

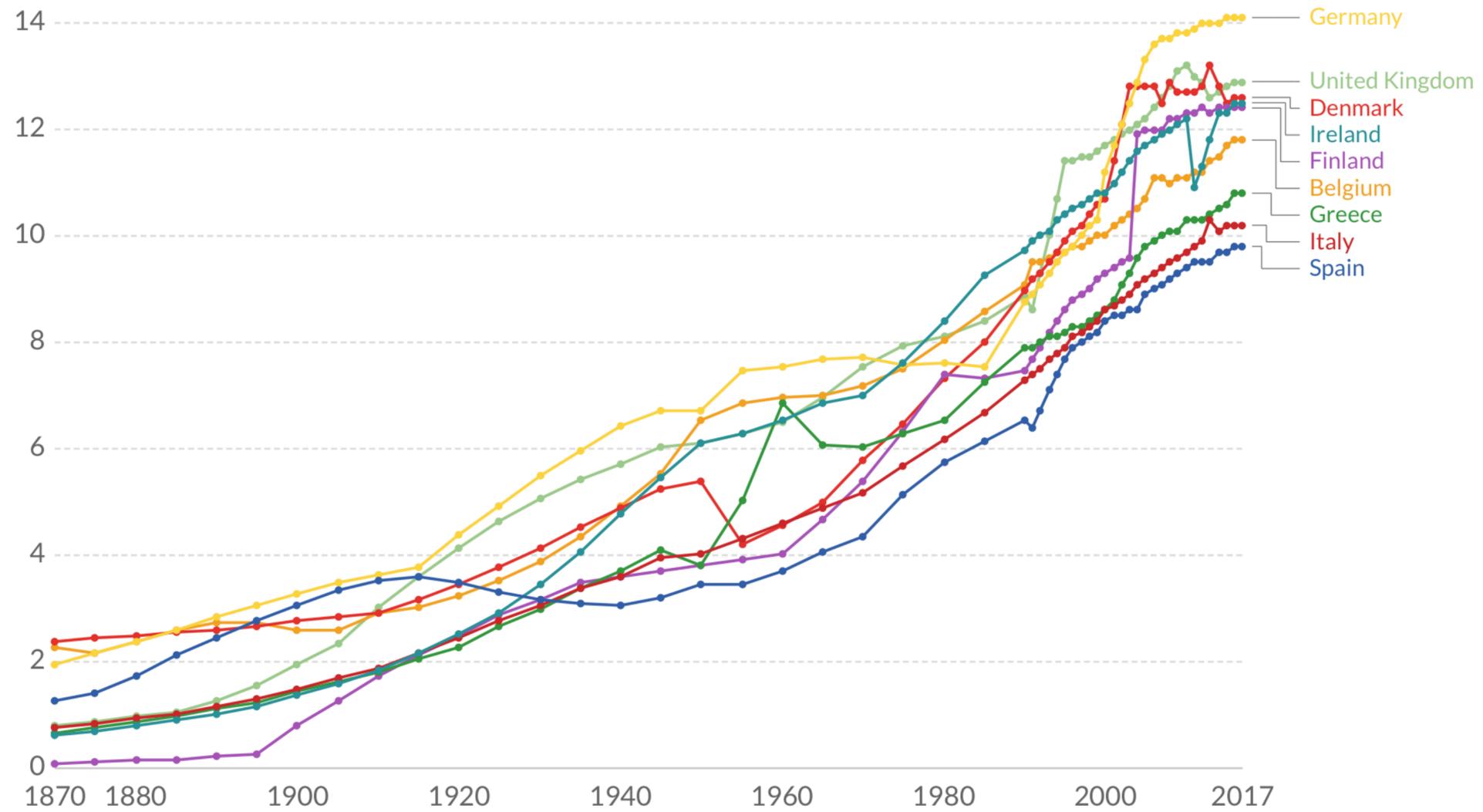
Skills, Inclusiveness & the Future of Europe

Dr Diego Rubio
Professor at IE University
Executive Director of IE's
Center for the Governance of Change



Mean years of schooling

Average number of years of total schooling across all education levels for the population aged 25+

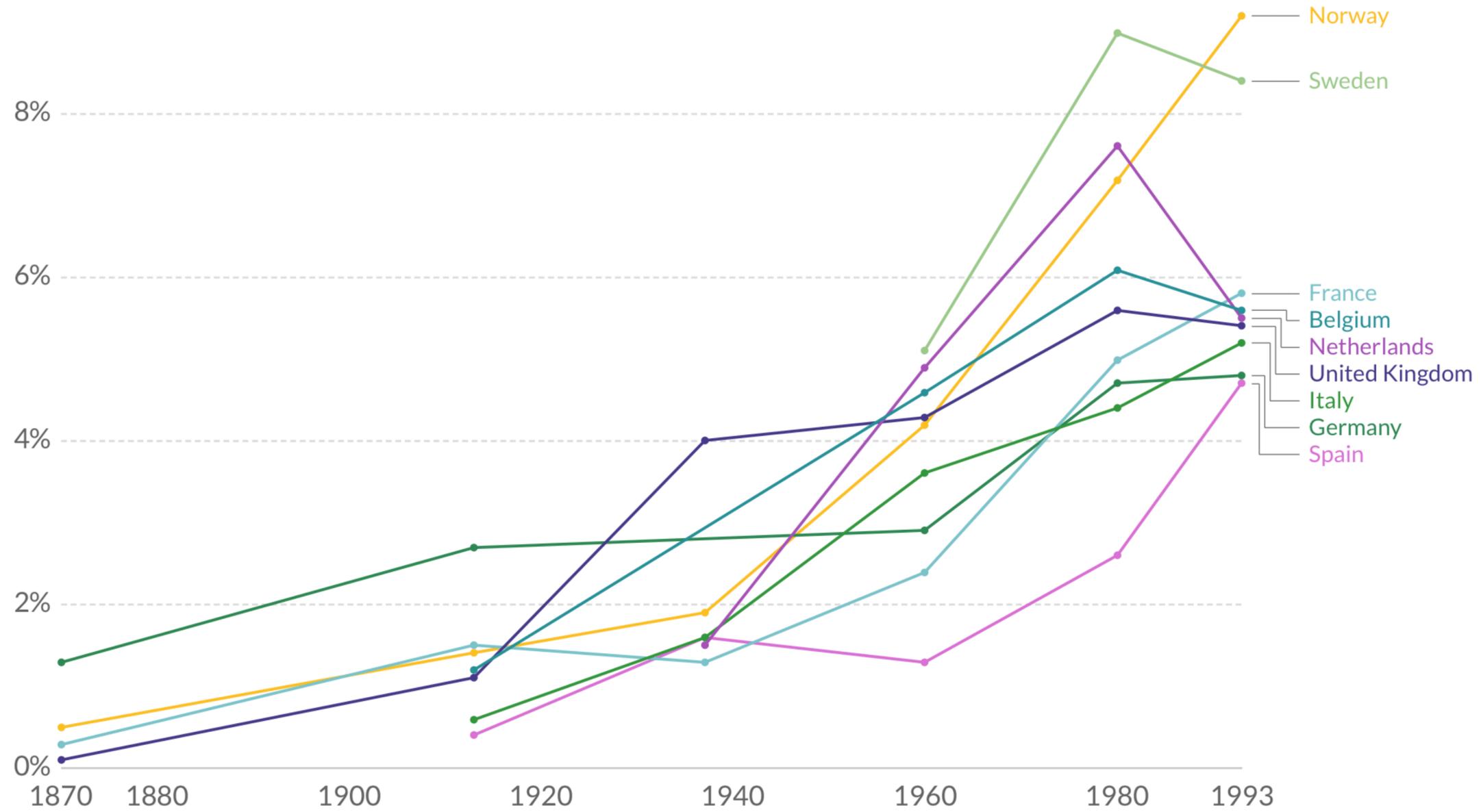


Source: Lee-Lee (2016), Barro-Lee (2018) and UNDP, HDR (2018)

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Public education expenditure as share of GDP

For Selected European Countries

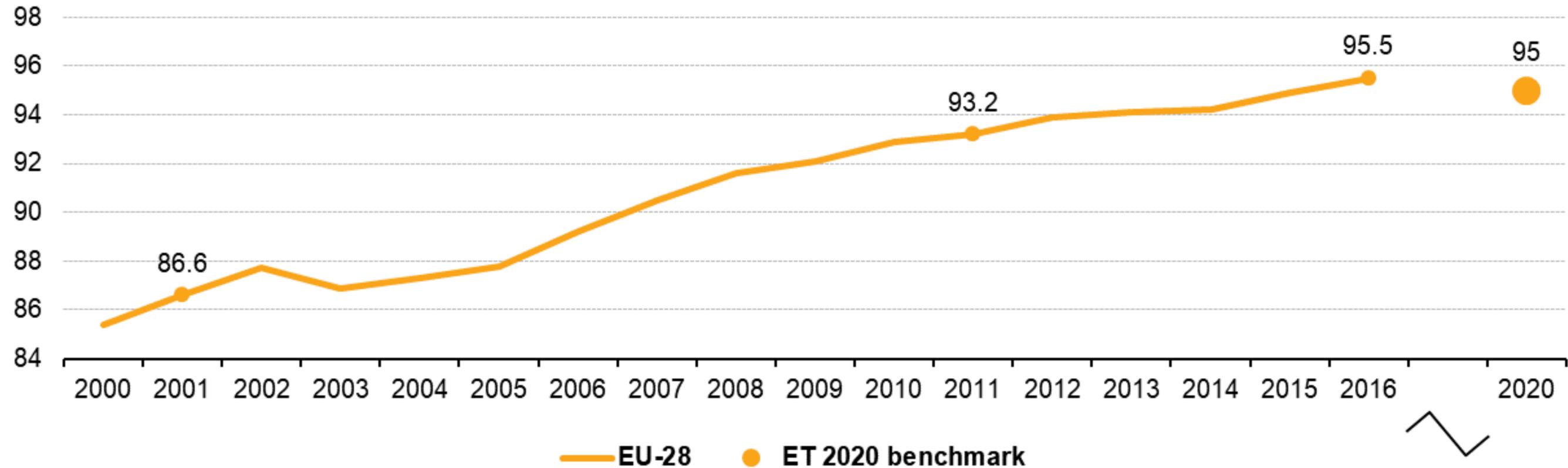


Source: Tanzi & Schuktnecht (2000)

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Participation in early childhood education

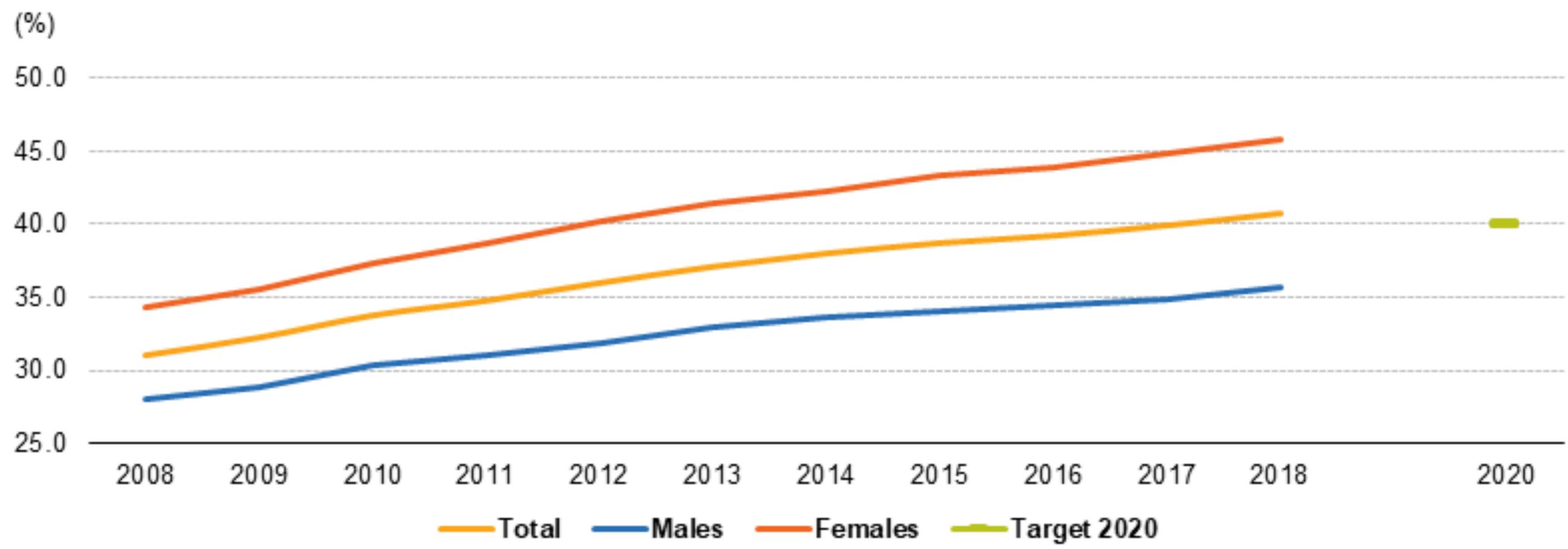
% of the age group between 4 and 6 years-old, EU, 2008 - 2018



