



Gender segregation in education, training and employment

Learning seminar: EIGE - EU Social partners
3 July, 2018



Focus of the presentation

- **Subject choices in education and training by gender**
- Gender analysis of the **transition to employment** of graduates in fields of education and training non-traditional to their gender
- **Gender segregation in the labour market and gender pay gap**

Rising demand, major shortages

- Demand for STEM professionals and associate professionals is expected to **grow by around 8% by 2025**, much higher than the average 3% growth forecast for all occupations (Cedefop)
- **Major skills shortages of STEM and ICT professionals** are already observed across all EU countries and expected to exacerbate with future demographic developments (i.e. large retiring foreseen)
- In spite of a series of measures, **women participation in STEM studies, in particular in engineering, remains low in most Member States**
- Low participation of women is increasingly associated with an insufficient supply of STEM skills - a barrier towards a strong and inclusive economic growth
- Demands for caring are also increasing in the context of aging societies (EHW sector)

The most segregated fields of education (tertiary and VET), %

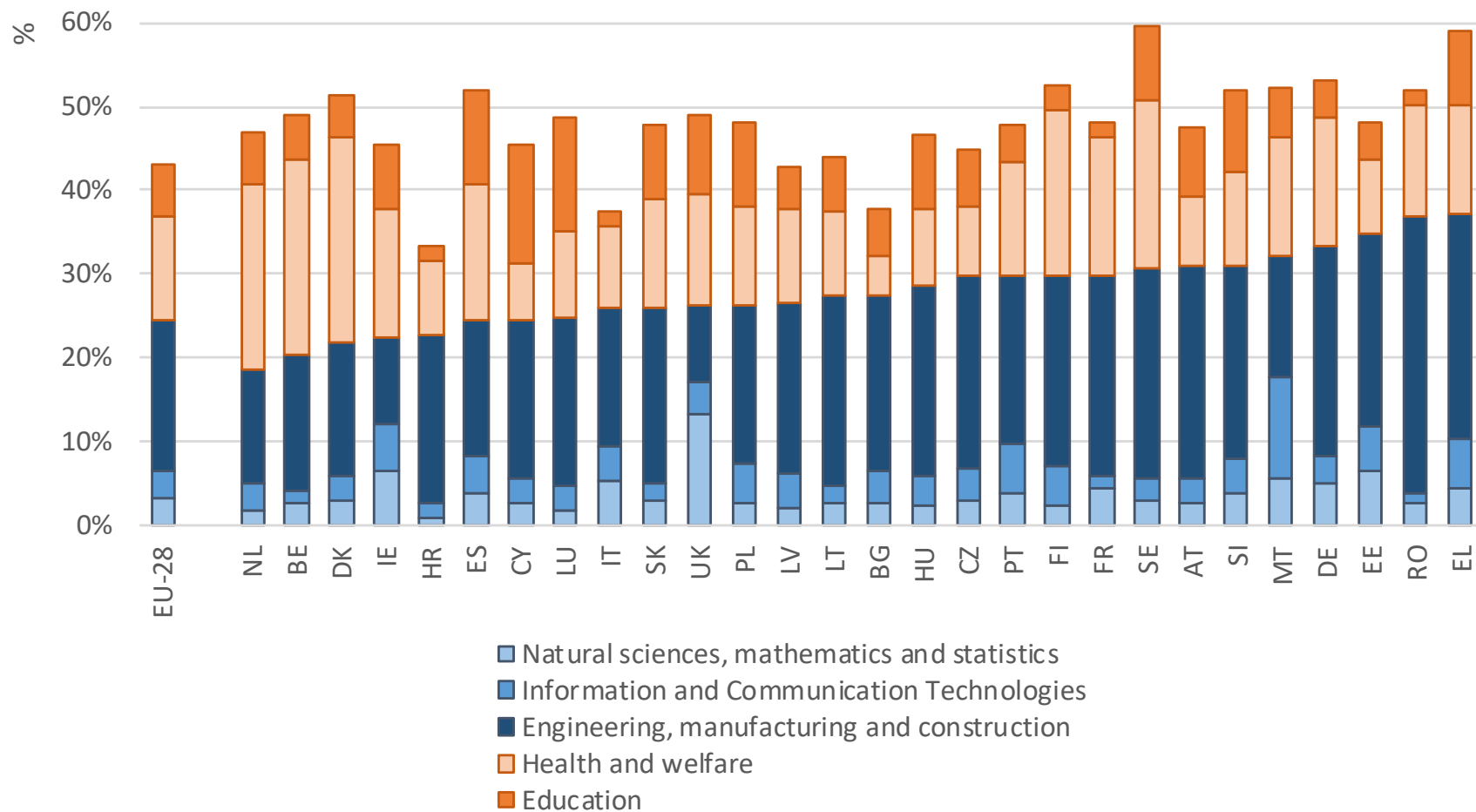
	Men	EU range	Women	EU range
Education			82	65 - 96
Health and welfare			76	58 - 89
Natural sciences, mathematics and statistics	43	20 - 56	57	80 - 44
Engineering, manufacturing and construction	72	59 - 85		
Information and communication technologies (ICT)	79	61 - 92		

Source: Eurostat [educ_uoe_grad02]

