



CEDEFOP

European Centre for the Development
of Vocational Training

Production of the new 2022 Skills Forecast

Session 2: Short presentation of the main results



Maddalina Suta

Date: 18 October 2022

Agenda

18 October 2022

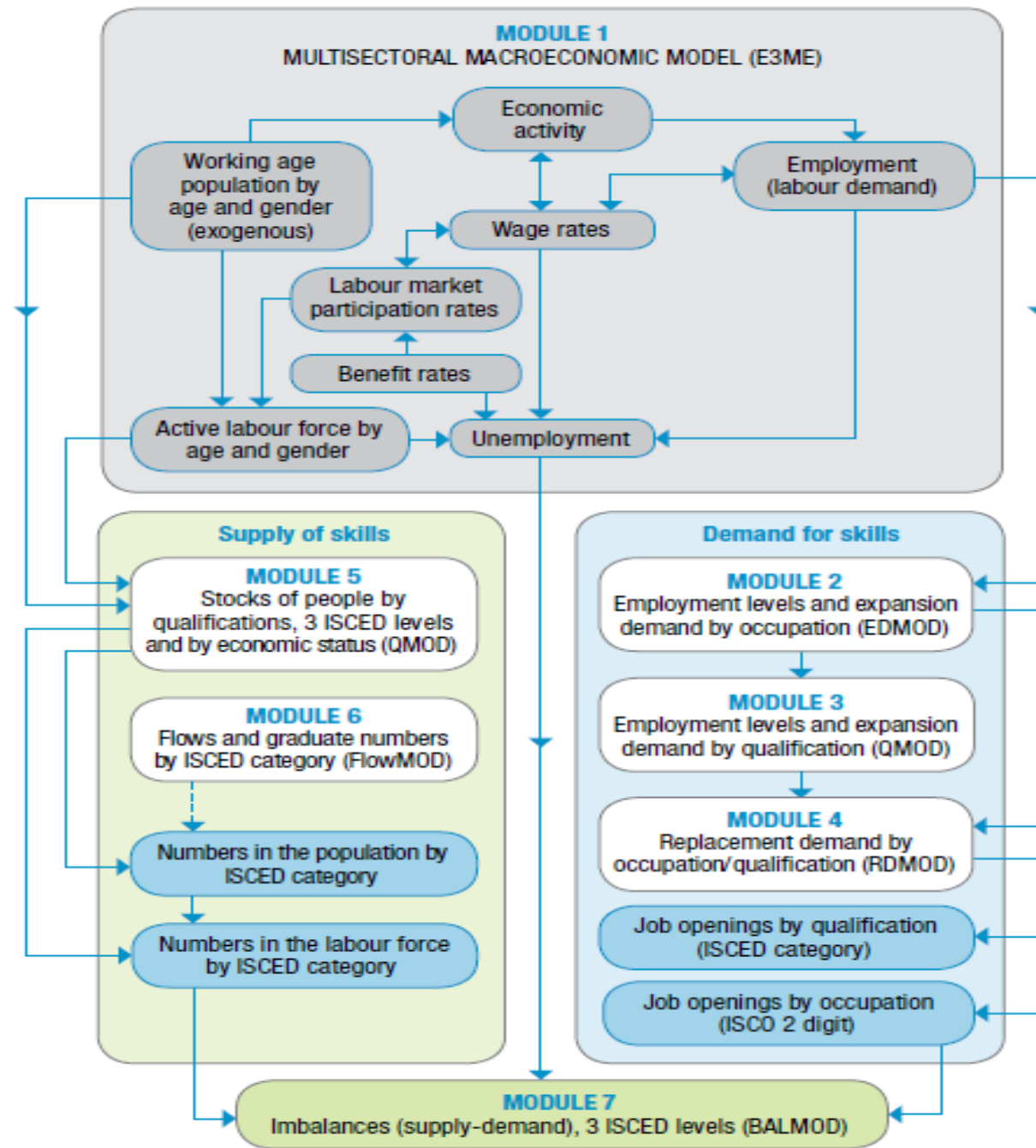
10:00-10:10	Welcome and introduction
10:10-10:30	Presentation of the assumptions
10:30-11:00	Plenary or Group discussions on the assumptions
11:00-11:15	Short presentation of the main results
11:15-11:25	Short break
11:25-12:00	Discussion within groups on the sectoral results
12:00-12:50	Discussion within groups on the occupation and replacement demand
12:50-13:00	Break/ Return to plenary session
13:00-13:25	Country groups reporting on group discussions
13:25-13.30	Concluding remarks and closing (Cedefop and CE)

