

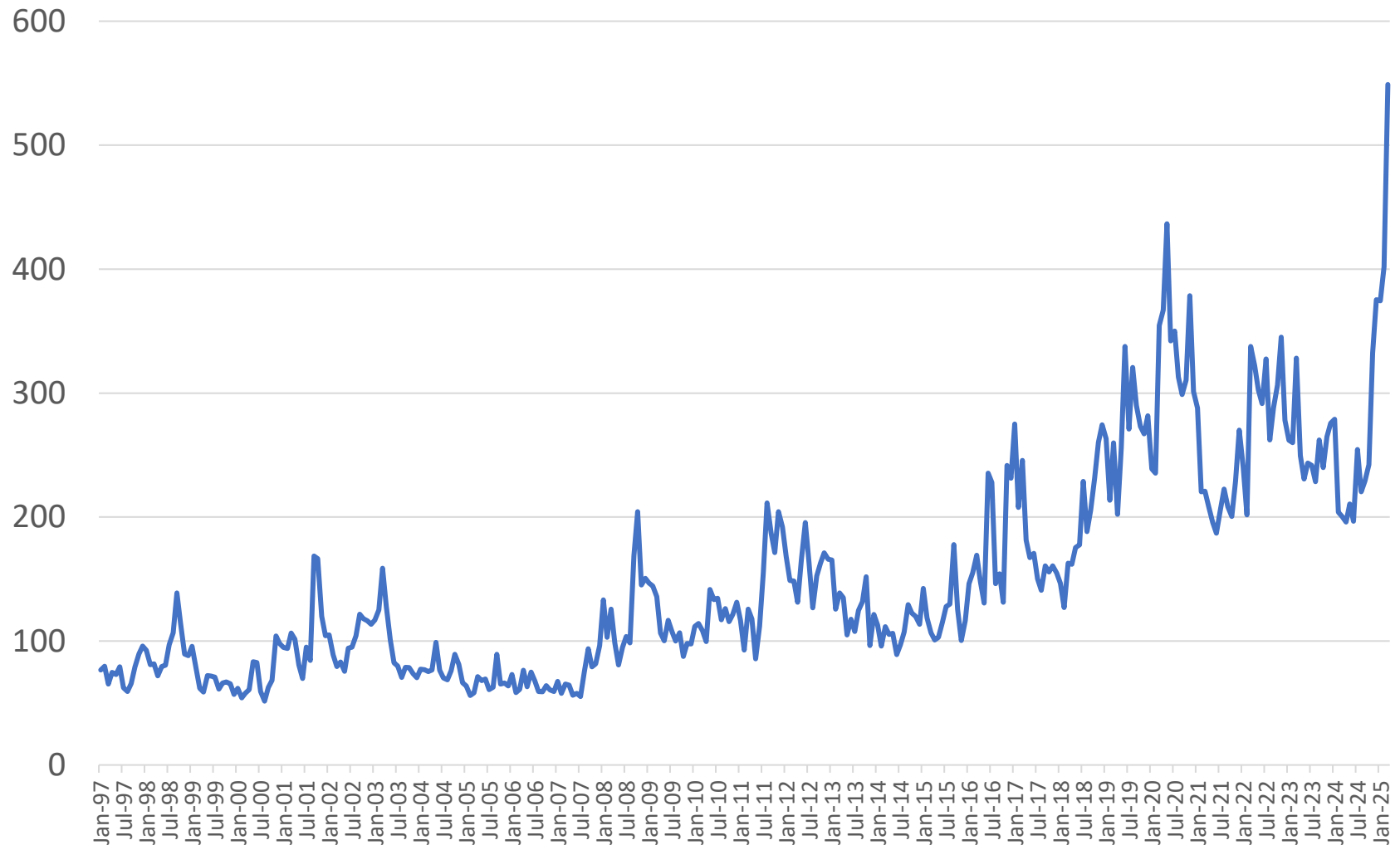
# Navigating the Green Transition and AI in MENA

**Ugo Panizza**

**Geneva Graduate Institute & CEPR**

**IMF-MENA Research Conference**  
**Cairo, 18-19 May, 2025**

# Global Economic Policy Uncertainty



# Labor Market Impacts of the Green Transition, AI, and Digitalization

## Risks:

- Job losses in high-emission sectors
- Vulnerable low-skilled workers
- Automation of routine jobs
- Skills mismatch

## Opportunities:

- Millions of green jobs by 2050 (ILO)
- New roles in renewables, construction, transport
- AI readiness
- Digital public sector services

# Three Scenarios

- Implement the declared Nationally Determined Contributions (NDCs) but fall short of climate neutrality.
- Promote green hydrogen, solar power and electric mobility together reskilling and skills training for young people in new low-carbon technologies and social protection and relocation programs for fossil fuel workers
- Climate resilience, green water desalination, reforestation and waste management together with investment in human capital and social protection



# Employment deviation with respect to BAU

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	NDC	Medium	Full
	<b>Algeria and Libya</b>		
2030	373,000	363,000	104,000
2050	-527,00	-328,000	68,000
	<b>Egypt</b>		
2030	120,200	437,000	481,000
2050	414,900	1,938,000	2,419,800
	<b>Saudi Arabia</b>		
2030	160,000	677,000	408,000
2050	166,000	790,000	577,000
	<b>UAE</b>		
2030	-21,500	9,800	-22,400
2050	-64,300	52,500	400
	<b>Total</b>		
2030	631,700	1,486,800	970,600
2050	-10,400	2,452,500	3,065,200

# Most Affected Sectors (Employment deviation with respect to BAU in 2050)

## Algeria and Libya

Electricity	19'500	31'200	56'600
Land Transport	33'500	77'600	85'300
Forestry	5'400	6'000	89'500
Water Transport	-211'300	-212'700	-194'600
Gas Supply	-62'600	-82'300	-82'000
Oil & Gas	-46'200	-57'800	-59'300

## Saudi Arabia

Electronics	41'800	108'900	194'500
Construction	102'700	132'600	204'000
Electricity	155'500	163'700	233'800
Rubber & Plastics	13'300	43'400	-170'700
Gas Supply	-42'200	-42'200	-42'200
Electr. Eng.. & Instr.	2'200	-23'600	-25'400