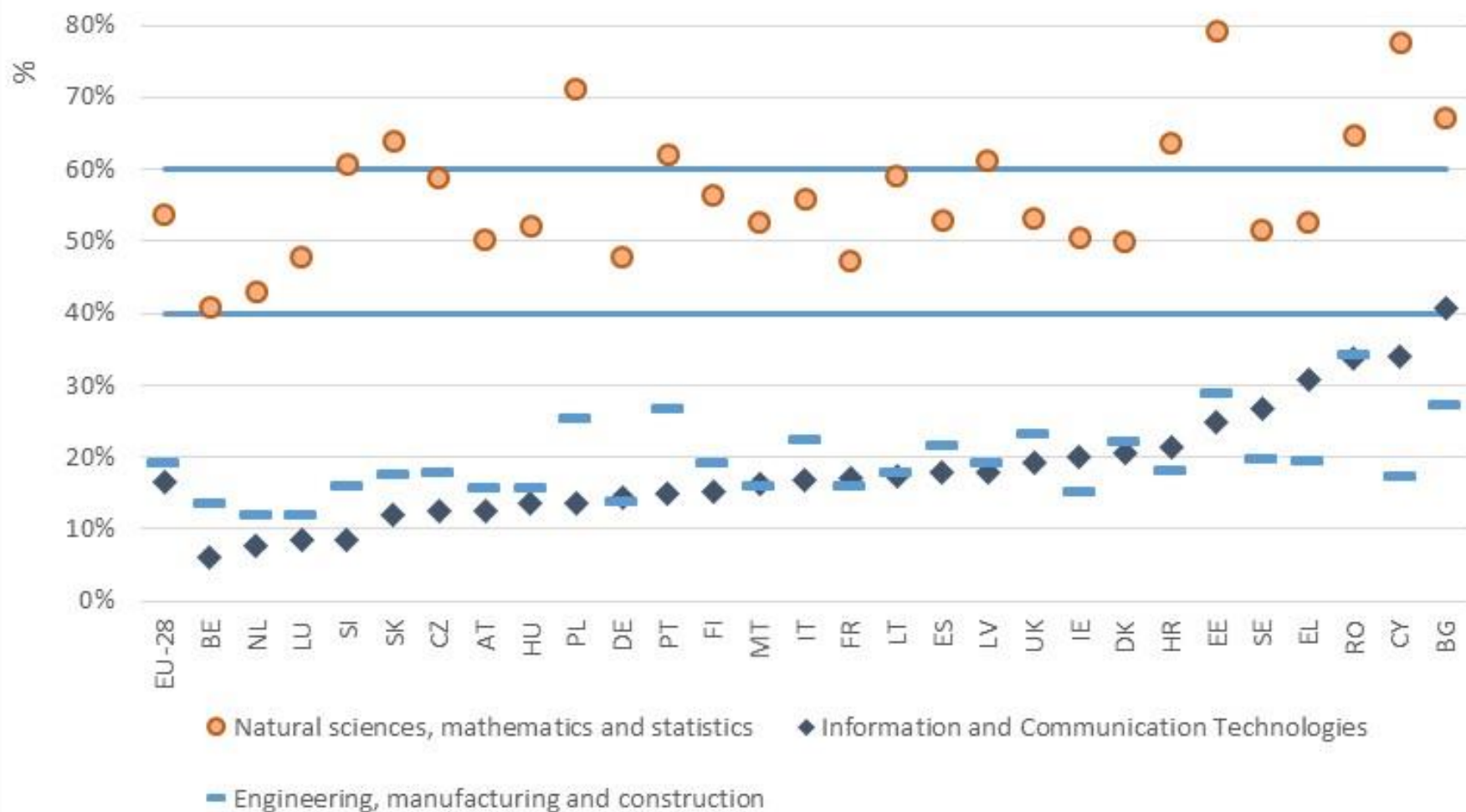
The most segregated occupations, %

	Men	EU range	Women	EU range
Science and engineering professionals	75	56 -80		
ICT professionals	84	68-92		
Science and engineering associate professionals	84	71-91		
ICT technicians	82	65-91		
Building and related trades workers	97	94-100		
Metal, machinery and related trades workers	96	93-100		
Electrical and electronic trades workers	96	89-100		
Stationary plant and machine operators	67	37-82		
Health professionals			70	45-89
Teaching professionals			69	62-85
Health associate professionals			80	52-94
Personal care workers			90	81-98

STEM and EHW graduates within total number of graduates, 2013-2015

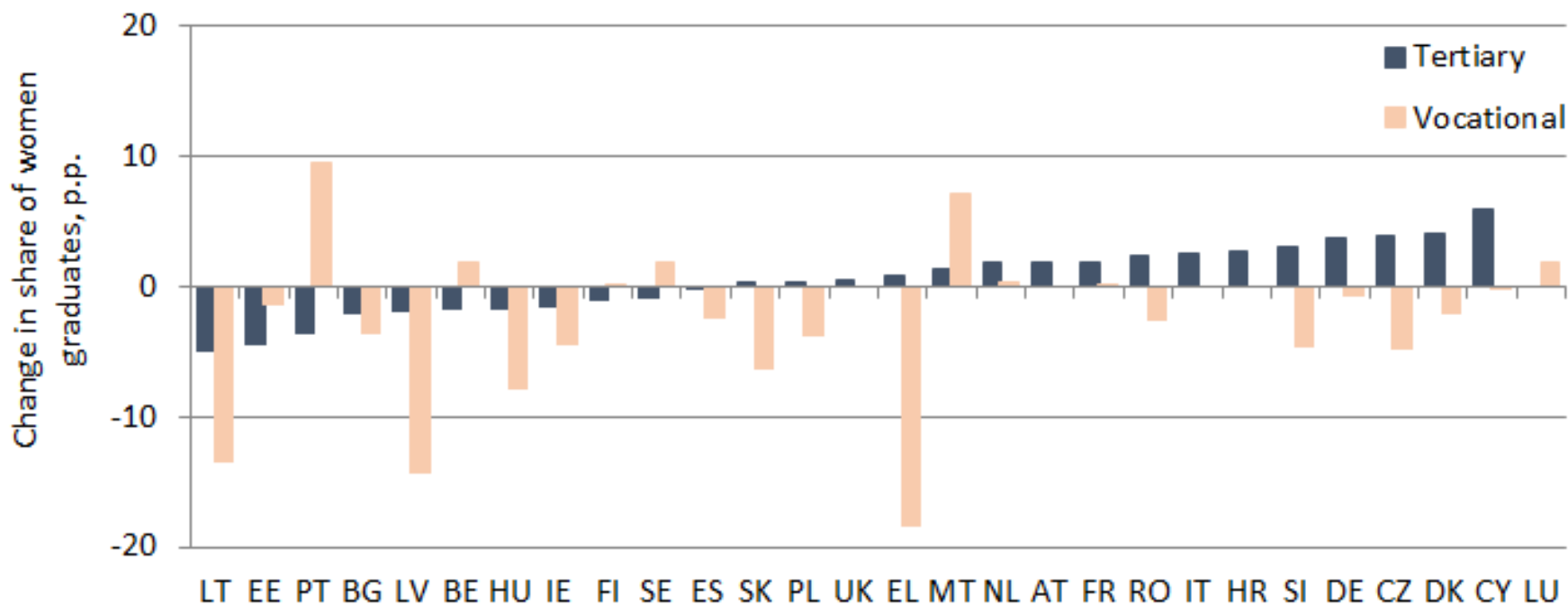


Women in STEM study fields, 2013-2015



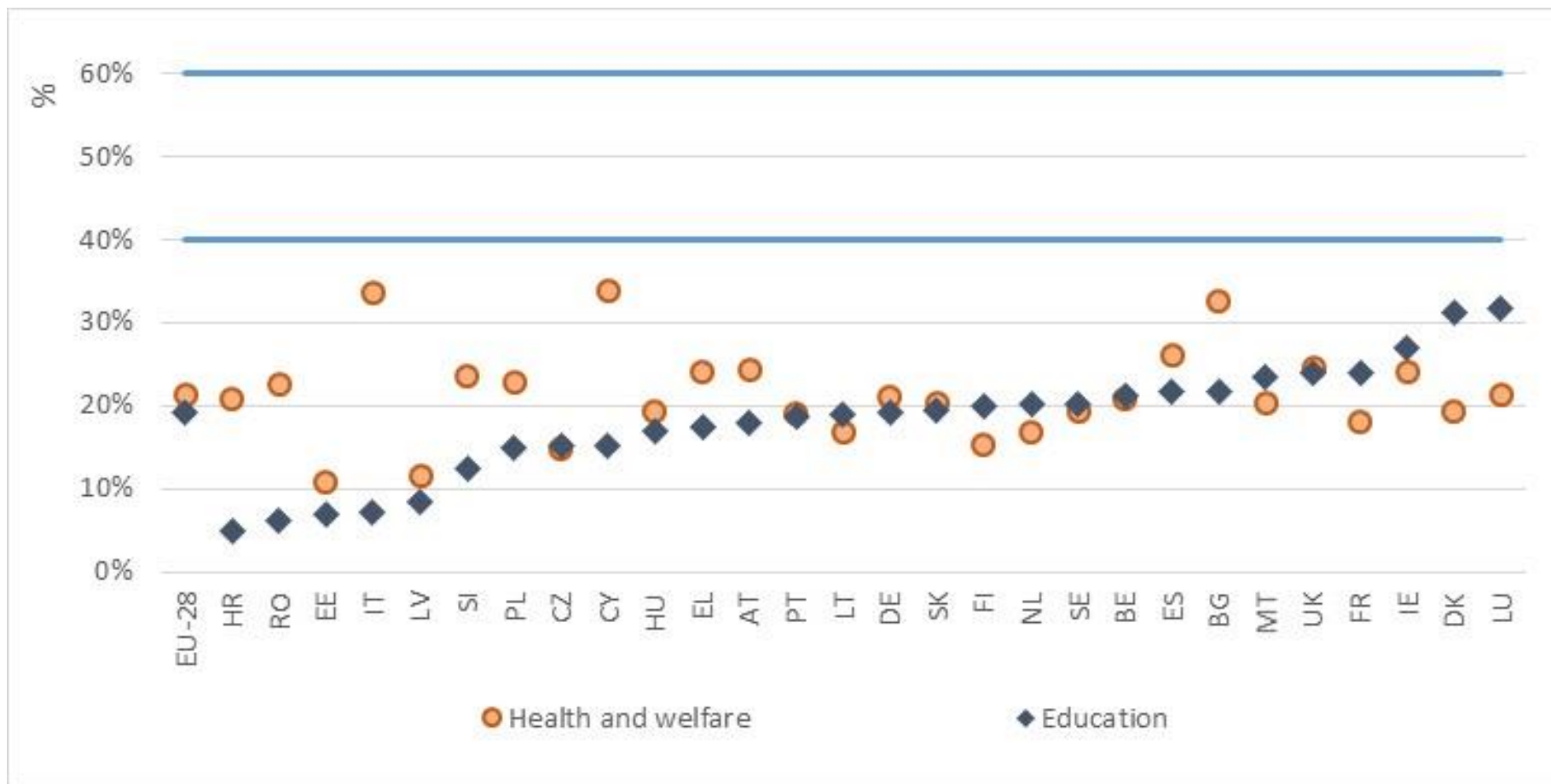
Notes: EU-28 is calculated as the unweighted average across countries with available data; data refer to average value during the period 2013–2015 due to data reliability constraints; based on EUROSTAT data [educ_uoe_grad02].

