

Safety nets for the Technology Transition

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**IMF-MENA Research
Conference**

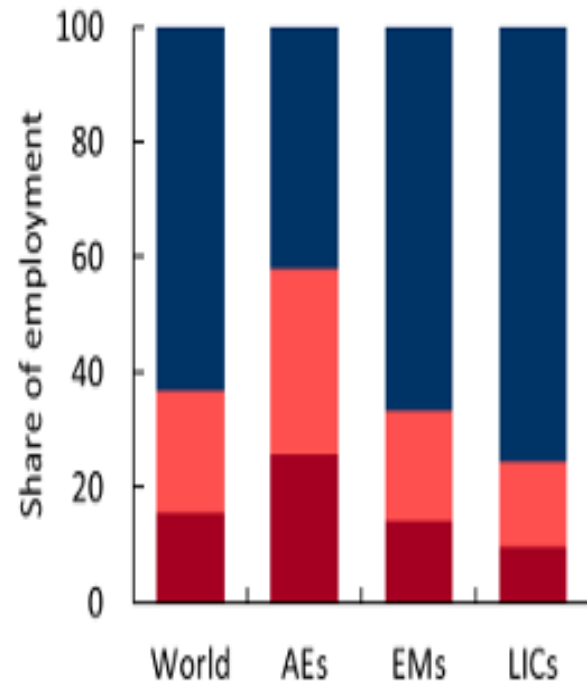
Cairo, 18-19 May, 2025

5 key issues for AI driven Job Reallocation in the MENA Region

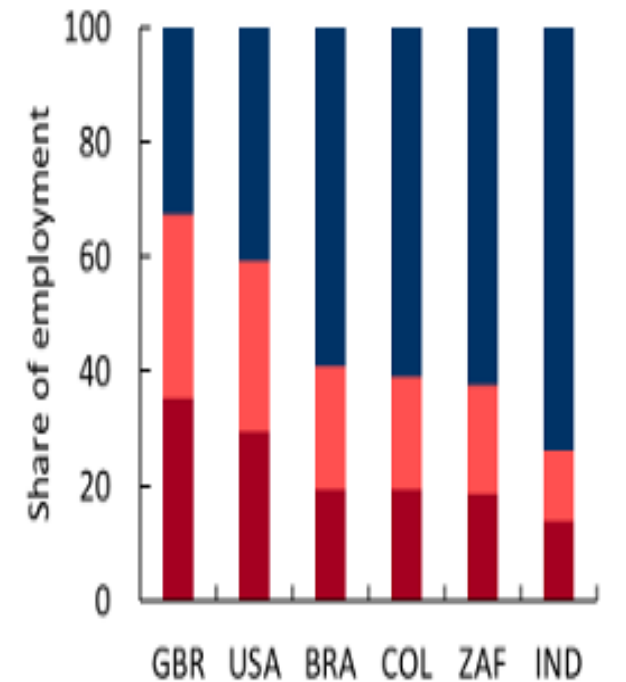
1. Are MENA countries more or less exposed to AI?
2. Can dominating tasks be complements?
3. The scope for education reforms
4. How to protect the losers
5. Designing a safety net under widespread informality

