

Cedefop Labour Shortage Index

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CEDEFOP

European Centre for the Development
of Vocational Training

Labour Shortages at the heart of EU agenda



'Labour and skill shortages are becoming endemic and addressing them now is a must do' Margaritis Shinas, EC VP

'EU is suffering from persistent shortages', Draghi competitiveness report

Commission presents an action plan to tackle shortages where data gathering and skills intelligence is at centre stage

Skill-deficiencies
Human-capital-deficiency
Workforce-shortages
Labour-mismatches
Skill-imbalances
Competency-shortage
Skills-shortages
Workforce-scarcity Aptitude-scarcity
Occupational-shortfall
Competency-deficit
Talent-mismatches
Skills-mismatches
Skills-gaps

Shortage-ology



A theoretical construct?

- In theory wages are a clearing device . . . but:
- Short-term supply is inelastic
- Labour market imperfections (*Beveridge curve*)
- Inefficiency of institutions (*Institutional constraints theory*)
- Firms pay higher than clearing wage (*Efficiency wages theory*)
- Firms may not want to pay high new workers (*Insider-outsider theory*)
- Non-economic factors (*Labour mobility theory*)

Is it possible to measure in practice?



It is a 'notoriously difficult' task (Bosworth 1993:242)



"Labour shortages are not easy to measure" (OECD 2003:103)



"No single empirical measure of occupational shortages exists, nor does it appear that one can easily be developed" (US Bureau of Labor Statistics 1999:17)



'Accurately measuring skill shortages can be challenging due to various factors including data limitations, labour market dynamics, and the subjective nature of skills assessments' (CHAT GPT 2023)

