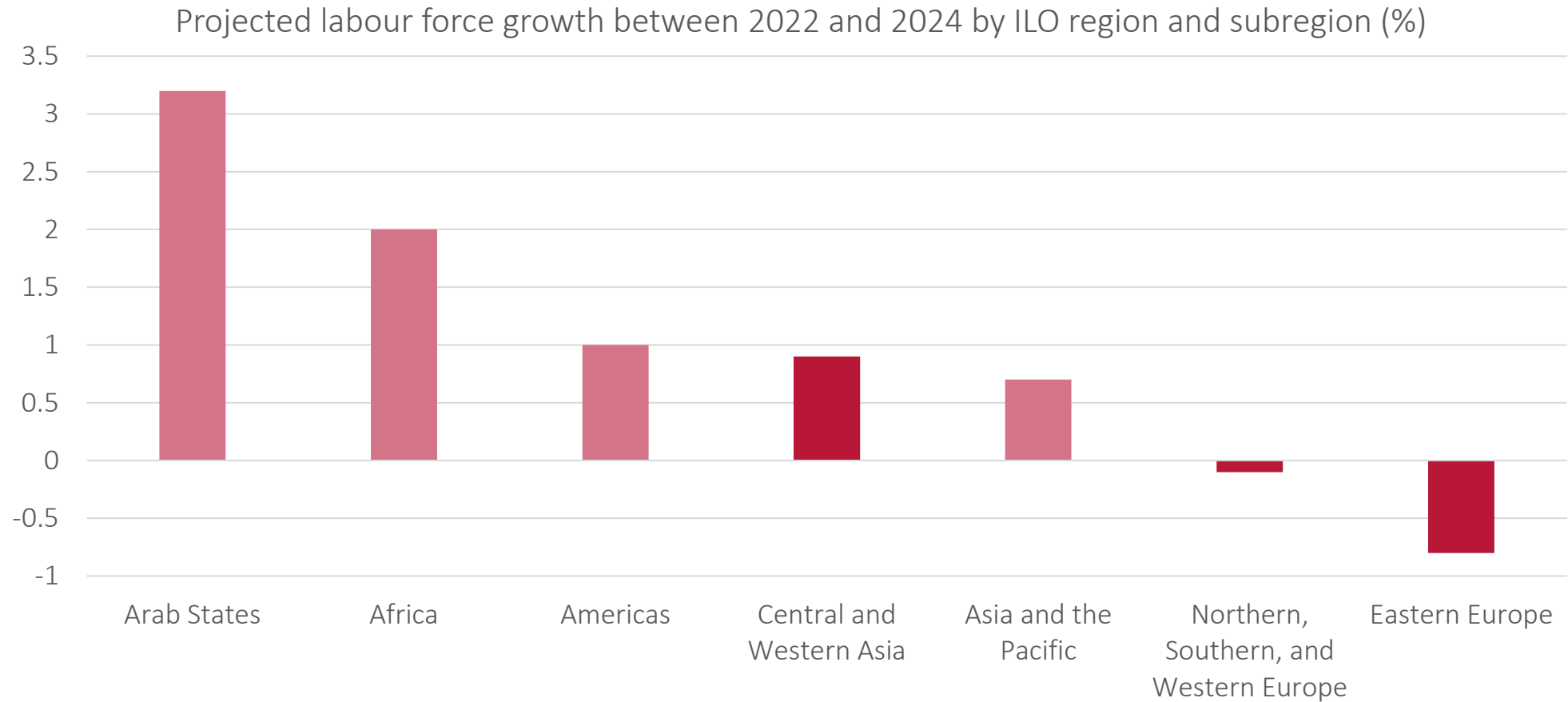


# Can AI alleviate demographically-driven labour shortages?

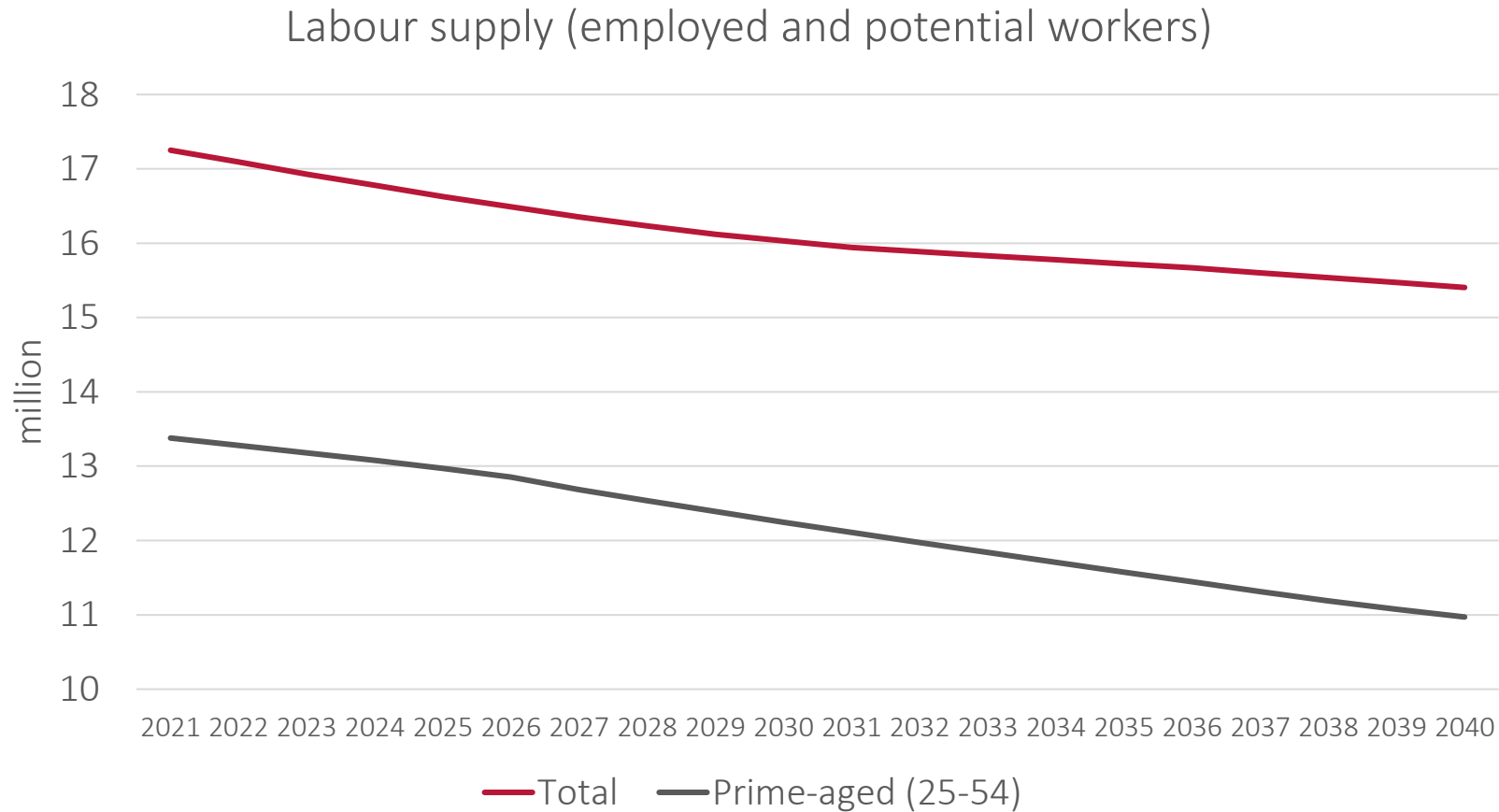
Piotr Lewandowski (IBS, IZA, RWI)

# European labour markets stand out globally with declining labour supply



To illustrate the structural labour market challenges of population ageing, I will use the example of Poland – fast growing economy that will age rapidly.