Source: Eurostat, 2019

Tertiary Educational Attainment

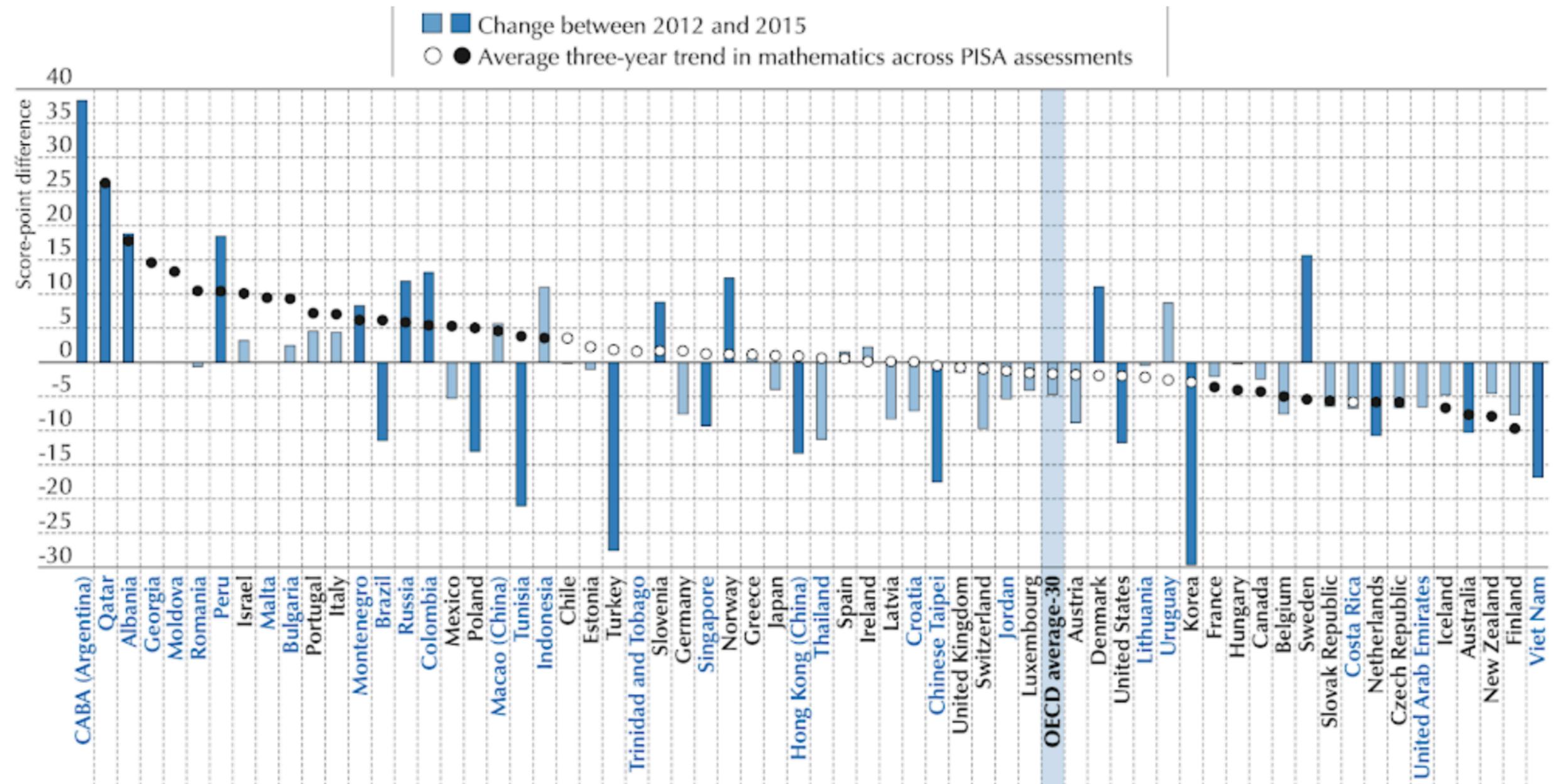
Population aged 30-34, EU, 2008 - 2018



Source: Eurostat, 2019

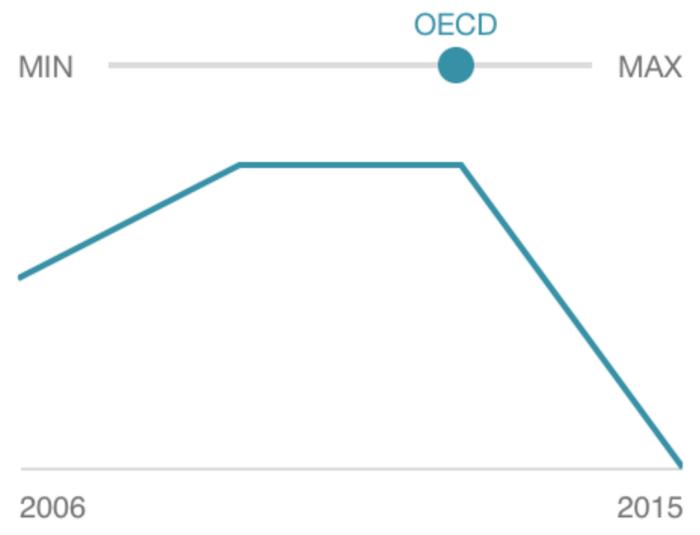
Change between 2012 and 2015 in mathematics performance

And average 3-year trend since earliest participation in PISA

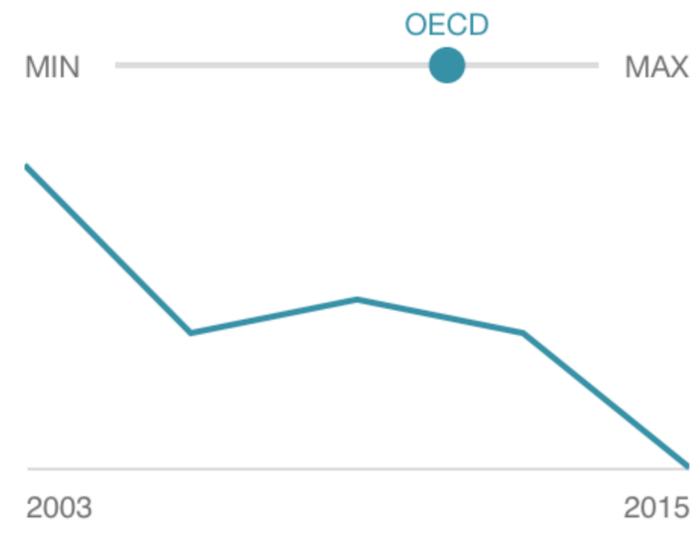


PISA Average performance in OECD Countries

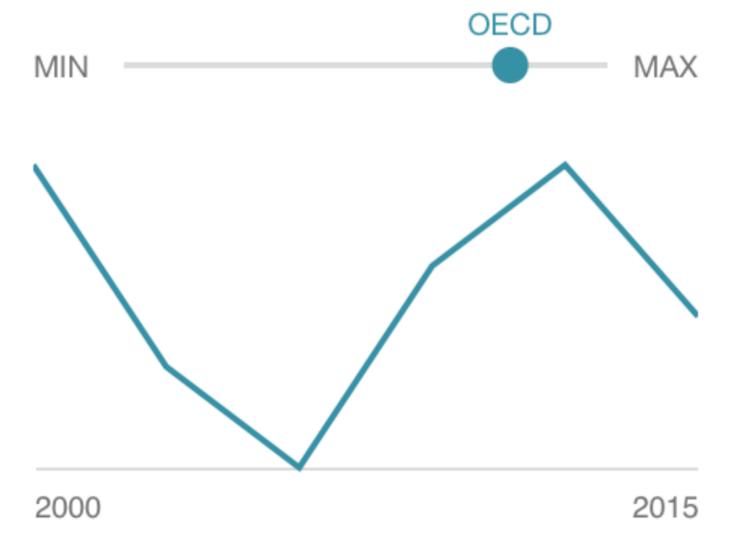
2000 vs 2015



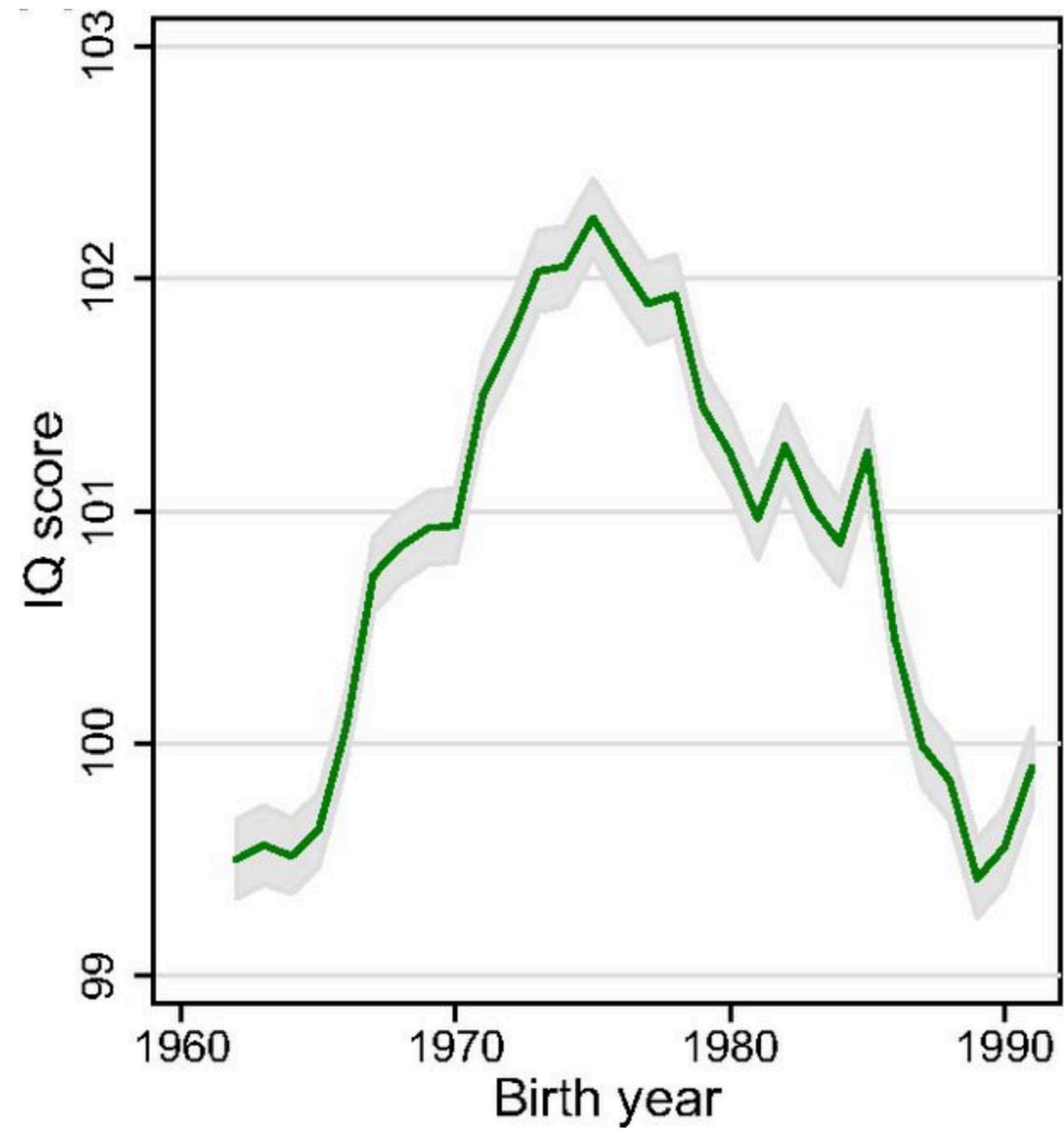
Science



Mathematics



Reading



Average IQ score by birth year

Male adults, Norway, 1960-1990

Source: Bernt Bratsberg and Ole Rogeberg, "Flynn effect and its reversal are both environmentally caused", PNAS June 26, 2018 115 (26) 6674-6678.