Change in a share of women STEM graduates (2004-2015): progress stalled



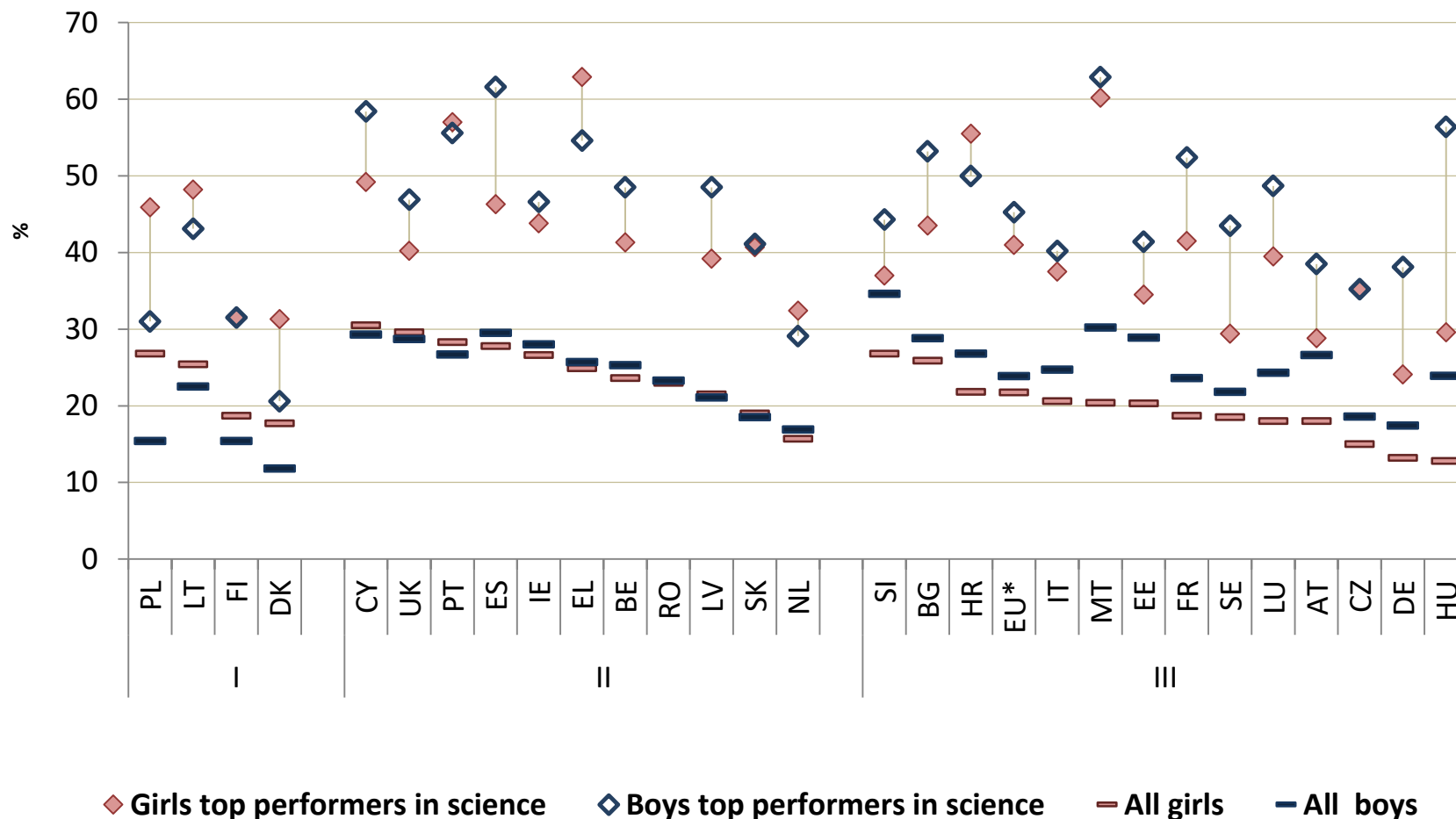
Source: Eurostat [educ_grad05], EIGE's calculations.