Overview

- Introduction
- Brief overview of sectoral results
- Brief overview of occupational level results
- Brief overview of replacement demand
- Brief overview of labour supply

What we are doing here – the short version

- Skills demand and supply forecasts
- Using a set of modelling tools and expert judgement ... and a lot of data
- All integrated into a single framework, that looks like this:



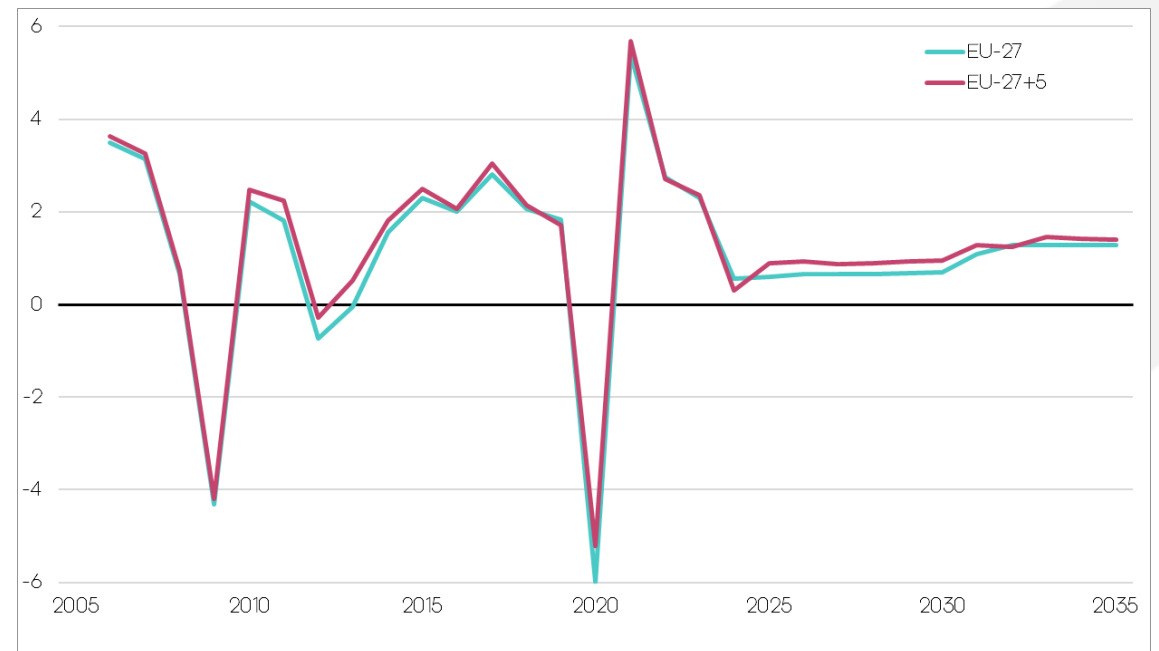
Sectoral results



GDP assumptions: recap

- Between 2015 and 2019, the EU-27 economy grew on average by around 2% annually.
- This was followed by a decline of 6% of GDP in 2020 when the pandemic hit.
- The projection period (2022-35) sees the EU-27 economy grow, albeit at a low pace of slightly above 1% per annum, on average.