The IQ drop In Europe

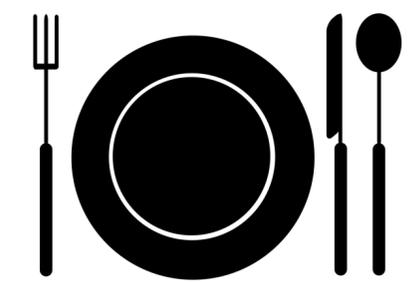


Potential causes of the drop in IQ

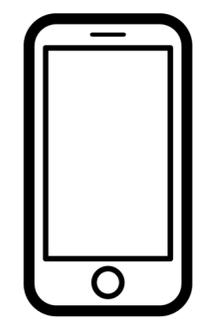
Not driven by genetics



Genetics



Lifestyle



Technology



Education



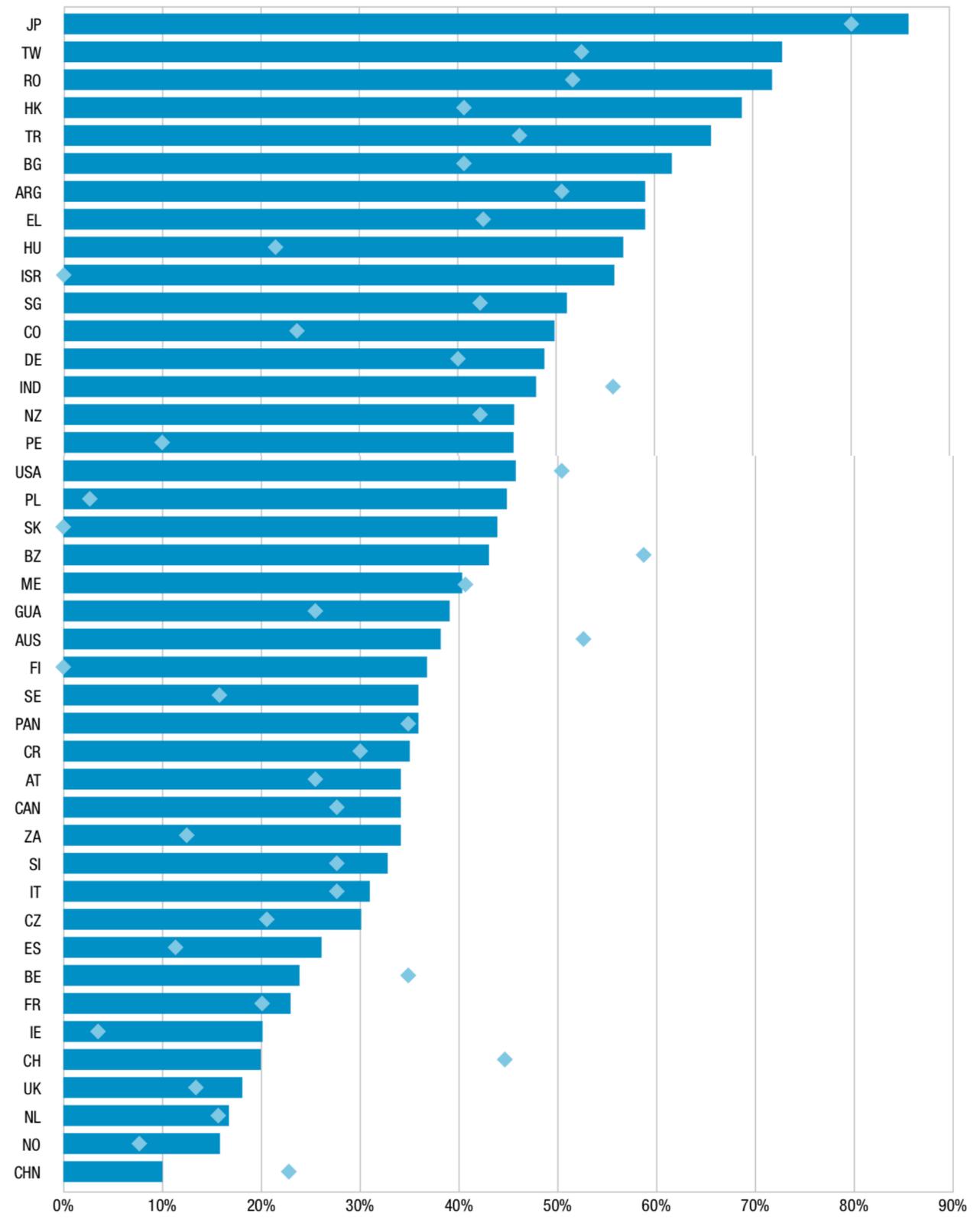
The Skills Shortage

Percentage of employers reporting difficulty 'finding the right skills or talent' or 'filling jobs'.

2016, 44 countries

Source: Manpower Group: Talent shortage survey 2016/17

■ 2016 ◆ 2011



Difficulties filling vacancies

By bottleneck type for employers with tertiary education, 2010, EU

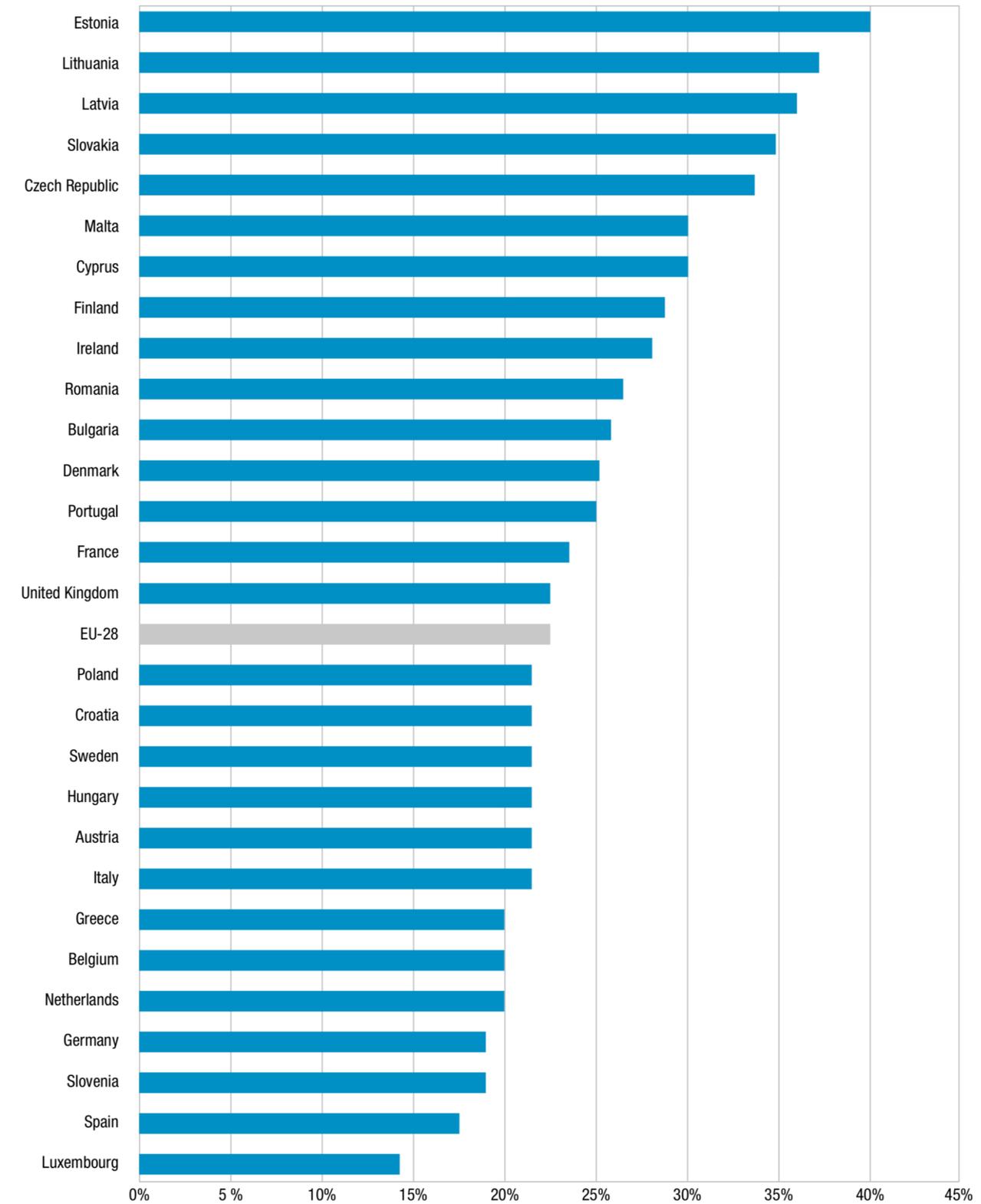
Type of recruitment bottleneck	% of firms with difficulty filling vacancies
Genuine skill shortage <ul style="list-style-type: none"> Lack of applicants with the right skills and ability to offer a competitive starting salary 	12%
Apparent skill shortage <ul style="list-style-type: none"> Lack of right skills and inability to offer a competitive starting salary Lack of right skills and HRM inefficiency 	46%
Uncompetitive wage offer <ul style="list-style-type: none"> Inability to offer a competitive starting salary 	29%
HRM inefficiency <ul style="list-style-type: none"> Lack of offer of competitive graduate training and development programme and slow hiring process or limited resources to market vacancies 	13%