## Egypt

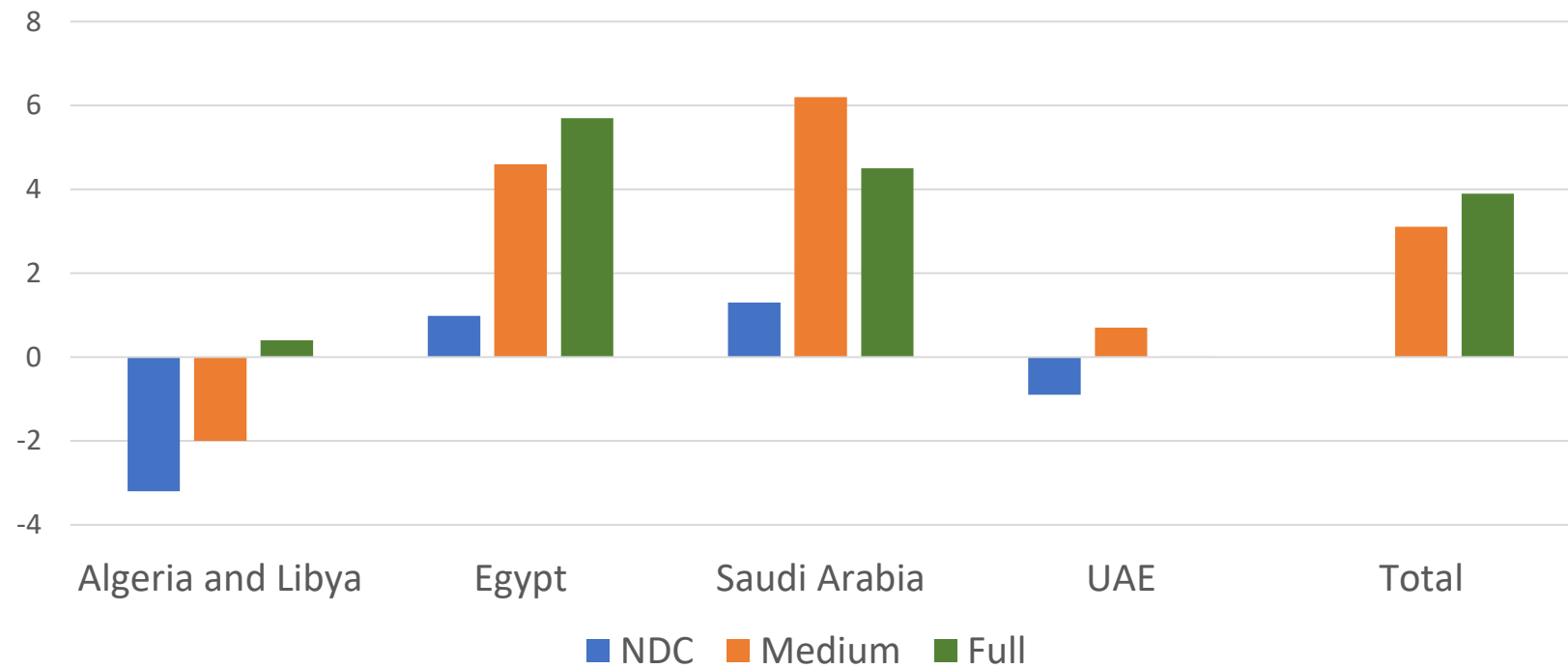
Construction	46'300	187'300	327'900
Electr. Engi. & Instr.	10'500	361'700	359'300
Hydrogen supply	-	872'700	856'900
Gas Supply	-46'500	3'000	-85'300
Pharmaceuticals	900	-70'800	-76'100
Metal Goods	-13'600	-63'600	-58'400

## UAE

Hydrogen supply	100	40'600	37'500
Electronics	-1'200	2'900	48'100
Electricity	12'400	13'800	80'600
Retailing	-11'000	200	-41'100
Agriculture	2'900	16'000	-28'100
Land Transport	-20'200	-22'700	-24'800

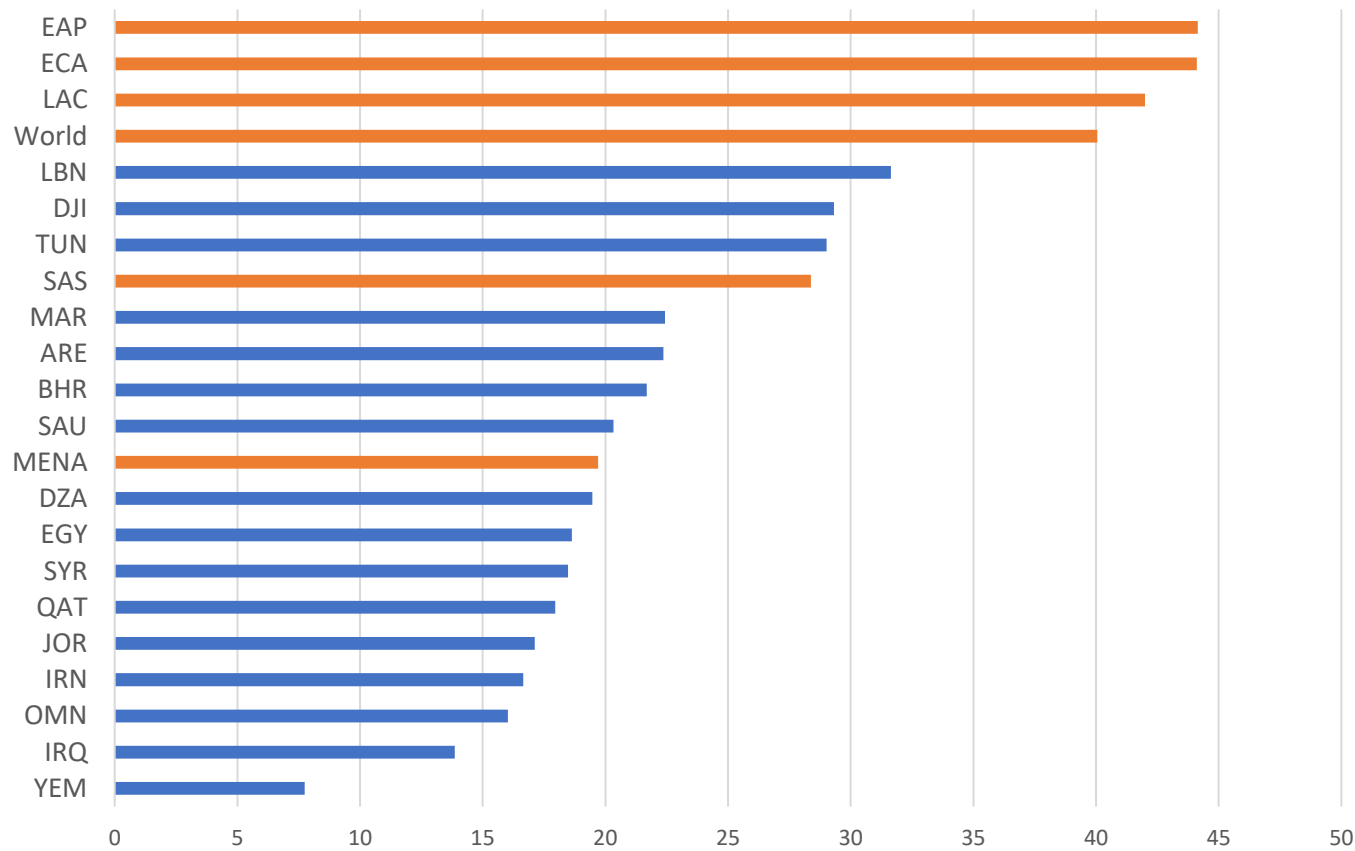
# Potential positive net effects, but...