GDP annual growth rate (%), EU-27 & EU-27+5, 2010-35



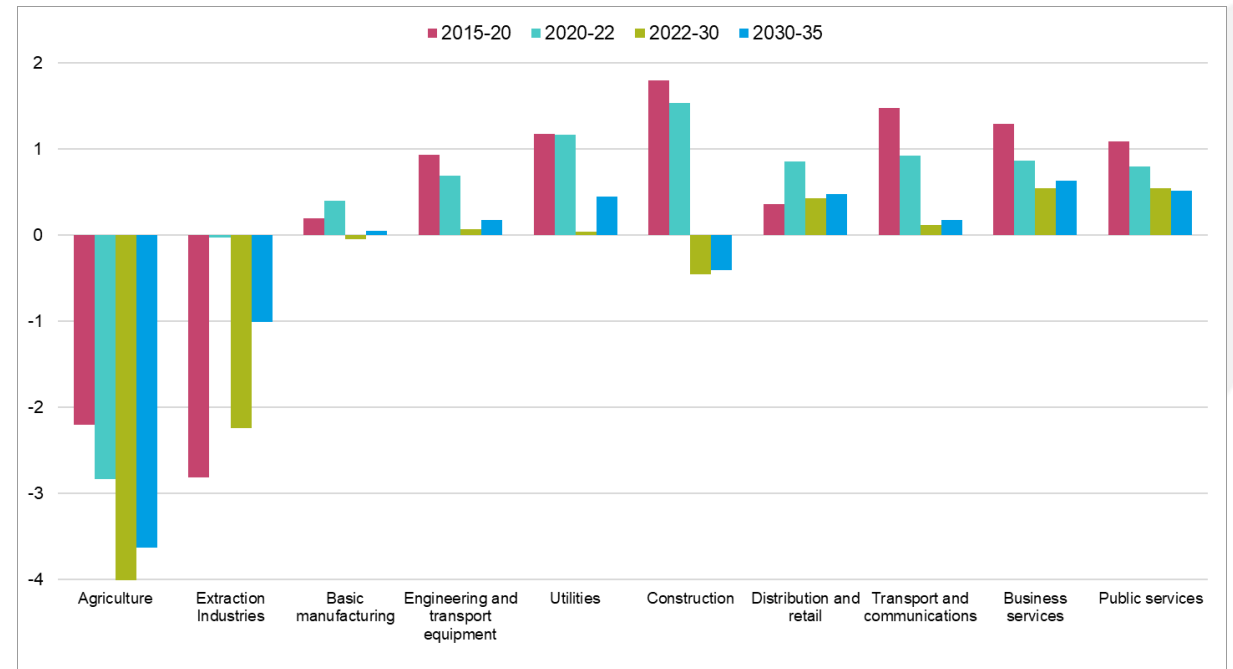
Overall employment prospects

- 2015-19, employment grew on average by 1.3% on an annual basis
- In 2020, the Covid-19 pandemic and related restrictions on economic activity resulted in a drop of employment by 1.4% (EU-27) and 1.8% (EU-27+5)
- In 2022, the first year of the forecast, employment picked up again and largely rebounded from the 2020 shock
- Employment growth will be moderate and eventually slow down from 2024 onwards



Employment by broad industry (% pa), EU-27

- Employment in the agricultural sector will continue to fall over the longer term
- Primary industries are forecast to see a decline in employment in line with EGD.
- Utilities – trade off
 - 2022-30: less gas demand
 - 2022-30 & 2030-35 electricity benefits from increase demand
- EGD benefits Engineering and transport equipment by producing the renewables and electrical appliances



Employment by detailed sector (% pa), EU-27

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE
Agriculture, etc	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Mining and quarrying	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Food, Drink and Tobacco	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Textiles, Clothing & Leather	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Wood, paper, printing and publishing	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Coke & ref petroleum	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Other chemicals	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Pharmaceuticals	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Rubber & plastic products and other non-metallic mineral products	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Basic metals & metal products	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Computer, optical & electronic equip.	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Electrical equipment	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Other machinery & equipment	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Motor Vehicles	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Other Transport Equipment	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Manufacturing nes	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Electricity	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Gas, steam & air conditioning	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Water supply	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Construction	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Wholesale and retail trade	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Land transport	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Water Transport	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Air Transport	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Warehousing and postal services	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Accommodation and food service activities	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Media	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Telecommunications	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Computer programming, info serv.	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Financial and insurance activities	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Real estate activities	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Legal, account & consulting services	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Architectural & engineering	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
R&D	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Advertising and market research; other professional nes	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Administrative and support service activities	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Public administration & defence	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Education	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Health	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Arts, entertainment and recreation	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Other service activities	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light

- Over the period 2022-35, most MSs will see strong growth in R&D employment and electricity.
- The digital transition will continue to impact employment across sectors, with demand in the telecommunications and the computer programming sectors expected to grow across most MSs