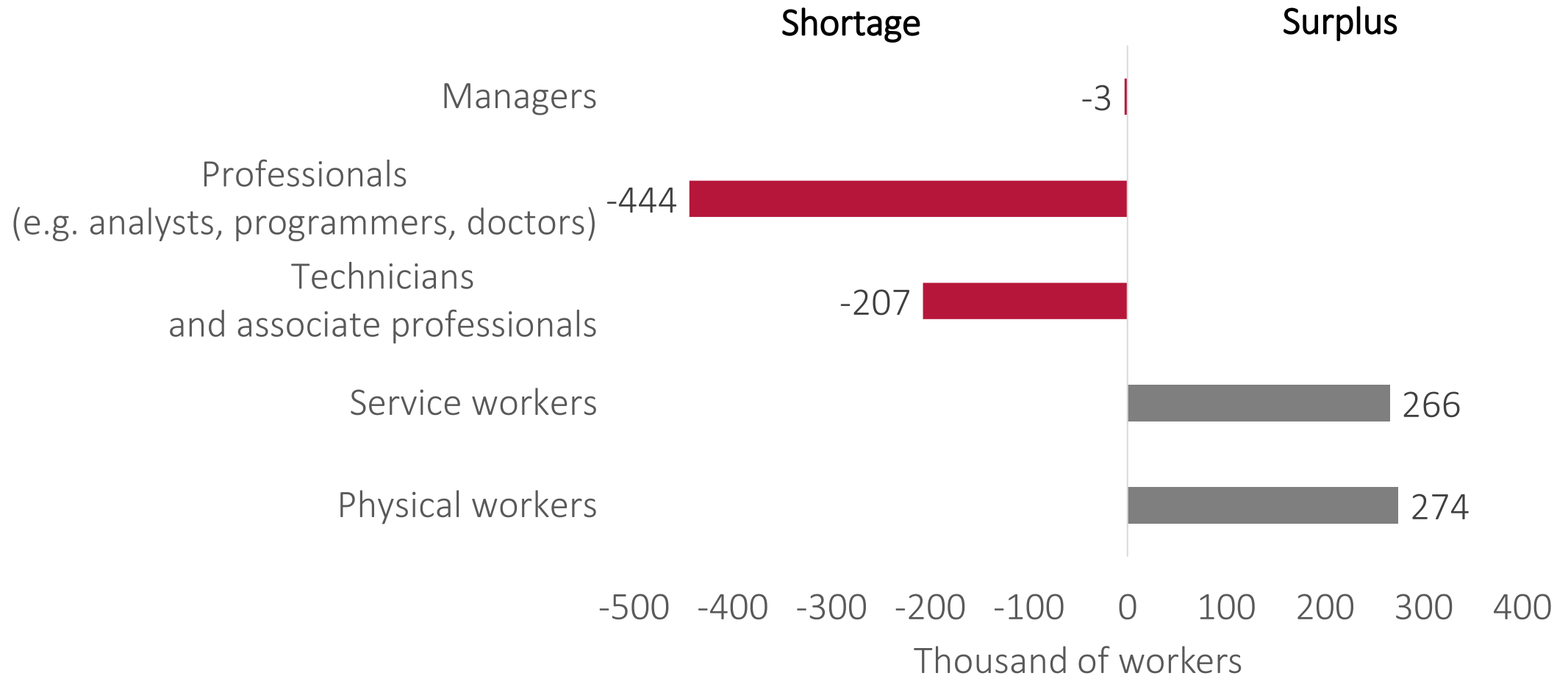
By 2040, the total labour supply will fall by 10%, the labour supply of prime-aged workers – by 17%.