Percentage deviation in 2050 employment with respect to BAU



# ... there are peculiarities related to the MENA labor market

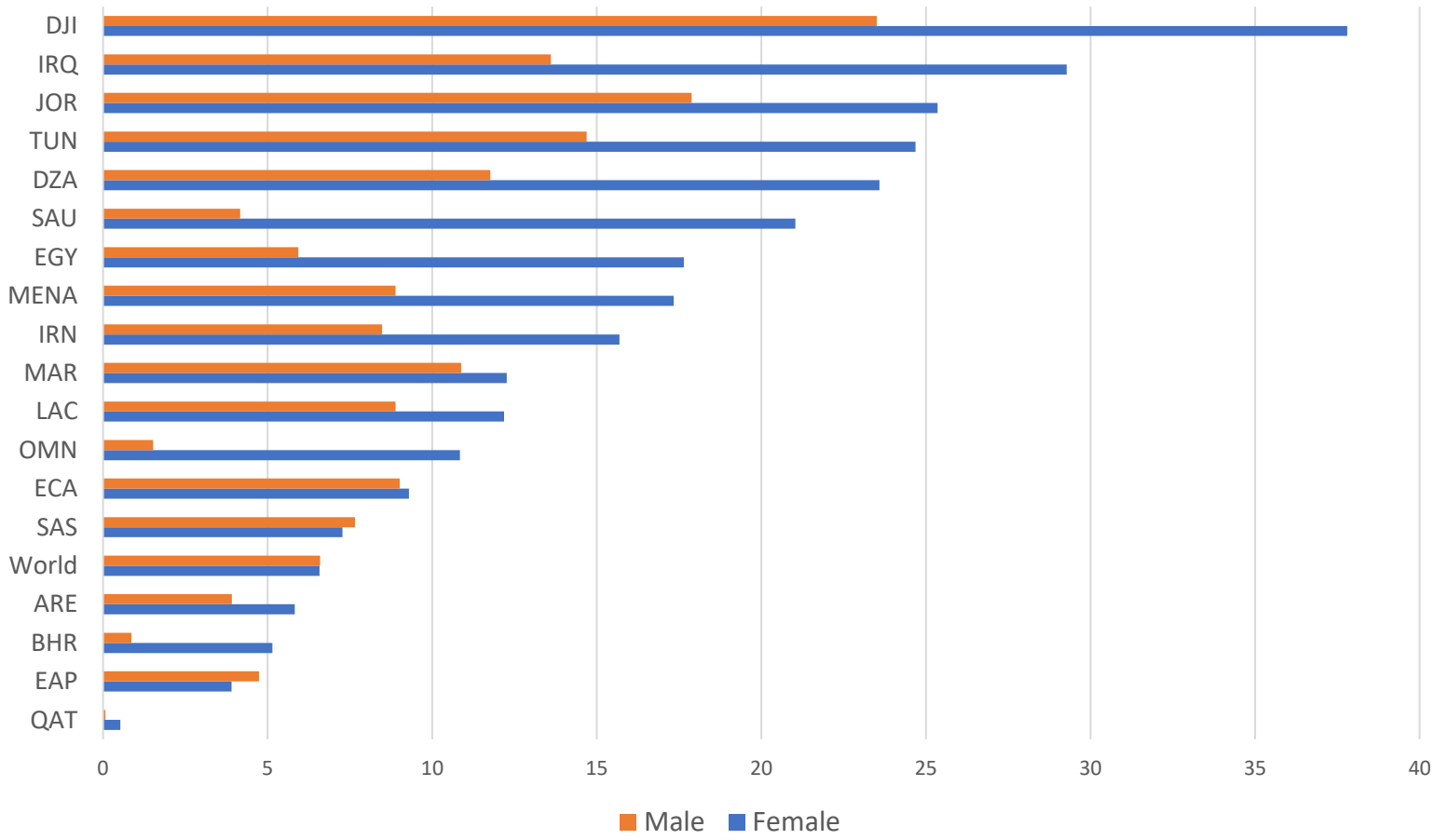
Share of Women in the Labor Force