Occupations and qualifications

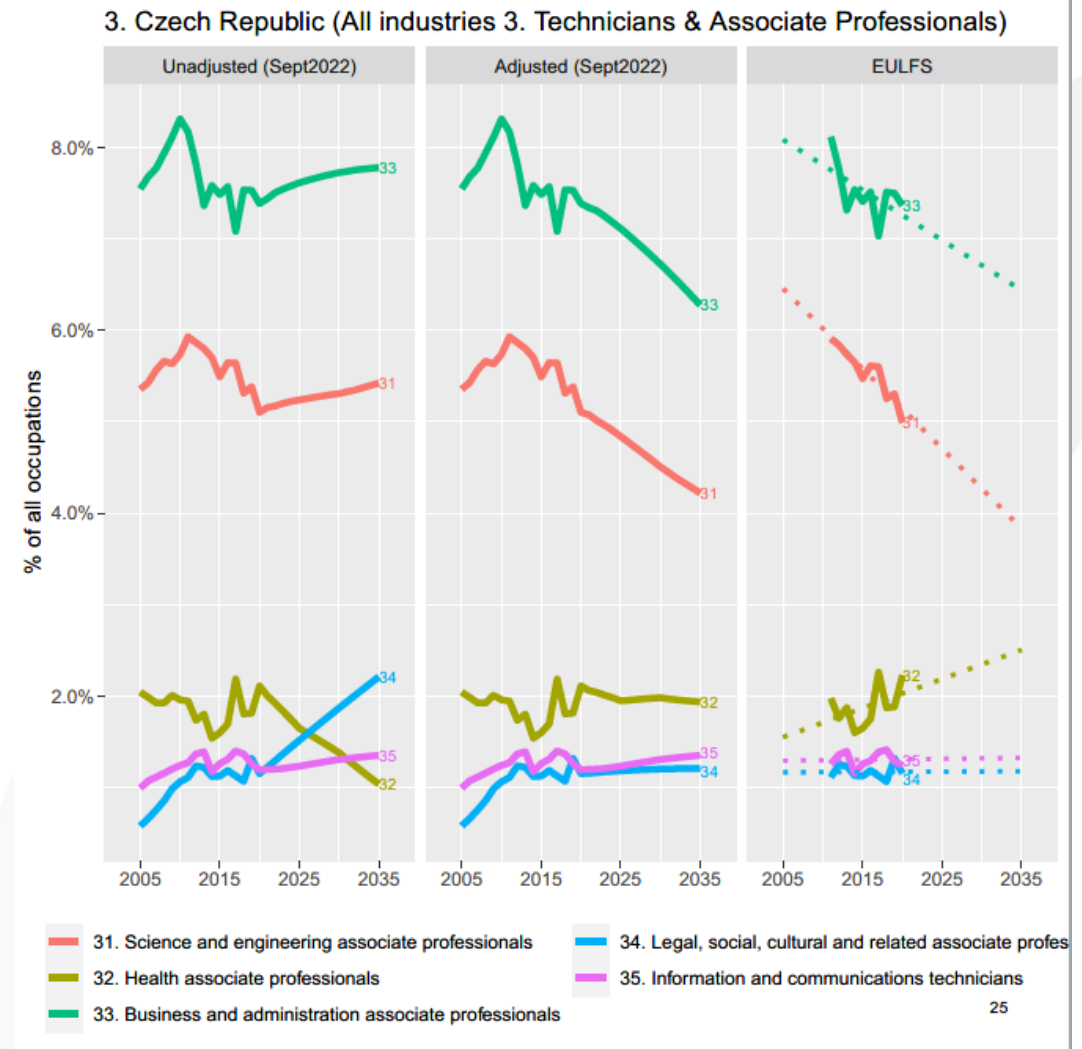


Adjustment to overall occupational trends in light of latest EU-LFS data

- With the data you have received: **compareDemOccShares_baseline_eulfs_unadjusted vs adjusted.pdf**
- There are two ways to extrapolate occupational trends:
 - **Left hand panel** are based on long-term trends.
 - **Right hand panel:** IER used the most recent data which is also more limited in its information value (especially on occupational employment patterns **within** industries)
 - **Middle panel:** the outcome of the "judgement" on which (combination of) the information from either panel is to be taken for the forecast is depicted.

