Globalized firms: The gender employment gap and the transmission of attitudes towards female work across countries

Carolina Lennon
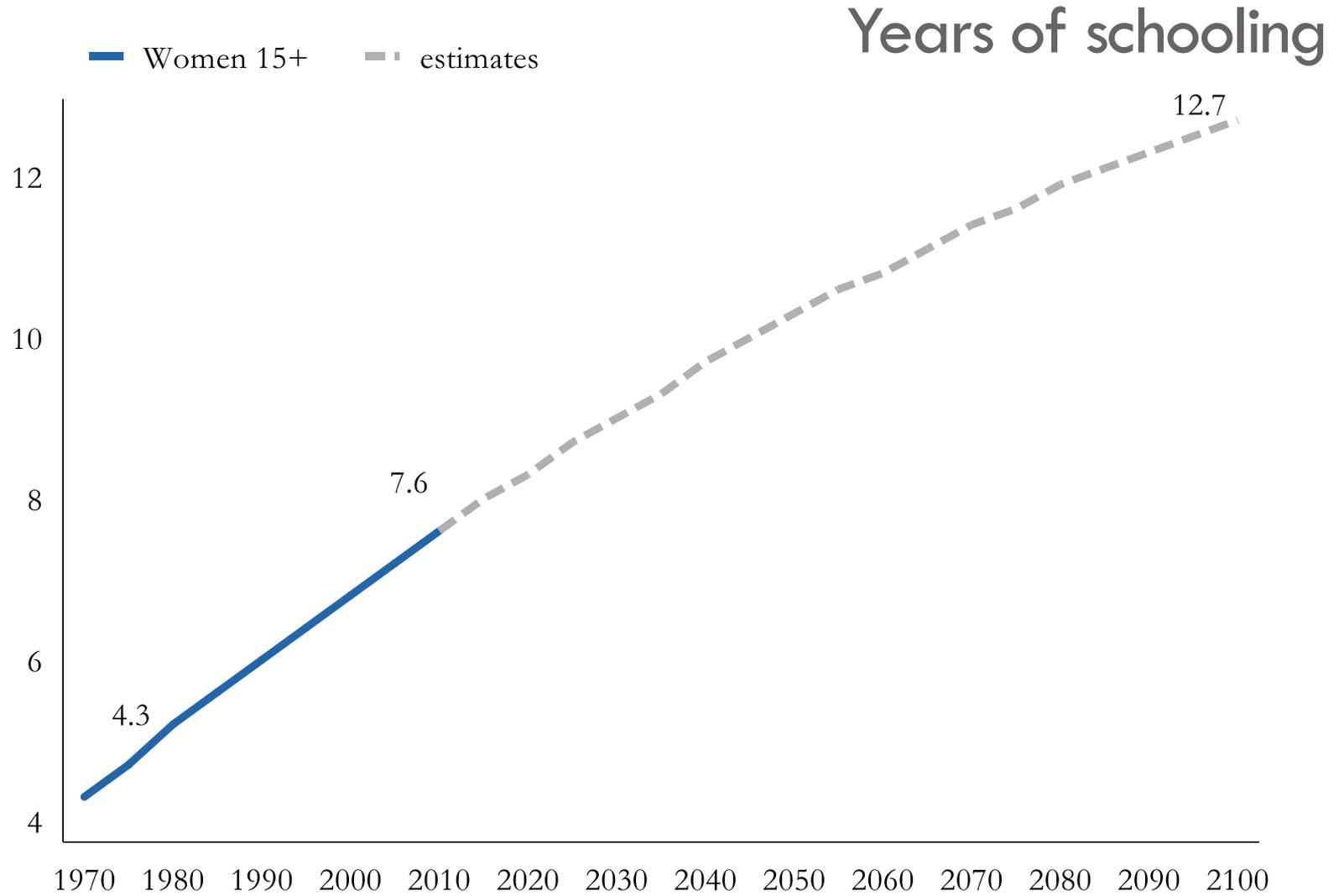Vienna University of Economics and Business (WU)