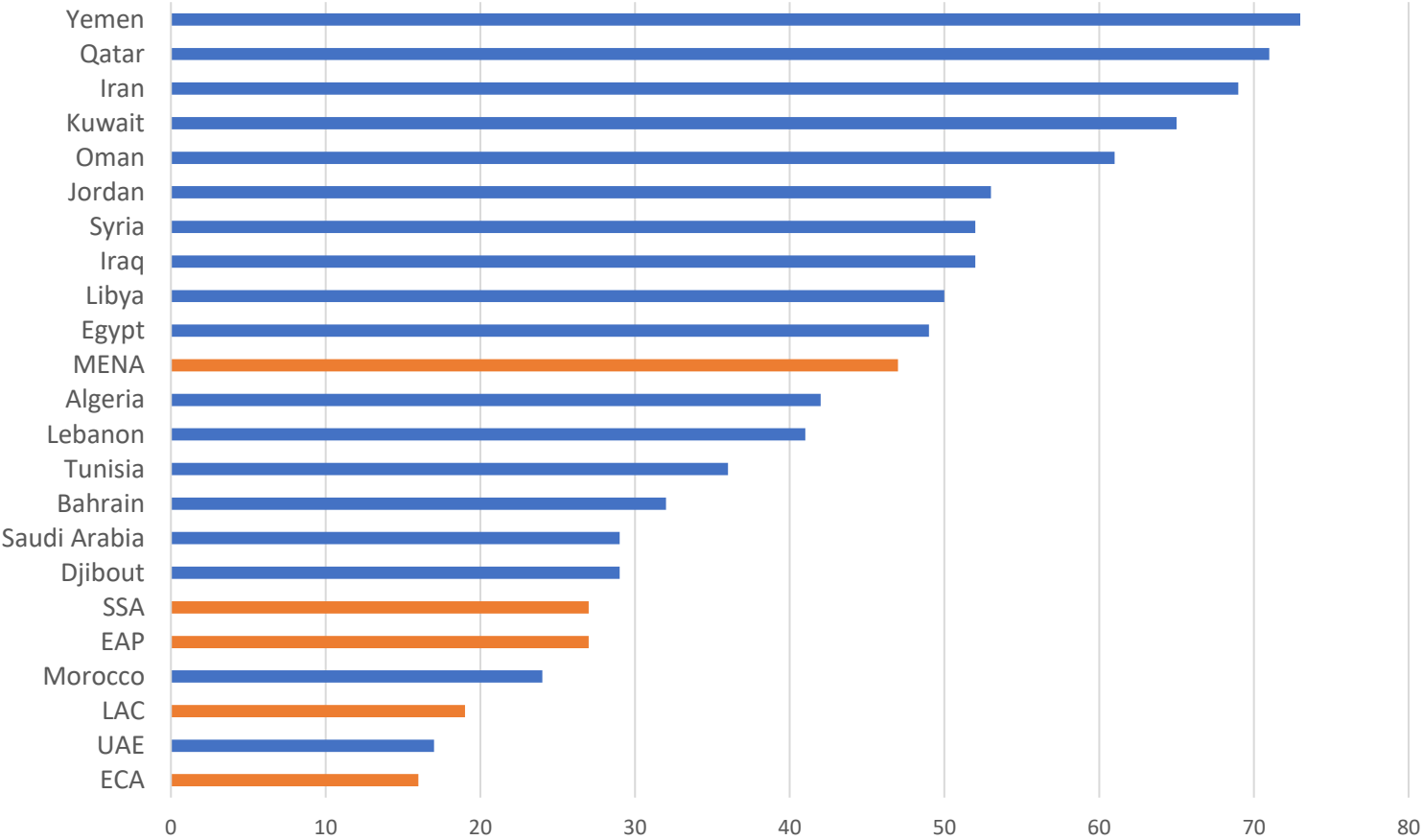
# ... there are peculiarities related to the MENA labor market

Unemployment Rate



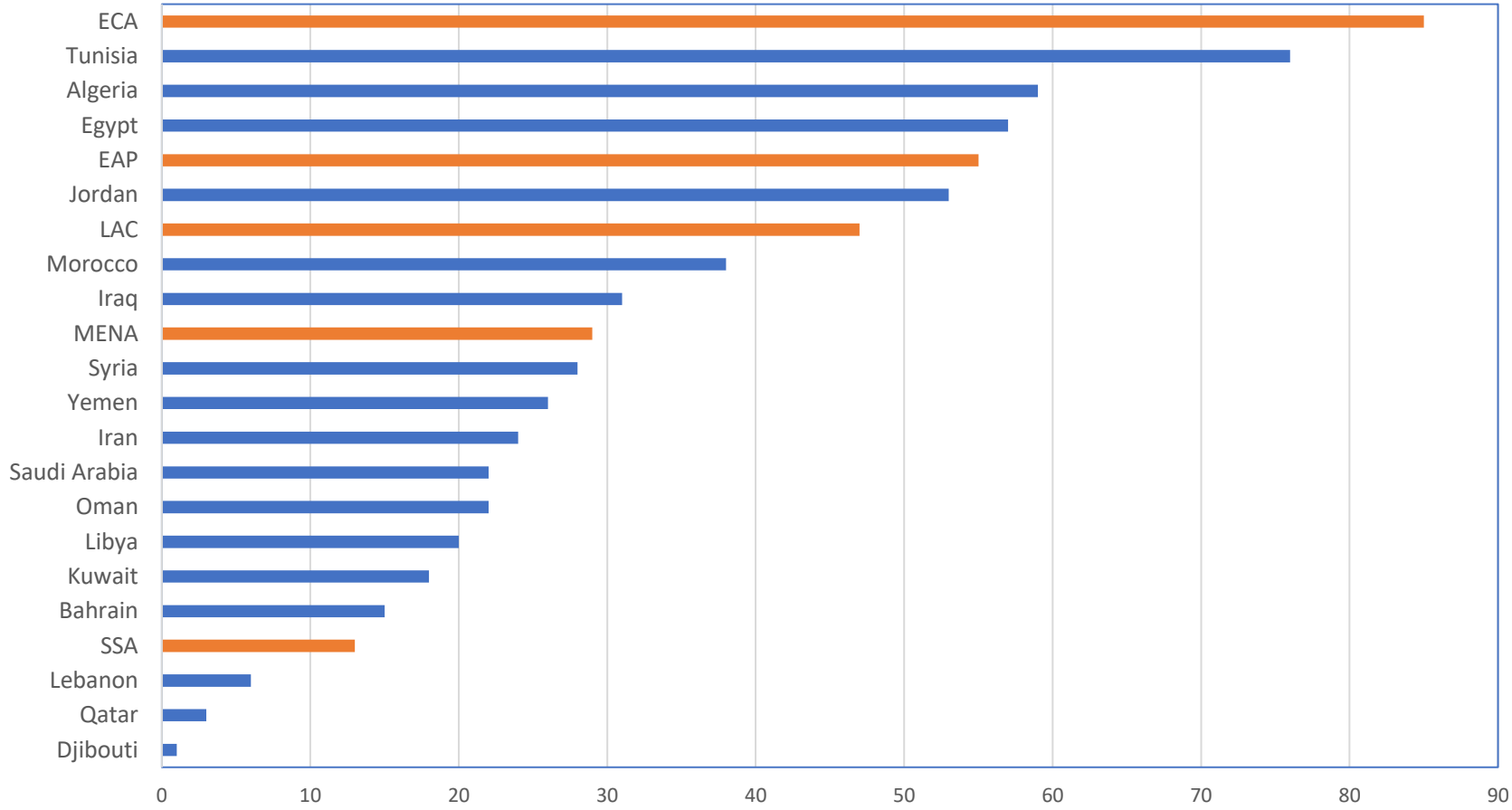
# ... there are peculiarities related to the MENA labor market