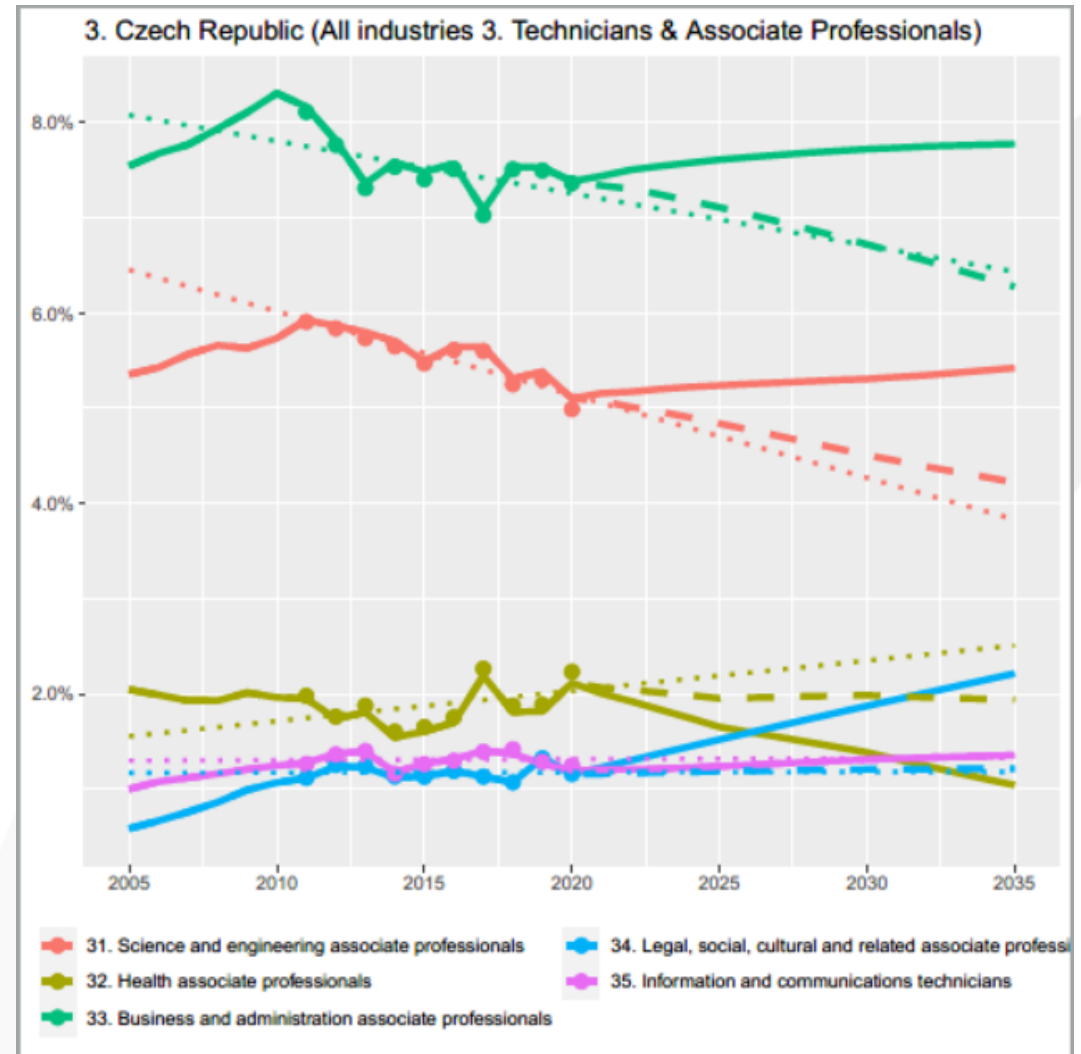
Occupational employment patterns within sectors

- The country experts should use "left" and "right" panel as background information to check the judgement made by IER on the middle panel.
 - Does it make sense from their perspective as national expert? If not, what would be the best alternative they would supply. Here the quantitative number in 2035 would be the best quantitative measure to correct, as this would be extrapolated back to 2021, the base year).
- We would like you to **consider the complete set for your country**. Based on your national expertise, please reflect on the judgements made and correct any choice in your response to the team (**be precise in quantifying your correction for the year 2035**).
 - This can be done after the workshop.