Lower exposure but also lower complementarity in Emerging Economies

1. Country Groups (Percent)



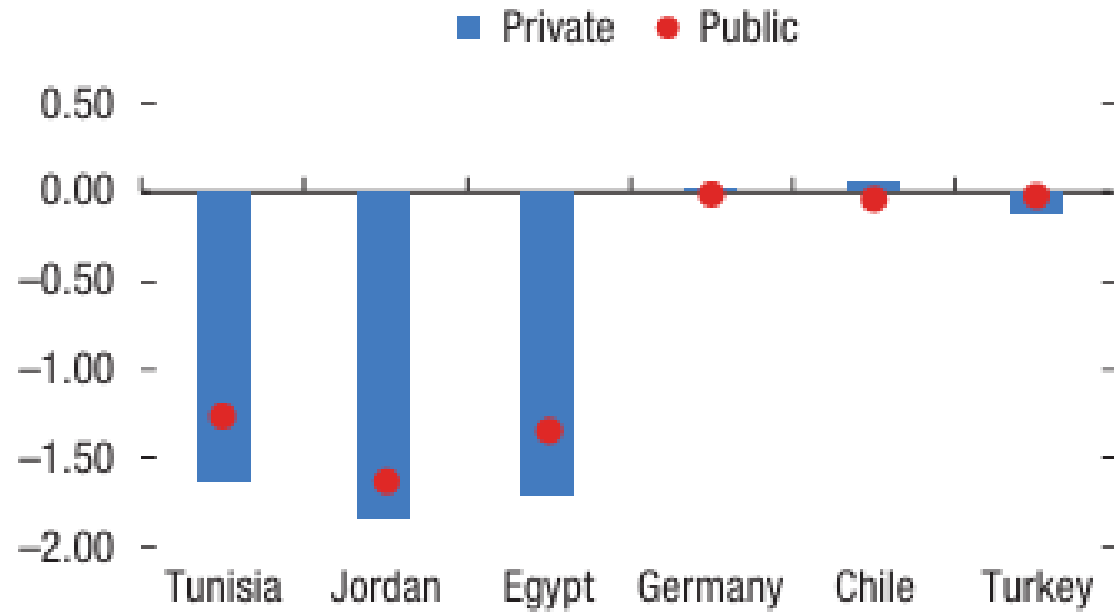
2. Selected Countries (Percent)



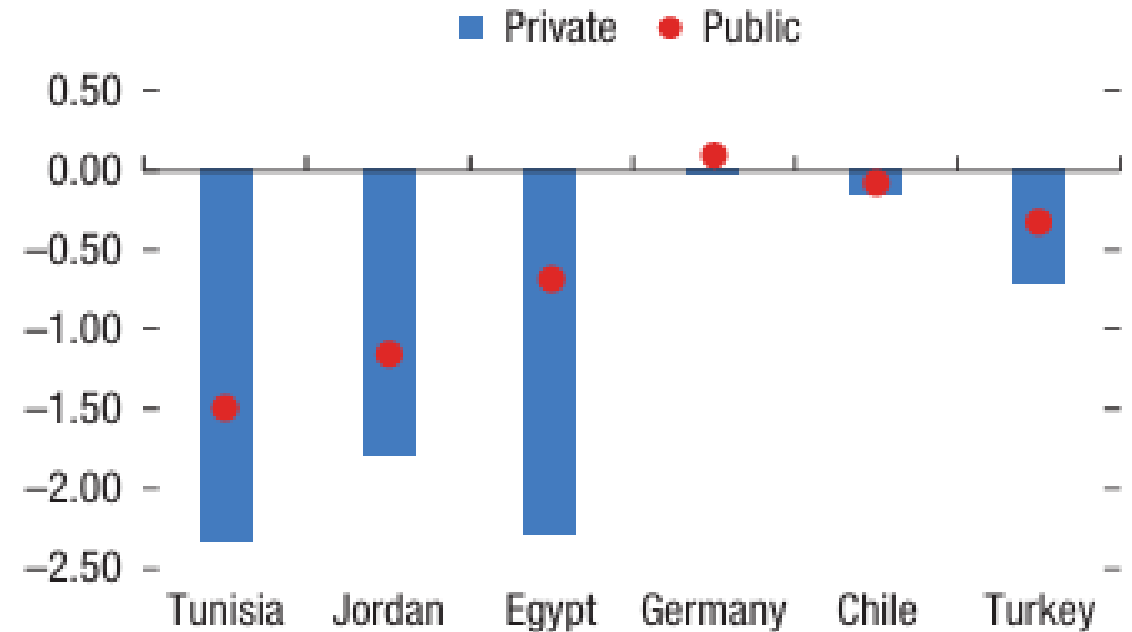
■ High exposure, high complementarity ■ High exposure, low complementarity ■ Low exposure

Source: Gen-AI: Artificial Intelligence and the Future of Work , IMF (2024)

Nonroutine interpersonal tasks
(standard deviations with respect to Germany's mean)