Source: Cedefop, 2015

Share of adult workers underskilled at the start of their current jobs

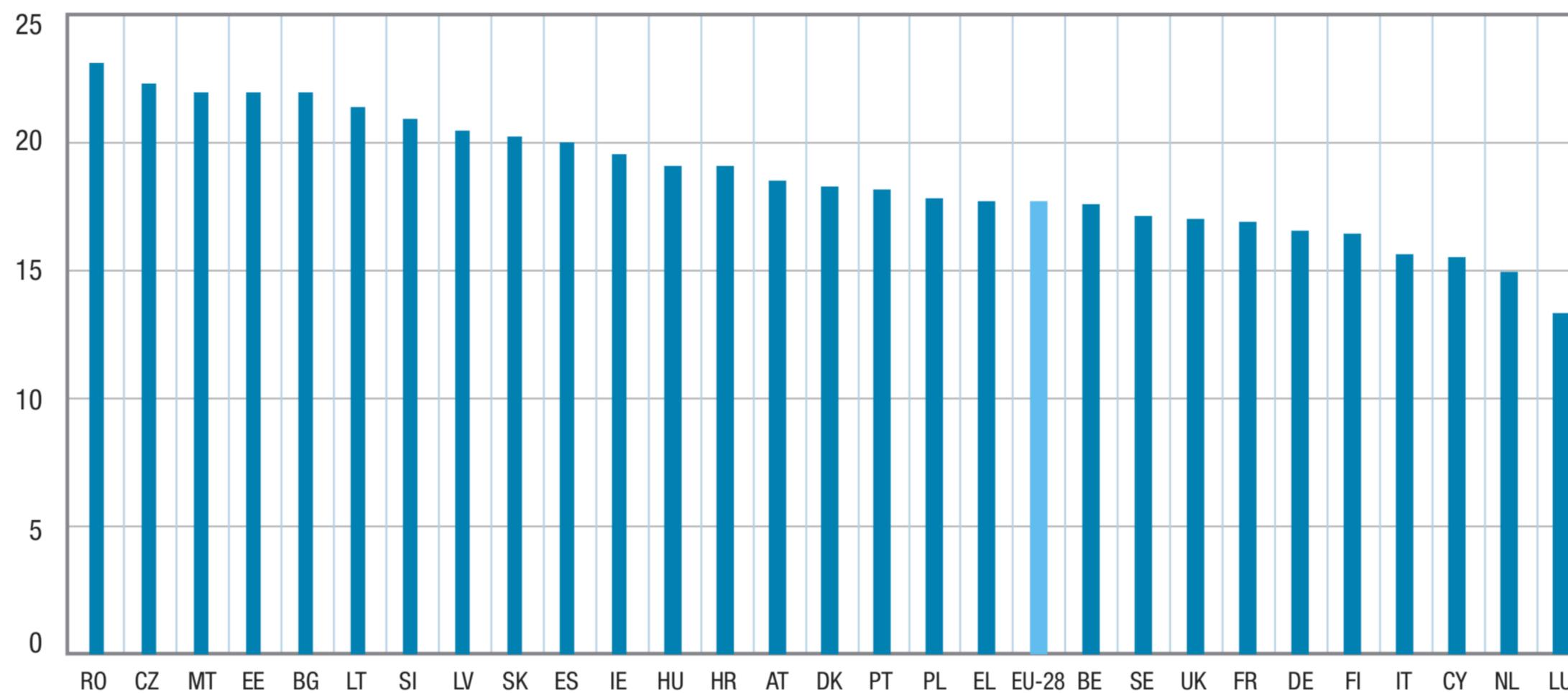
2014, EU-28

Source: Cedefop, *European skills and jobs survey*, 2015.



Average skill deficit in the EU

Adult employees, 2014



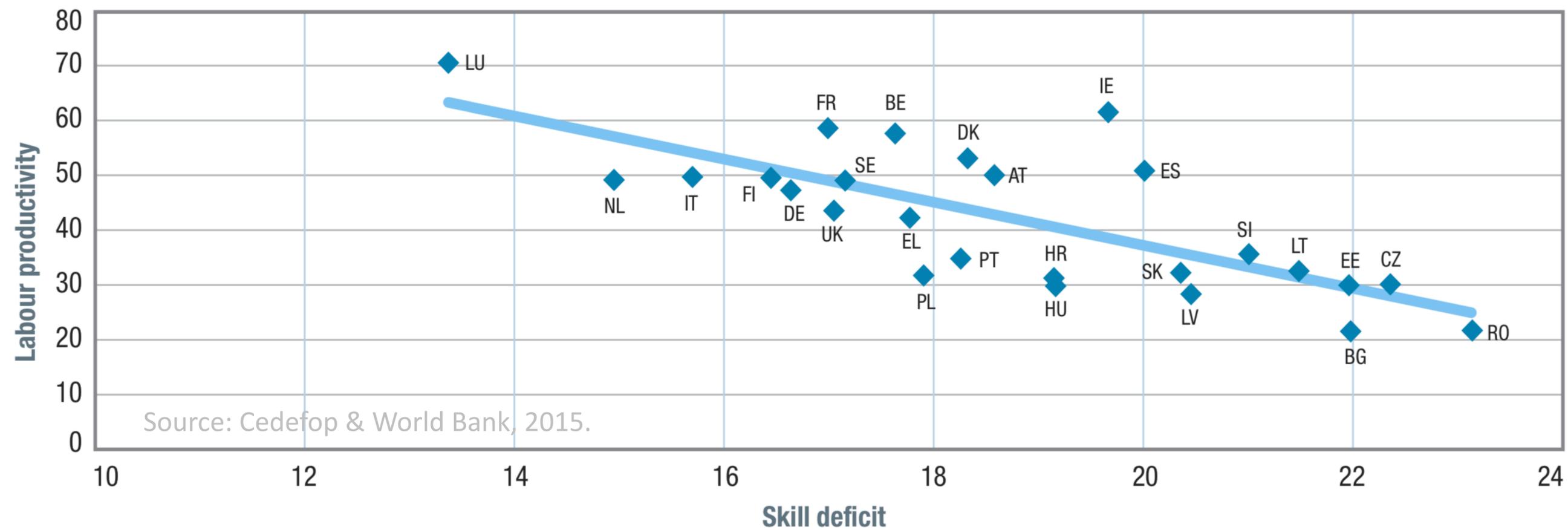
Source: Cedefop, *European skills and jobs survey*, 2015.

The background of the image features several dark blue silhouettes of hands raised in the air, set against a lighter blue background. The hands are positioned at various heights and angles, creating a sense of collective participation or agreement. The central text is overlaid on this graphic.

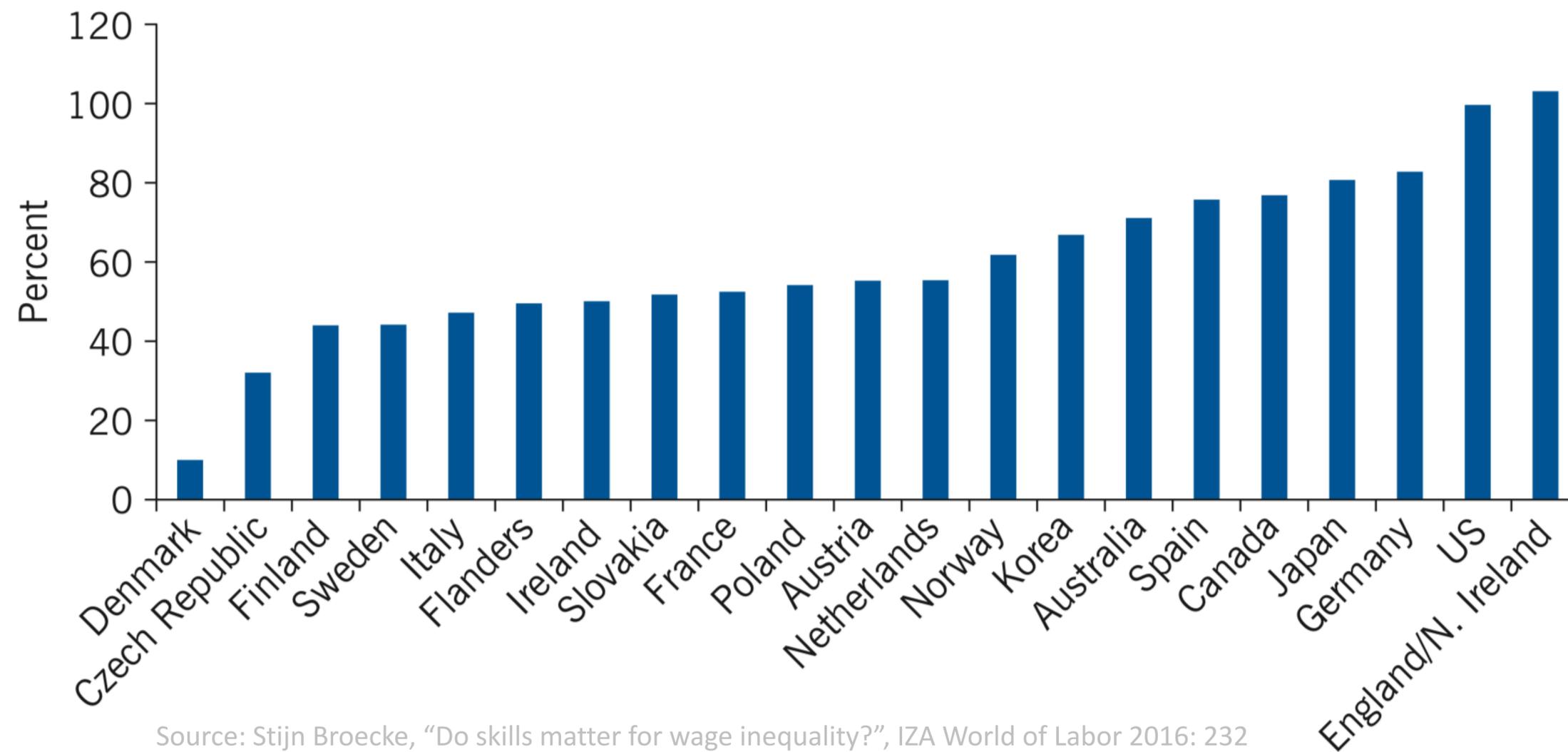
Skills & Inclusiveness

Skill deficits and labour productivity

2014, EU-28

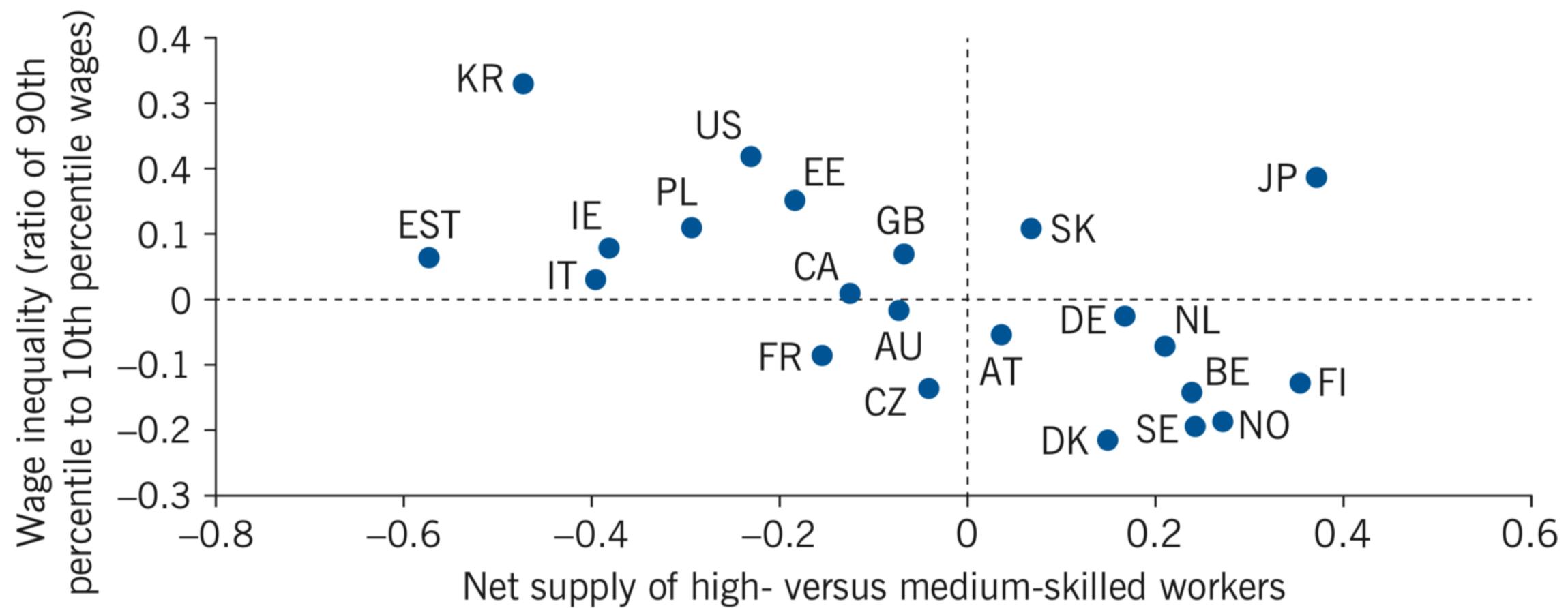


How much higher the wages of high-skilled workers are than those of low-skilled workers