Occupational employment patterns within sectors

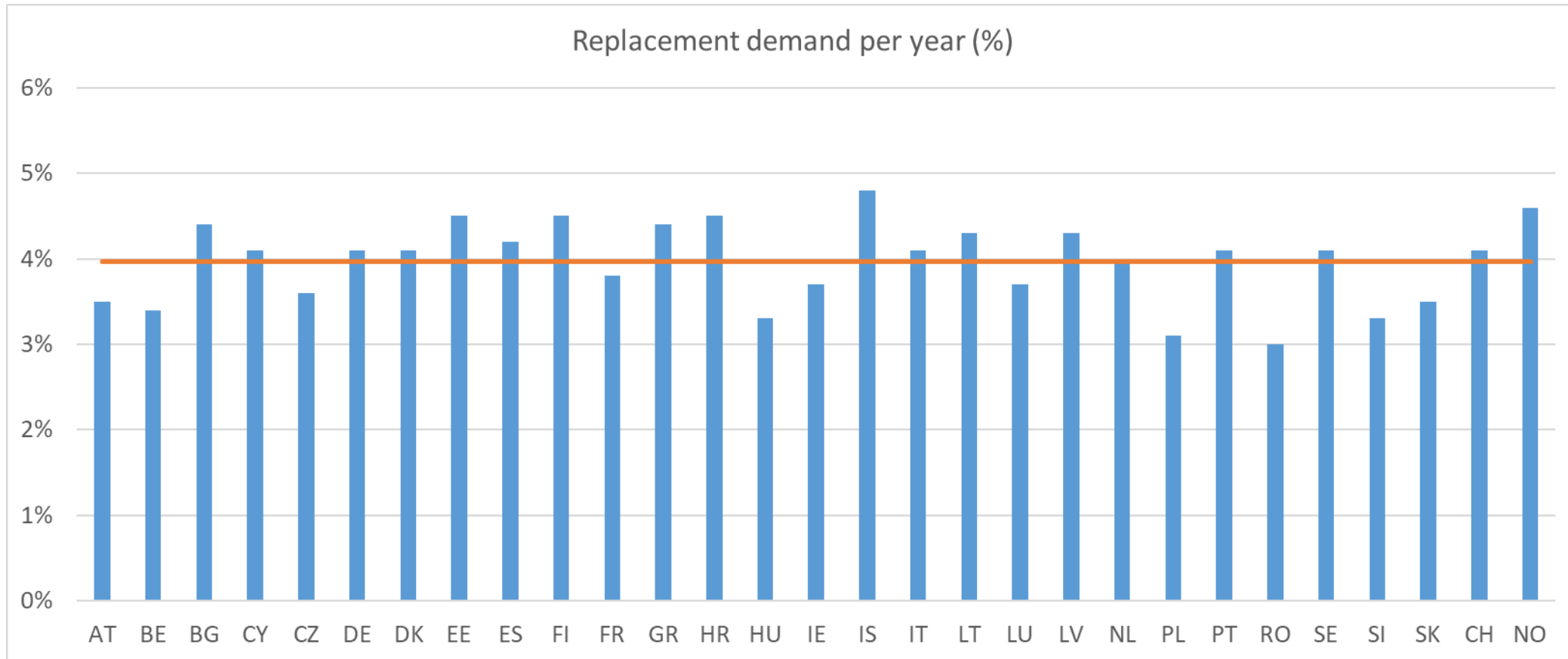
- In this example, the results appear to be broadly consistent with the latest EU-LFS data. However, the projected trends appear to be out of line with the most recent historical trends.
- In this case, the projections have been adjusted quite significantly (compare Panel 1 and 2 in the previous slide and the solid and dashed lines here).
- In other cases, the EU-LFS trend line extrapolated to 2035 does not look plausible, so more modest adjustments have been imposed.
- The values of the adjustments are linearly interpolated back to zero in the last historical year (2021).
- **Please supply any corrections you wish to impose for 2035, based on your expert judgement.**