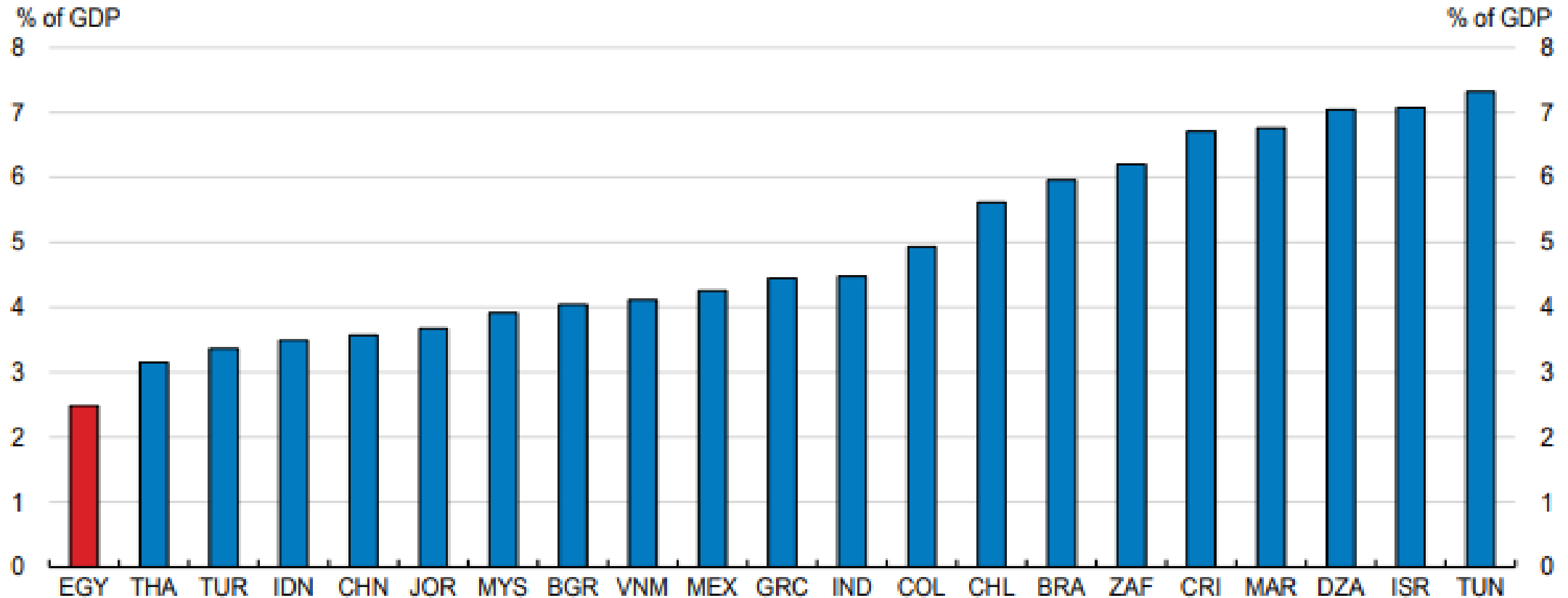
Nonroutine analytical tasks
(standard deviations with respect to Germany's mean)



Source: Promoting Inclusive Growth In The Middle East And North Africa, IMF (2022), graph from Viollaz and Winkler (2020)

