

wiiw Spring Seminar

4 April 2019

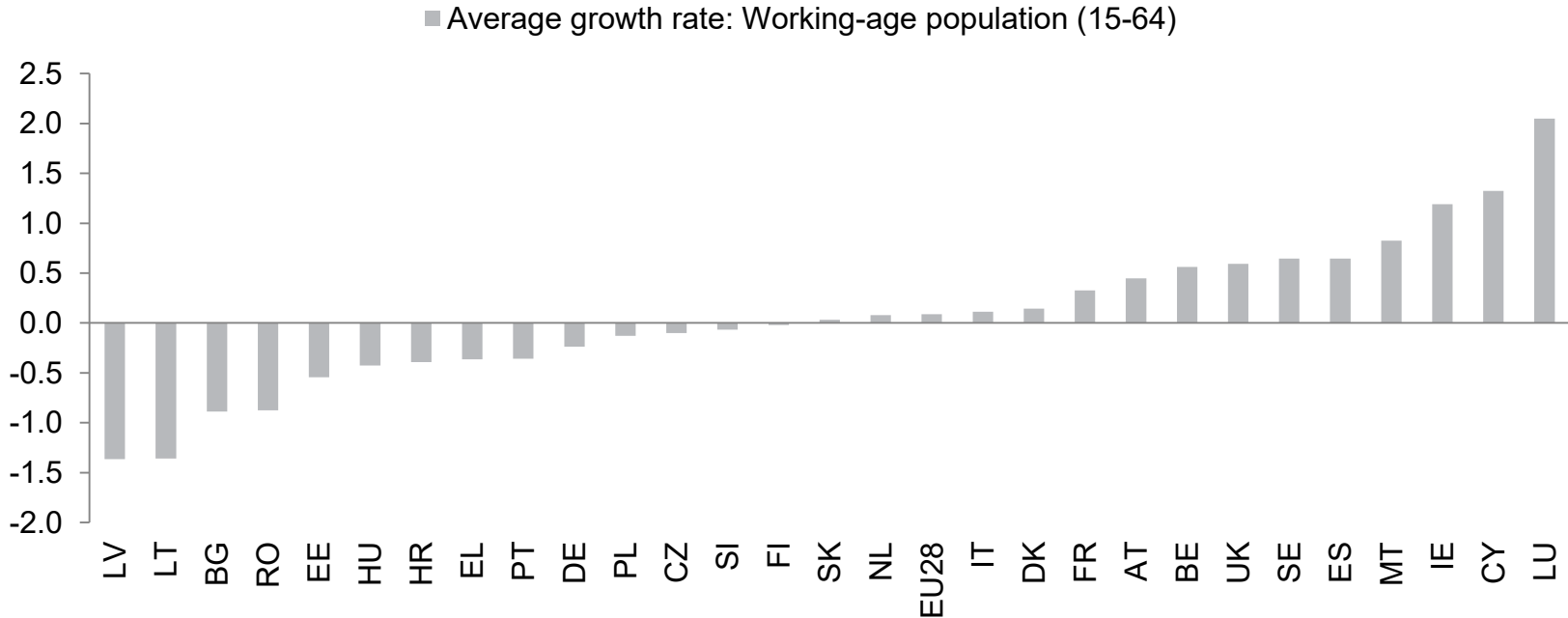
Labour supply constraints in the EU: Reaching the tipping point

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Overview

- Shrinking working-age populations in the EU
 - Already pronounced in many CEE countries (and Germany)
 - More recently also observable for many EU15 countries
- If this trend continues, labour shortages become increasingly more likely which will imperil growth and convergence
- Identify the 'tipping point' when this becomes a constraint on growth
- Look at different scenarios – informative for policy

Shrinking working-age populations in many CEE countries (2002-2017)