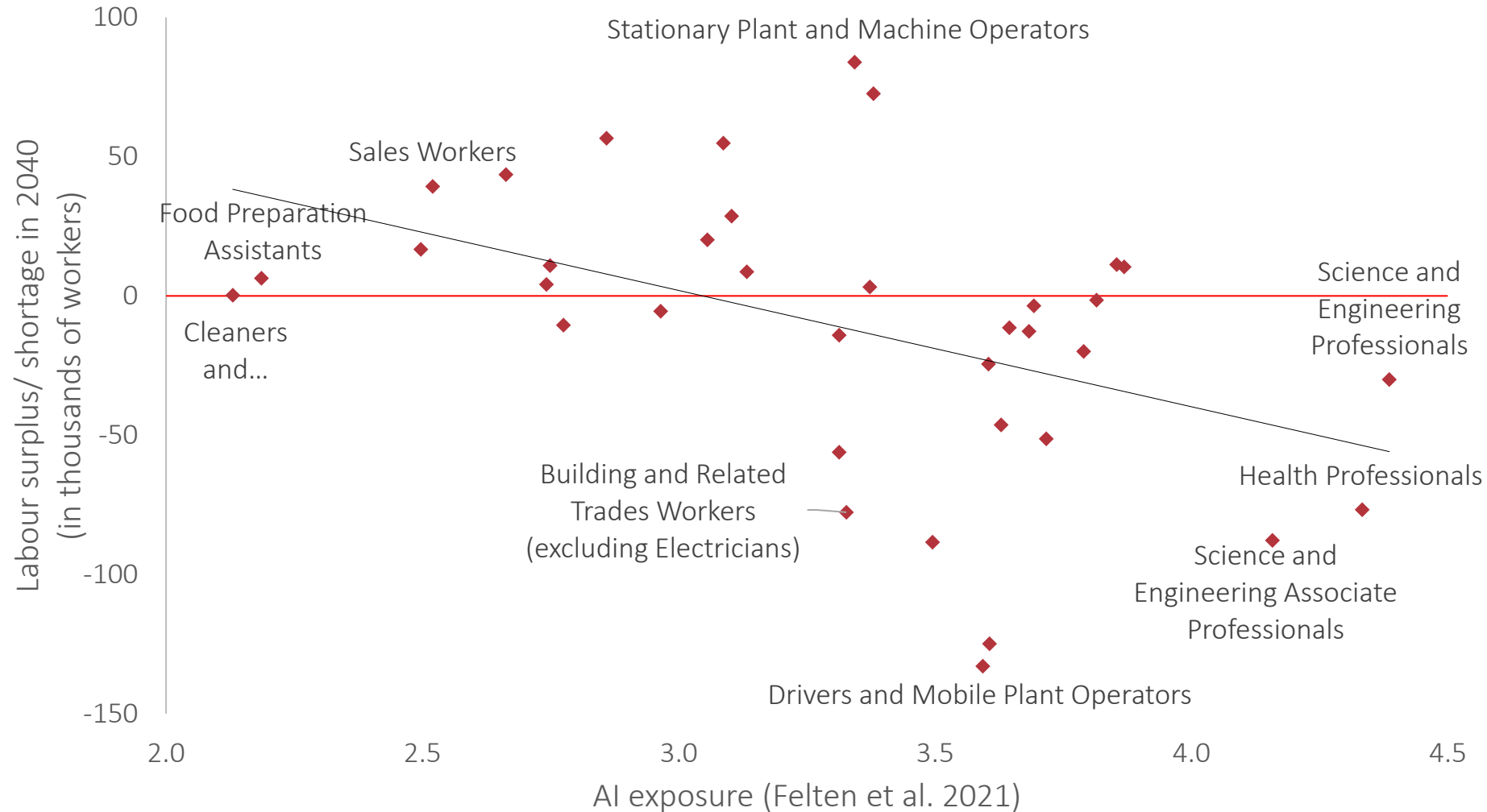
# Future talent shortage will be particularly acute among professionals, while there will be a surplus of service and physical workers