Comparatively More Routine Tasks In Northern Africa Economies

Total government expenditure on education as a share of GDP, 2020 or latest

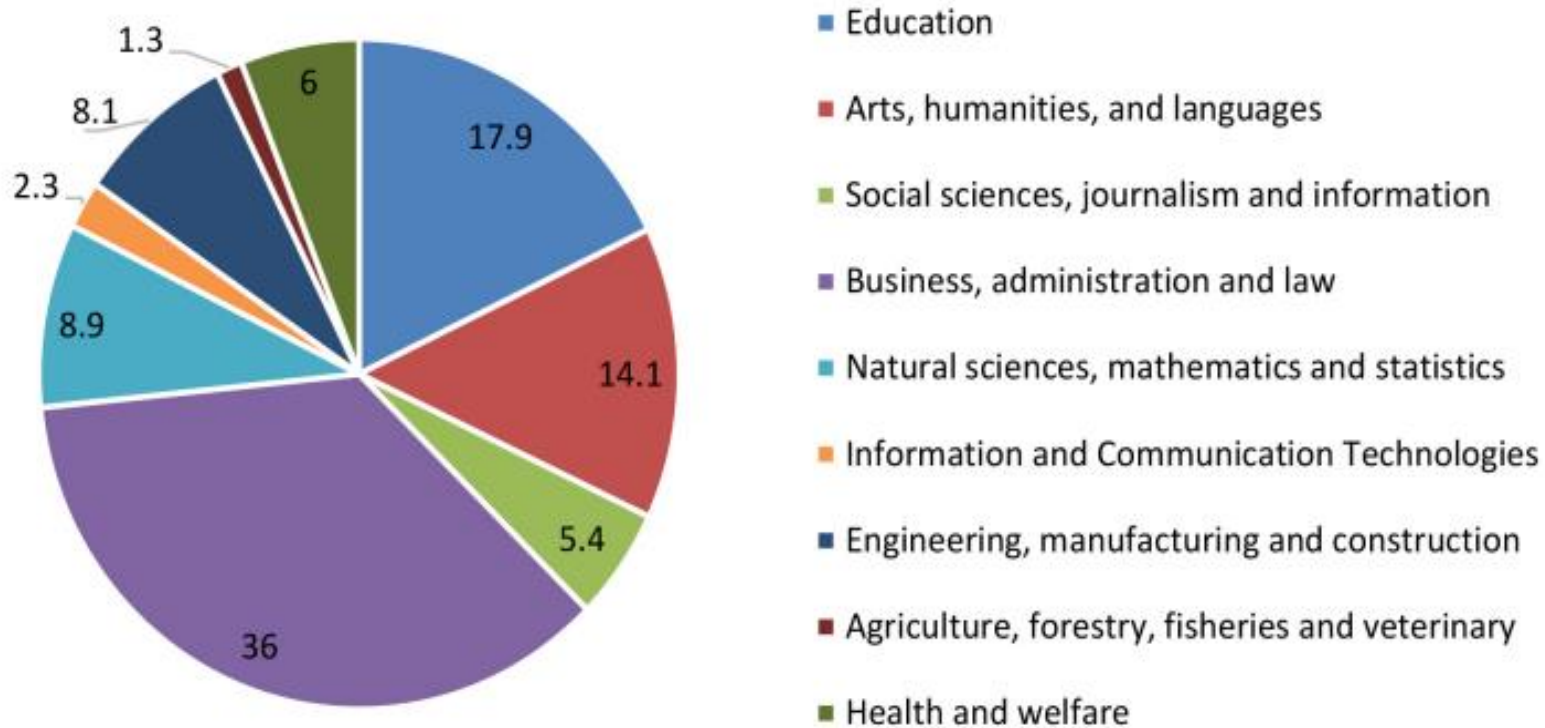


Source: OECD Economic Surveys, OECD (2024)

Low Education spending hampers use of AI as a complement to Human Capital

Challenges

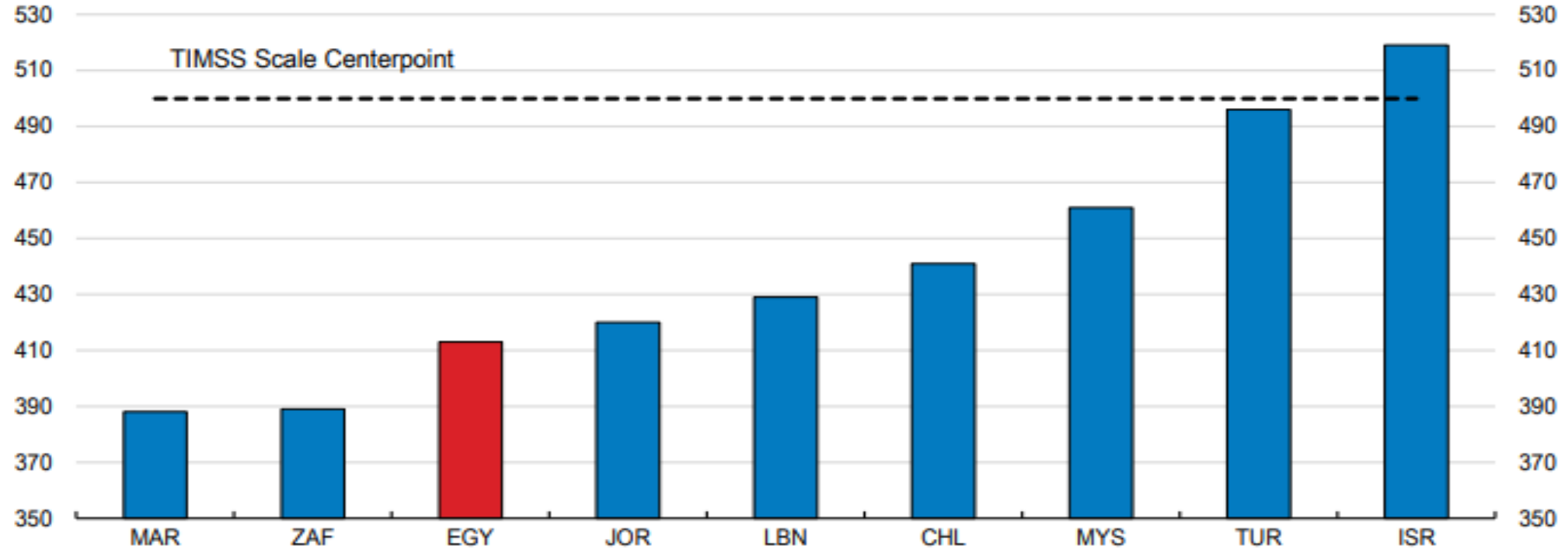
- Overall low public investment in education
- Low achievement in maths before postsecondary education
- Low rate of STEM graduates (22% in 2022, UNESCO Institute for Statistics)