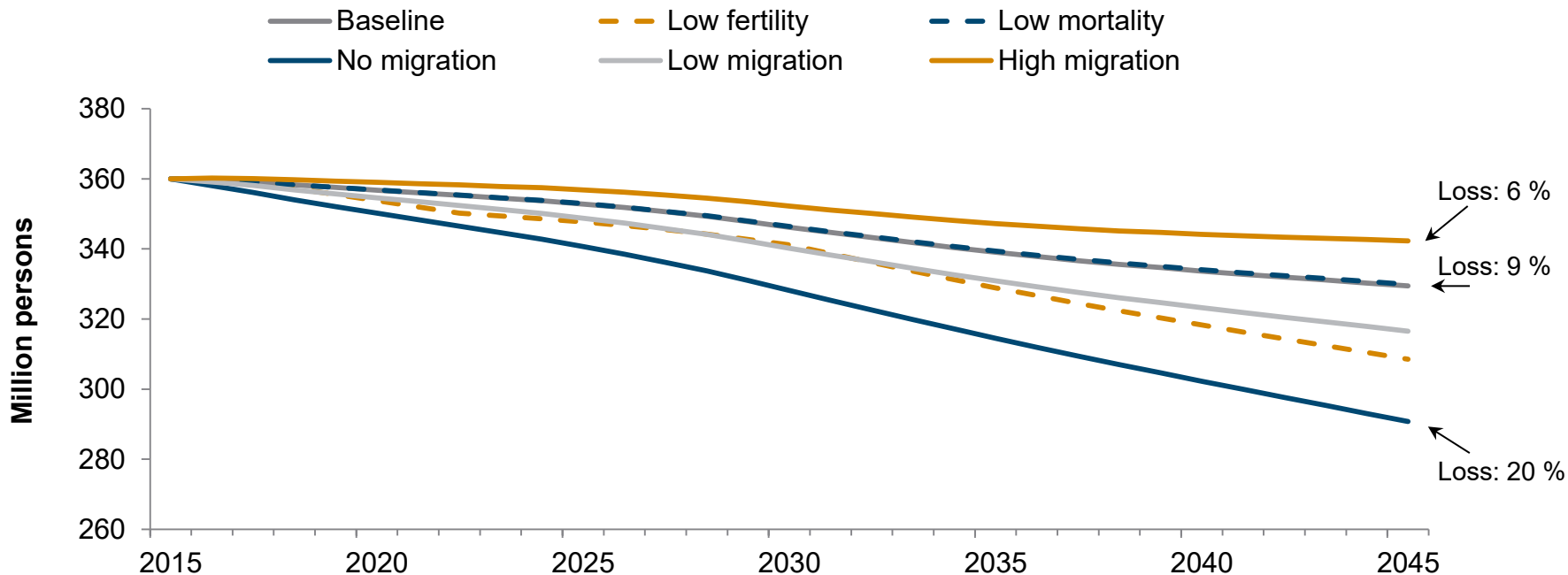


Eurostat population projection scenarios

	Net migration	Fertility	Mortality
Baseline	Trend extrapolation for 2016-2080 based on net migration during 1996-2015	Fertility rates for 2016-2080 are extrapolated based on different fertility data for 1977-2014	Interpolation of smoothed age- and sex-specific mortality rates for 2014 to long-term common life table

- High migration scenario: Increase of net migration by one third over projection period
- Low migration scenario: Decrease of net migration by one third over projection period
- No migration scenario: Decrease of net migration to zero over projection period
- Low fertility scenario: Shrinkage of fertility rate by 20% over projection period
- Low mortality scenario: Progressive reduction of the age- & sex-specific mortality rates