Men in EHW study fields, 2013-2015

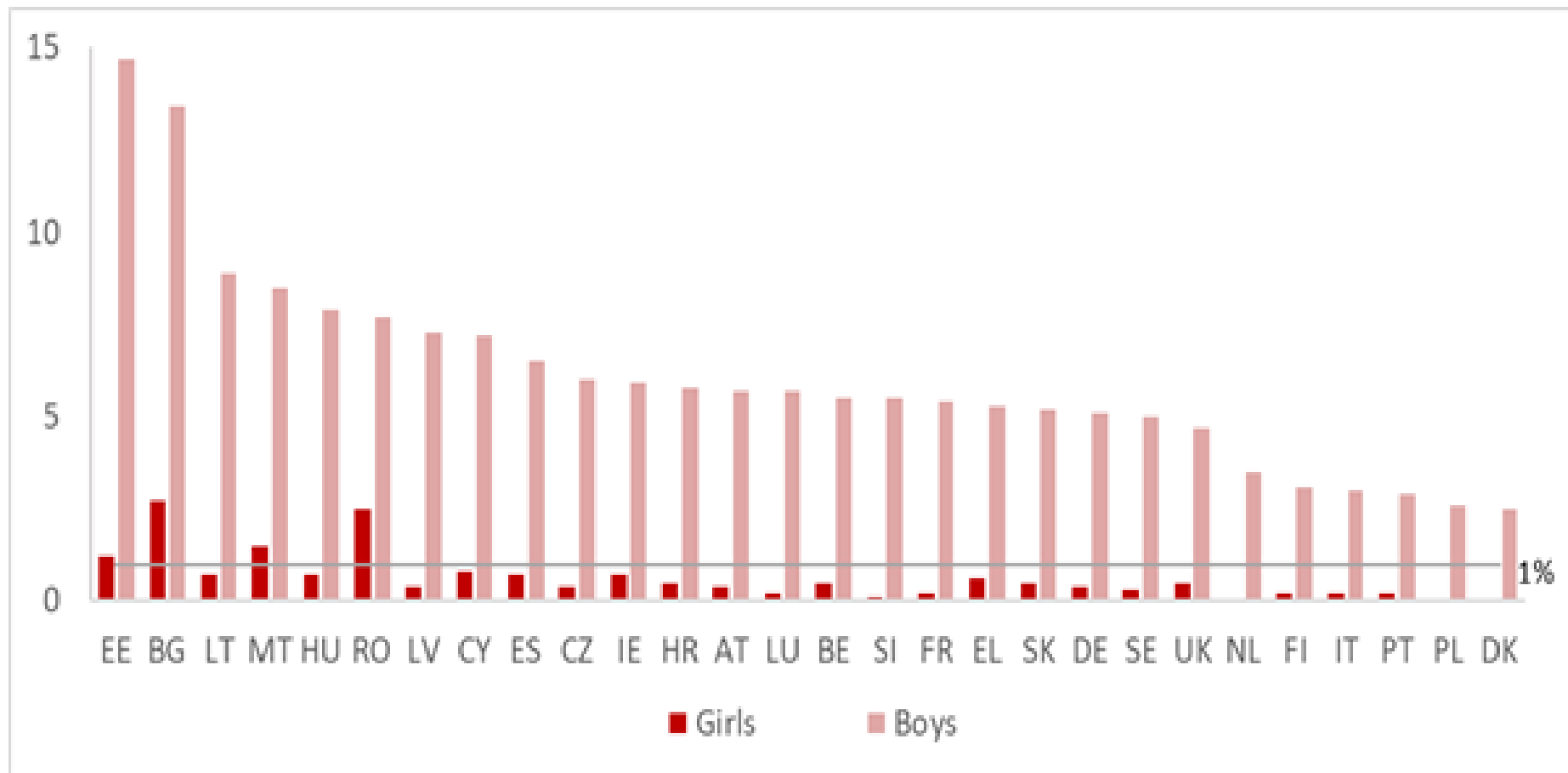


Notes: EU-28 is calculated as the unweighted average across countries with available data; data refer to average value during the period 2013–2015 due to data reliability constraints; based on EUROSTAT data [educ_uoe_grad02].