Replacement demand



Results by country: total RD-rate per year



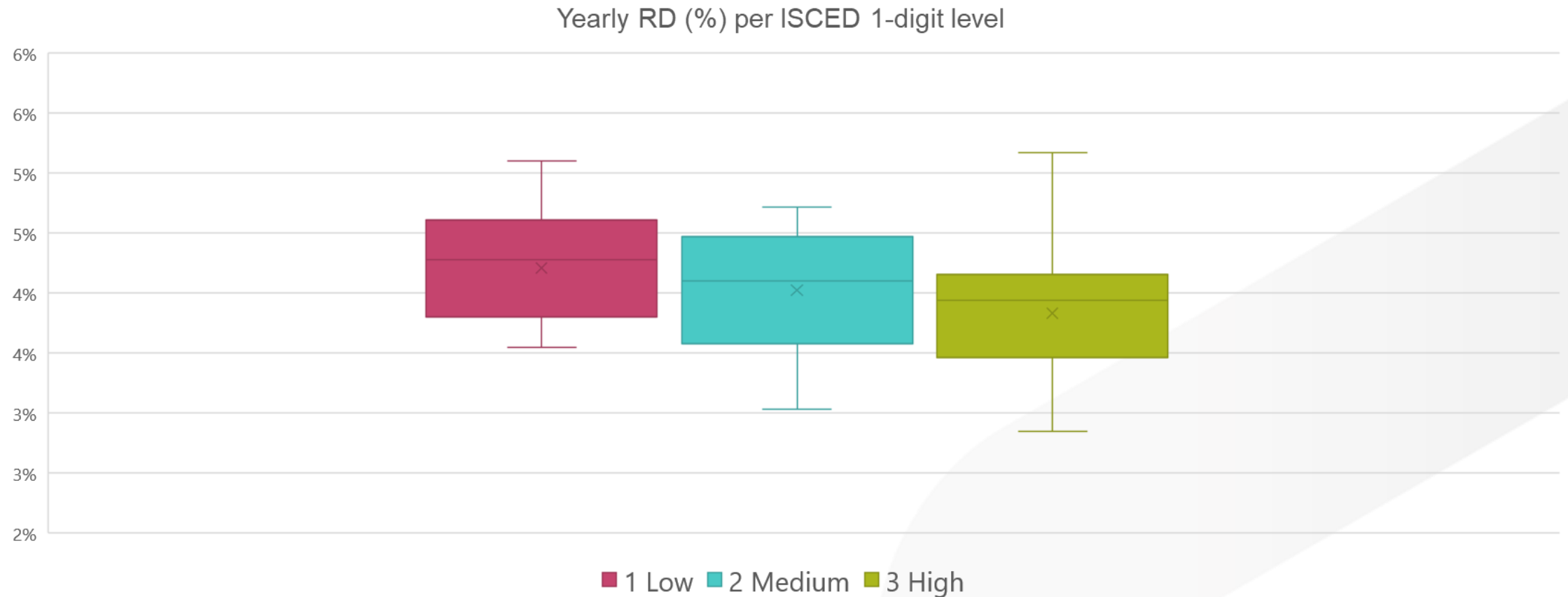
Source: RDMOD

Results: distribution of RD-rates by occupation



Source: RDMOD

Results: distribution of RD-rates by education



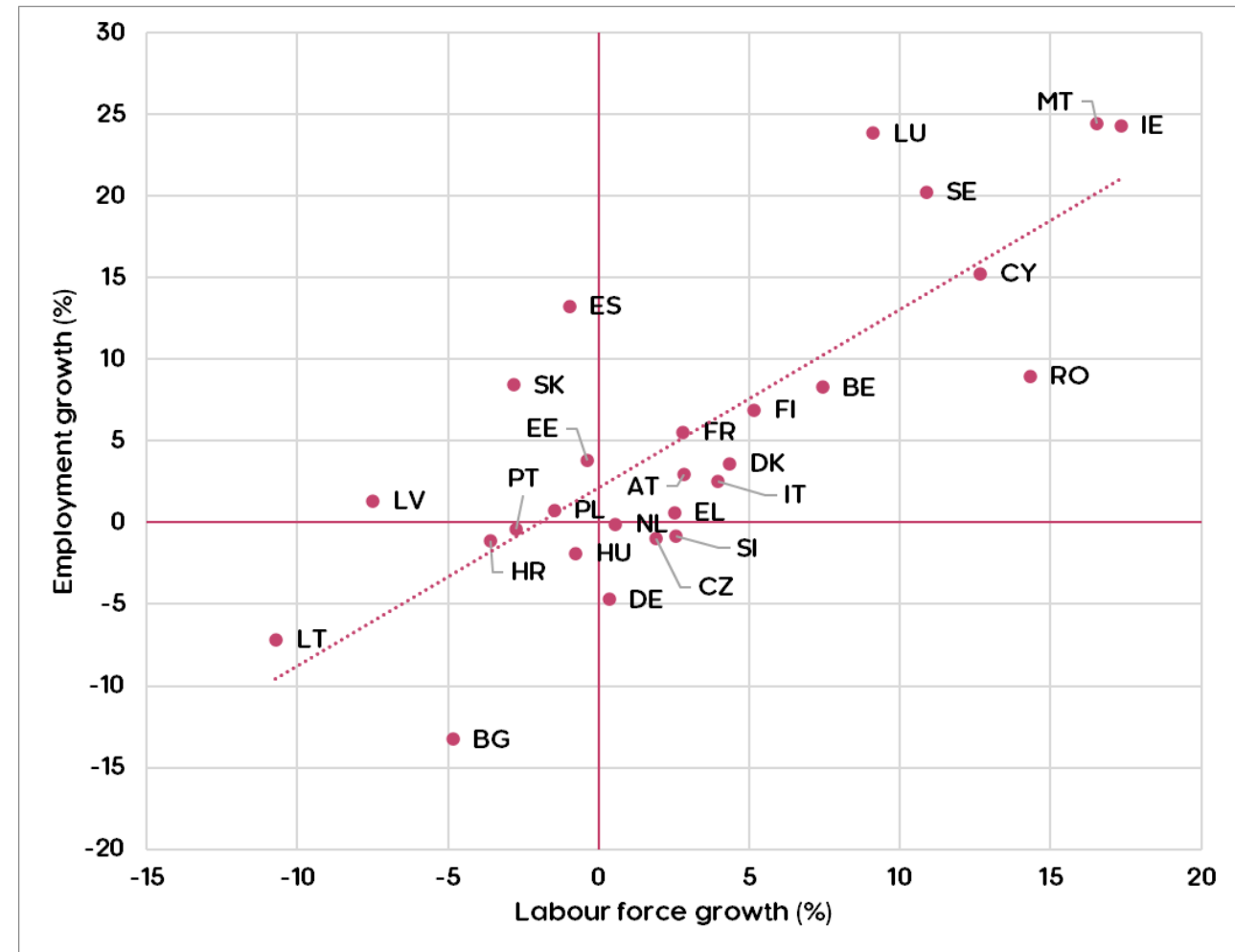
Source: RDMOD

Labour supply



Different employment and labour force evolution, 2022-35

- Generally, a positive correlation can be observed between labour supply and demand
- Employment growth is positive while the labour force shrinks or remains stable: Spain, Slovakia, Estonia
- In Lithuania and Bulgaria, labour demand is expected to decline along with supply
- The largest number of MSs can be found in the upper-right panel of the graph, benefiting from both rising employment and labour supply



Questions for the groups discussion



Questions for discussions on the sectoral forecasts

- Please identify 2-3 main observations/ conclusions for your country arising from the sectoral employment forecast (These observations can be the development of important sectors for your country, the manifestation of shifts in the importance of sectors, but also developments in the forecast which contradict your intuition, etc.).
- Please identify 2-3 issues (policy, economic or other trends) that will affect labour force development in your country and thus impact future employment prospects. (Are these issues identifiable / included in the outcomes of the forecast?)
- Please highlight any elements with respect to policy and other developments that you think will have a major impact on your country, and the sectoral and labour force forecast does not reflect that. How would you expect these to impact employment in your country?