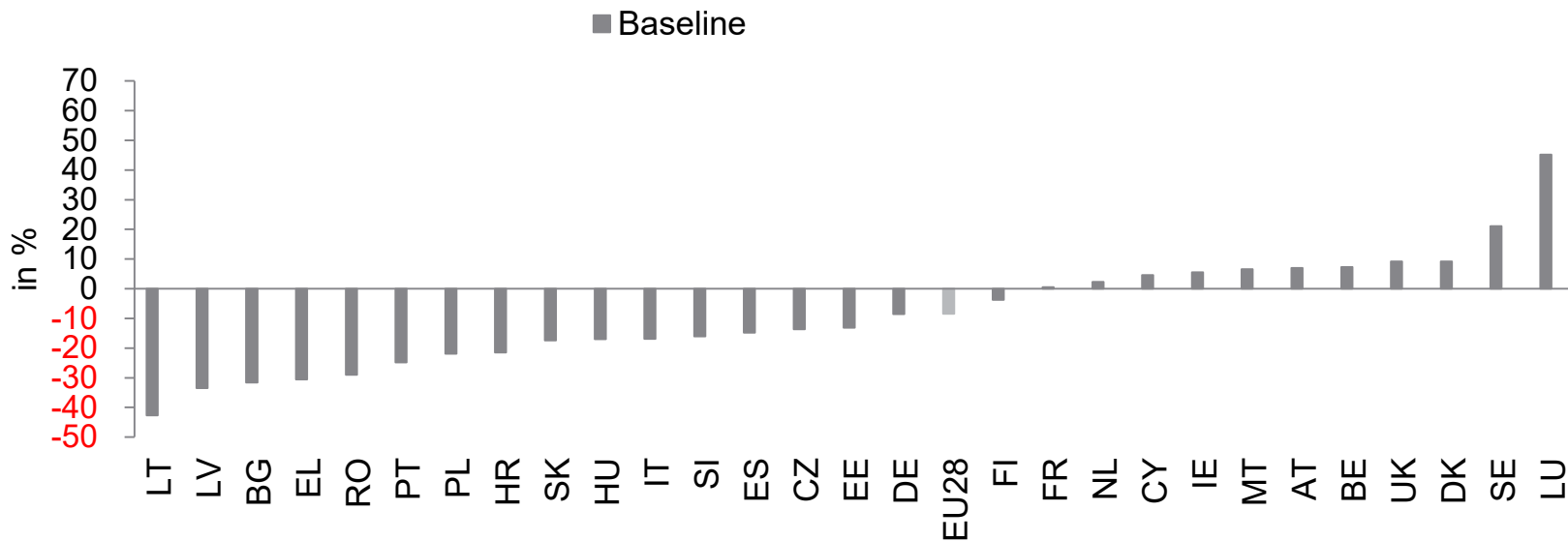
EU28 working-age population (15-64) is projected to shrink further



Source: Eurostat's population projections. Note: The baseline and the low mortality scenarios overlap.

Largest declines in working-age populations (15-64) projected for CEE and Southern Europe