Source: Stijn Broecke, "Do skills matter for wage inequality?", IZA World of Labor 2016: 232

Countries with a higher net supply of skills have lower wage inequality

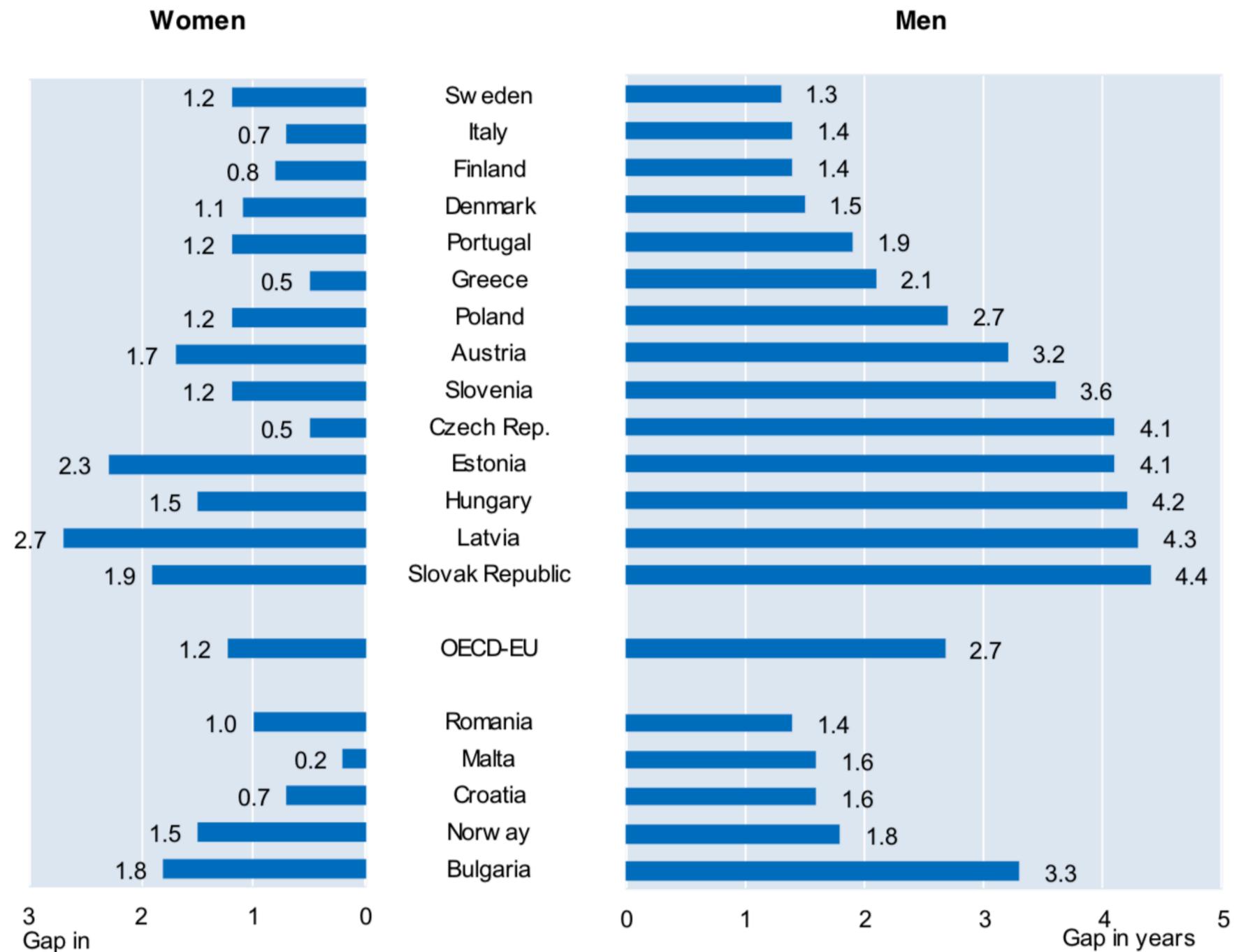


Source: Stijn Broecke, "Do skills matter for wage inequality?", IZA World of Labor 2016: 232

Individuals with lower level of education have a lower life expectancy than the better educated

2013, EU

Source: OECD/EC, *Health at a Glance*, 2016

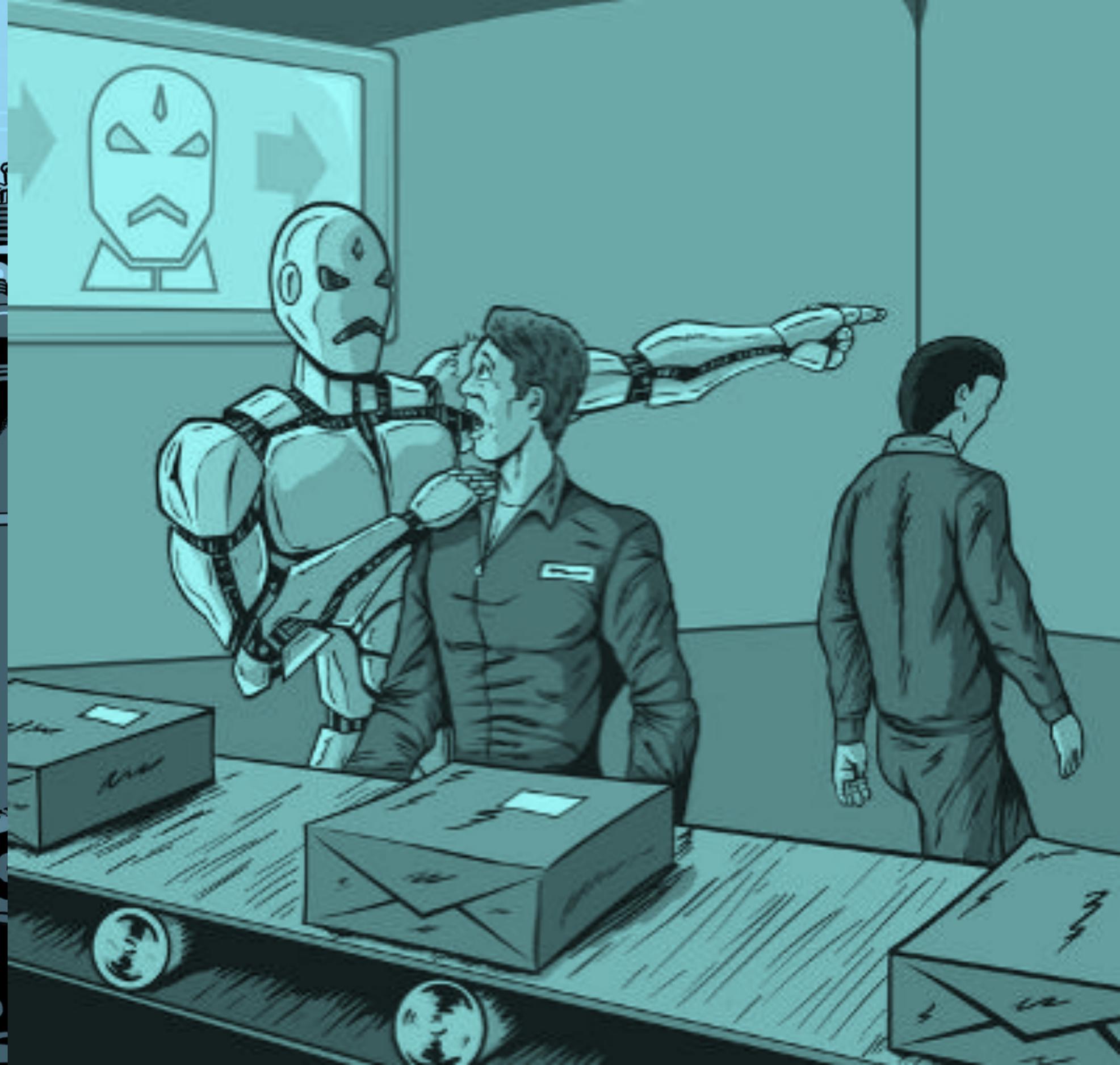
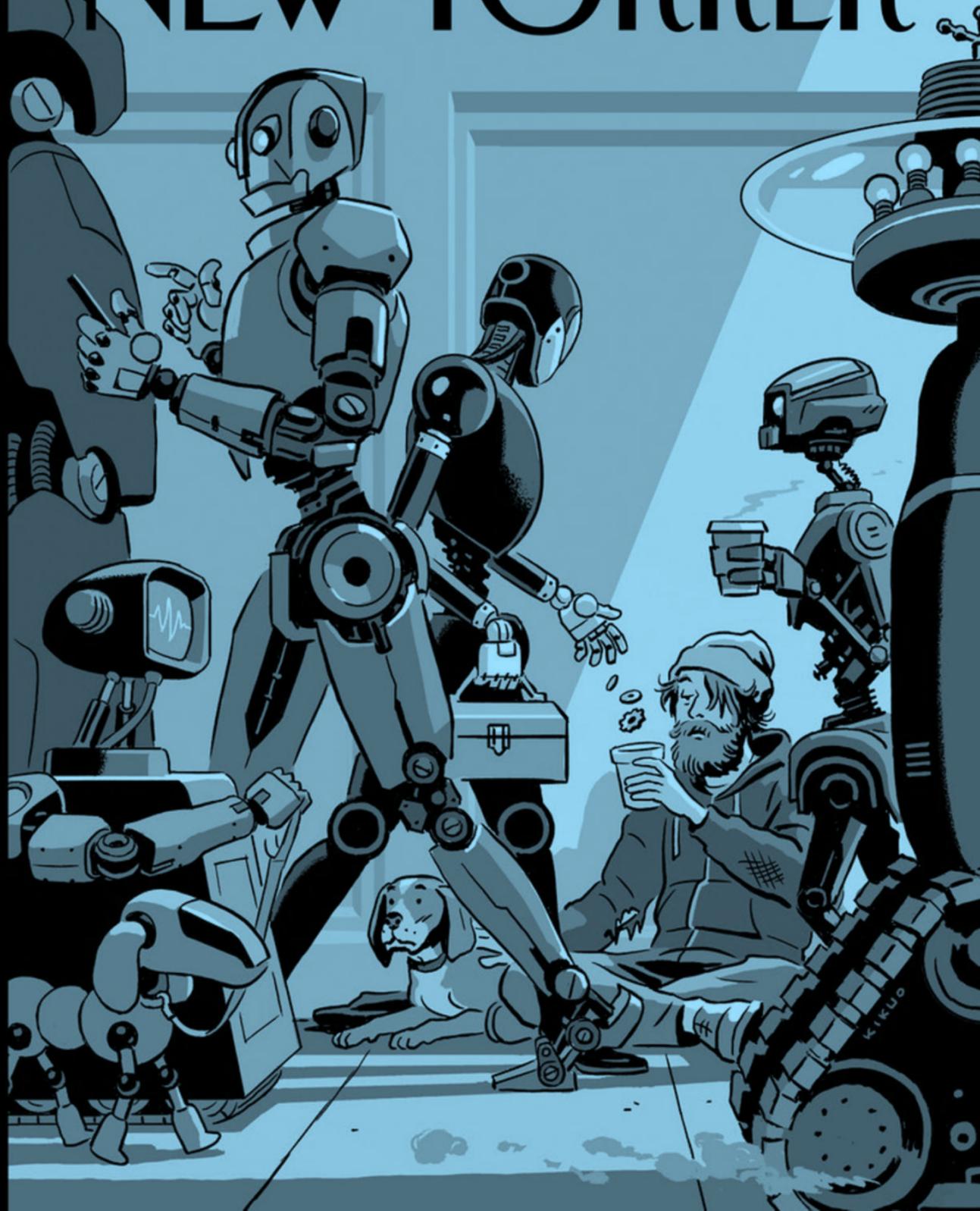