Legal Restrictions on Women's employment



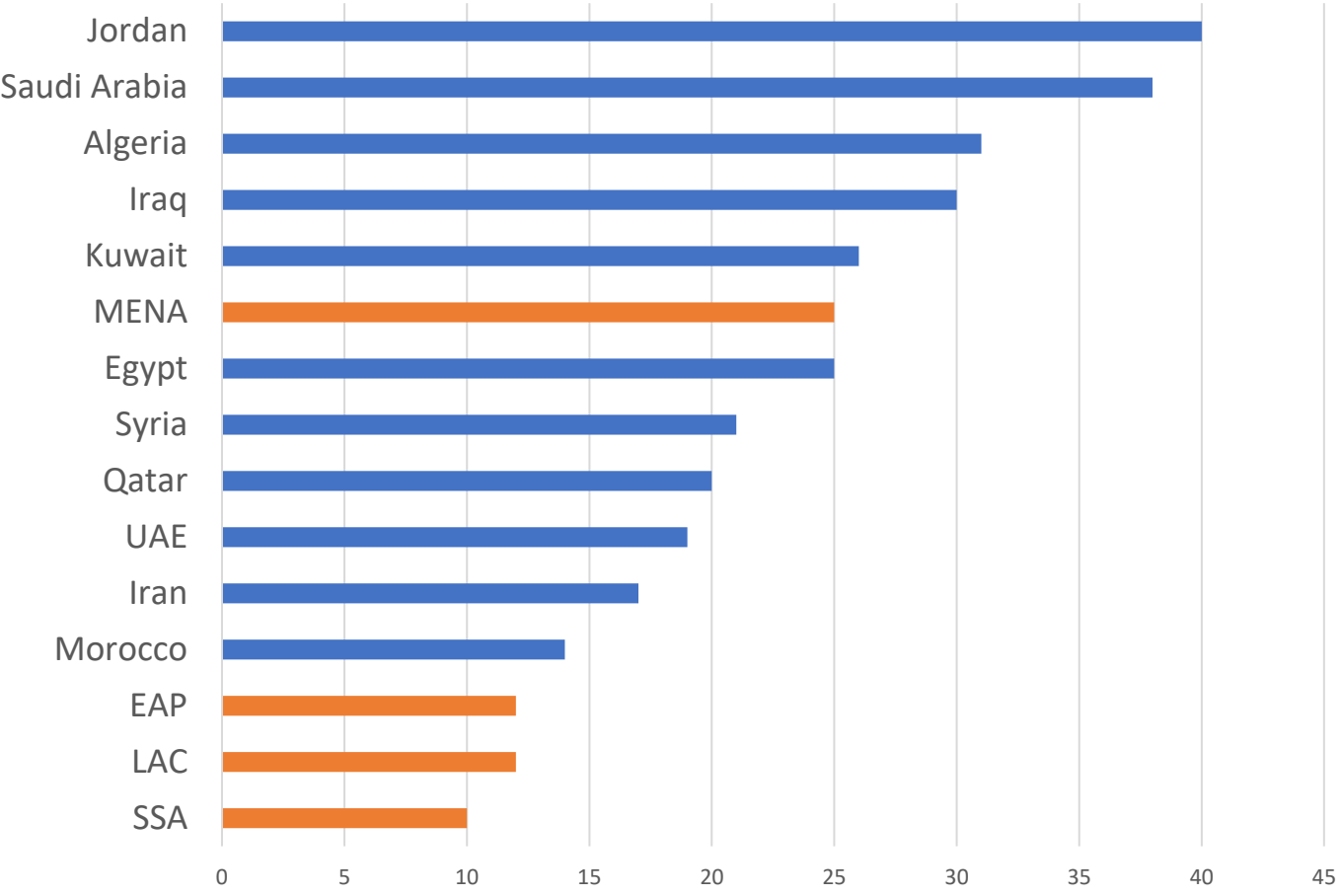
# ... there are peculiarities related to the MENA labor market