GLOBALIZED FIRMS:
THE GENDER EMPLOYMENT GAP AND THE TRANSMISSION OF ATTITUDES TOWARDS FEMALE WORK ACROSS COUNTRIES

Carolina Lennon & Alyssa Schneebaum

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Years of schooling

Women 15+   — —   estimates

Source: Wittgenstein Centre

Years of schooling

Women 15+ — Men 15+ — estimates

Gap: 0.1

Gap: 0.9

Gap: 1.2

1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100
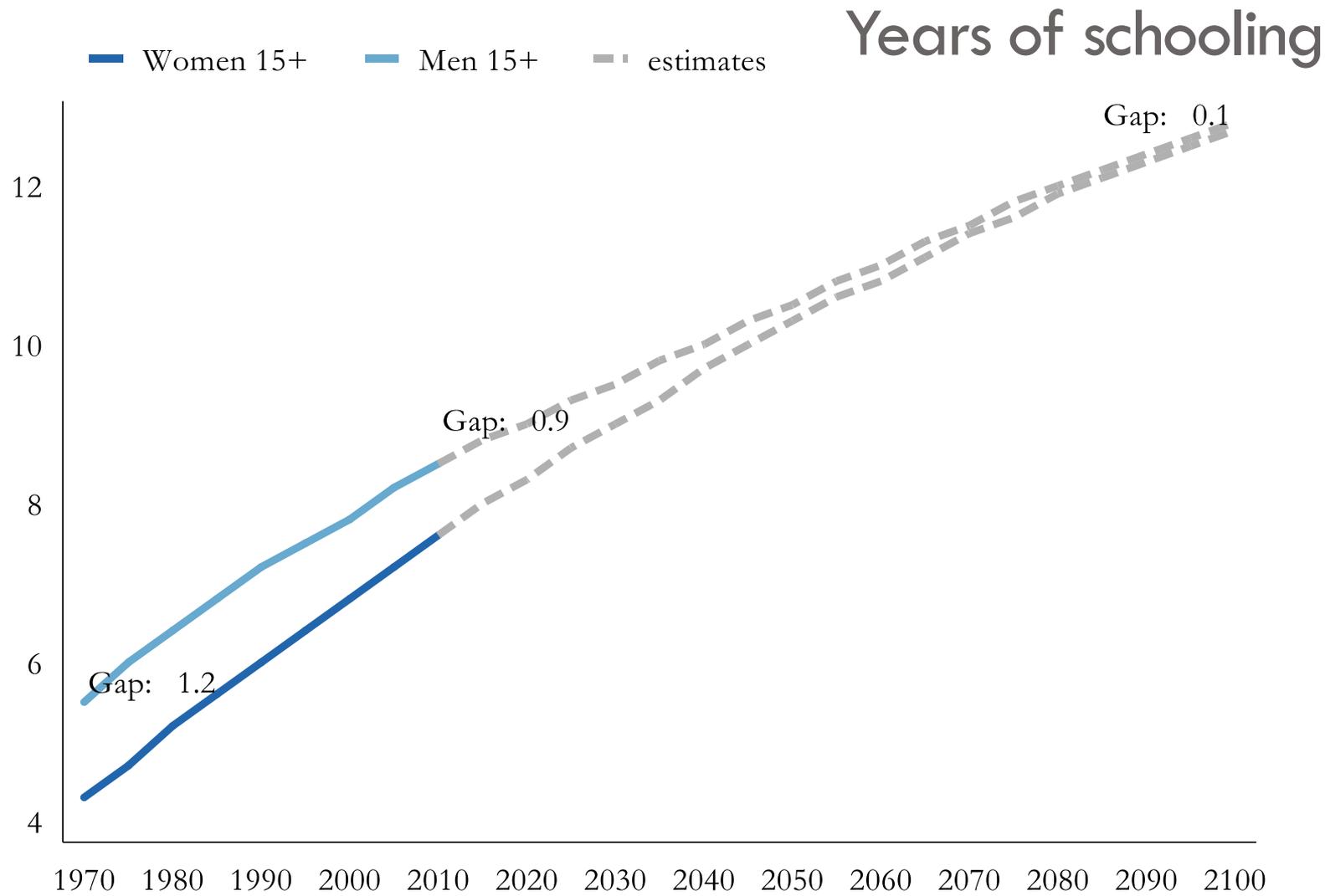
Source: Wittgenstein Centre