- What are effects of long-term changes (greening, digitization) on the sectoral employment in your country? Are they well reflected in the forecast?
- How well are the recent external effects, namely the COVID crisis and the war in Ukraine, reflected in the outcomes?

Questions for discussions on the occupational and replacement demand forecasts

- Please identify 2-3 main observations/ conclusions for your country arising from the occupational employment forecasts. (These observations can be the development of important occupations for your country, the manifestation of shifts in the importance of skills, and developments that contradict your intuition, etc.).
- What are the main conclusions for your country arising from the qualifications/ educational employment and labour supply forecasts (three broad levels)?
- Are the training policies in your country ready to redirect employment of occupations/sectors that will suffer from digitalisation/ robotisation? What are the implications of the above trends for policy and training needs in your country?
- What are the most in-shortage occupations in your country?
- Do you observe skills upgrading in your country in the education-occupational structures? For example, is there evidence that employers demand higher qualifications in some occupations? Which occupations are most affected?
- Adjustment to overall occupational trends in light of latest EU-LFS data

Contact us

EuropeanSkillsForecast
europianskillsforecast@camecon.com

Ben Gardiner (Project director)
bg@camecon.com

Madalina Suta (Project manager)
cs@camecon.com



“ In a world swamped with information and data, we provide clear insights based on rigorous and independent economic modelling and analysis. ”