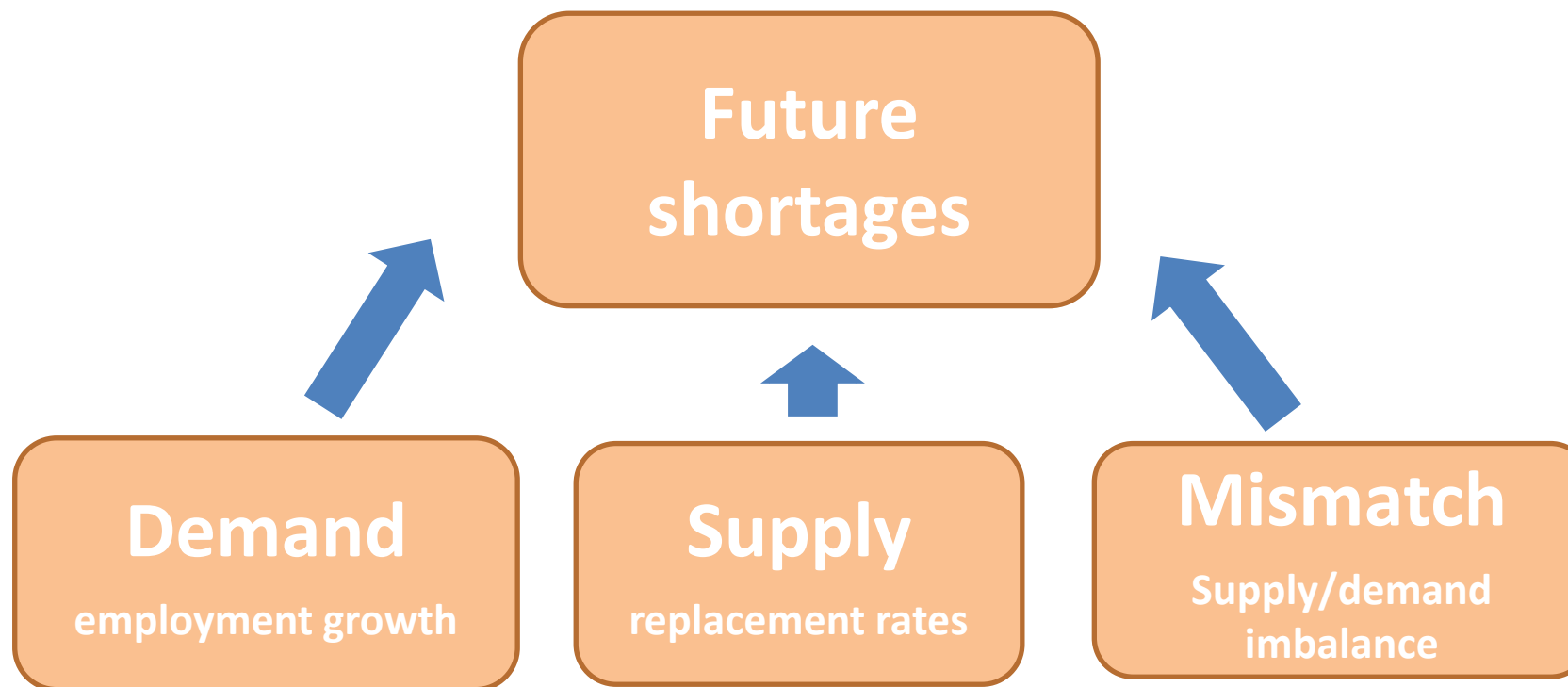
Data and methods commonly used

- Employers/employees surveys
- Job vacancy data
- Case studies
- Immigration data
- Trends in indicators
- Forecasts of demand