Post Secondary

Source: Wittgenstein Centre

Labor force participation
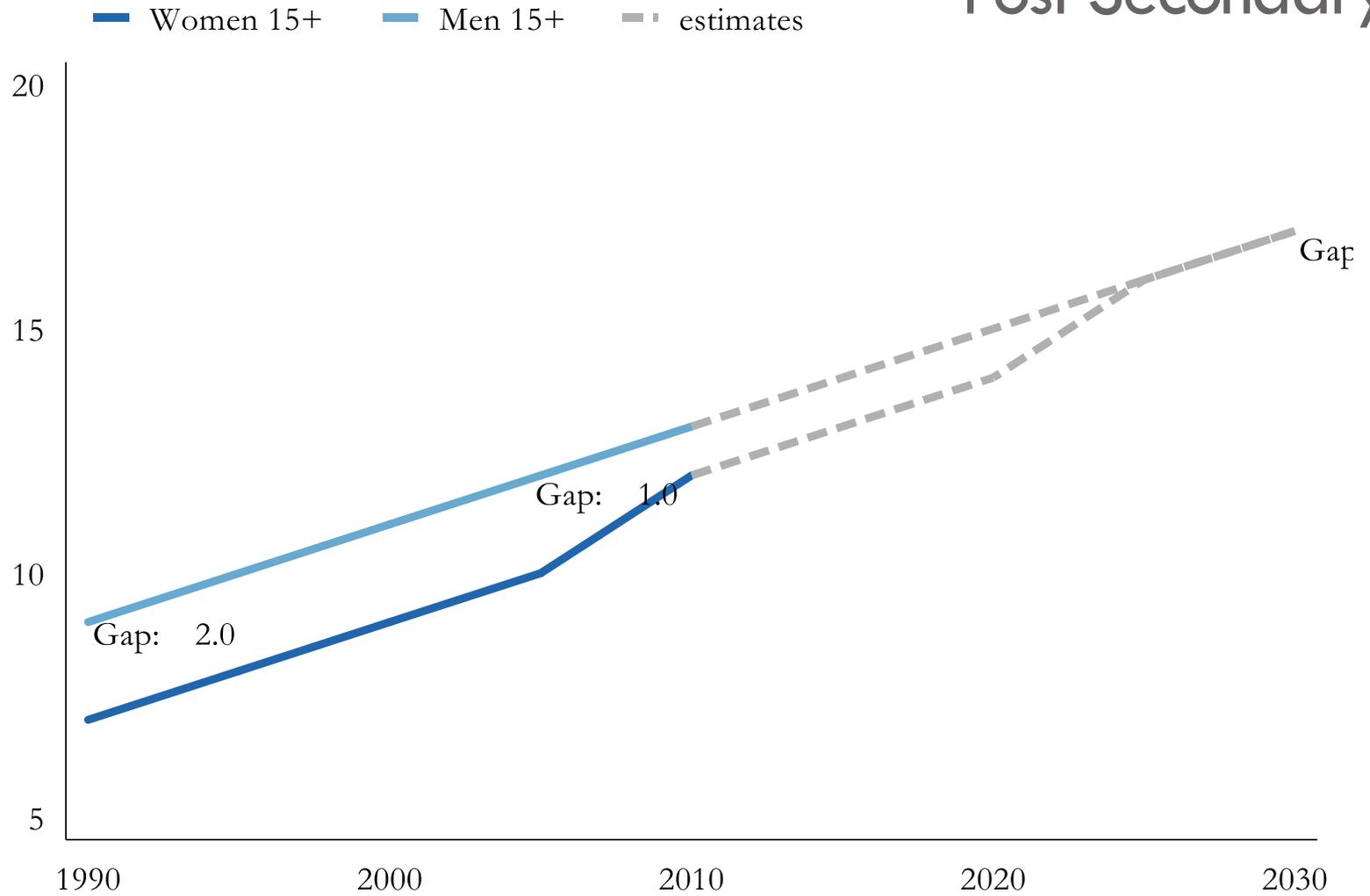