Talent mismatch in 2040, Poland



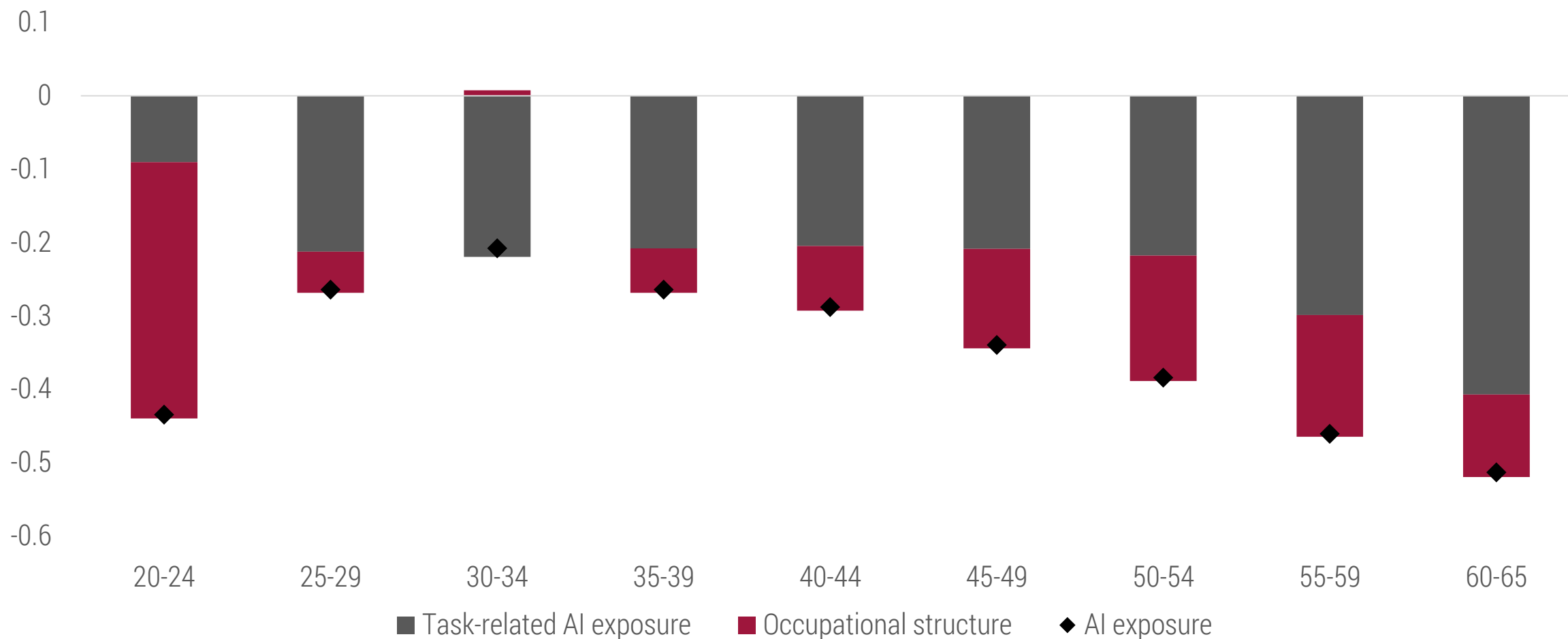
# Shortage occupations tend to be more exposed to AI. Labor-saving innovation may come at the right time



# European workers have lower exposure to AI than US workers, mostly because they perform fewer tasks exposed to AI, especially older workers

