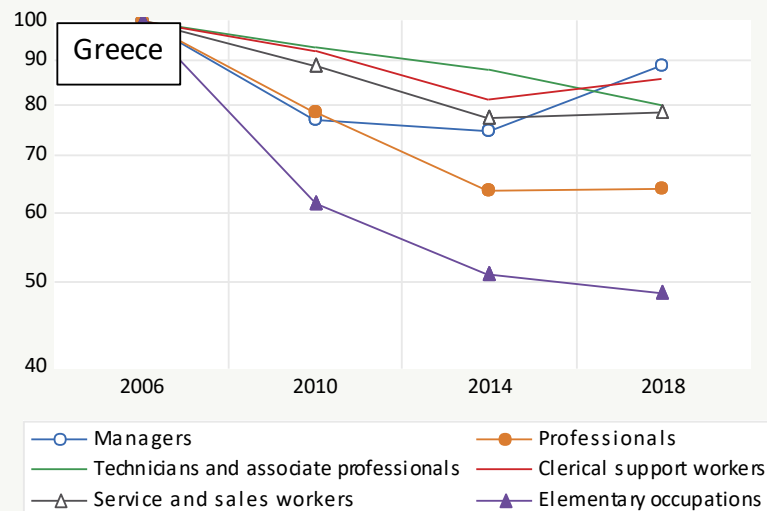
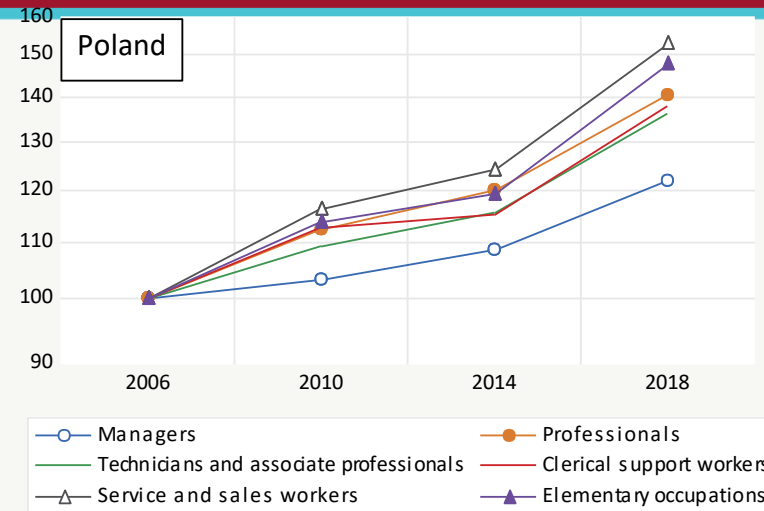
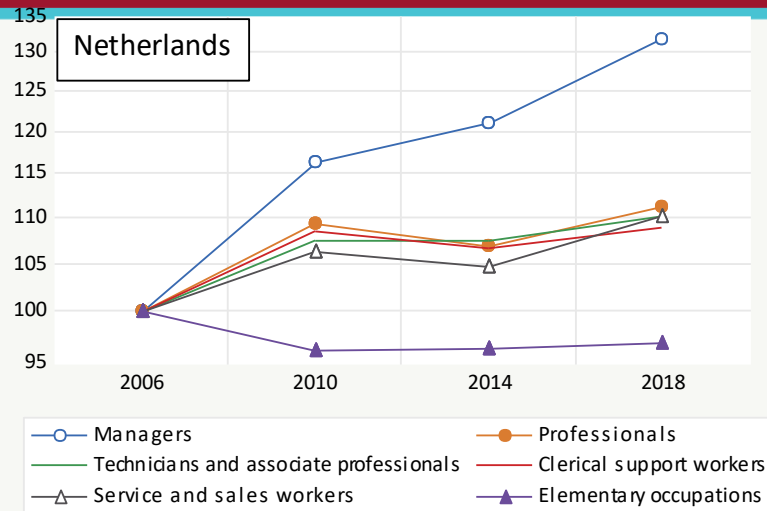
- Some conclude the substitution effects dominate
- Some conclude low-skilled jobs are substituted, while high-skilled jobs are complementary to machines
- Some conclude many jobs are replaced, but also many jobs are created due to (1) lower product prices (which improves competitiveness and raise output and employment), (2) increased demand due to higher incomes, (3) spill-overs to services