Source: Tertiary Education Graduate Survey in Egypt 2021, ILO (2021)

Low Share of Stem Graduates

TIMSS international results in mathematics and science 2019, mathematics grade 8 scores

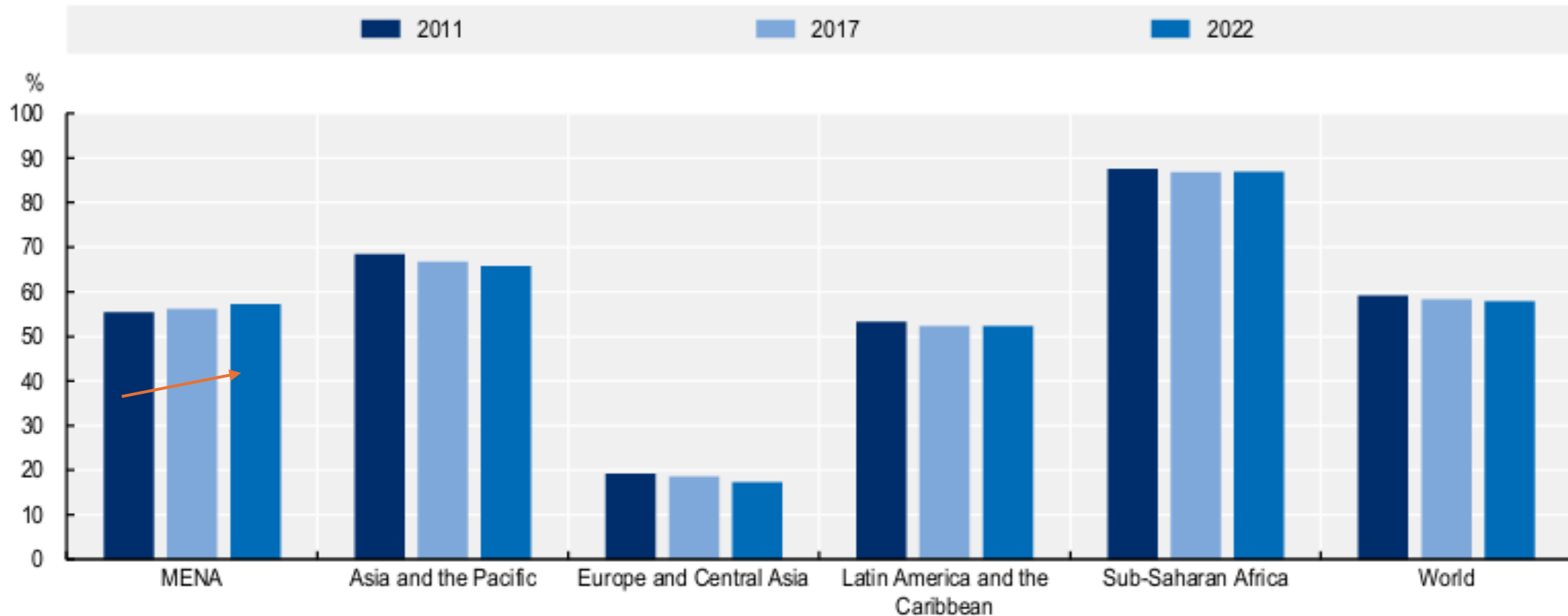


Source: IEA TIMSS & PIRLS, Boston College, Lynch School of Education and Human Development.

