

# Gender segregation in education, training and the labour market:

Emerging findings from  
the Beijing Platform for Action report

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**STEM Gender Equality Congress**

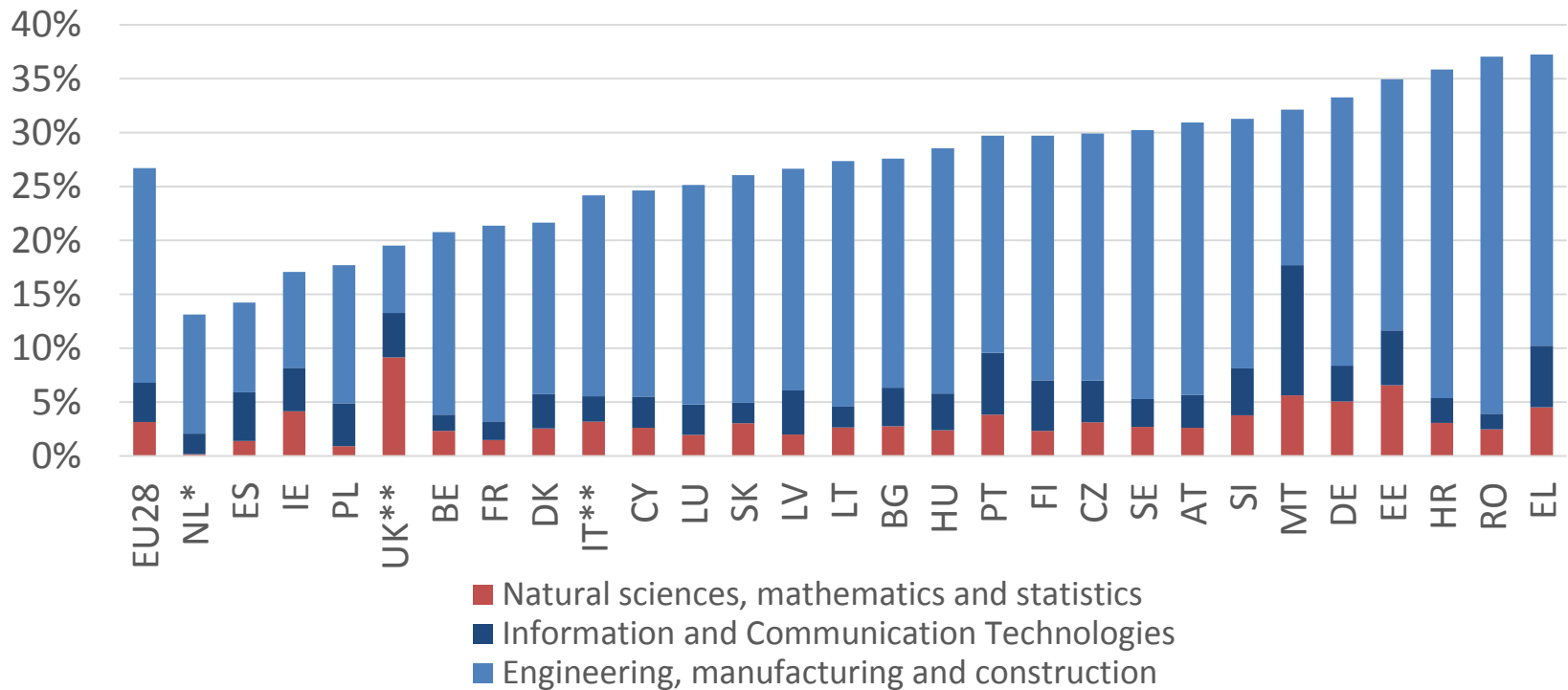
European Parliament, March 8-9



# QUICK BACKGROUND

# STEM: share of graduates

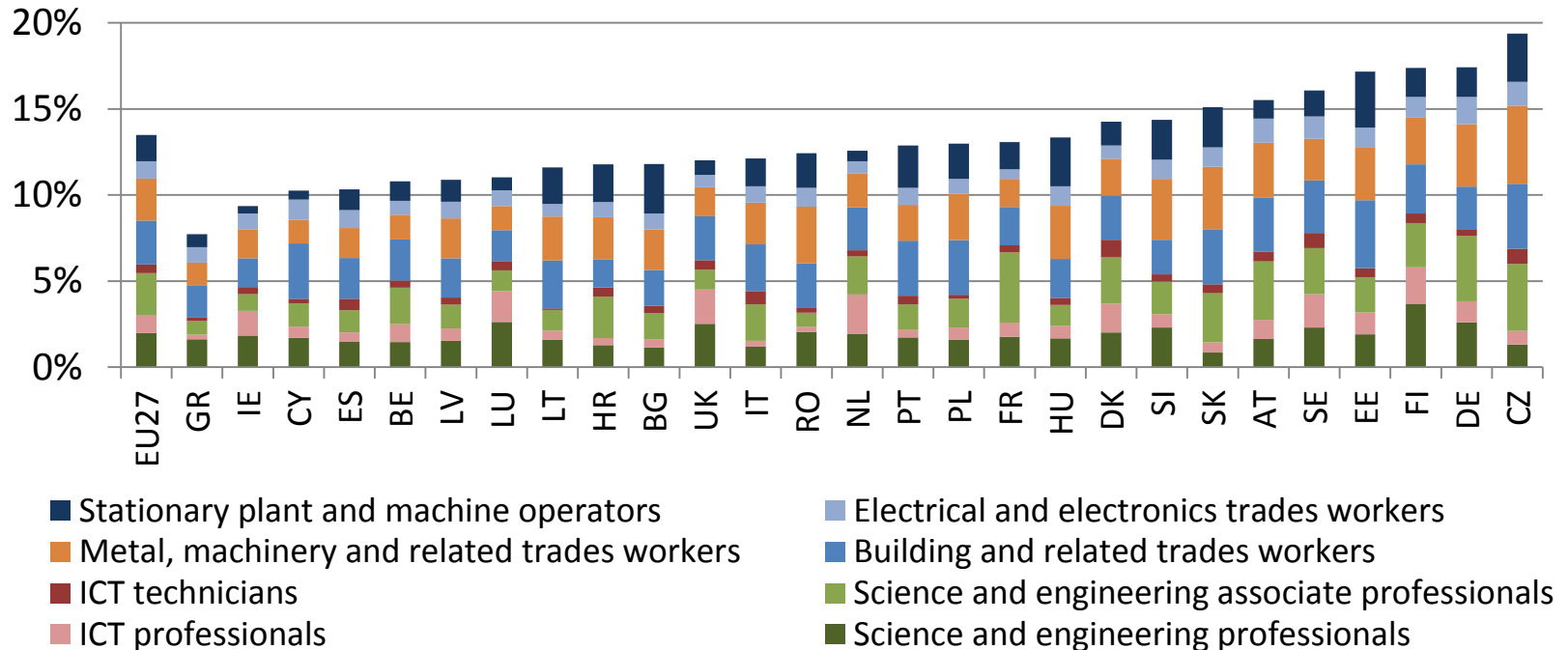
2013-2014



- Engineering, manufacturing and construction with 20% of all graduates is the largest study field of STEM disciplines.

# Main STEM occupations

- Science and engineering (associate) professionals refer to the largest STEM occupation type - in 23 EU countries, from 22% to 45% of all STEM employees



- In RO and HU – metal, machinery and related trades workers is the largest occupation; in Bulgaria – stationary plant and machine workers; in Cyprus – building and related workers.



# 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**
- An insufficient supply of STEM skills and a low participation rate of women in STEM studies are perceived as barriers, which could impede a job rich recovery and growth of economy

EIGE's report

# **MONITORING BEIJING PLATFORM FOR ACTION (BPFA)**



# Beijing Platform for Action

- To support better informed policy-making at EU and Member State levels, EIGE provides support to the Presidencies of the Council of the EU.
- EIGE's reports assess progress in gender equality in the critical areas of concern of the BPfA chosen by the Presidencies.
- Gender segregation in education, training and the labour market – the topic chosen by the forthcoming Estonian Presidency of the Council.

# BPfA areas of concern

	Current BPfA Indicators
<b>B. Education and Training of Women</b>	<ul style="list-style-type: none"> <li>• Proportion of female graduates and male graduates of all graduates in mathematics, the sciences and technical disciplines (tertiary education);</li> <li>• Proportion of female/male ISCED 5a-graduates of all ISCED 5a-graduates and proportion of female/male PhD graduates of all PhD graduates by broad field of study and total</li> </ul>
<b>F. Women and the economy</b>	Proportion of women and men among tertiary graduates of all graduates (ISCED levels 5 and 6) in natural sciences and technologies at the EU and Member State level
<b>K. Women and the environment</b>	Gender segregation: gender pay gap
<b>L. The girl child</b>	<ul style="list-style-type: none"> <li>• Proportion of girl students in tertiary education in the field of science, mathematics and computing and in the field of teacher training and education science</li> <li>• 15-year-old girls and boys: performance in mathematics &amp; science</li> </ul>