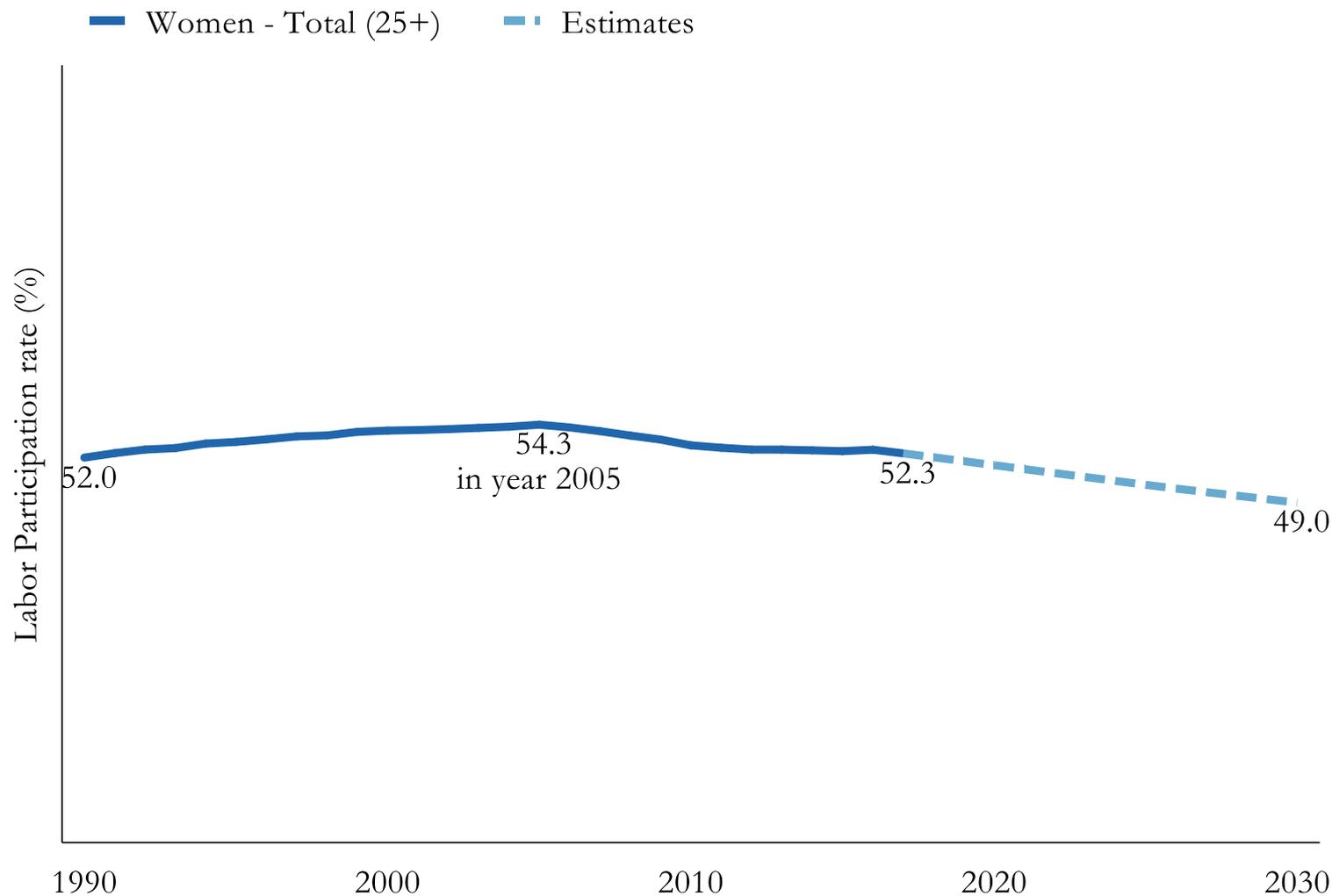

Source: ILO, Key Indicators of the Labour Market (KILM)