15-year-olds expecting to work in science-related occupations at age 30, 2015

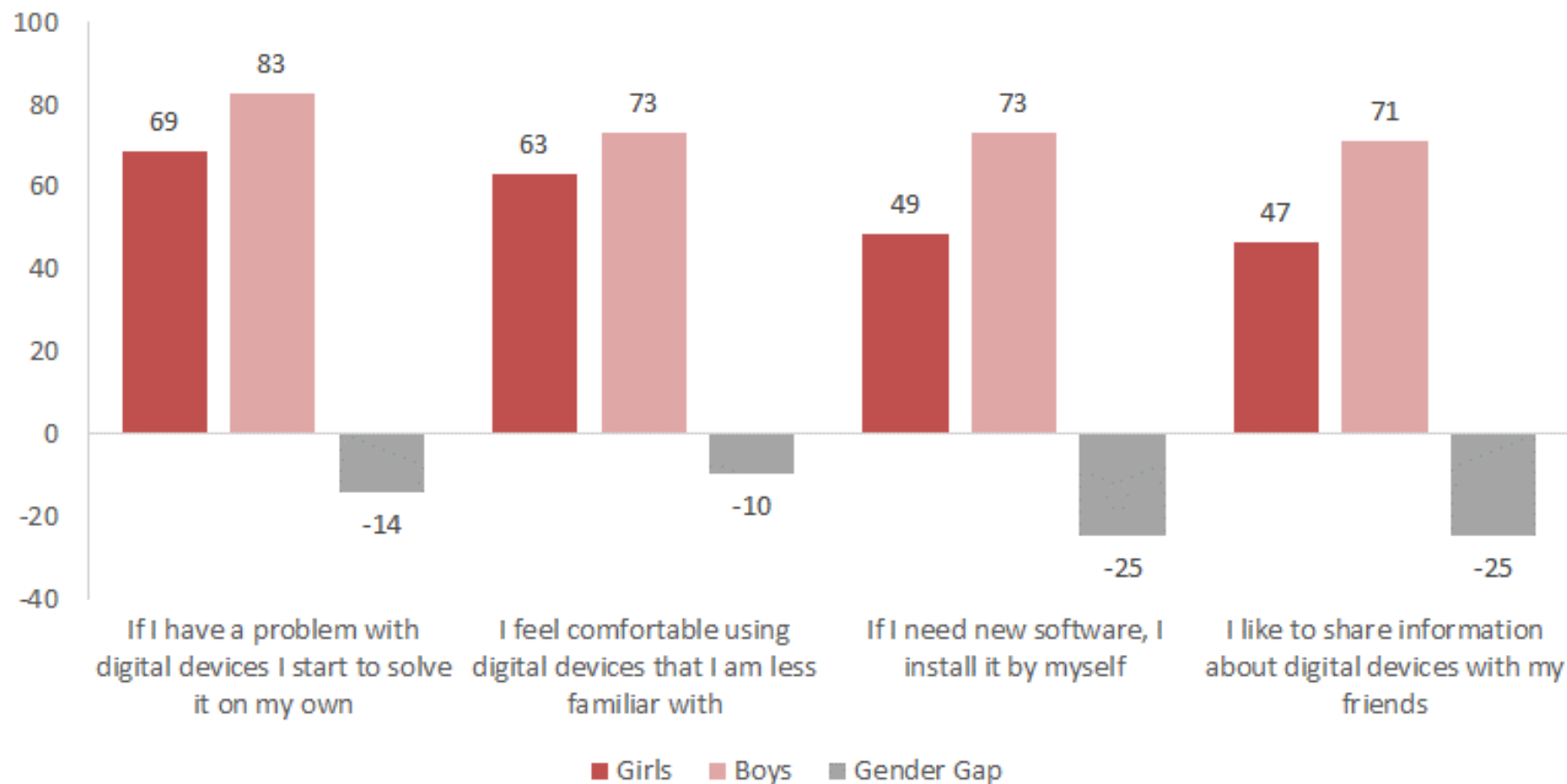


15-year-olds expecting to work as ICT professionals at age 30, 2015

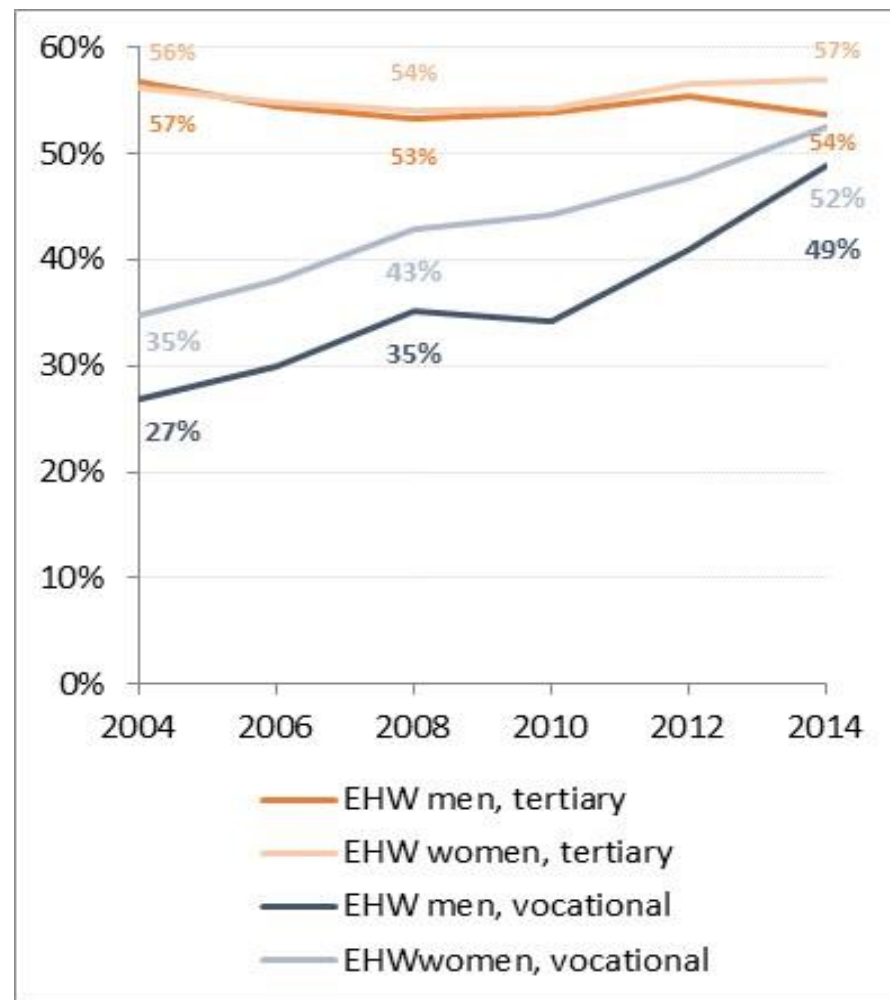
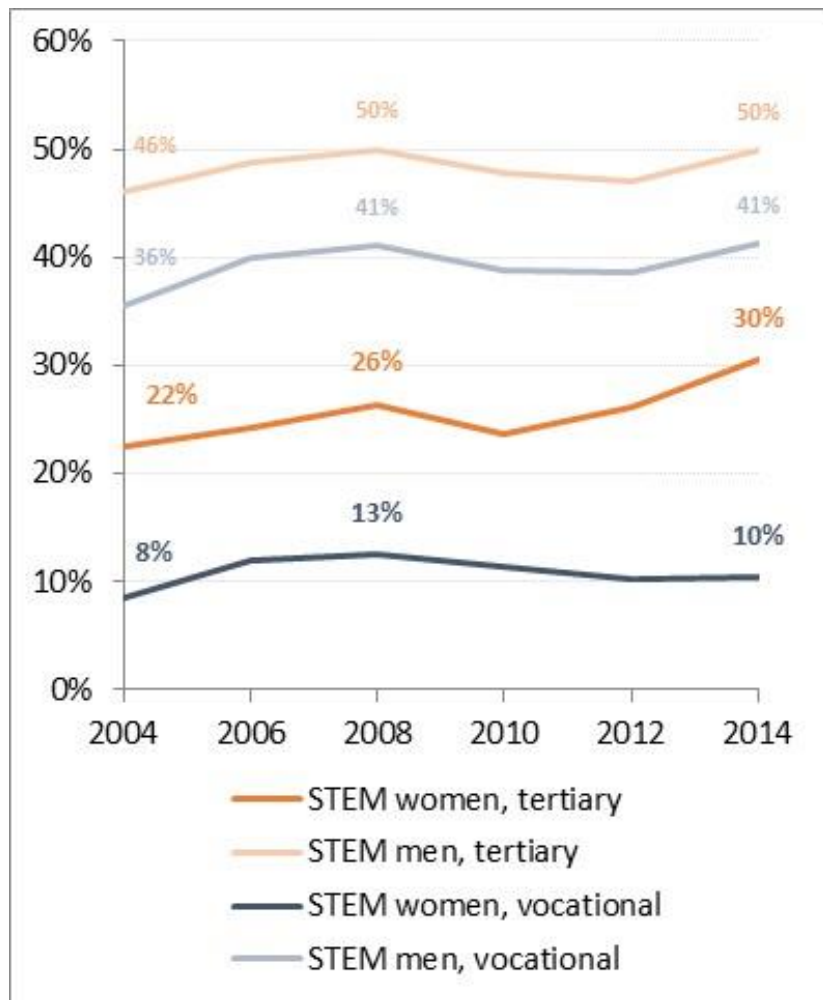


Source: OECD, PISA, EIGE's calculations based on 2015 microdata.

Boys are more confident in their digital skills, 2015



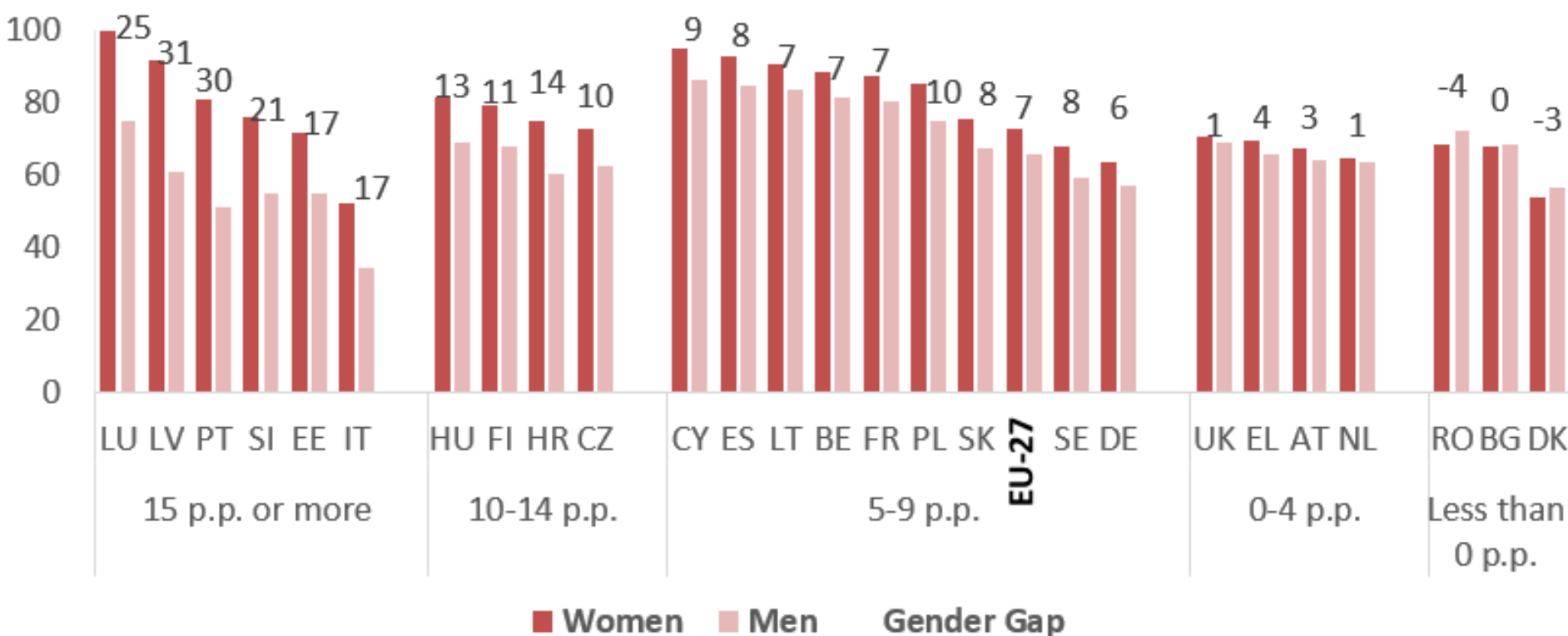
Working in an occupation matching educational qualification



Source: EU-LFS, EIGE's calculations based on 2004 to 2014 microdata.