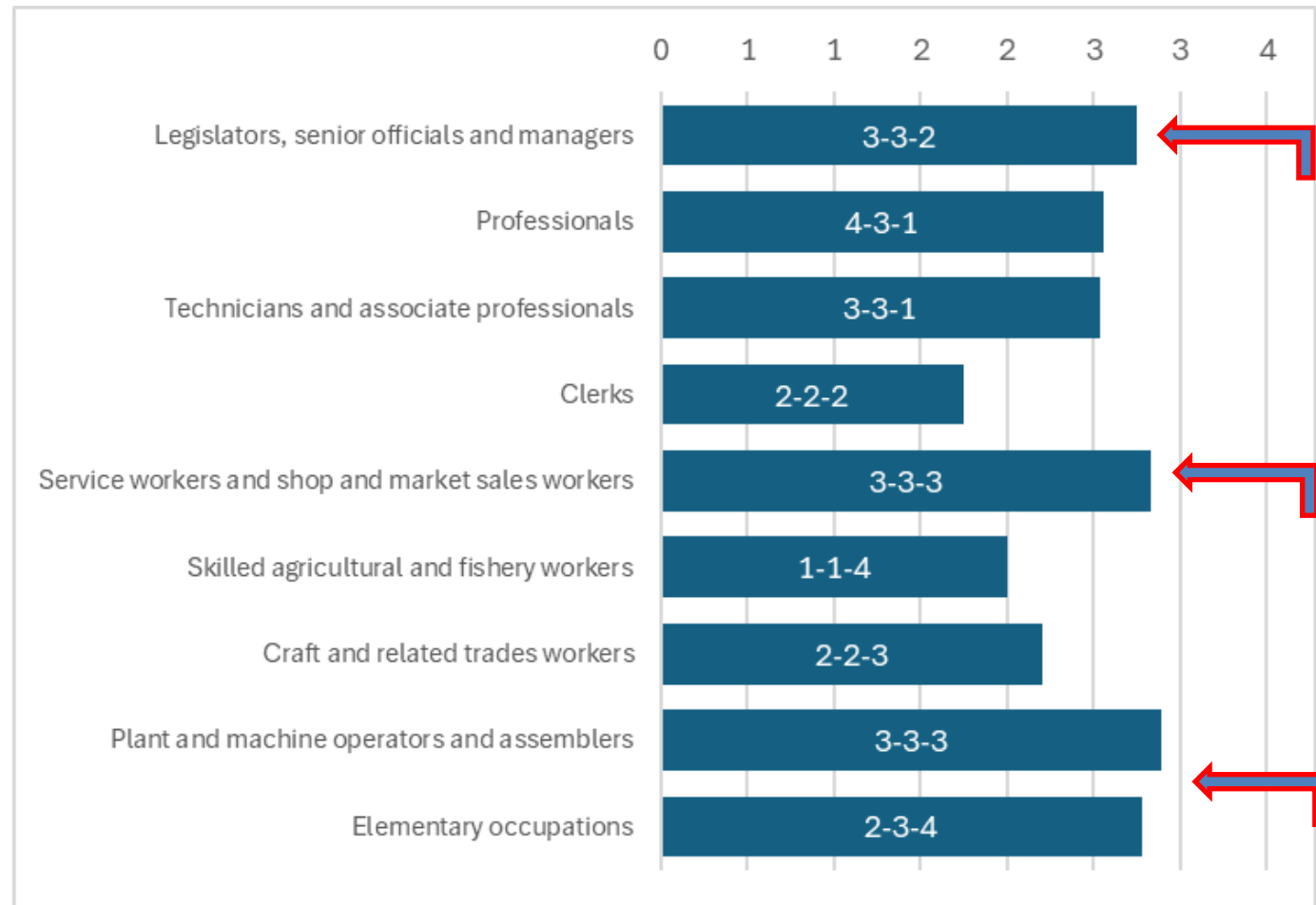
Cedefop Labour Shortage Index

Powered by Cedefop skills forecast

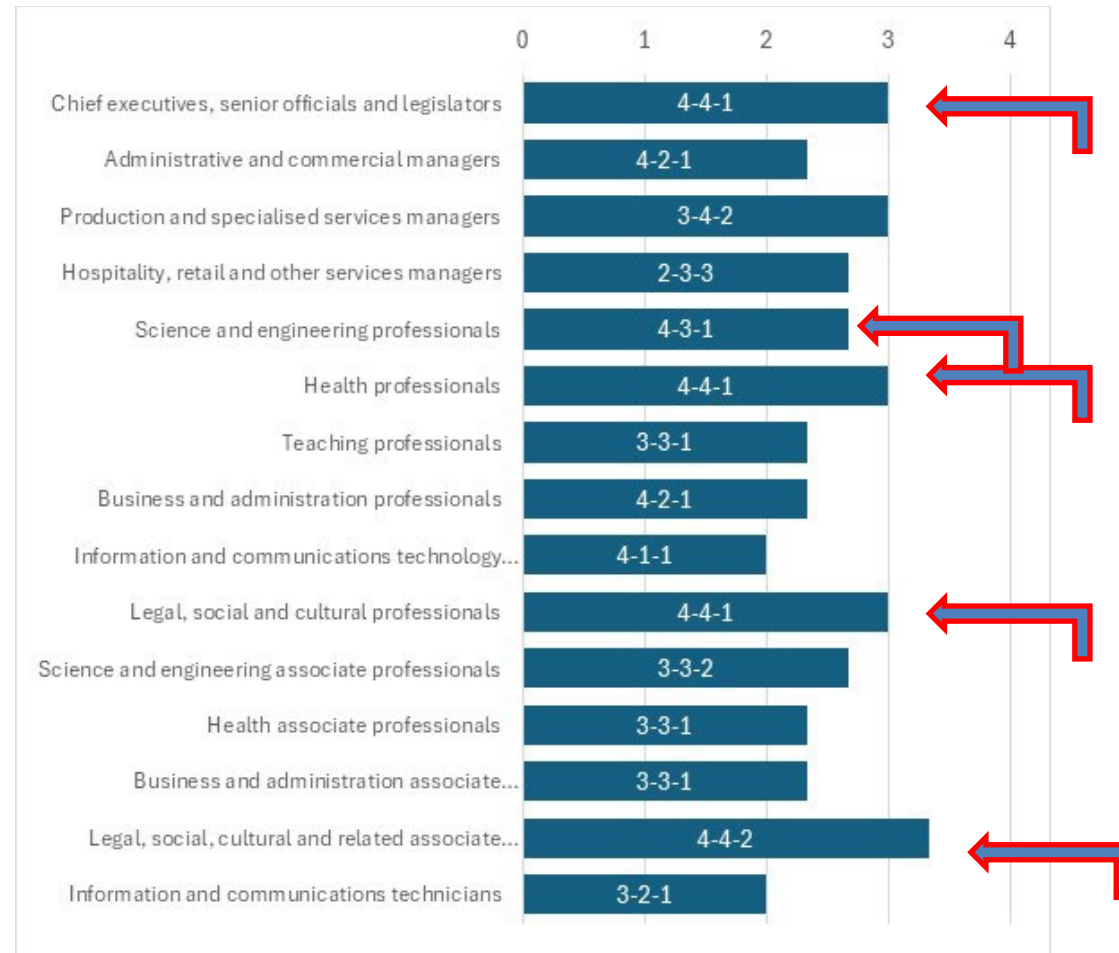


- Score from 1 to 4
- Equal weights
- Arithmetic average
- Estimated by skill level
- Extended to sectors
- Covers all MS & EU27