# Rationale

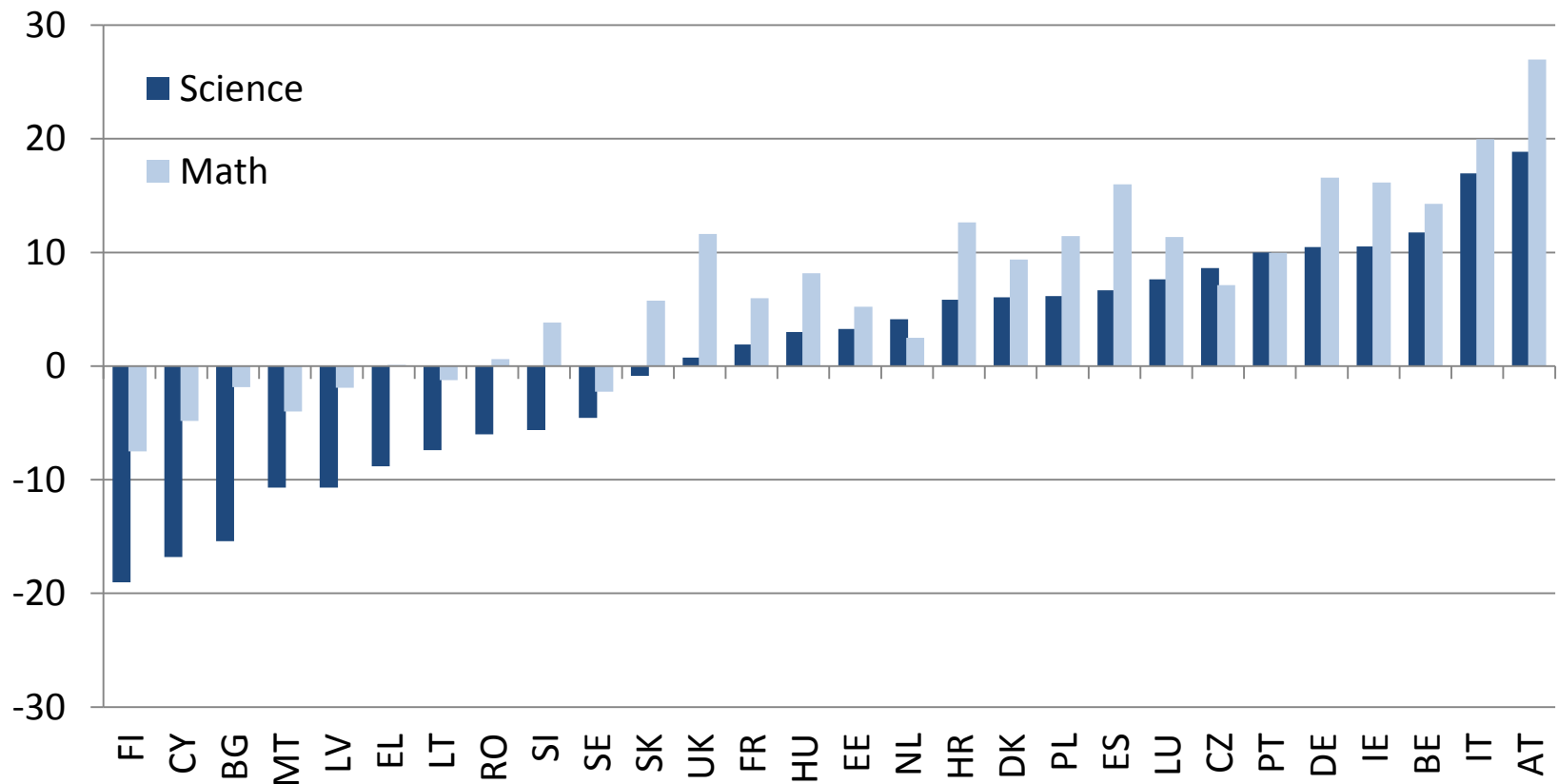
- Gender segregation in education and training → labour market stratification → results in:
  - supporting gender stereotypes; narrowing life-choices and employment options; gender pay gap, etc.
  - A causal link.
- Addressing: participation of women in STEM; participation of men in education, health and welfare (EWH).
- Policy context: a need of active intervention guided by evidence.