GAP-Labor force participation
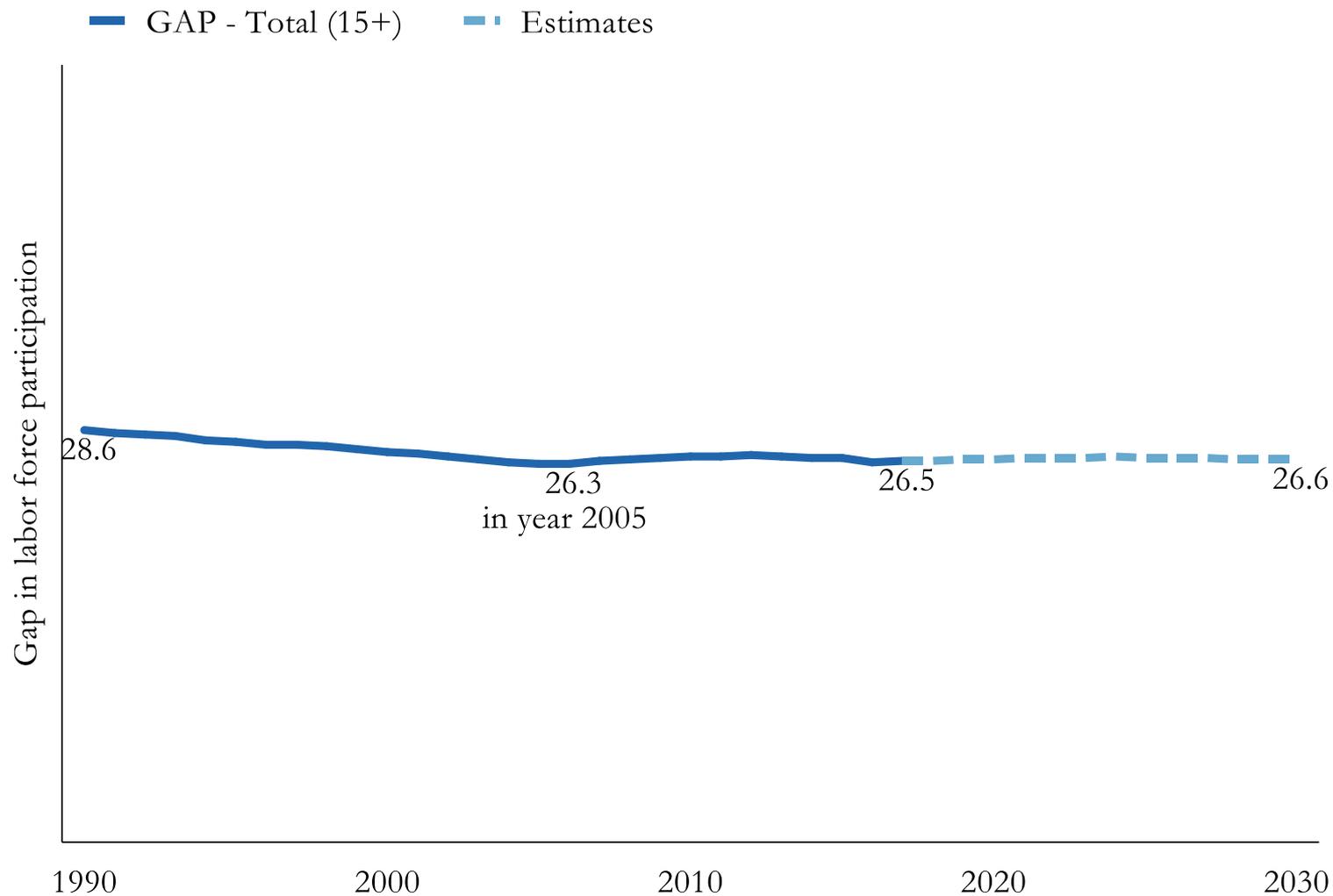
Source: ILO, Key Indicators of the Labour Market (KILM)

Main questions

- Can globalization serve as a catalyst for more gender equality in the work force?

1. Do multinationals and exporting firms hire relatively more women?

2. Does it depend on

   - who are your clients?