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The Impact of Automation

Some Estimations

5 million
in Europe & US
by 2020



25 million
in Germany and
the UK by 2030

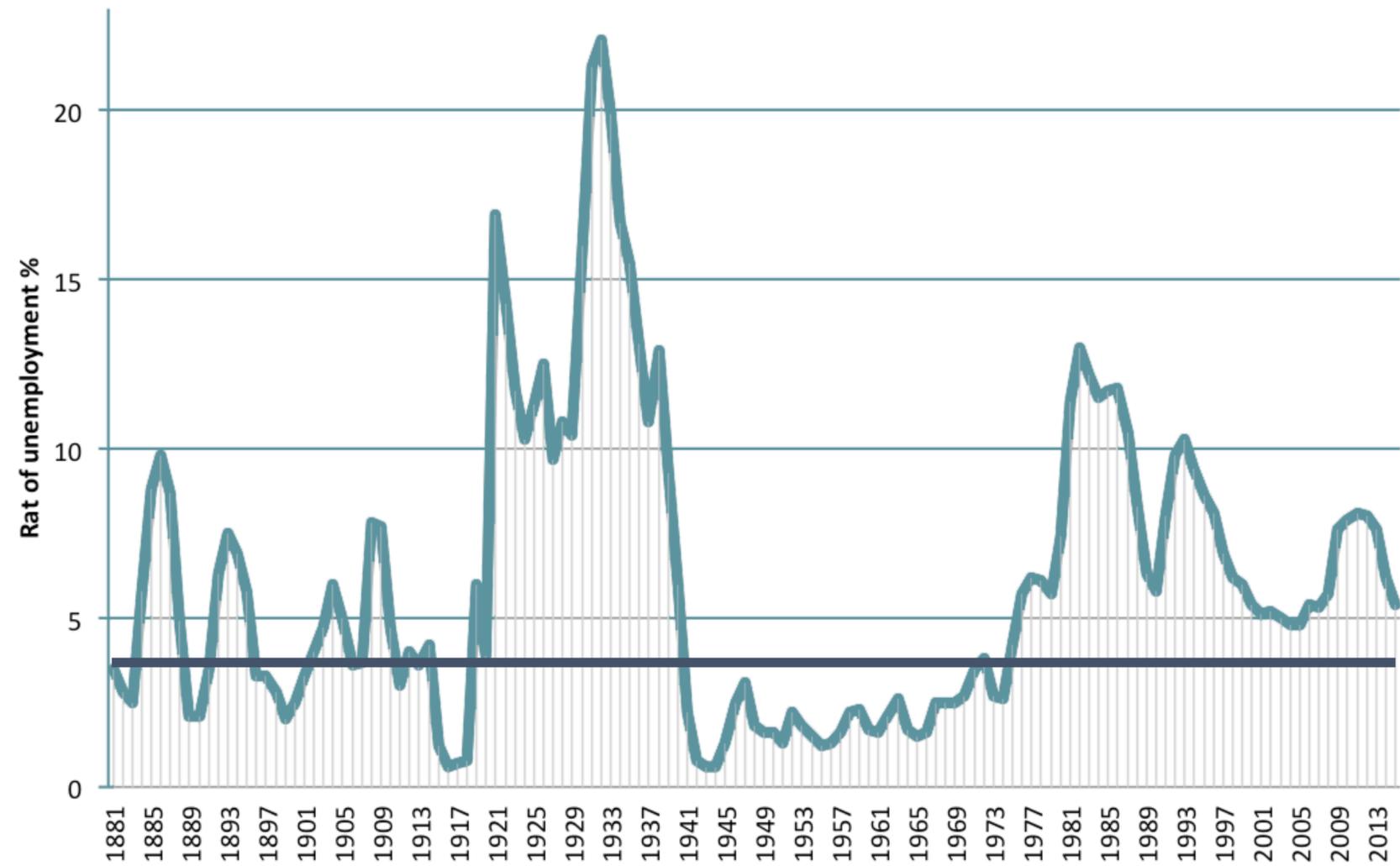


135 million
in Europe
by 2030



Unemployment in the UK

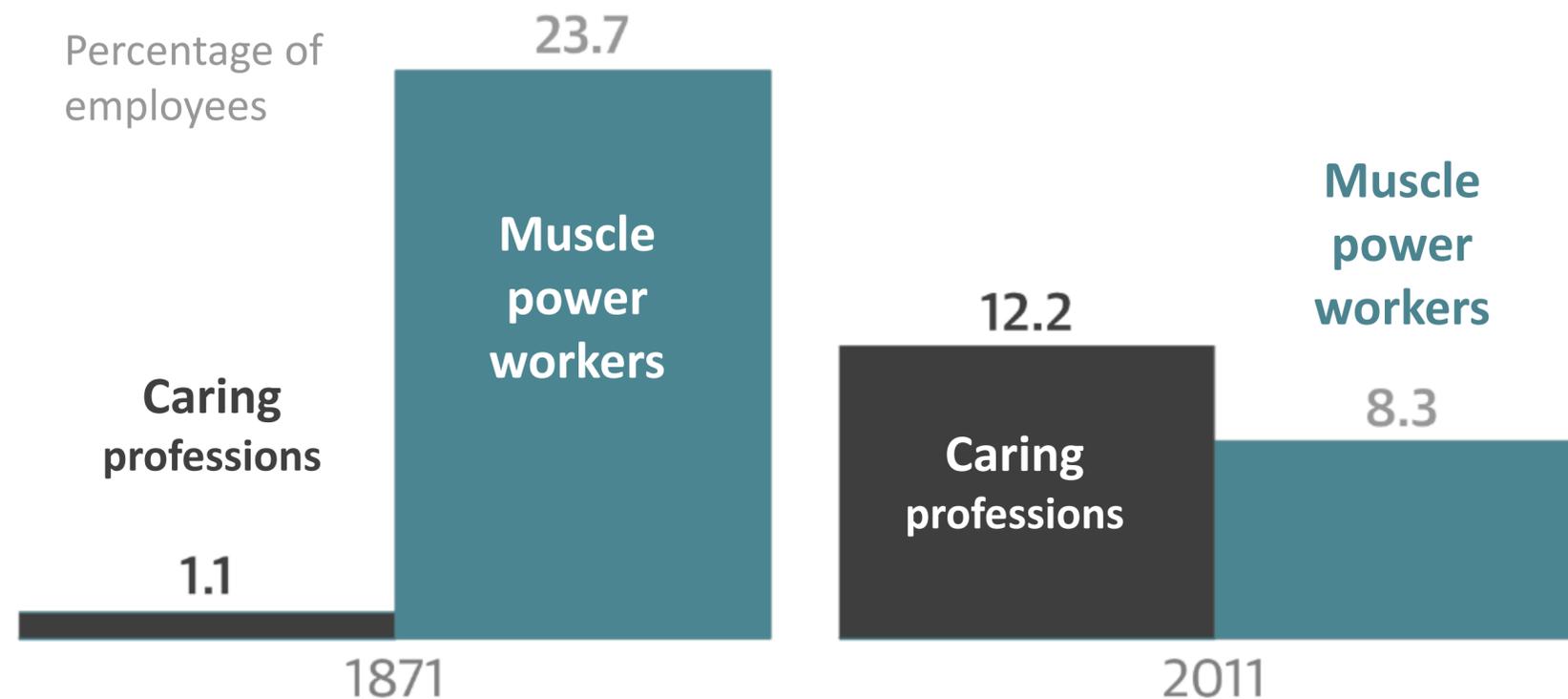
1881 - 2013



Source: ONS, Historical Unemployment.

Employees' movement driven by Tech

In England & Wales, 20th century



'Muscle power' includes cleaners, domestic servants, labourers and miners. 'Caring professions' include health and teaching professionals and care home workers. Source: England and Wales Census records