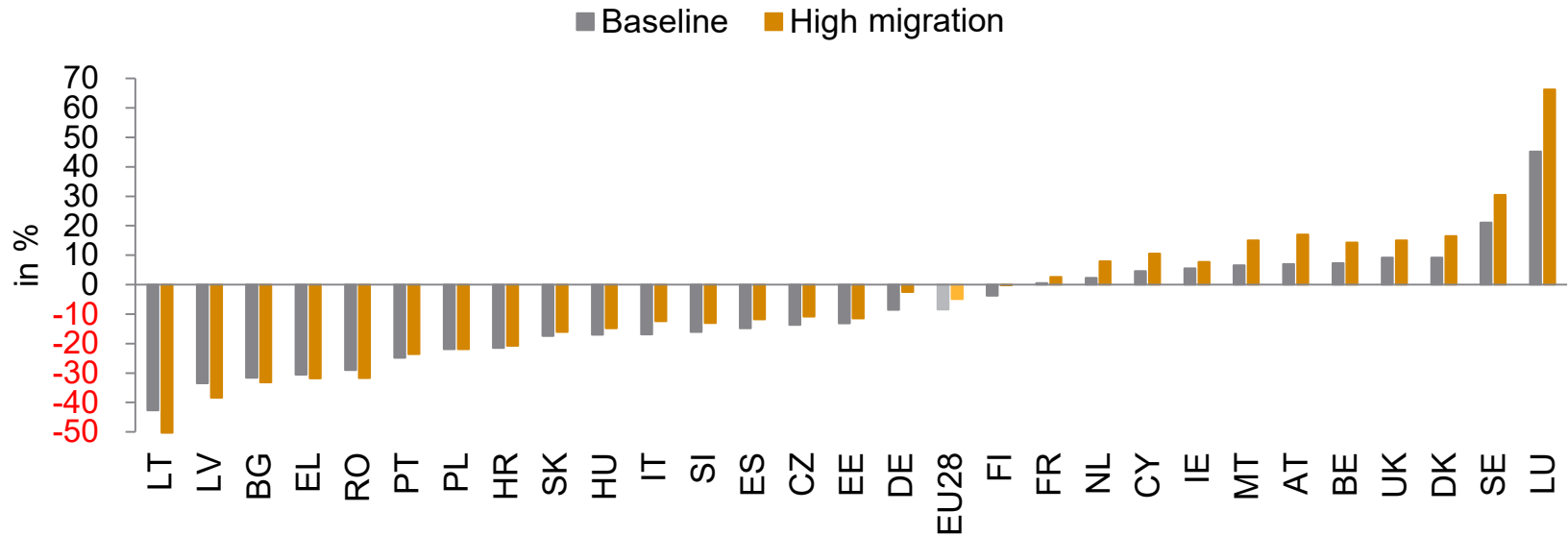
Cumulative change: 2015-2045



Source: Eurostat's population projections.

High migration scenario: partly more pronounced effects

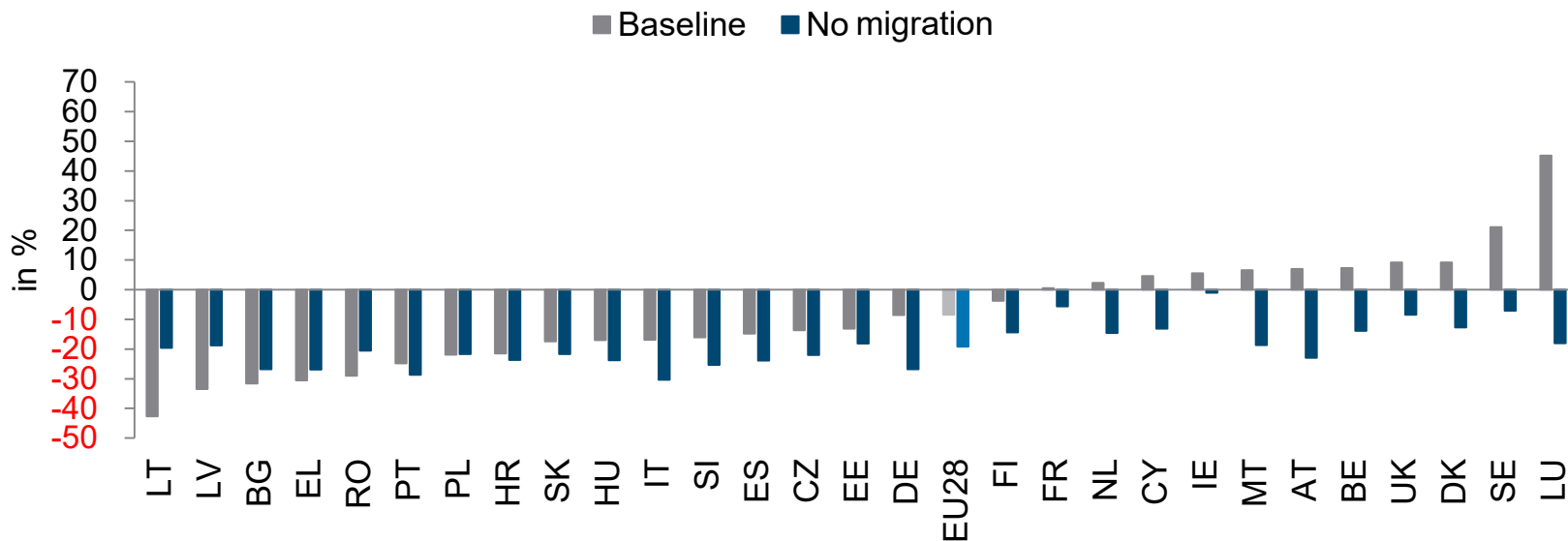
Cumulative change: 2015-2045



Source: Eurostat's population projections.