     - gender norms in export markets

     - Need to appeal to consumers (competition; emulation); fear of backlash (Harrison & Scorse, 2010)

   - who are your investors?

     - gender norms in source countries of FDI

     - Investors can directly influence firm practice (adaptation)

Data

- Firm-level data

  - World Bank's Enterprise Surveys

  - 30,000+ enterprises

Variation across countries and over time

  - 100+ developing and emerging economies

  - 2007-2016

- Manufacturing

Data

Gender

- female share in full-time employees

  - production workers

  - non-production workers

  - if the top manager is a woman

Global firms

- Exporters

  export share in firm's total sales

- Foreign-owned firms

  share of foreign ownership

Literature: firm-level data

Global firms & female labor outcomes

Germany

(Klein, Moser, & Urban, 2010)

Norway

(Javorcik, Boler, & Ulltveit-Moe, 2015)

Japan

(Kodama, Javorcik, & Yukiko, 2016)

China

(Chen, Ge, Lai, & Wan, 2013) and (Dong & Zhang, 2009)

Mexico

(Aguayo-Tellez, Airola, & Juhn, 2010), (Juhn, Ujhelyi, & Villegas-Sanchez, 2013) and (Juhn, Ujhelyi, & Villegas-Sanchez, 2012)

Literature: 3 mechanisms

1. Competition, Becker's (1957) taste for discrimination
   - Globalization → increased competition → reduction of firm mark-up → less discrimination against women
     - Competition: Working Capital financed by Credit/Advances

2. Comparative advantage, Heckscher-Ohlin trade models
   - Trade openness → expansion of sectors with comparative advantage
   - Unskilled labor is abundant in developing economies and women make up a large share → gender gaps fall in developing countries
     - Industry fixed-effects (2-digit ISIC) and the skill intensity

3. Technology and Heterogeneous firms
   - Technology reduces women's comparative disadvantage of preforming physically demanding tasks. Heterogeneous firms (Juhn, Ujhelyi, & Villegas-Sanchez, 2012) and (Juhn, Ujhelyi, & Villegas-Sanchez, 2013)
     - size (employment in lag), productivity (Sales per worker in lag), and technology (investment in new equipment)

Results

- More controls:
  - temporal employment, female ownership, age of the firm, and location in a country's main business/large city
  - country*year, city/region and broad size fixed-effects

Do multinationals and exporting firms hire relatively more women?

	Female share (%)
Domestic, non-exporter	29
Foreign owned (100 %)	30
Exorter (>=10%)	31
Foreign-owned and exporter	35

Female share

	1	2	3
Exporter (>=10%)	2.791***	2.497***	
	[0.565]	[0.587]	
Foreign (100%)	3.331***	1.447*	
	[0.945]	[0.866]	
Exporter (>=10%)*Foreign (100%)		4.033***	
		[1.509]	
Exporter (>=10%, <50%)			0.324
			[0.471]
Exporter (>=50%, <100%)			2.901***
			[0.869]
Exporter (100%)			10.75***
			[1.447]
Foreign (>=10%, <50%)			-0.139
			[0.908]
Foreign (>=50%, <100%)			0.218
			[0.779]
Foreign (100%)			2.534***
			[0.867]
Observations	30,474	30,474	30,474
R-squared	0.471	0.472	0.475
City/Region FE	YES	YES	YES
ISIC 2digit FE	YES	YES	YES
Firm's Size FE	YES	YES	YES
Country*Year FE	YES	YES	YES

Literature: a fourth mechanism

Trade and FDI & the transmission of gender norms and women's rights

- Neumayer & de Soysa, 2011:
    - Country-level analysis of transmission of women's social and economic rights via trade and FDI
    - Transmission is found but not for low income economies
    - We use spatial lags

- Tang & Zhang 2017:
    - Firm-level analysis for China
    - Multinationals
    - We use GII

Transmission of gender norms

UNDP's Gender Inequality Index GII

   maternal mortality ratio, adolescent birth rate, parliamentary representation, secondary educational attainment and labor market participation