Employees' movement driven by Tech

In England & Wales

1992

Weavers and knitters - 79%

Company secretaries - 52%

Farm workers - 52%

2014

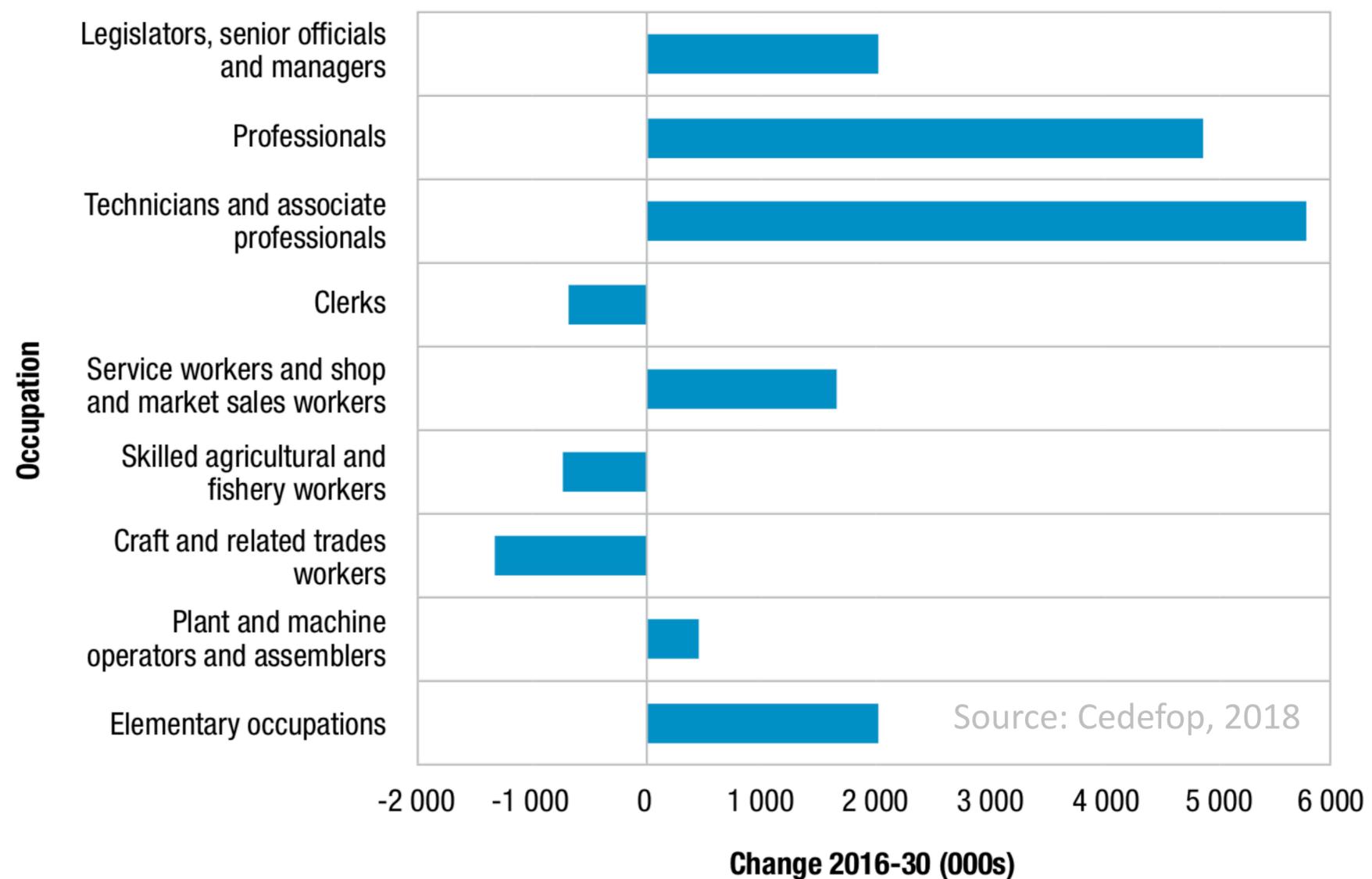
Nursing auxiliaries + 909%

Management consultants
and business analysts + 365%

Teachers + 580%

Projected change by broad occupation

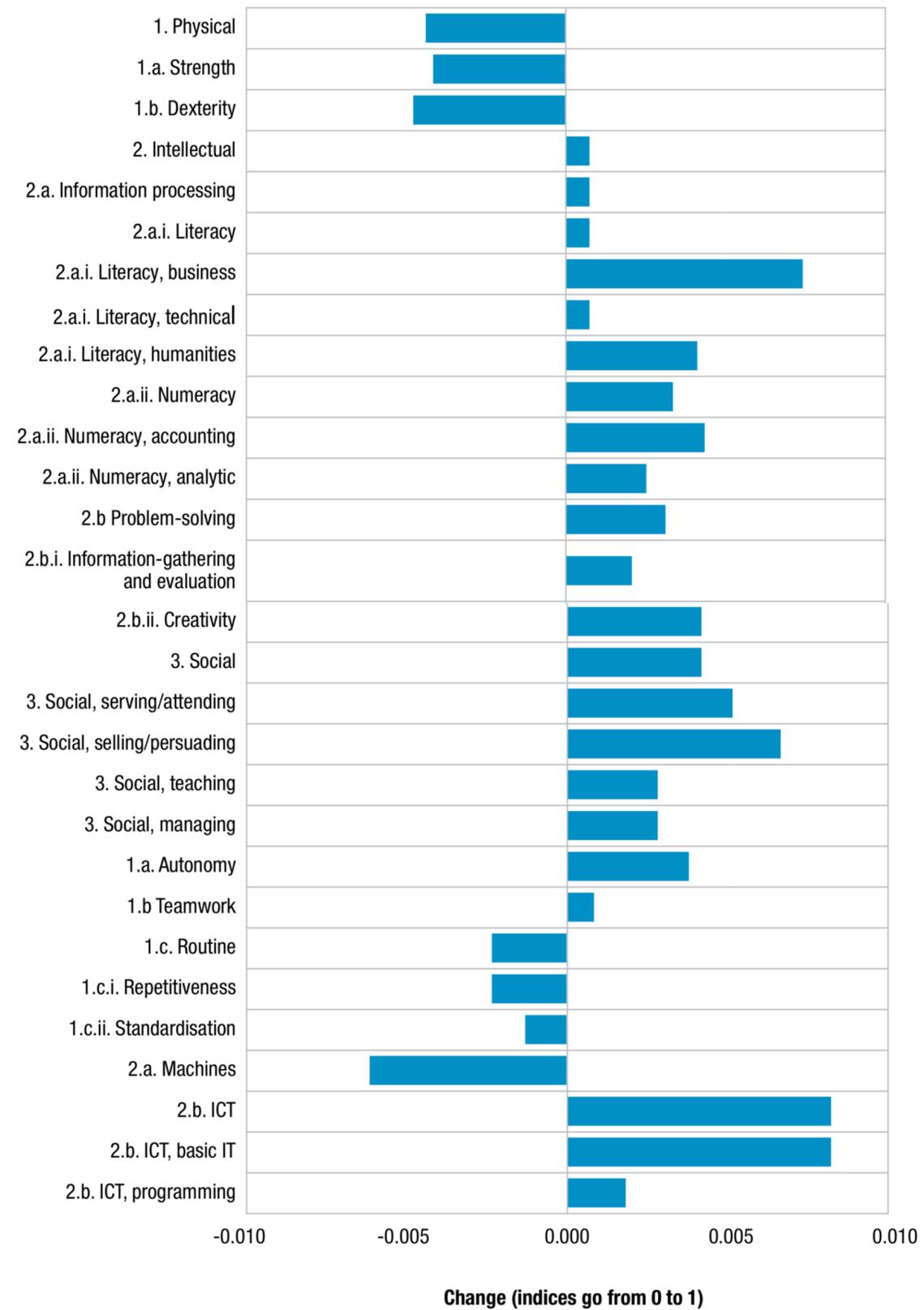
2016 – 2030, EU 28 + 3



Projected change in tasks

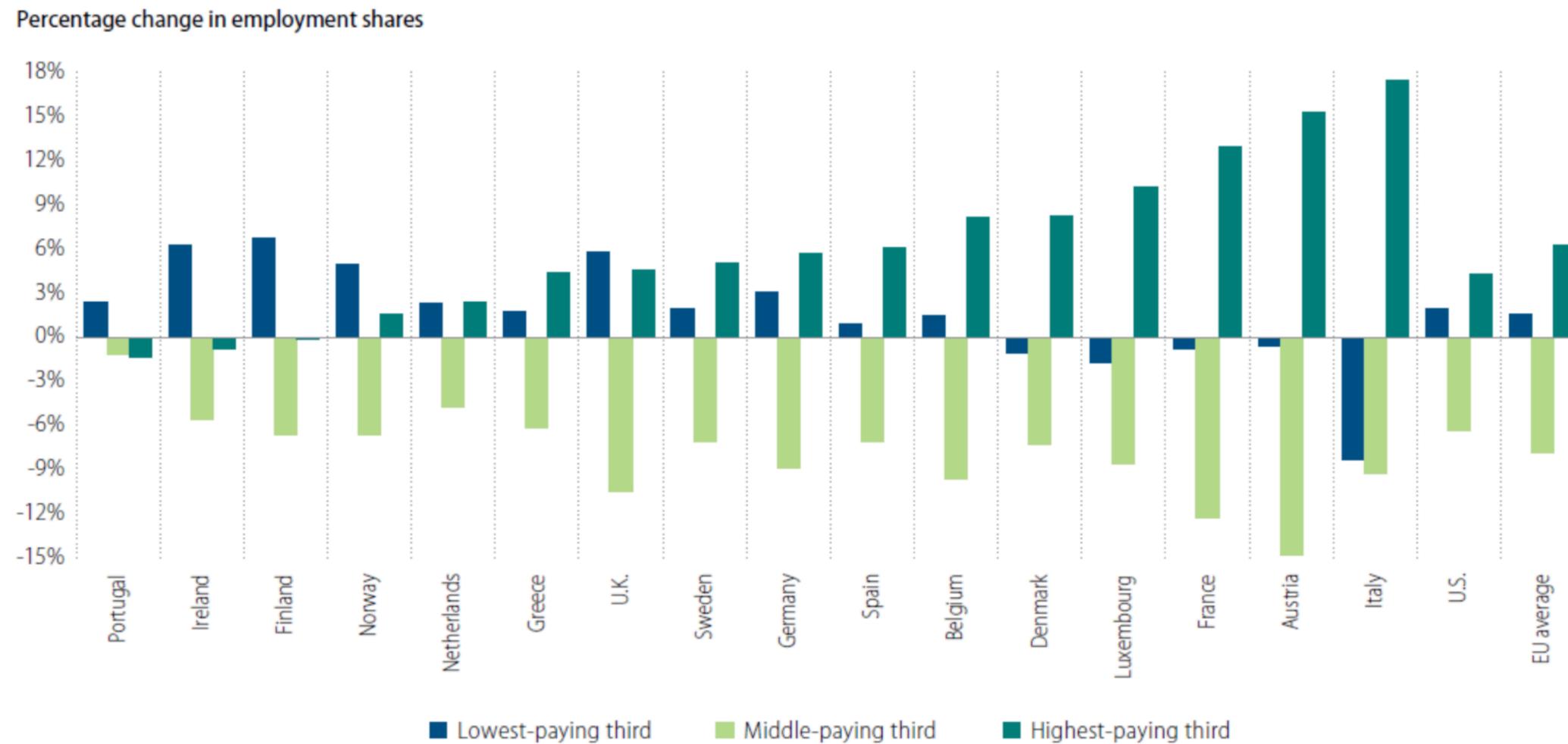
2015 – 2030, EU

Source: Eurofound, 2018



1. Increase in demand for high-skills

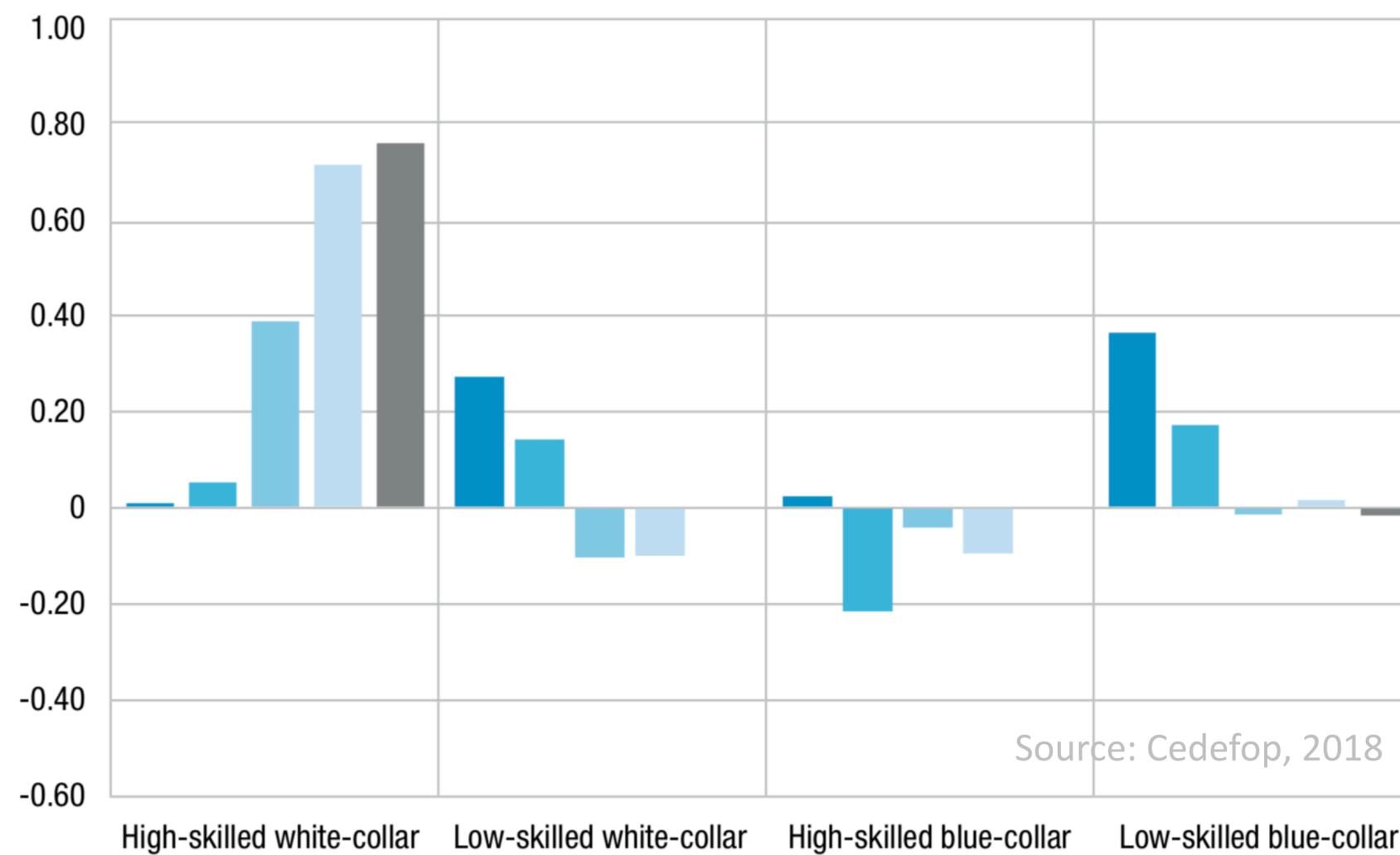
The labour market polarisation in Europe & the US, so far