No migration scenario: Working-age population (15-64) projected to shrink in all EU countries

Cumulative change: 2015-2045



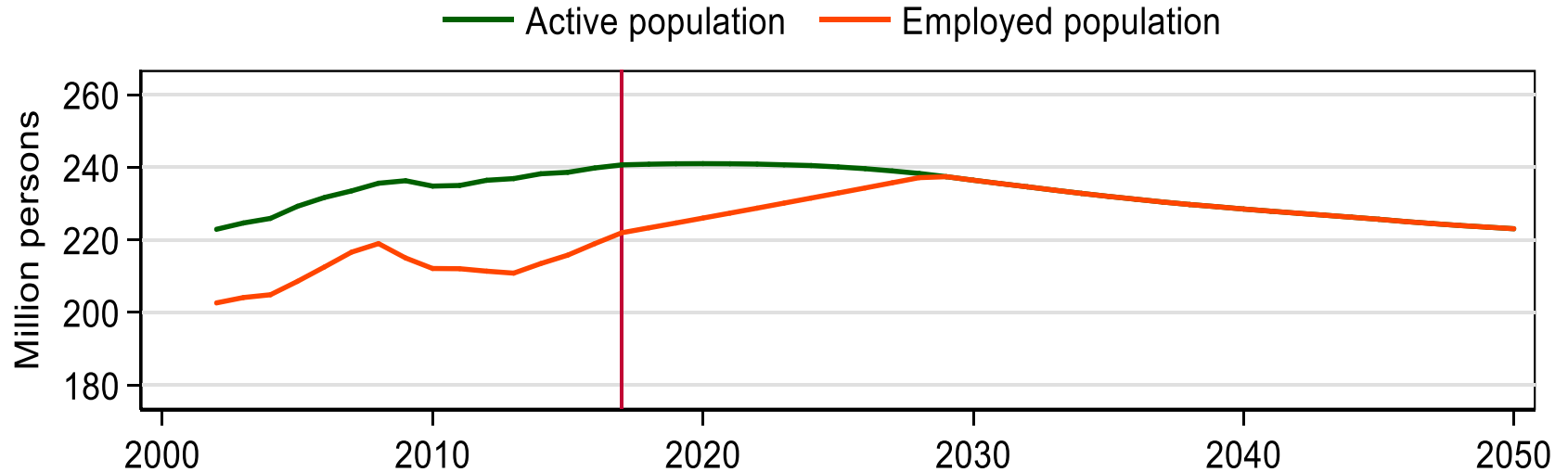
Source: Eurostat's population projections.

Simulation results from a simple trend-based model: tipping point

- Labour supply: active population
 - Projections for the working-age population for each scenario
 - Activity rate: assumed to converge to long-term level (75%)
- Labour demand: employed population
 - GDP growth
 - Labour productivity growth
- Projection period: 2017-2050