Women still need higher qualifications to be in ICT jobs

Share of ICT service managers, professionals and technicians with high education, 2016



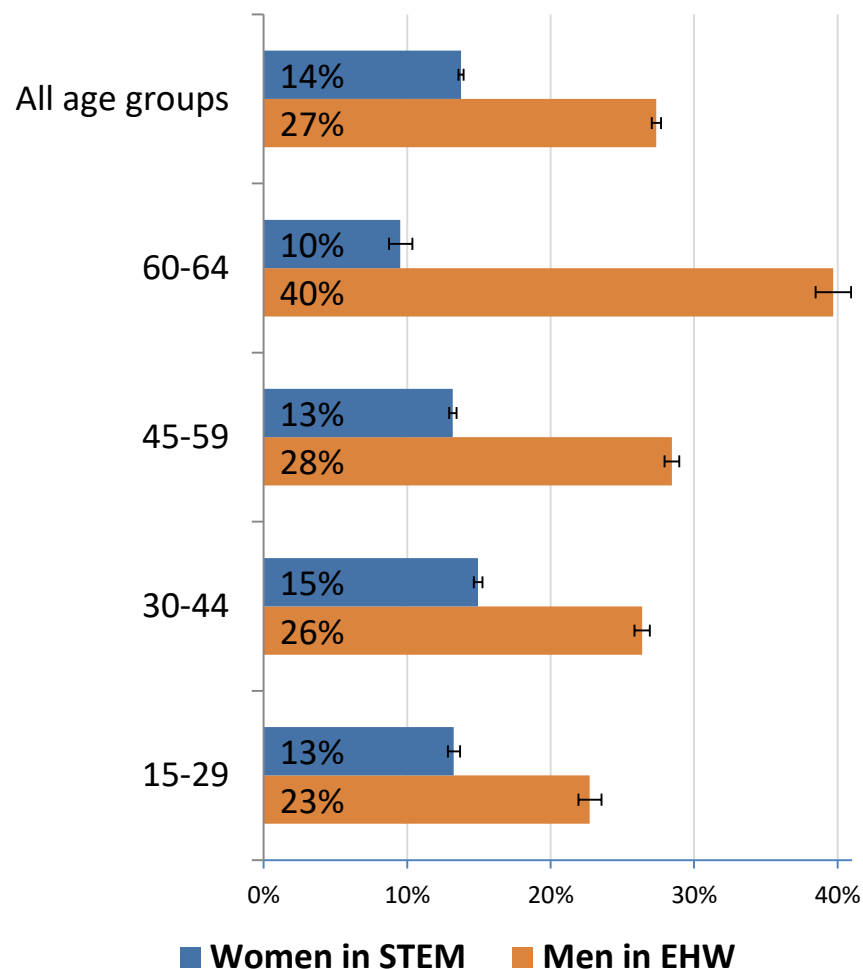
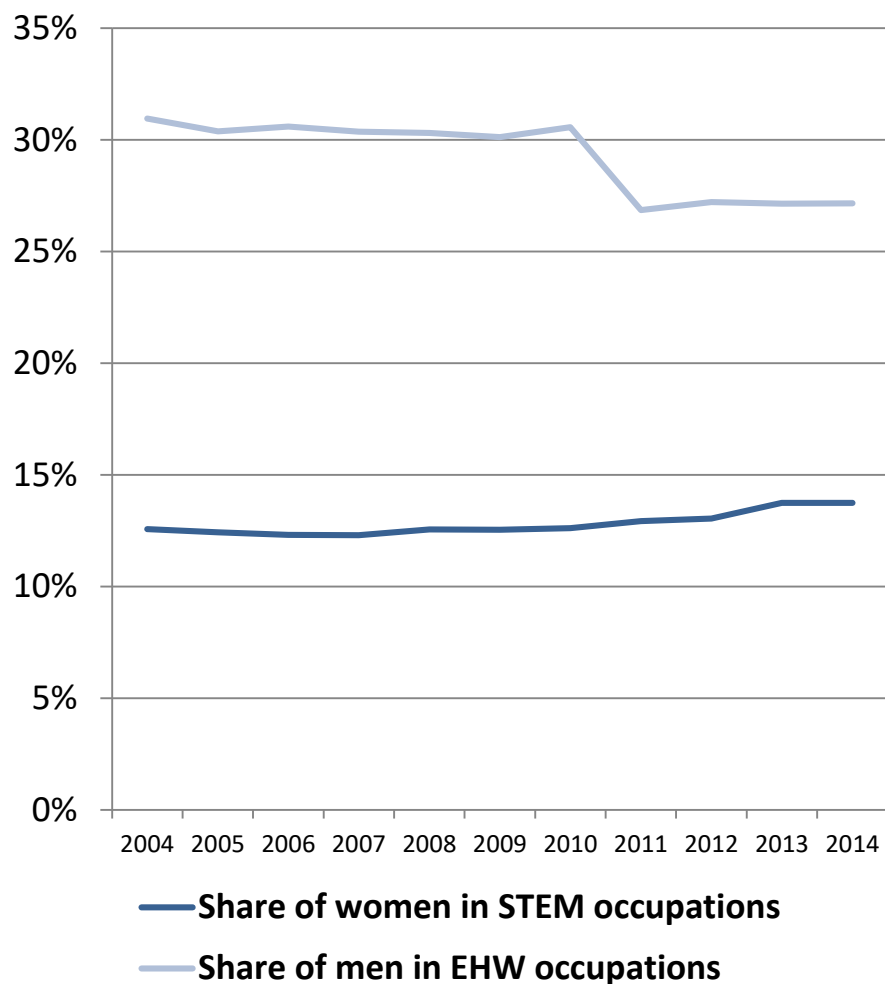
Other occupations of STEM graduates, 2014 (%)

	Tertiary		Vocational	
	women	men	women	men
Teaching professionals	21	12		
Business and administration professionals	11	11		
Business and administration associate professionals	10	10	4	4
Production and specialized services managers	5	13		
Sales workers	7	4	20	7
Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers			11	10
Personal Services Workers			10	
Drivers and Mobile Plant Operators		3		15
Labourers in Mining, Construction, Manufacturing and Transport			4	10

Other occupations of EHW graduates, 2014 (%)