# **EMERGING FINDINGS: STEM**



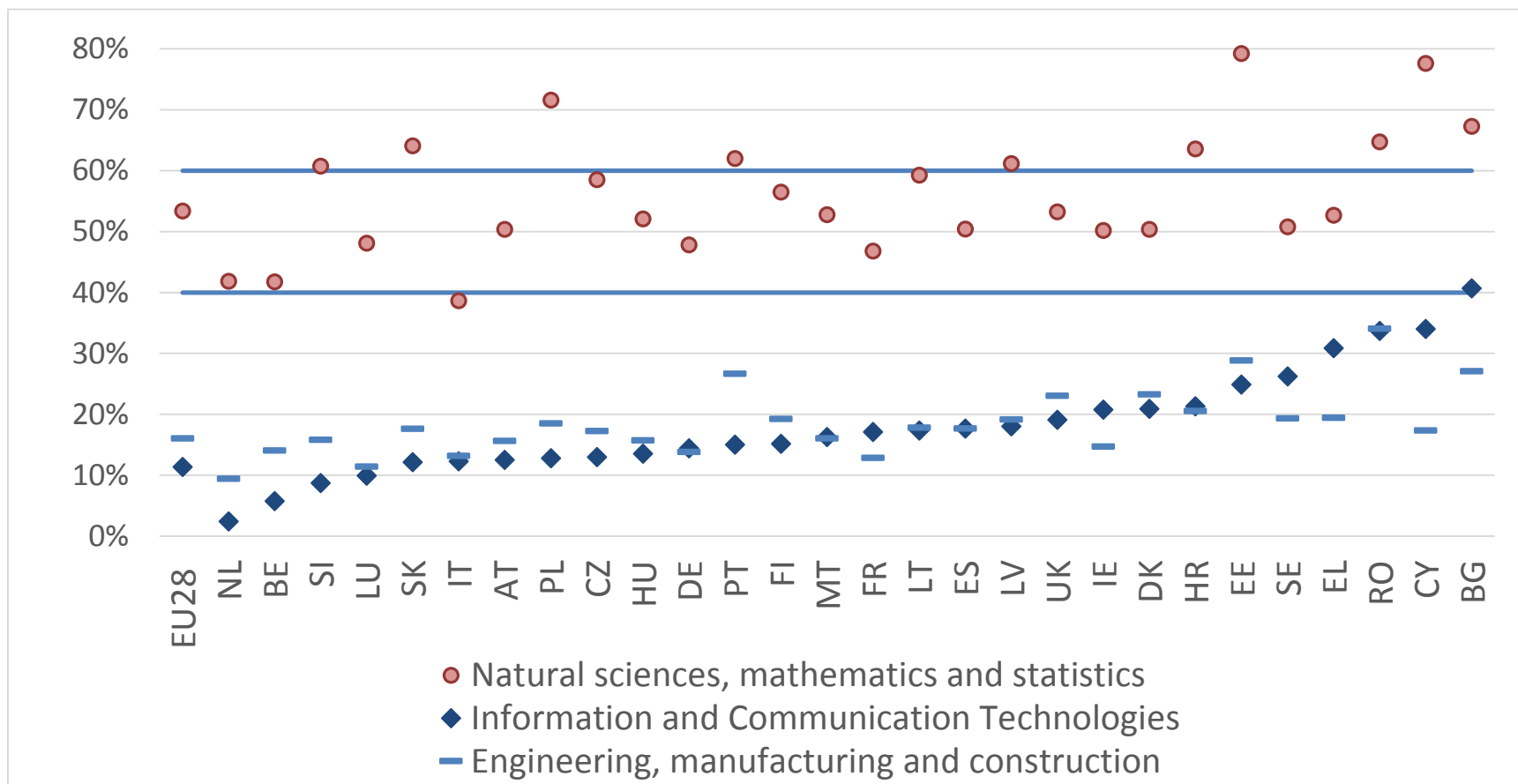
# Achievements: science and mathematics

- Gender difference in 15 year olds' mean achievement in science and mathematics: 2015