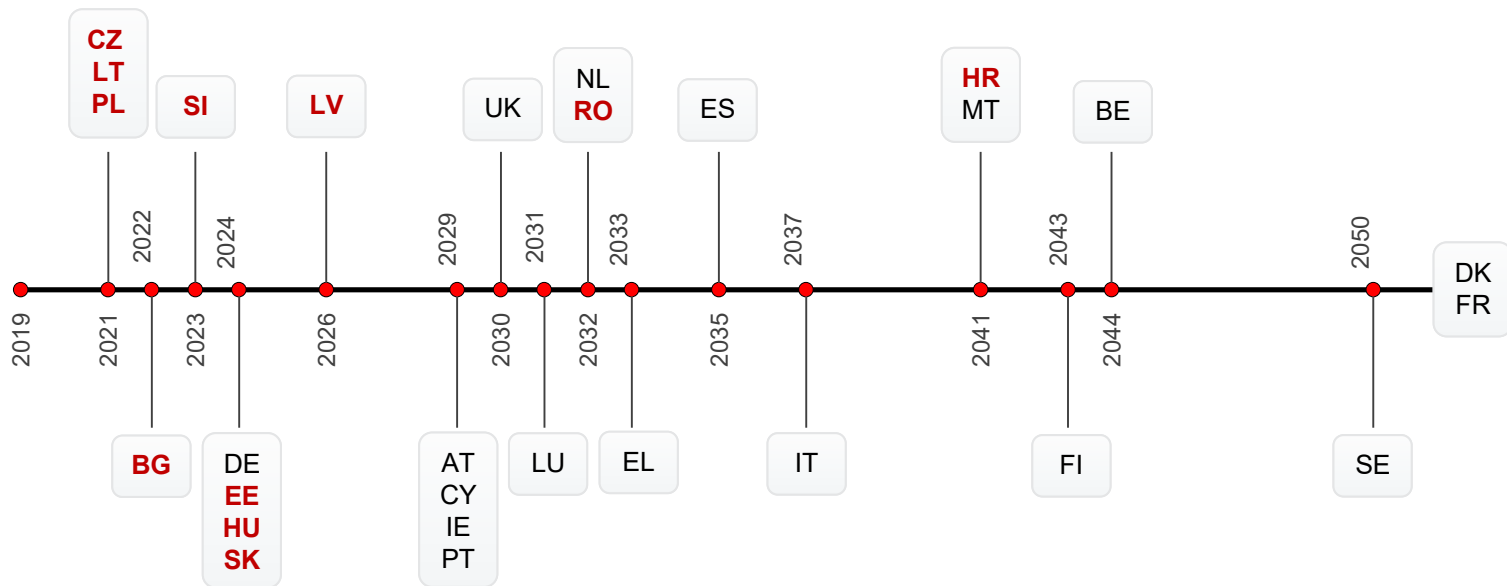
Baseline scenario: EU28

EU28 (2029)



Note: Vertical red line refers to 2017.

Baseline scenario: Half of all EU countries will reach the tipping point within the next 10 years



Policy-relevant sensitivity analysis

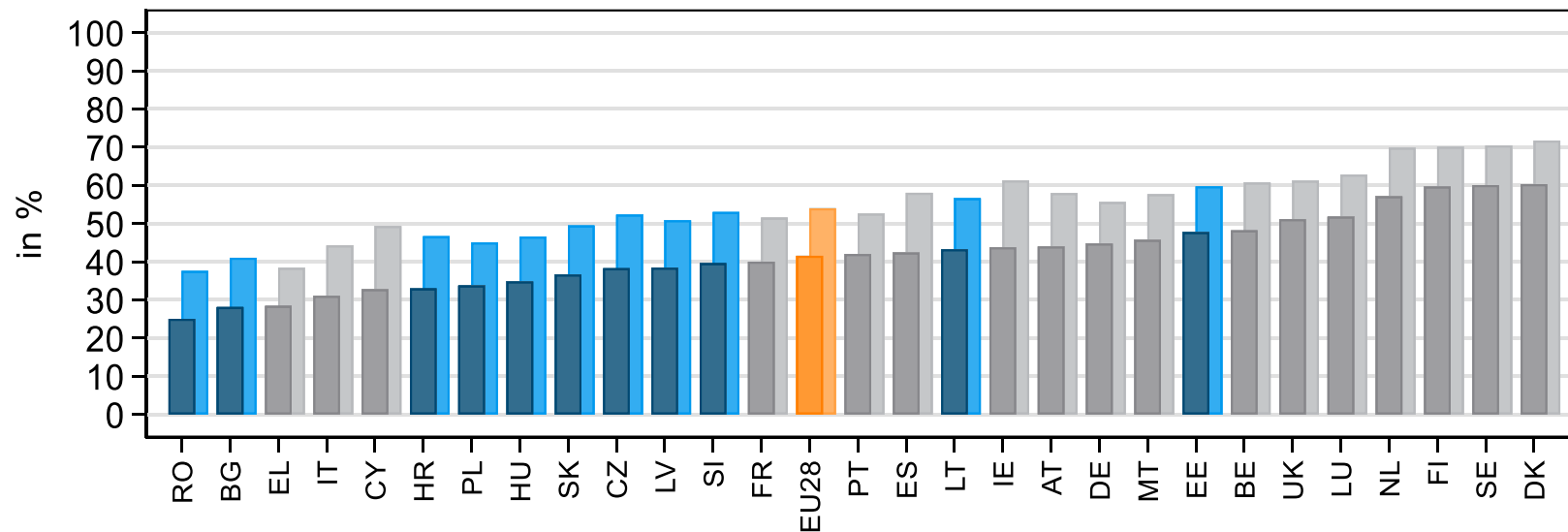
- Other five scenarios: 'no migration scenario' is less favourable for many EU15 countries but more favourable for some CEE countries
- Higher activity rate of 85% (instead of 75%): tipping point tends to occur later
- Higher labour productivity growth: tipping point tends to occur later