Share of Workers Covered by a Pension Scheme



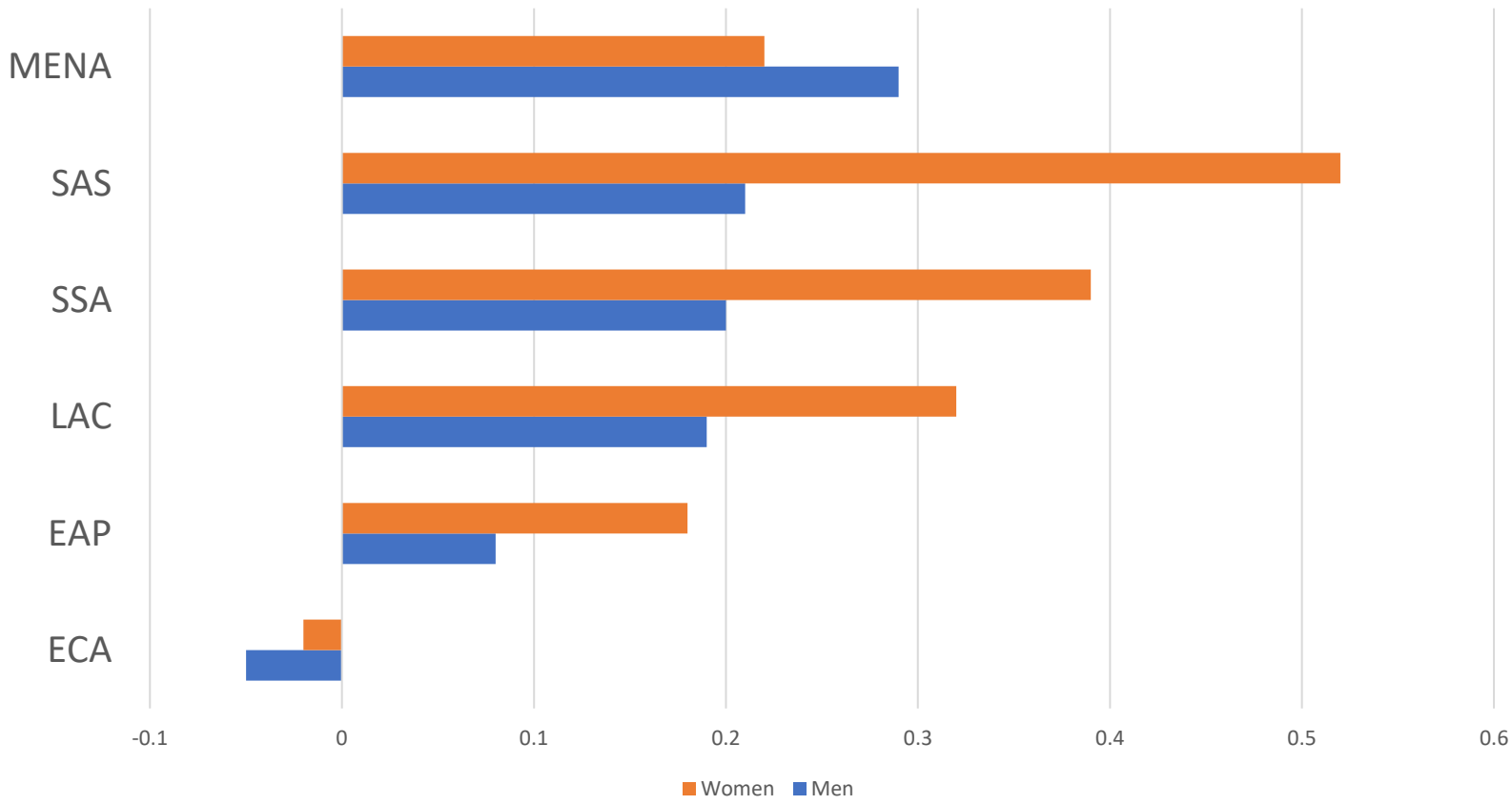
# ... there are peculiarities related to the MENA labor market

Share of Public Sector Employment over Total Employment



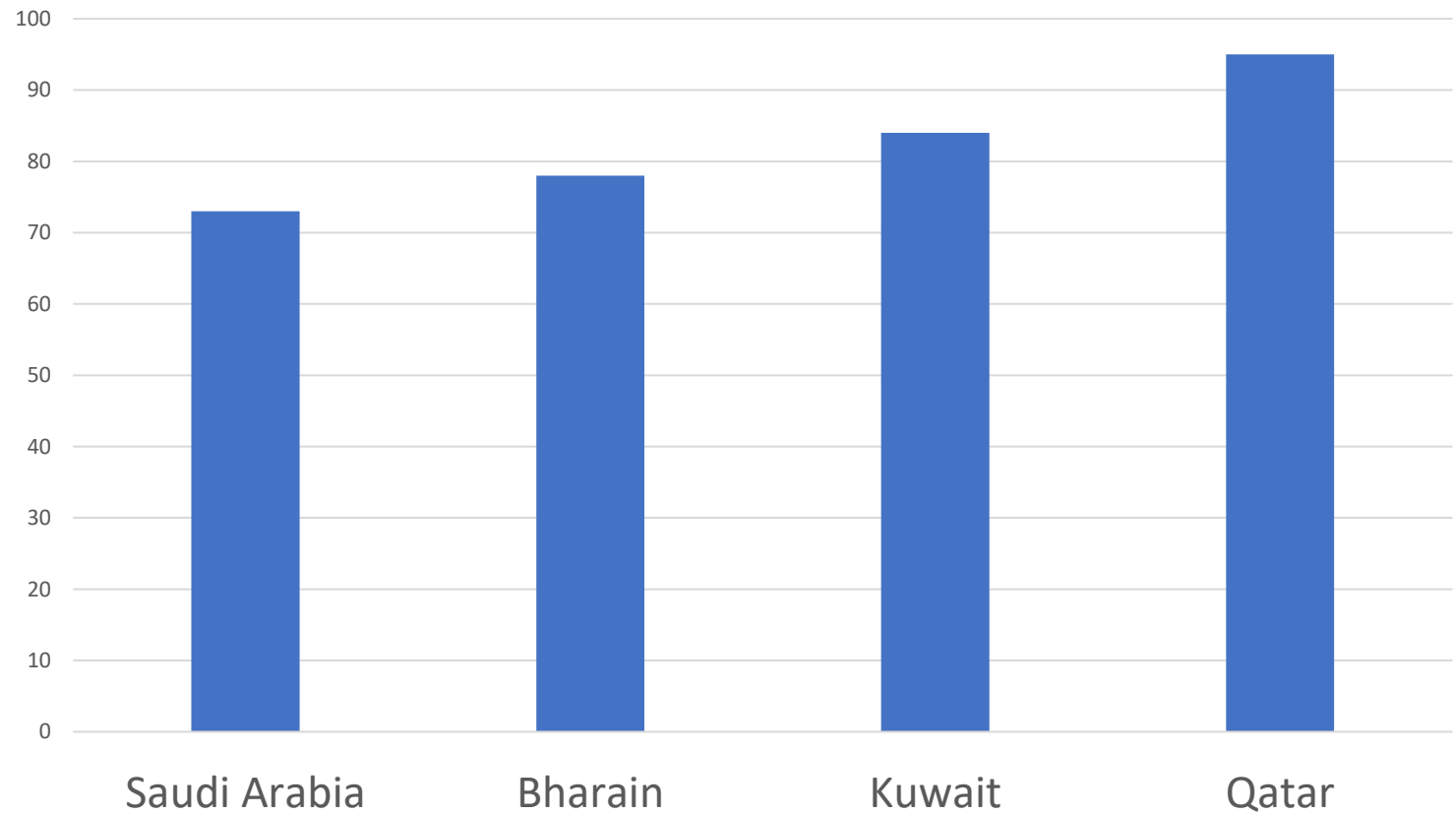
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Public Private Wage Differential