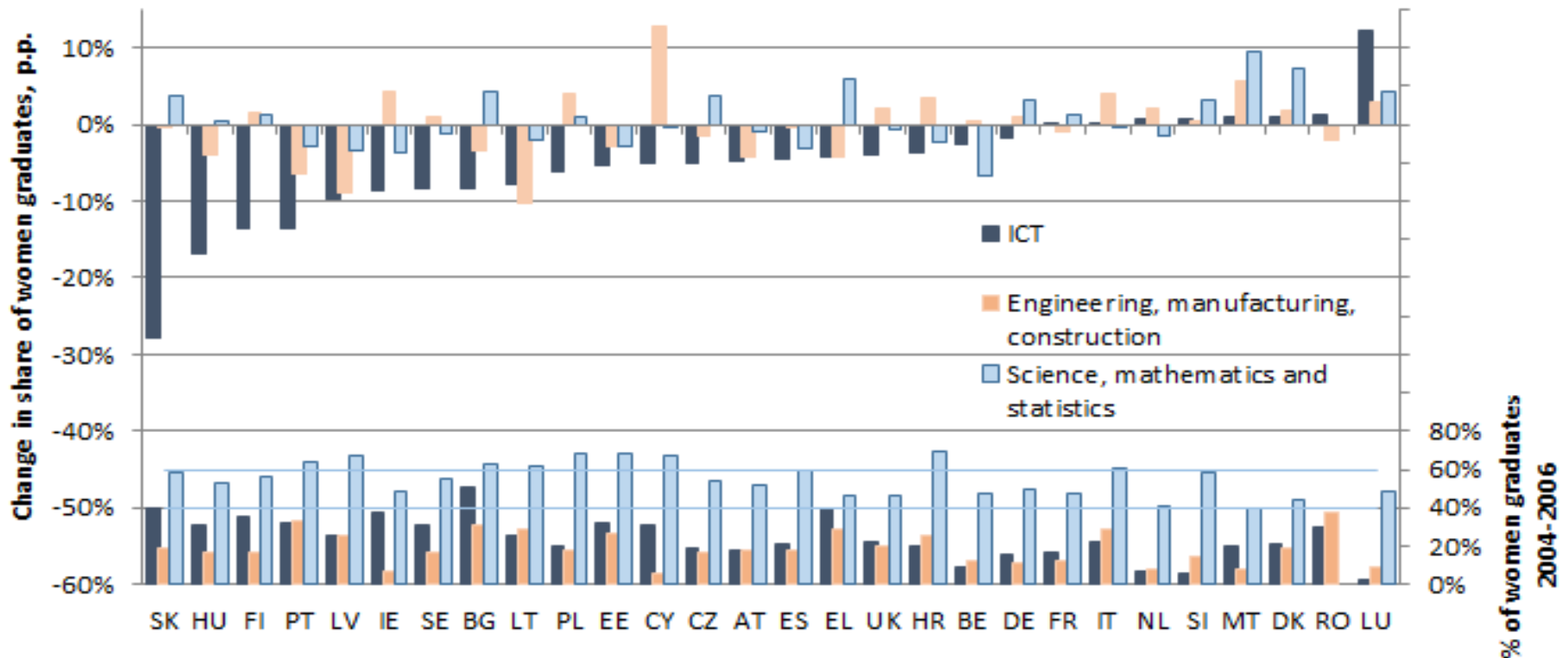
# Women's share in STEM

2013-2015



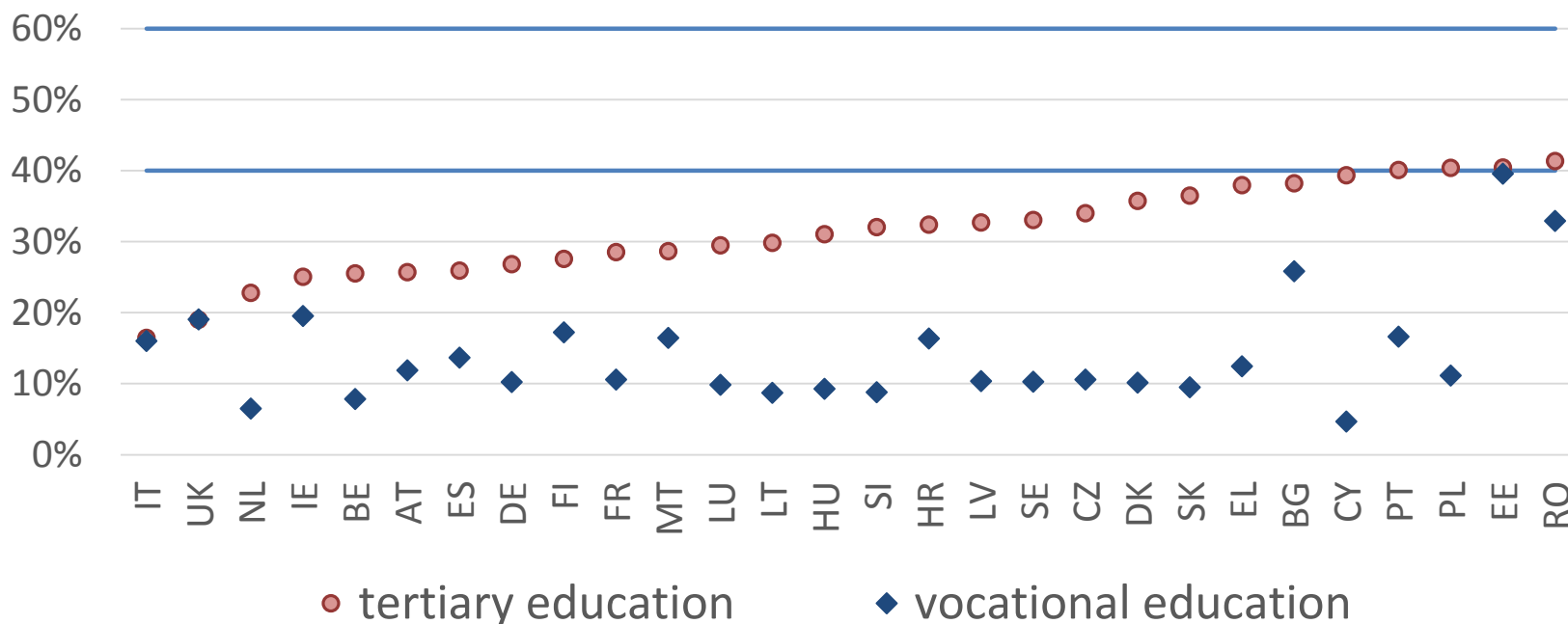
# Changes over time

- Progress stalled or eroding: 2004 to 2014



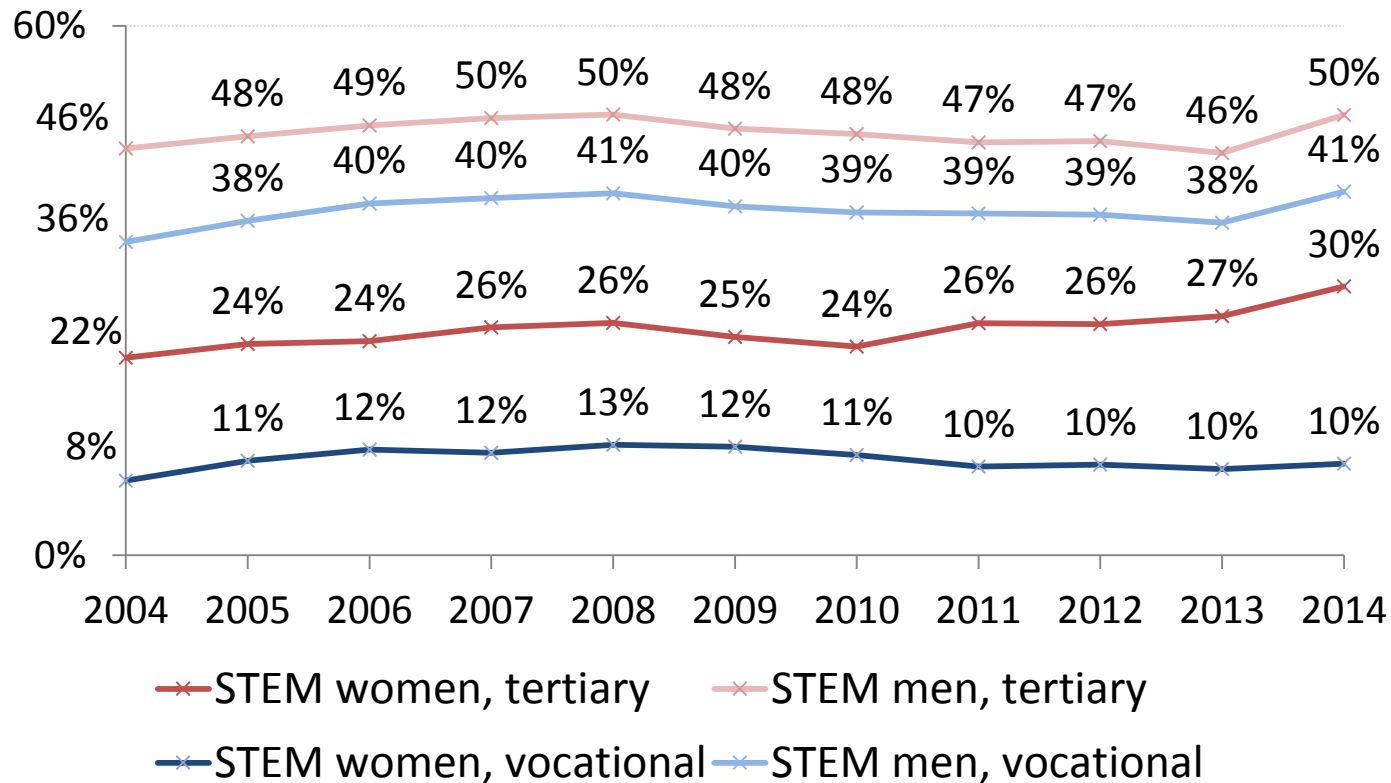
# Segregation by education level

- Gender segregation in STEM is much worse within vocational education than within tertiary education level (2013-2015);
- About 55% of all students are enrolled in vocational education programmes.



# Graduates working in STEM field

- No smooth transition to the labour market, especially for women with vocational education level