Source: OECD Economic Surveys, OECD (2024)

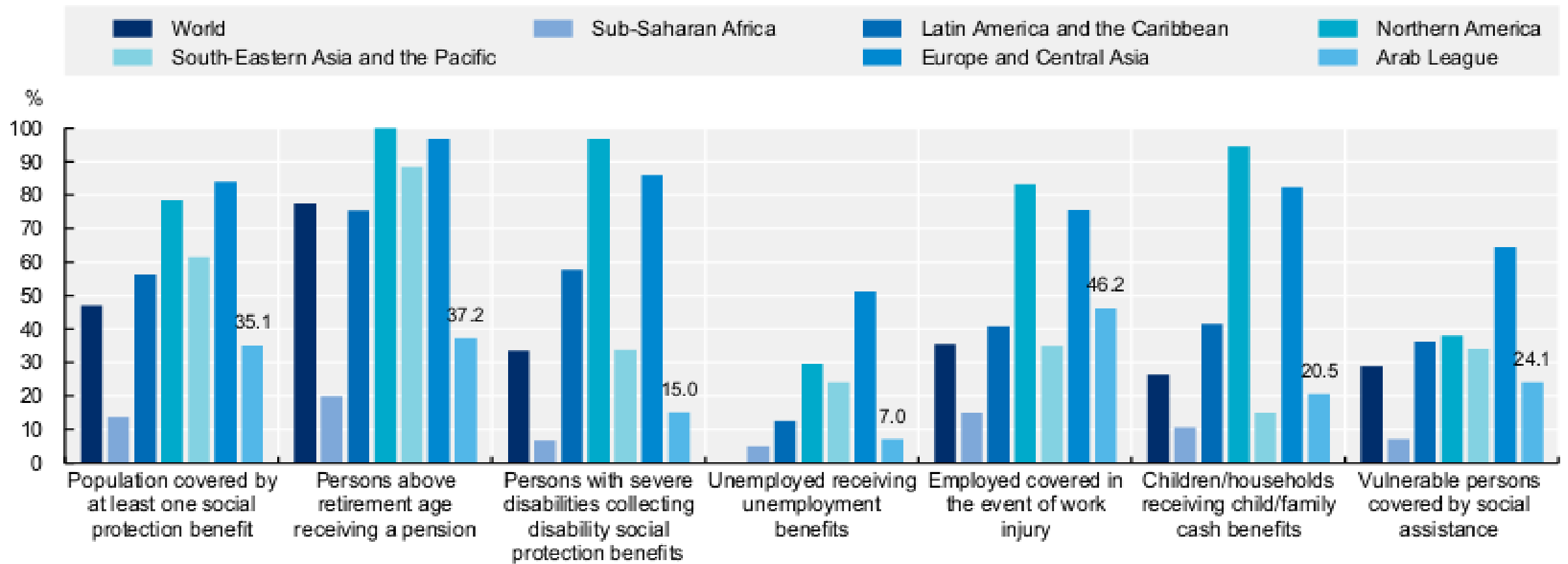
And low quality of Secondary Stem Education

Informal employment rate (% population 15+)



Source: Informality and Structural Transformation in Egypt, Iraq and Jordan, ILO (2024)