Labour Shortages to 2035, EU27, 2 digit



High skilled, non-manual occupations



Skilled, non-manual



	Chief executives, senior officials and legislators	Administrative and commercial managers	Production and specialised services managers	Hospitality, retail and other services managers	Science and engineering professionals	Health professionals	Teaching professionals	Business and administration professionals	Information and communications technology professionals	Legal, social and cultural professionals	Science and engineering associate professionals	Health associate professionals	Business and administration associate professionals	Legal, social, cultural and related associate professionals	Information and communications technology associate professionals	General and keyboard clerks	Customer services clerks	Numerical and material recording clerks	Other clerical support workers	Personal service workers	Sales workers	Personal care workers	Protective services workers	Market-oriented skilled agricultural workers	Market-oriented skilled forestry, fishery and hunting workers	Subsistence farmers, fishers, hunters and gatherers	Building and related trades workers, excluding construction	Metal, machinery and related trades workers	Handicraft and printing workers	Electrical and electronic trades workers	Food processing, wood working, garment making and textile workers	Stationary plant and machine operators	Assemblers	Drivers and mobile plant operators	Cleaners and helpers	Agricultural, forestry and fishery labourers	Labourers in mining, construction, manufacturing and other sectors	Food preparation assistants	Street and related sales and service workers	Refuse workers and other elementary occupations	
EU27	3.00	2.33	3.00	2.67	2.67	3.00	2.33	2.33	2.00	3.00	2.67	2.33	2.33	3.33	2.00	1.33	3.00	1.33	1.33	3.33	2.67	3.33	2.00	2.00	2.33	1.67	3.33	1.67	2.33	2.00	1.67	2.67	3.00	3.00	3.33	2.00	3.00	3.00	2.00	2.00	3.33
AT	2.67	1.67	3.00	3.00	2.67	2.33	2.33	1.67	2.33	3.00	3.00	2.00	2.00	3.00	2.67	1.67	2.33	1.33	1.33	3.00	3.33	3.33	2.33	2.67	3.33		2.67	1.67	1.67	2.33	2.67	2.67	2.00	2.00	3.67	3.67	1.67	3.00	3.67		
BE	3.00	2.33	3.00	1.67	2.33	2.67	1.33	2.33	2.33	2.67	2.33	2.33	2.67	3.33	2.67	1.00	2.67	1.67	1.67	3.33	2.67	2.67	2.67	3.33	3.00	2.00	3.00	1.67	1.67	2.33	1.67	2.67	3.33	2.33	3.00	3.33	2.00	3.33	2.00	3.33	
BG	2.00	2.33	2.00	2.00	2.33	2.33	2.00	2.67	2.33	2.33	1.67	2.00	2.33	3.00	1.33	1.67	3.33	1.33	3.00	2.67	1.67	3.67	3.00	2.00	2.00	2.00	3.33	2.00	3.00	2.00	1.67	2.67	3.33	2.33	3.67	3.33	3.00	3.00	3.67	3.67	
CY	2.67	3.00	3.00	2.33	2.33	3.00	1.67	2.00	2.33	2.67	2.33	2.33	2.00	2.33	2.67	2.00	3.00	1.33	2.00	2.00	2.67	3.33	2.00	3.00	2.00		2.00	1.67	3.00	1.67	3.67	2.67		2.33	3.00	2.00	3.00	2.67	3.67	3.67	
CZ	4.00	4.00	2.33	3.67	3.67	4.00	3.00	3.33	3.33	4.00	2.67	1.67	2.67	3.00	2.00	2.33	3.33	2.00	1.67	3.00	1.33	3.33	3.00	2.00	1.00	2.67	2.33	1.67	3.00	1.67	1.33	2.33	1.67	2.33	1.33	3.00	1.33	1.33		1.33	
DK	2.33	3.00	3.33	2.33	2.33	2.33	1.67	2.33	2.67	2.67	2.67	3.33	2.33	3.33	2.33	1.00	1.33	1.33	1.67	3.33	2.33	2.00	3.33	2.00	3.00		2.33	2.00	3.33	2.67	1.33	3.00	2.00	3.67	2.00	3.67	3.33	2.00		2.67	
DE	3.33	2.67	2.33	1.67	3.33	3.00	3.67	2.67	2.67	4.00	2.33	2.33	2.00	2.67	1.00	1.33	2.33	1.00	1.33	3.00	1.33	2.67	2.33	3.67	3.00		2.33	1.33	1.67	1.33	1.33	2.33	3.67	2.67	3.33	4.00	2.67	3.00		3.33	