Policy options

- Policy options
 - Mobility and migration policies
 - Higher fertility rates: takes time to materialise
 - Higher labour force participation (general, women, older workers)
 - Higher labour productivity growth: labour-saving technologies (digitalisation)

The degree of digitalisation is lower in CEE

Digital Economy and Society Index: 2014 and 2018

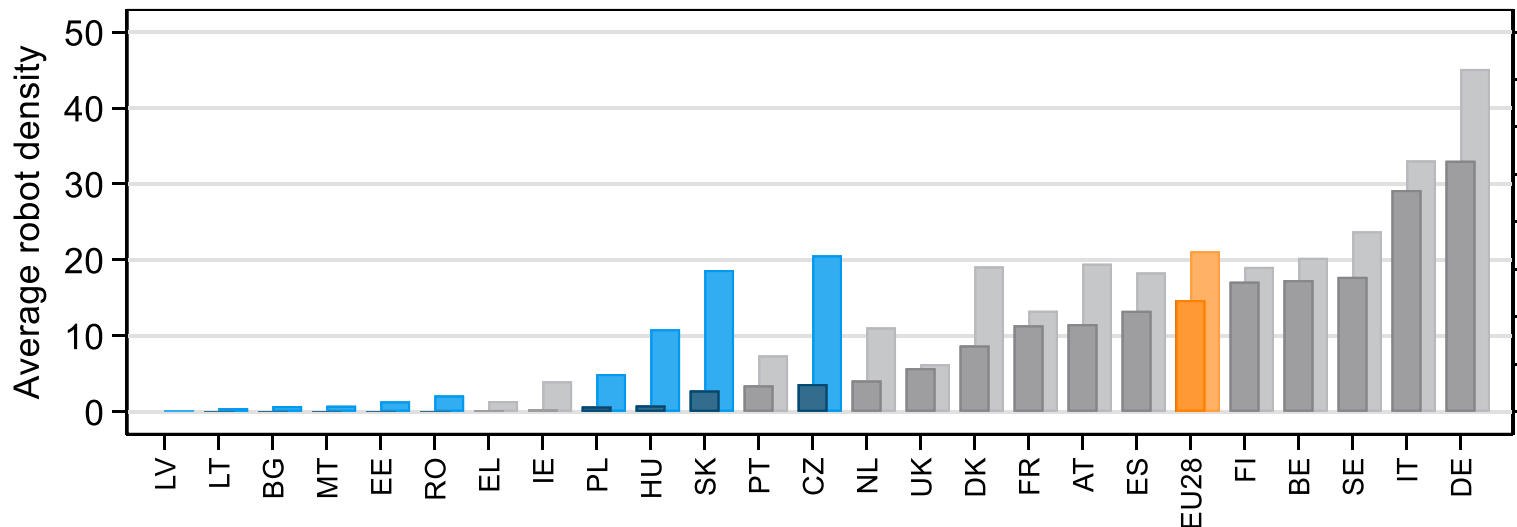


Note: Dark-shaded bars (front): 2014; light-shaded bars (back): 2018.