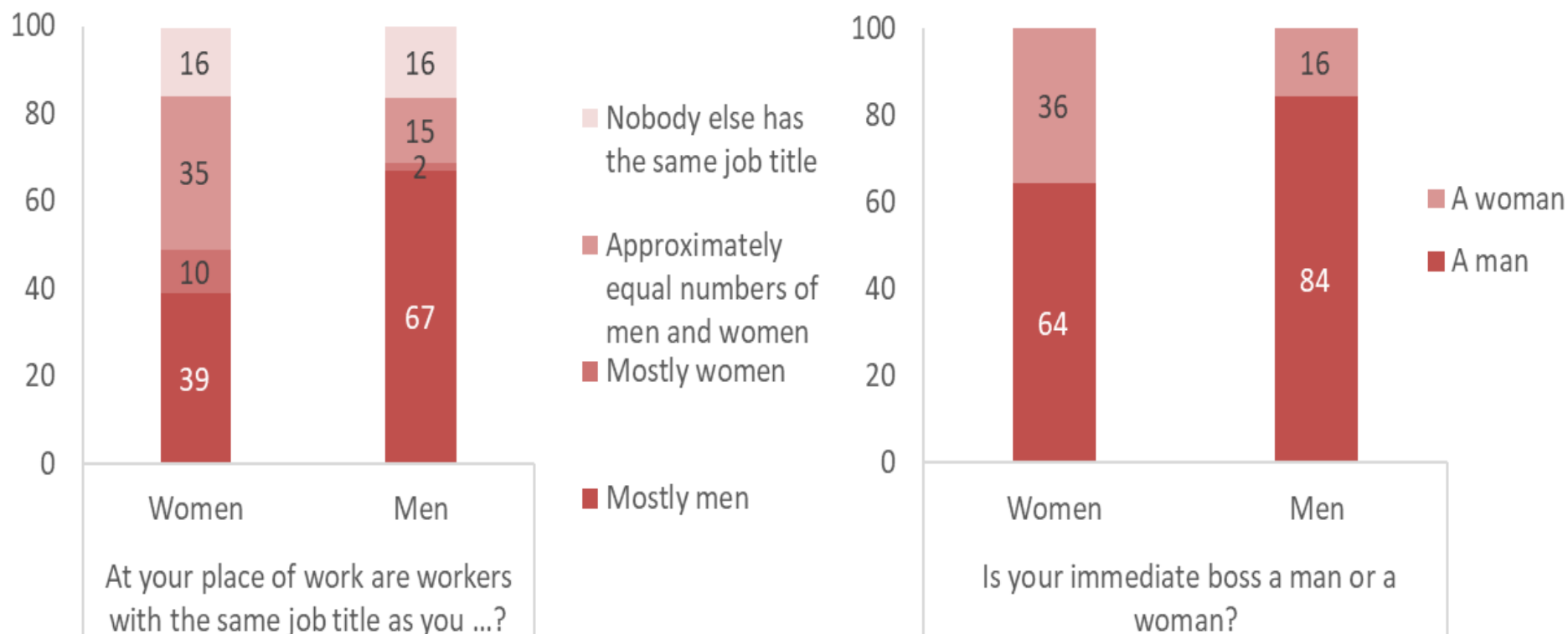
	Tertiary		Vocational	
	Men	Women	Men	Women
Legal, social, cultural and related associate professionals	15	23	24	24
Legal, social and cultural professionals	12	17	3	
Science and engineering professionals	8			
Business and administration associate professionals	6	7	7	5
Sales workers	4	8	7	15
Cleaners and helpers		3		15

Gender segregation in STEM and EHW occupations



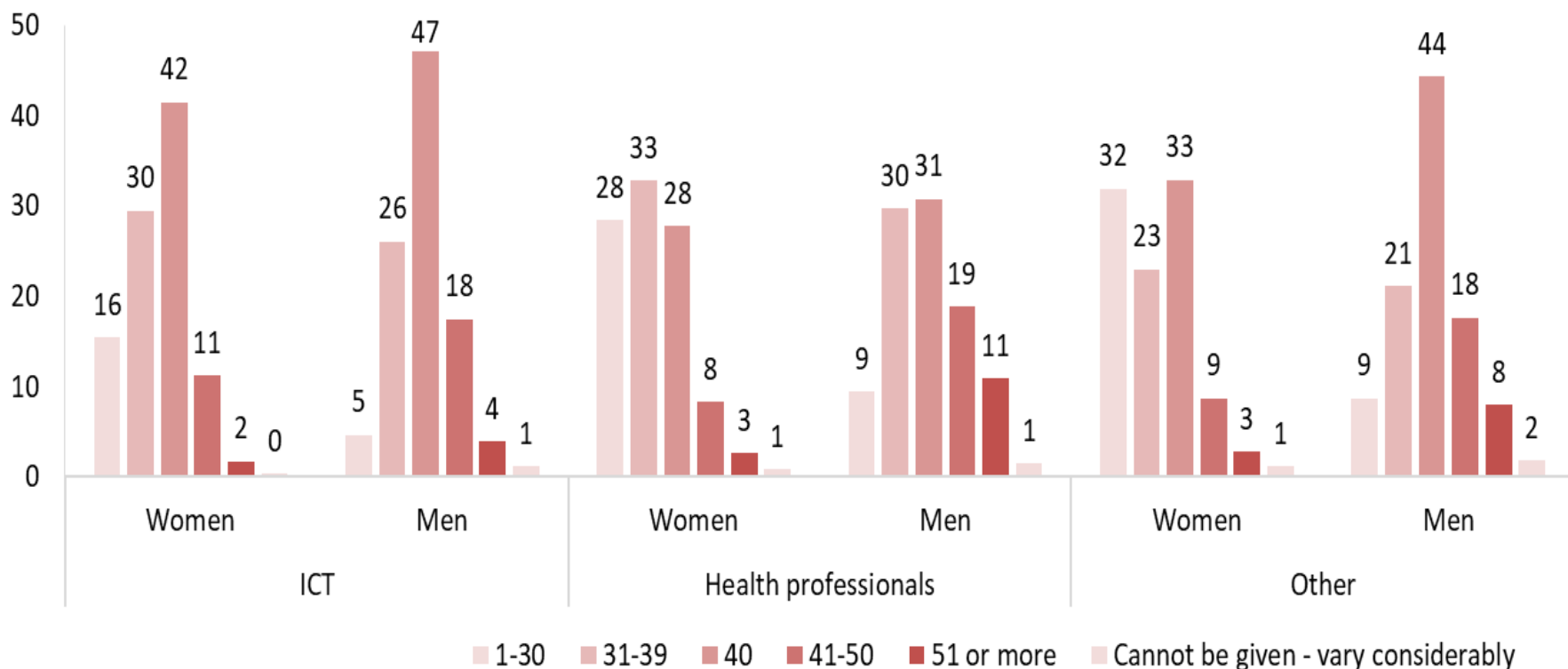
In ICT women tend to work in more gender diverse environments

Gender composition of ICT specialists' workplace in the EU-28 (% , 2015):