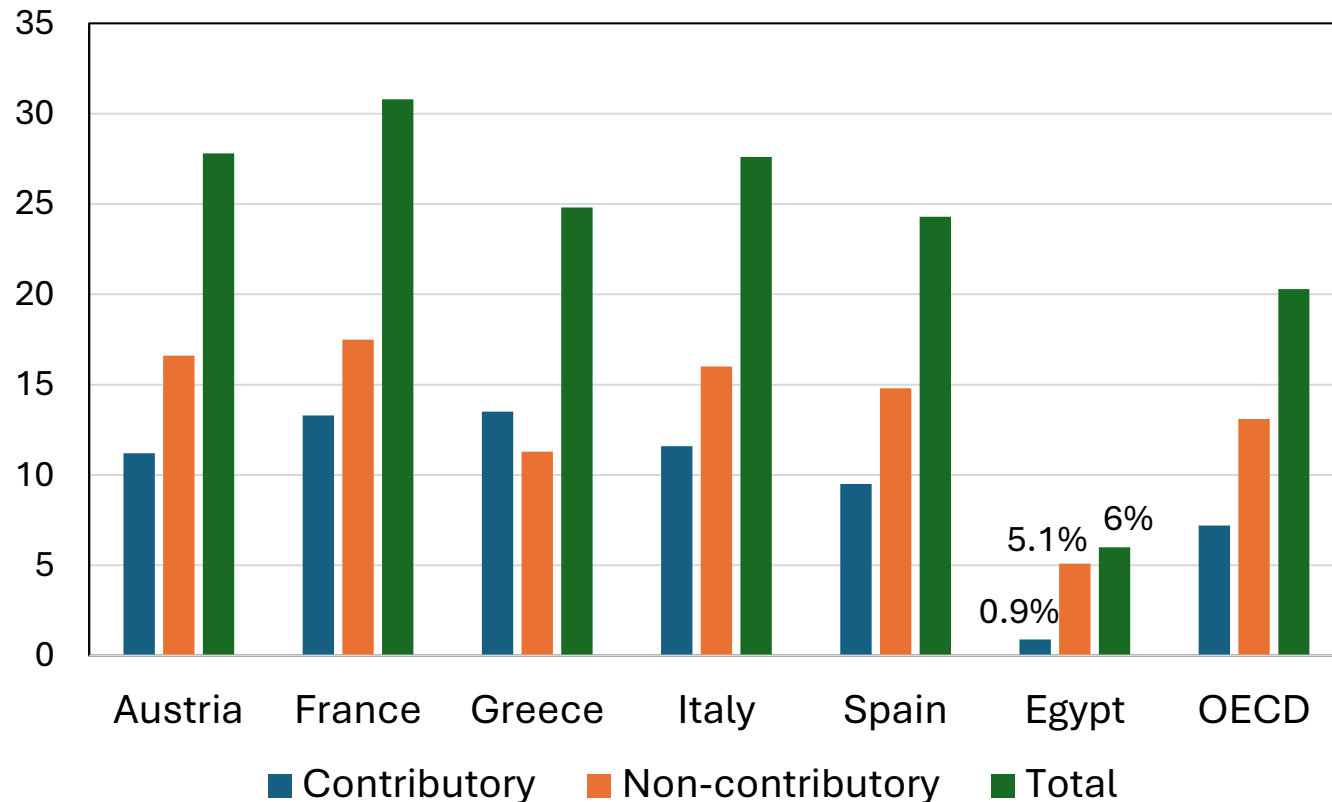
Informal Employment is on the Rise unlike elsewhere



Source: Informality and Structural Transformation in Egypt, Iraq and Jordan, ILO (2024)

Social Insurance lags behind....

Social Protection Spending In 2019 (% GDP)



Source: data from the OECD Database and Egypt Public Expenditure Review for the Human Development Sectors , World Bank (2022)

Challenges

- High share of employment in the informal sector
- Low coverage of social insurance schemes
- Few non-contributory programs capable of reaching everyone

... and is dominated by Non-contributory Benefits

Conclusions

1. MENA region countries are on average less exposed to AI than advanced economies
2. However, workers in MENA countries are also likely to benefit less from AI as a technology enhancing the quality and productivity of their jobs, and education system seems to be still ill-equipped to deal with the transition
3. Displaced workers in this region are poorly protected by technology shocks, notably in the informal sector

Conclusions

4. Given the long duration of technological unemployment a stronger safety net would be needed
5. Vicious circle: low social protection dominated by non-contributory transfers which does not encourage formal employment and this reduces the tax base for social protection

Key challenges: Invest more in STEM education.

Expand contributory social protection