Source: Digital Economy and Society Index (DESI), total.

Starting from a low level: Sizeable increase in robot density in CEE

Robot density: 2002-2005 compared to 2012-2015

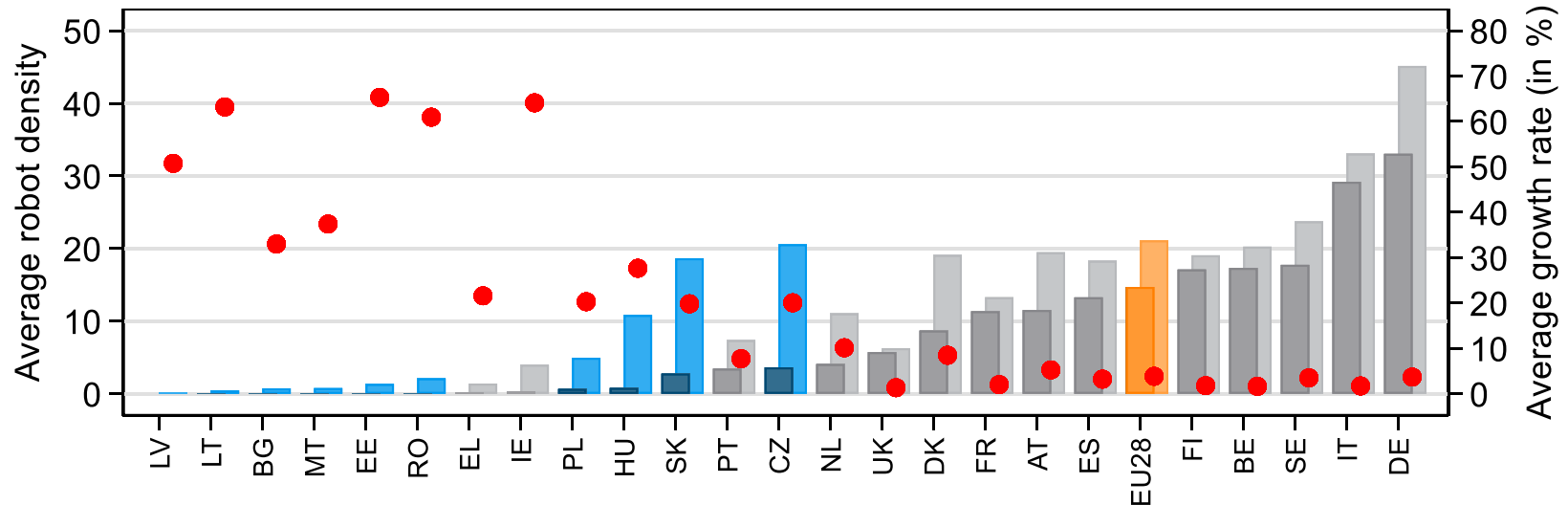


Note: Robot density defined as the number of robots per 10,000 employees. Dark-shaded bars (front): 2002-2005; light-shaded bars (back): 2012-2015.

Source: World Robotics Statistics Database and EU-KLEMS (2017 release).

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Note: Robot density defined as the number of robots per 10,000 employees. Dark-shaded bars (front): 2002-2005; light-shaded bars (back): 2012-2015.

Source: World Robotics Statistics Database and EU-KLEMS (2017 release).

Summary

- Many EU countries face shrinking working-age populations – particularly CEE countries
- Trend is likely to continue – labour shortages become more likely
- Tipping point is imminent for many CEE countries, while some EU15 countries are better positioned
- No one-size-fits-all type of policies, instead country-specific policies are needed

Thank you for your attention!

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