Source: David Autor, 2010

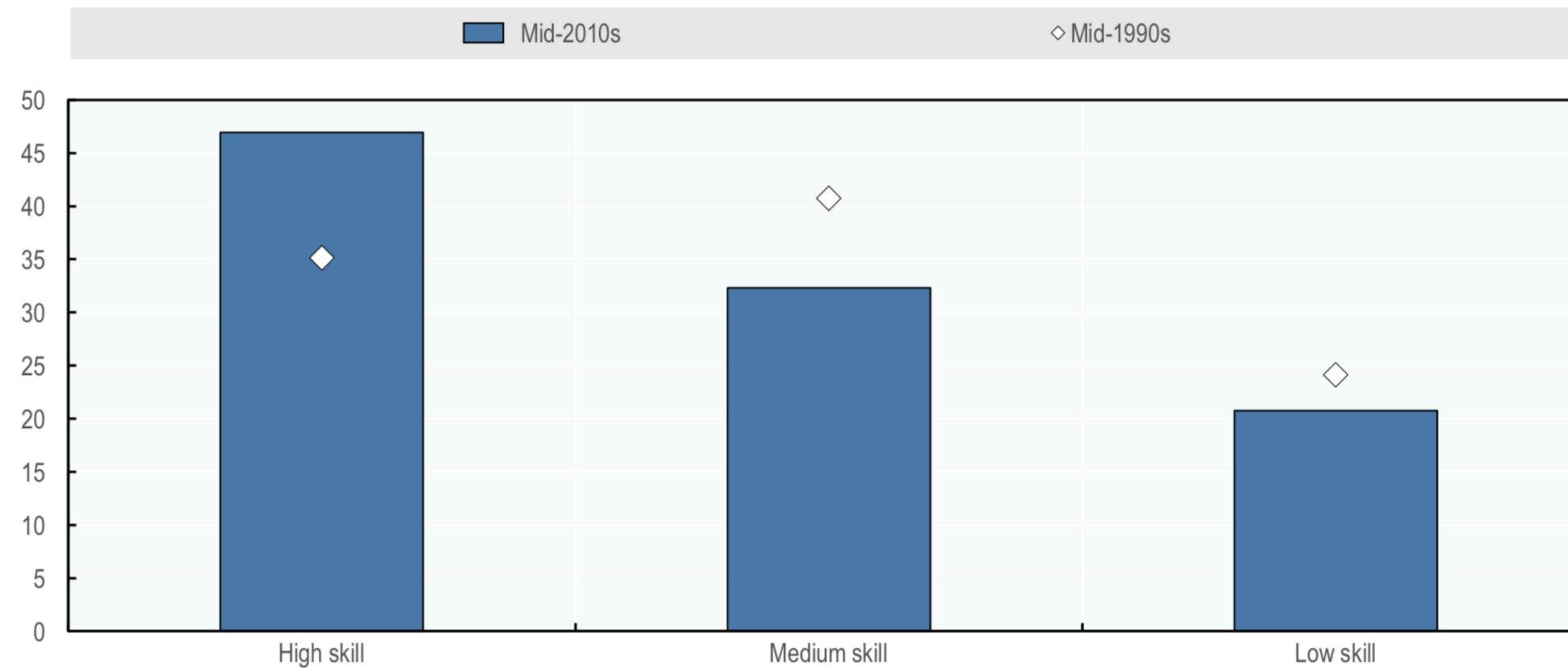
1. Increase in demand for high-skills

The labour market polarisation in Europe & the US, in the future



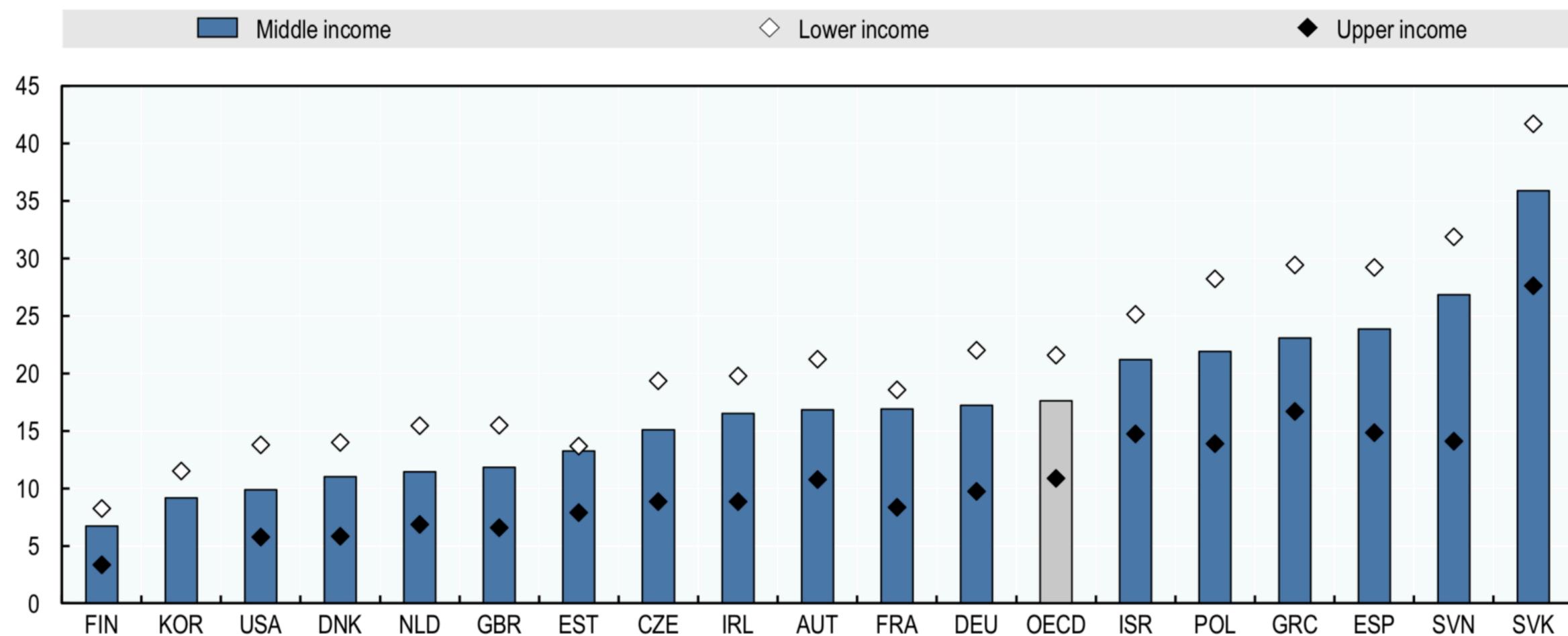
1. Increase in demand for high-skills

The skills profile needed to reach the middle of the income distribution has increased



Source: OECD, 2019

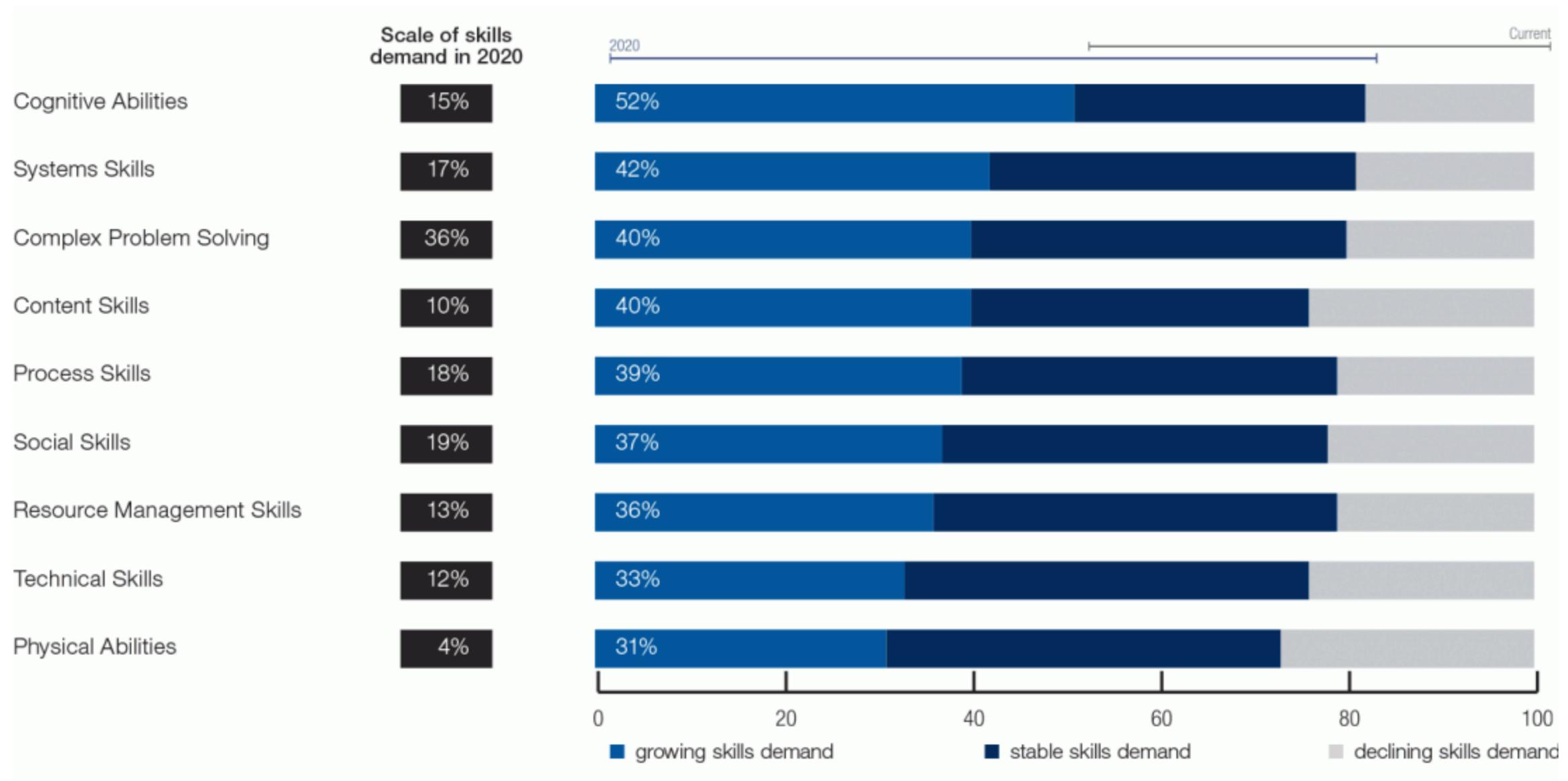
One in-six current middle-income jobs face high risk of automation



Source: OECD, 2019

2. Quick & deep change of the skills demand

Change in demand for core-work related skills, 2015 - 2020



Source: WEF, Future of Jobs Survey, 2018

2. Quick & deep change of the skills demand

Change in technical skills too

50%

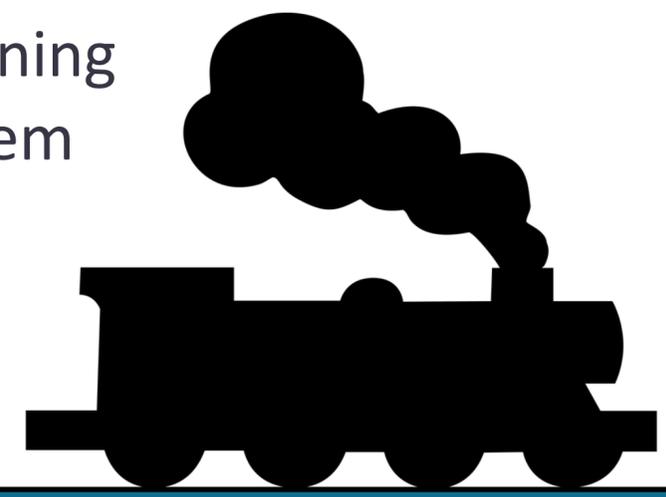
of the subject knowledge acquired during the first year of a four-year technical degree will be outdated by the time the students graduate.

Source: Universities UK, *Solving the Future Skills Challenge*, 2018.

The incoming train crash

A visual summary

a stagnated
educational
& training
system



a labour market
in deep & fast
transformation