# If leaving STEM: occupations of STEM graduates

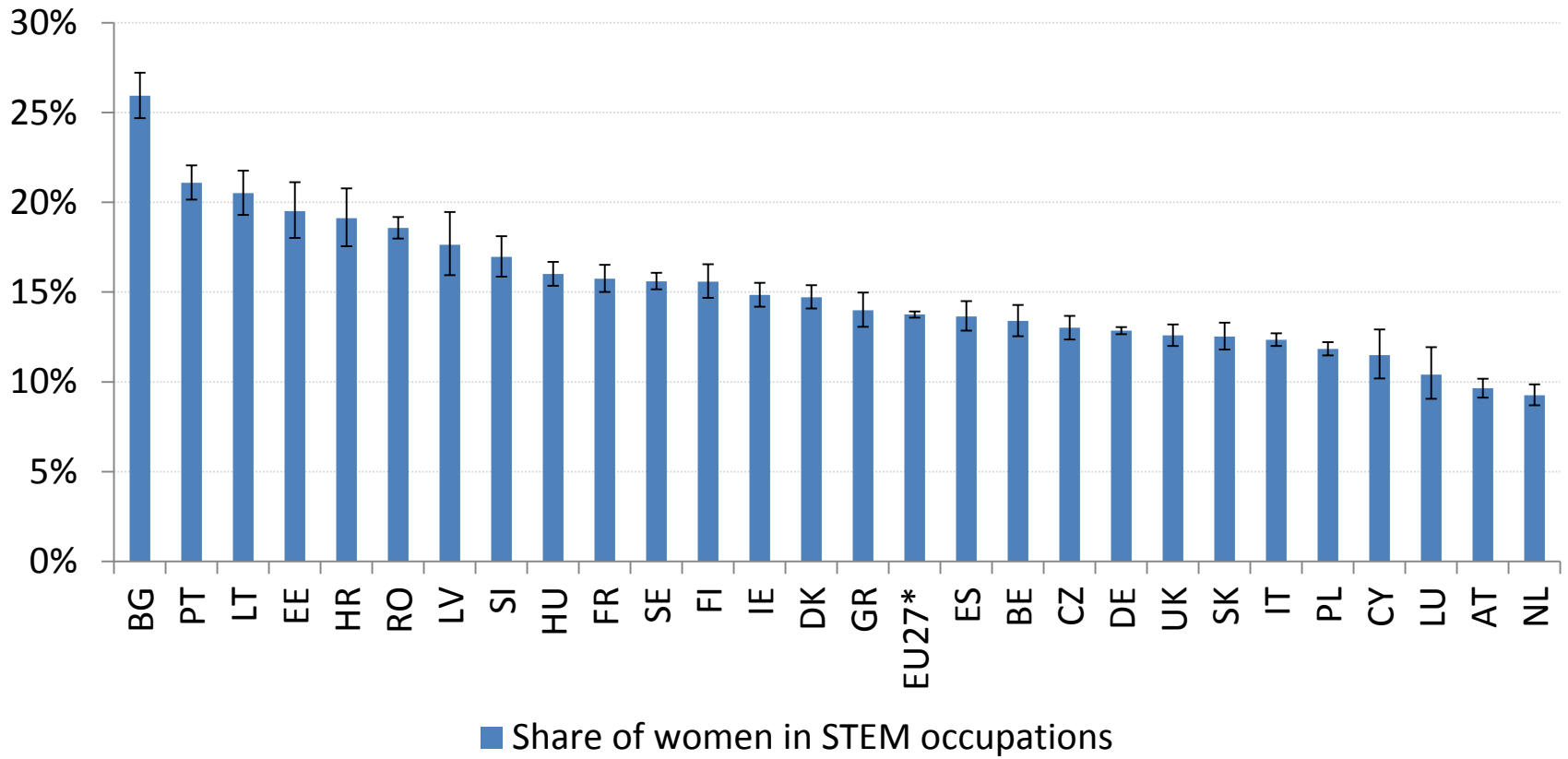
EU, 2014

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