EE	2.00	3.00	2.33	1.67	2.33	2.33	2.00	1.67	2.00	2.00	2.33	1.33	2.33	3.33	2.67	3.00	2.67	3.00	2.33	2.67	1.67	3.33	1.33	1.67	2.00		2.67	2.33	2.00	2.00	2.00	2.67	4.00	3.33	3.33	3.33	3.33	3.00		3.00	
IE	2.33	3.33	2.33	2.67	1.33	1.00	1.33	2.33	1.67	2.67	2.67	2.67	2.33	3.00	2.33	1.67	2.00	2.33	2.00	1.67	2.33	2.67	2.67	3.33	3.00		3.33	3.33	3.67	2.33	2.00	3.00	1.67	4.00	3.67	2.00	2.33	2.67	3.00	4.00	
GR	3.67	3.00	3.00	1.33	2.33	2.67	2.00	2.33	2.00	2.67	3.33	3.00	2.33	3.33	2.33	1.67	2.00	1.00	1.33	3.00	3.00	3.00	1.00	2.00	2.00		2.67	2.33	2.00	3.00	3.67	3.00	3.67	3.33	2.67	2.00	3.00	1.67	3.67	2.33	
ES	3.00	2.33	3.00	1.33	2.33	1.67	2.00	2.33	1.67	2.67	2.67	2.67	3.00	3.33	3.00		3.33	1.33	1.33	3.33	3.00	2.67	2.33	2.67	2.00		3.33	2.00	2.00	2.33	2.00	2.67	3.00	2.67	3.00	2.00	2.67	2.33	2.00	3.33	
FI	3.00	1.00	2.33	2.33	2.33	2.00	1.33	2.67	2.33	2.00	2.33	1.00	2.67	3.00	1.67	1.33	2.67	1.33	1.33	2.00	2.00	2.33	1.67	3.00	3.33		3.67	2.67	3.33	3.67	3.00	2.67	4.00	3.67	3.67	2.67	3.33	4.00	3.00	2.33	
FR	3.00	2.33	3.00	1.67	2.67	2.33	2.33	2.33	2.33	2.67	2.67	1.67	2.67	3.00	2.33	1.33	2.33	1.33	1.33	2.33	3.33	2.67	2.00	3.33	3.33		2.67	1.67	1.67	1.67	3.00	2.00	2.67	3.00	3.67	2.00	3.00	3.67		3.67	
HR	2.67	1.00	2.33	1.33	2.33	2.67	2.00	2.33	2.67	2.00	2.67	3.33	1.33	3.00	3.00	2.33	3.67	2.67	2.00	3.33	2.00	2.00	3.00	1.33	2.67		3.00	3.33	3.33	3.33	2.67	2.33	3.33	2.33	2.00	1.33	3.00	3.67	2.00	3.00	
IT	3.67	4.00	3.00	3.67	4.00	3.67	3.67	4.00	3.33	4.00	3.00	3.33	3.33	3.33	2.33	2.33	3.33	2.00	2.00	1.33	2.33	2.33	1.67	1.67	1.00		3.00	1.00	2.67	2.00	1.00	2.33	2.33	1.67	2.00	1.00	2.00	2.33	1.00	1.33	
LV	3.33	3.33	3.33	2.00	2.67	3.00	2.67	3.33	2.67	3.67	2.67	3.00	2.33	3.33	1.00	1.33	2.67	2.33	1.00	2.67	1.33	2.67	2.67	2.33	2.67	1.00	3.67	1.67	2.00	3.00	1.67	3.00	2.33	3.00	1.67	3.00	3.33	2.67		2.67	
LT	3.33	3.67	2.00	1.67	3.00	3.67	3.33	3.33	3.00	4.00	2.33	2.00	2.67	3.67	2.00	2.00	2.00	2.33	1.67	2.67	2.33	3.33	1.33	3.00	3.00	2.00	3.00	2.33	3.00	1.00	2.00	2.33	3.00	2.00	2.33	1.67	1.67	2.67	1.00	2.33	
LU	3.33	2.33	3.33	2.33	2.67	2.33	2.33	2.33	2.33	2.67	3.33	1.67	2.67	4.00	3.67	3.00	3.00	2.33	3.00	2.33	1.67	1.67	3.33	3.00	2.33		1.00	2.67	2.67	3.33	1.67	1.33		1.67	1.00	3.00	2.33	1.67		2.33	
HU	3.00	3.00	4.00	3.00	4.00	4.00	4.00	3.33	3.00	4.00	2.33	1.67	3.67	3.00	1.67	2.00	2.67	2.00	1.67	1.00	1.67	3.00	3.00	2.33	1.67		1.00	1.33	1.33	1.33	1.00	2.33	2.33	2.33	3.00	3.67	2.00	2.33	2.00	3.67	
MT	3.00	1.00	2.33	1.67	2.33	2.33	1.67	1.33	1.33	1.67	3.00	2.67	2.00	2.00	1.67	1.67	2.67	1.67	1.33	1.33	3.33	3.67	2.00	3.67	3.33	3.33	3.33	2.67	2.67	3.33	2.33	2.67	3.33	3.00	2.33	3.00	4.00	2.00	3.00	3.33	
NL	3.00	1.00	3.00	1.33	2.67	2.67	2.00	2.67	2.00	3.00	1.67	1.67	2.67	3.00	2.33	3.33	3.00	2.33	3.00	2.67	2.67	3.00	2.33	2.00	1.67		2.67	2.33	2.00	1.67	1.67	3.33	2.00	3.33	3.33	3.00	2.67	2.67		3.33	
PL	3.67	3.67	3.33	1.67	3.67	4.00	3.00	3.33	3.33	3.67	2.00	3.33	3.00	3.67	3.00	2.33	2.67	1.33	1.33	2.00	1.00	2.00	1.67	1.33	2.00	1.33	2.67	2.33	1.00	1.67	1.00	1.67	2.67	2.67	2.67	2.67	3.00	3.00	2.33	2.00	3.33
PT	2.67	2.33	2.67	2.67	2.33	2.00	2.00	2.33	3.00	2.00	2.00	3.33	3.00	3.33	2.33	1.33	2.00	1.33	1.33	3.00	2.33	3.67	2.67	3.00	2.00		2.00	3.00	2.00	2.33	2.00										



Thank you

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