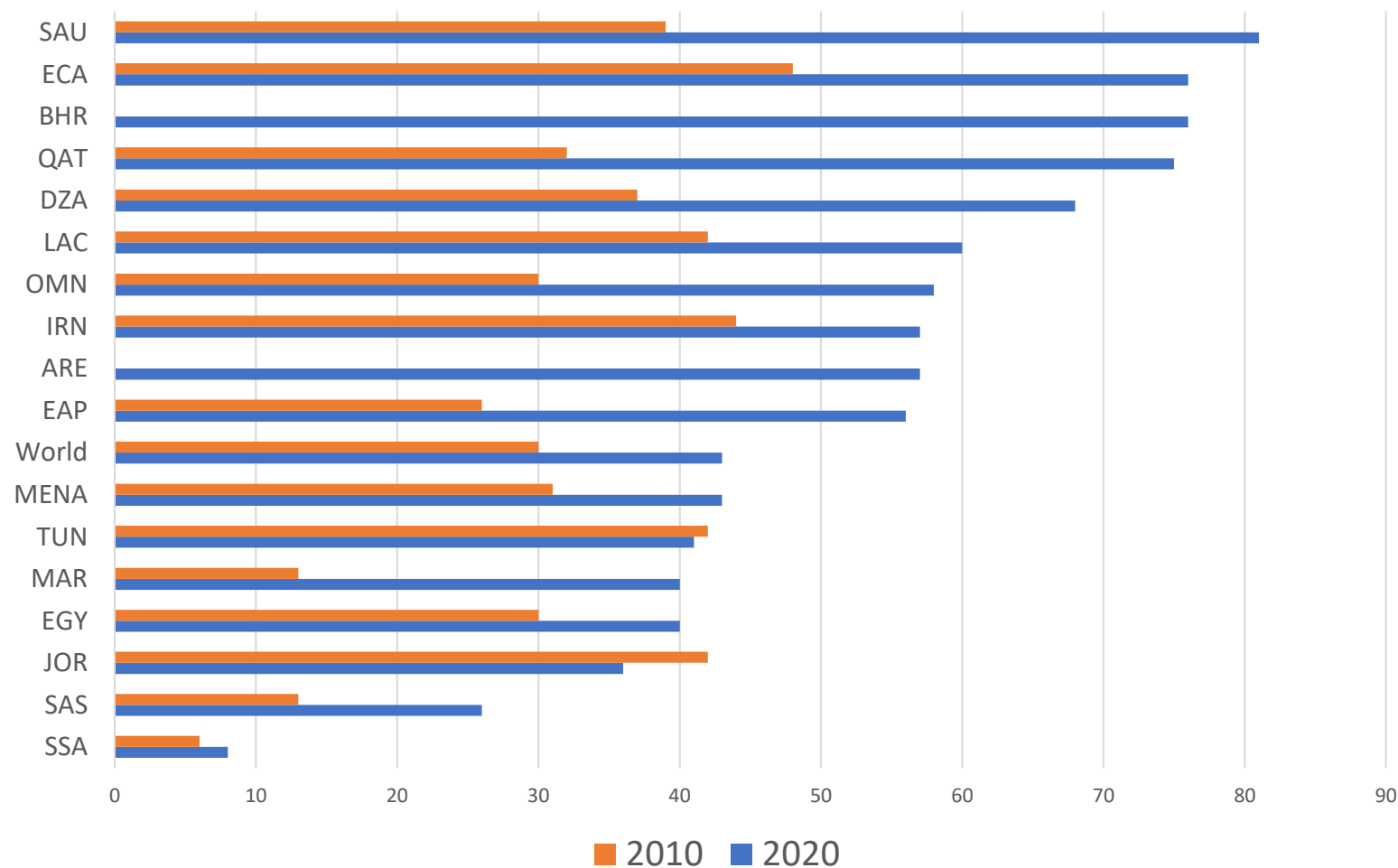
... there are peculiarities related to the MENA labor market...