High GII – gender inequality

- Niger, Mali, Chad, and Yemen

Low GII – gender equality

- Netherlands, Denmark, Switzerland, Sweden

We also use fertility rate, with very similar results…

Transmission of gender norms

Countries' exposure to gender norms elsewhere

Through trade

- who are your export markets
- Export market share in a country's exports
- bilateral exports (Comtrade/Feenstra)

Through FDI

- Who are your investors
- Source country share in a country's inward FDI
- bilateral inward FDI stocks (UNCTAD)

$$Exposure - GII_{jt} = \sum_{i=1}^{N} share_{ji} * GII_i , \text{with } i \neq j$$

Female share

	1	2	3	4	5	6
	all obs.	all obs.	Gender equality in **export** markets		Gender equality in source countries of **FDI**	
			equal	unequal	equal	unequal
Exporter (>=10%)	2.791***	2.637***	4.134***	0.888	3.063***	2.653***
	[0.565]	[0.502]	[0.768]	[0.539]	[0.654]	[0.946]
Foreign (100%)	3.331***	3.093***	5.085***	-0.0719	5.579***	0.245
	[0.945]	[0.859]	[1.059]	[1.079]	[1.112]	[1.048]
Exporter (>=10%) * GII (Trade)	21 % larger than non- global firms	-33.39***	32 % larger than non- global firms		30 % larger than non- global firms	
		[12.15]				
Foreign (100%) * GII (FDI)		-29.39*				
		[16.19]				
Observations	30,474	30,474	14,805	15,669	14,749	15,725
R-squared	0.471	0.472	0.446	0.461	0.462	0.462
City/Region FE	YES	YES	YES	YES	YES	YES
ISIC 2digit FE	YES	YES	YES	YES	YES	YES
Firm's Size FE	YES	YES	YES	YES	YES	YES
Country*Year FE	YES	YES	YES	YES	YES	YES

IV regression

Instruments:

> explain the selection into exporters and multinationals

> not direct impact on own hiring decisions of firms

Attractiveness of narrowly defined cell (city, industry and year) for global firms (exporters/multinationals)

>> For exporters and foreign-owned, separately

>> Share of global firms in total employment (lag)

>> Share of global firms in total investment in new equipment

>> …using surveys weights

> Since we are controlling for firm's own values on these variables, the instruments capture the attractiveness of that location for global firms- in a narrowly defined cell- that is uncorrelated with own firm's performance

Female share

	1	2	3	4	5
		Gender equality in **export** markets		Gender equality in source countries of **FDI**	
	all obs.	equal	unequal	equal	unequal
Exporter (>=10%)	2.185	5.131**	-5.350	6.377*	0.474
	[2.183]	[2.400]	[3.316]	[3.351]	[3.299]
Foreign (100%)	12.88***	17.64***	3.970	17.38***	3.772
	[4.142]	[4.345]	[6.690]	[6.002]	[5.282]
Observations	27,433	13,334	14,099	13,156	14,277
City/Region FE	YES	YES	YES	YES	YES
ISIC 2digit FE	YES	YES	YES	YES	YES
Firm's Size FE	YES	YES	YES	YES	YES
Country*Year FE	YES	YES	YES	YES	YES
Underind. LM test	120.03	74.10	64.89	65.61	57.42
p-value LM statistic	0.00	0.00	0.00	0.00	0.00
Weak ident. Cragg-Donald	481.19	230.95	231.67	218.18	246.27
Weak ident. Kleibergen-Paap rk	110.77	60.98	78.07	73.60	38.43
Hansen J statistic	4.14	2.58	3.63	2.89	1.24
p-value of Hansen J statistic	0.13	0.28	0.16	0.24	0.54

Concluding remarks

Transmission of gender values through both trade and FDI

- Race to the top
  - global firms adopt more equal hiring practices compared to non-global firms if they are trading and receiving investment from more gender equal economies
  - Female share is around 30 percent higher than that of domestic and non-exporting firms
- No clear evidence of a race to the bottom
  - hiring practices of global firms do not significantly differ from non-global enterprises if commercial links are held with gender unequal countries

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Comments/Questions/Discussion