# Yet impacts vary by country. Differences in real earnings by occupation (2006=100)





# Real earnings by occupation (2006=100)



# The pandemic shock

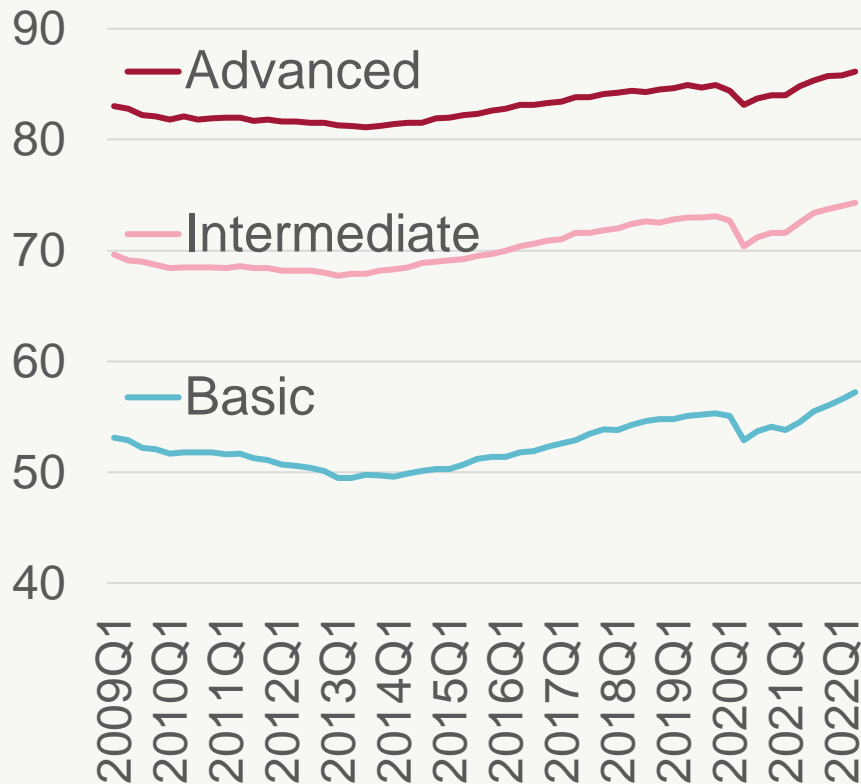
- COVID-19 (and precautions against future pandemics) will likely accelerate automation and the displacement of certain workers exposed to close interactions
- Remote work – mostly for better-educated higher earners → increase income inequality
- Workers with low educational levels suffered greater job losses than workers with high education levels
- However, ‘essential’ services unsuited to remote working (e.g. delivery services, transport and services auxiliary to transport, personal care, social services and health care)

# Looking forward

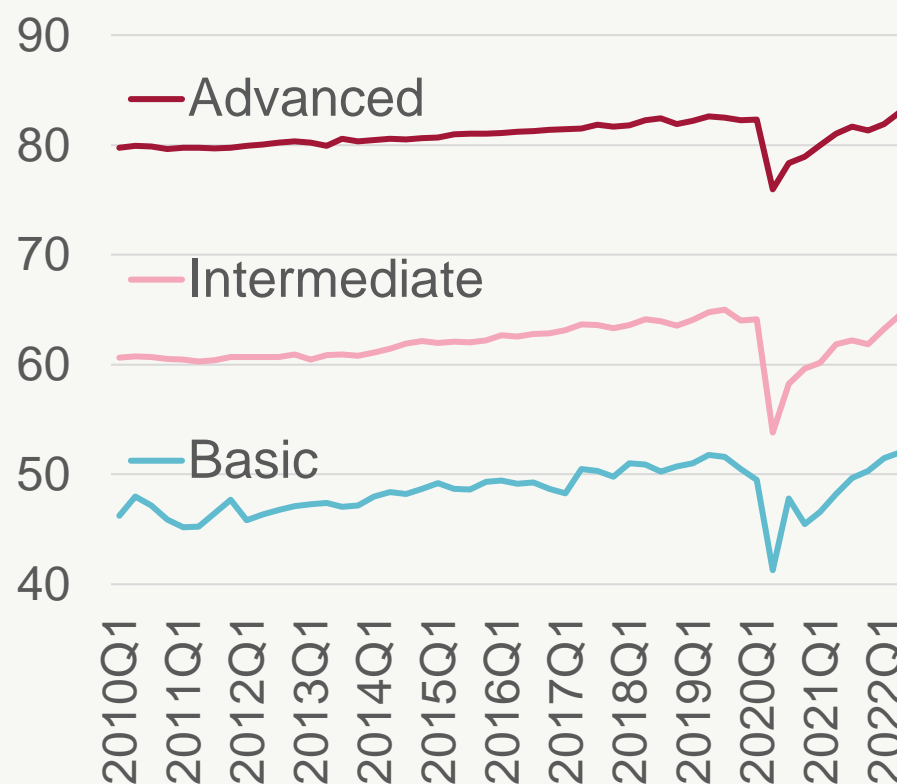
- David Autor (2015): a significant share of middle-skill jobs combining specific vocational skills with foundational middle-skill levels of literacy, numeracy, adaptability, problem-solving, and common sense will persist in the coming decades
- Richard Baldwin (2019): artificial intelligence (reflecting automation) and remote intelligence (i.e., hiring people from other countries who can work from home for lower salaries – reflecting globalisation) will mostly affect people working in the service sector, who faced little displacement so far from globalisation and automation
- He expects that the number of jobs displaced by white-collar robots will be somewhere between one in ten (“big”) and six in ten (“enormous”)
- Over the long-run, everyone would benefit, but the transformation period will likely be disruptive

# Importance of skills: just about half of low-educated people are at work

**Employment rate by education in the EU (% population)**



**Employment rate by education in the USA (% population)**



*Next presentation by Duygu Güner discusses re-skilling and up-skilling*

*Thank you for your attention*