Share of Foreign Workers in the Labor Force



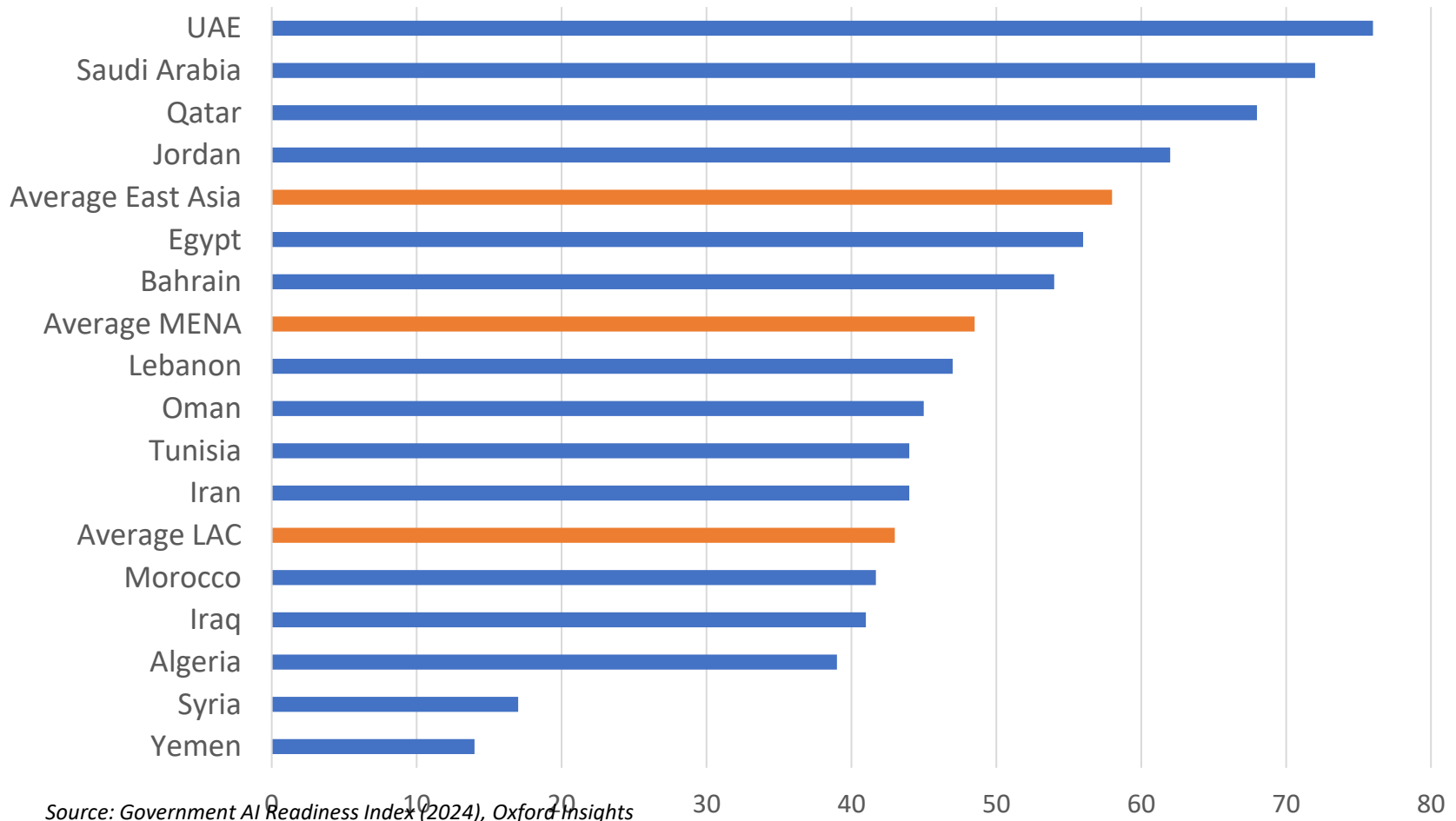
# ... but also great opportunities

## Female Enrollment in Tertiary Education



... but also great opportunities

## AI Readiness





# ... but also great opportunities

## Diaspora

Share with University  
Degree

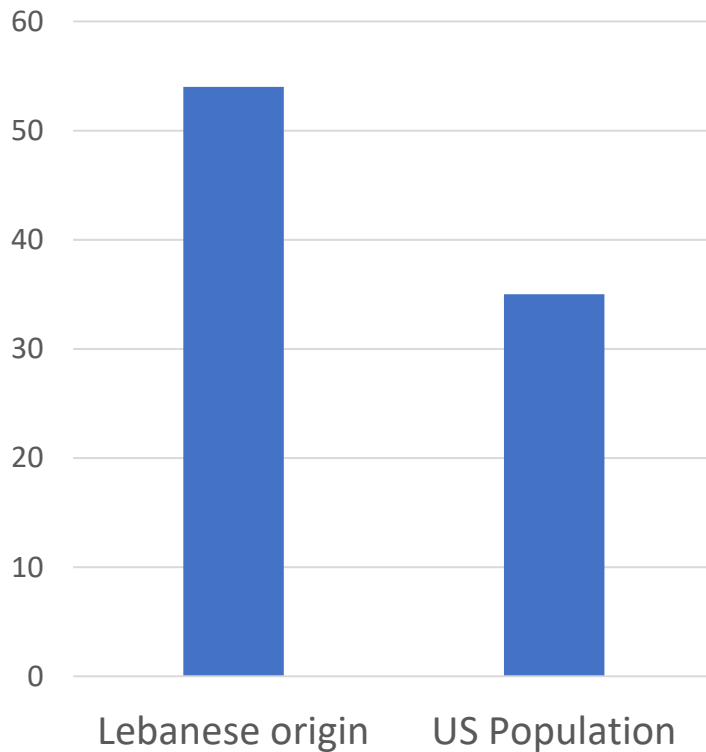
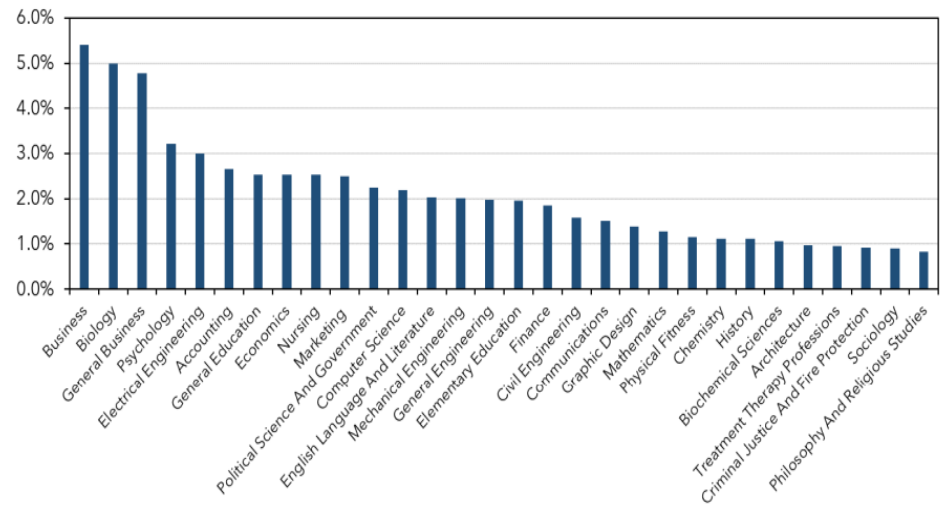


Figure 35. Fields among Lebanese in the US with at least a bachelor's degree (2021)



- Transitions are inevitable; outcomes are not
- Proactive policies can create better jobs & reduce inequality
- Invest in people, technology, & inclusive growth

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