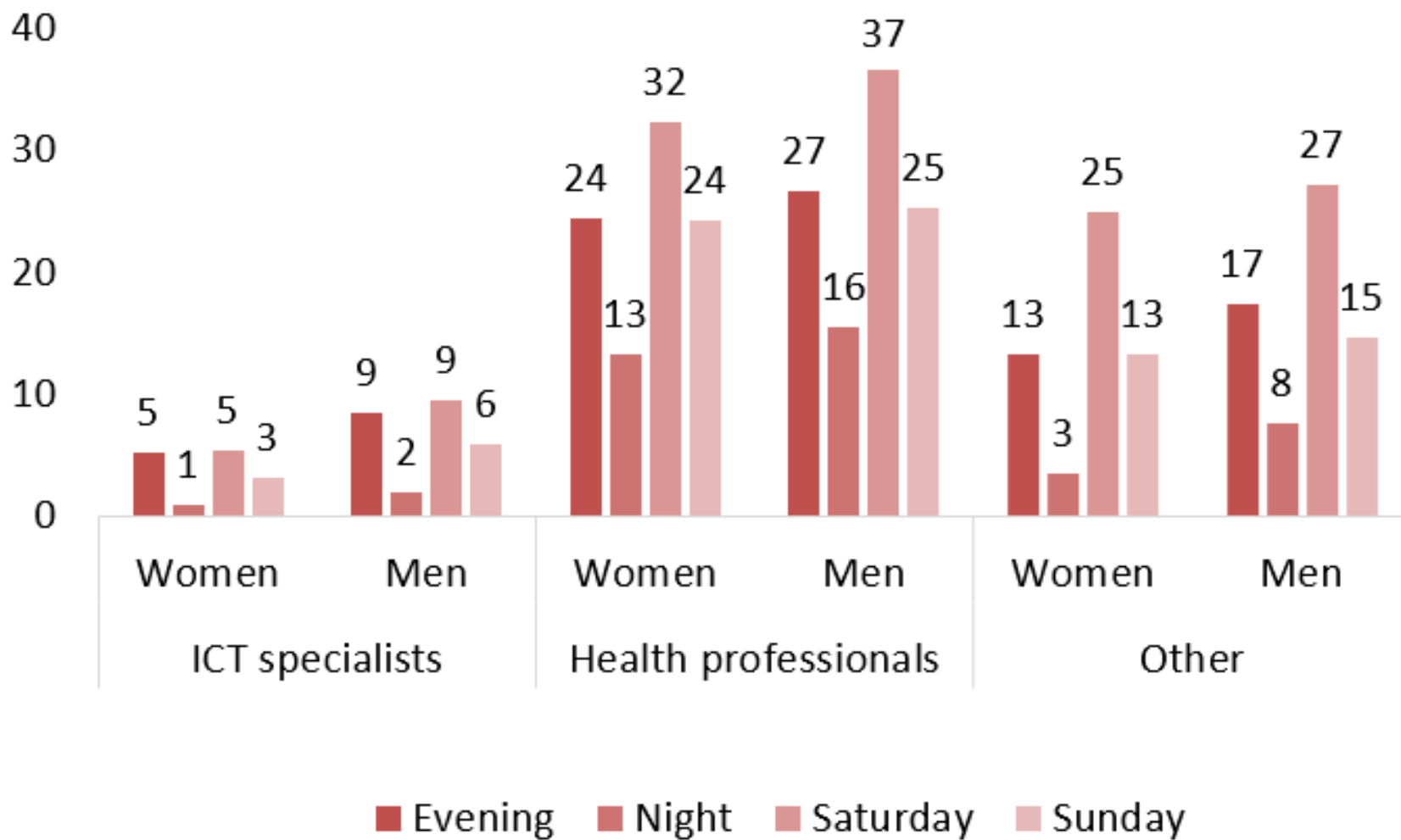


Work-life balance: longer working hours in ICT jobs

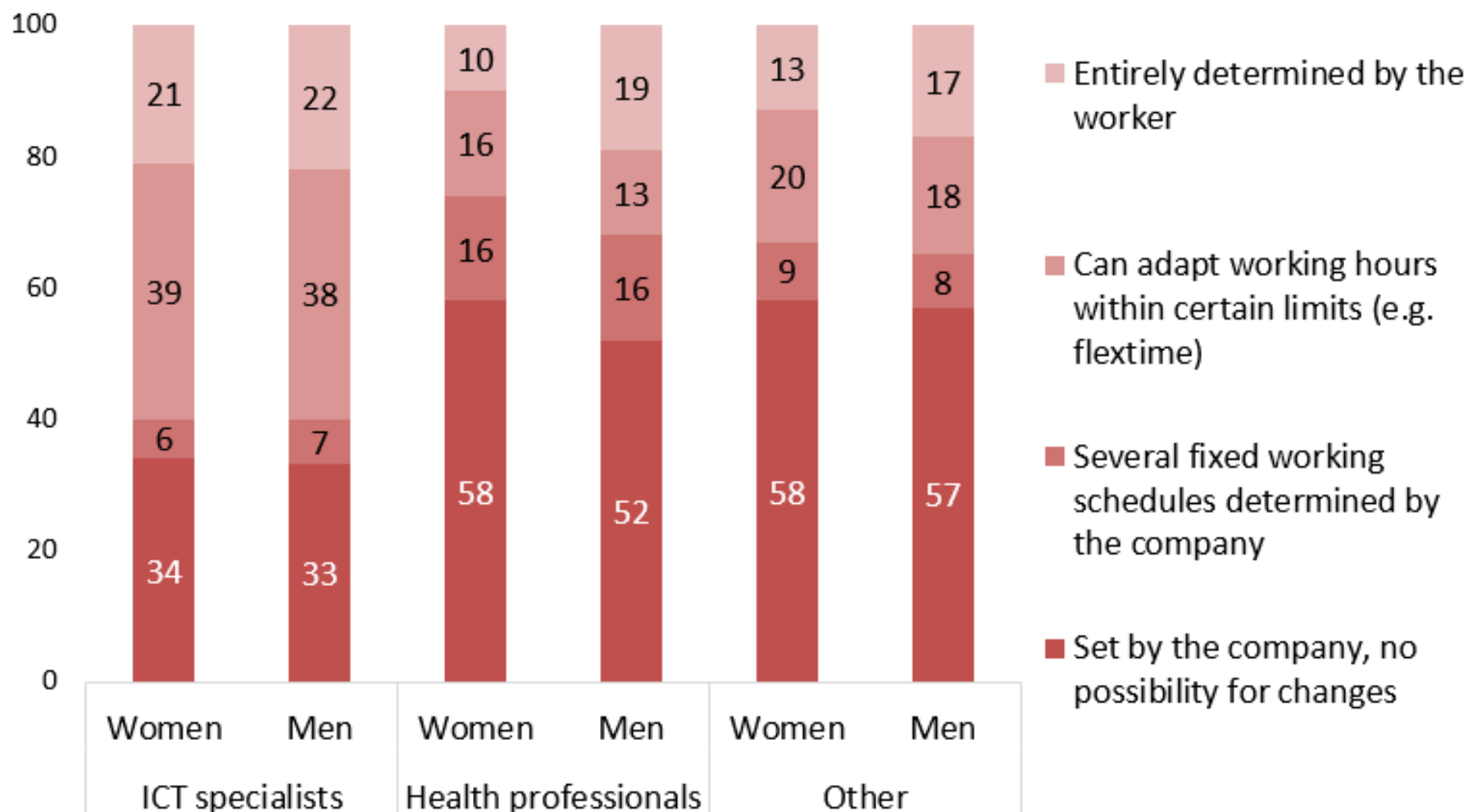
Average weekly working hours in the EU, by occupational group and gender (20-64, %, 2016):



... but atypical hours are less common



...and ICT specialists have more flexibility in working hours



Gender pay-gap in gender segregated sectors

Gender pay gap is higher in EHW sector compared to STEM sector

The largest gender pay gap in STEM (>20 %) exists in EE and IE

The largest gender pay gap in EHW (>20%) is found in BG, CZ, EE, HR, SK, FI, UK

Large gender pay biases in health sector in almost all countries

In manufacturing and ICT men earn more than women in all MS

Managers and professionals in STEM earn more than their counterparts in EHW

Workers in elementary occupations in EHW earn much less than their counterparts in STEM

Recommendations

- Gender stereotypes
- Innovative approaches to career choices
- Enriching STEM with arts and humanities (STEAM)
- Policies targeting gender gaps in digital skills and self-confidence in digital skills
- Professional development of digital competences for teachers and educators

Recommendations

- Active labour market policies and lifelong learning
- Work-life balance provisions
- Better gender balance in decision-making
- More balanced sharing of total work and care hours among women and men

European Institute for Gender Equality



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