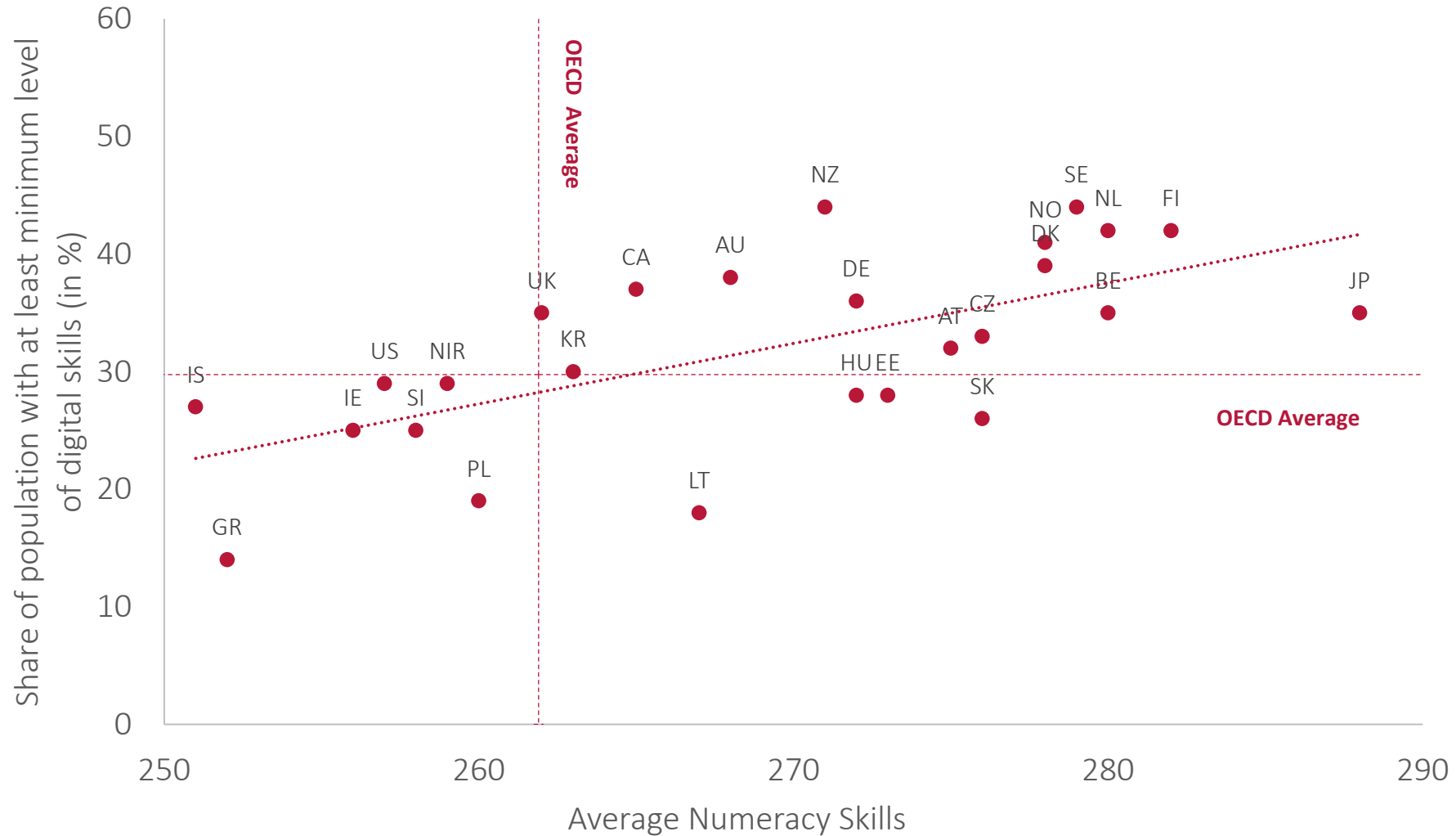


Decomposition of the differences in the AI exposure in Europe vs. the US (US average exposure=0)



**Note:** Covered countries: Austria, Belgium, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Macedonia, Netherlands, Norway, Poland, Russia, Slovakia, Slovenia, Spain, Sweden, United Kingdom

# Digital skills are correlated with numeracy and literacy skills, but in many countries they lag behind – specific investments needed



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## Can we strategically deploy emerging technologies to ease impending, occupational labour shortages in Europe?

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- Demographic change and population ageing will gather steam
- Fewer graduates, talent shortage particularly acute in high-skilled occupations
- AI / Automation can alleviate labour shortages but can also widen inequality
- Low digitalisation and digital skill gaps in many occupations / sectors / countries



Thanks for listening

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