# Share of women in STEM occupations

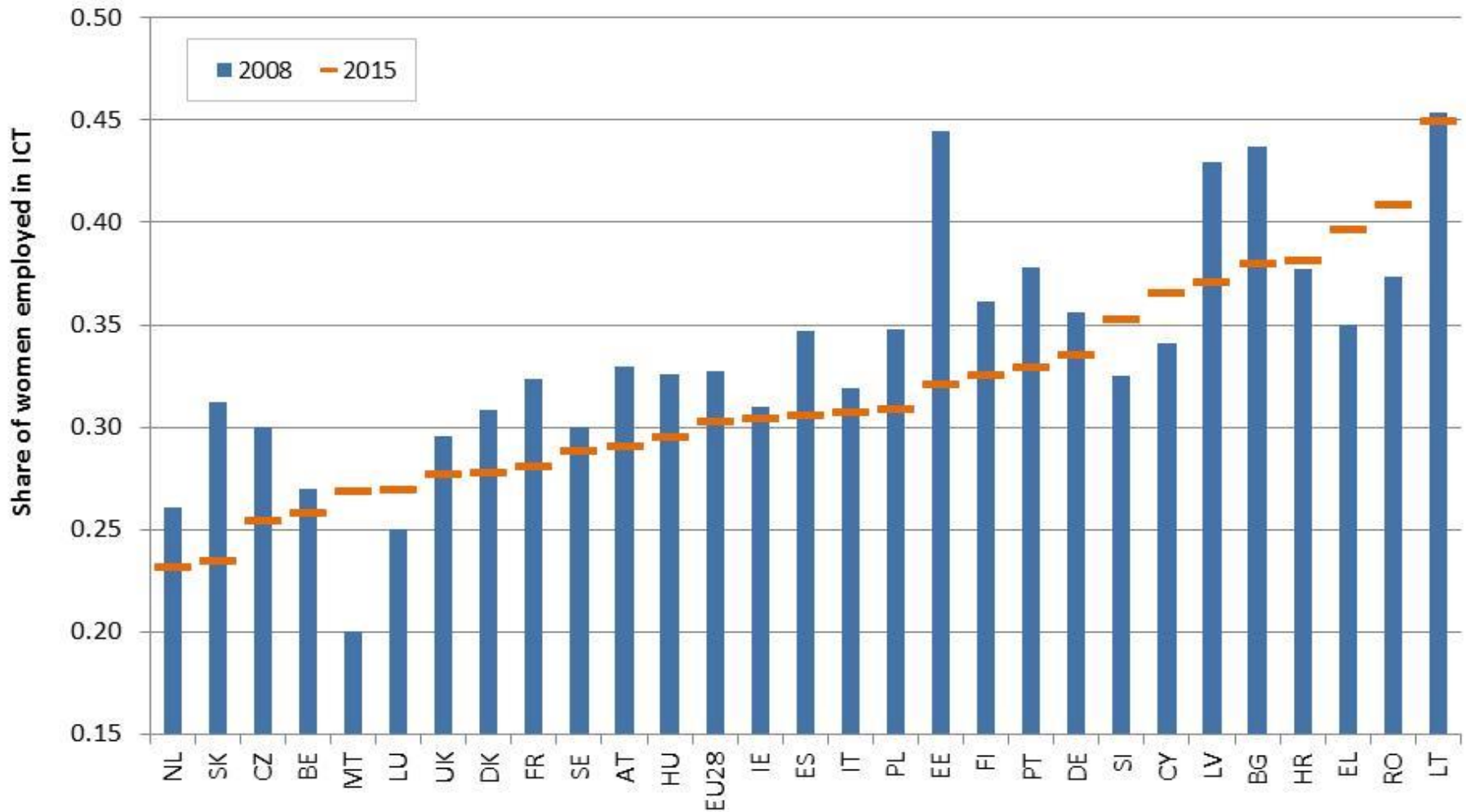
2013-2014



Essentially progress recorded since 2004 with 1 p.p. at the EU level.



# Share of women employed in ICT, 2008-2015

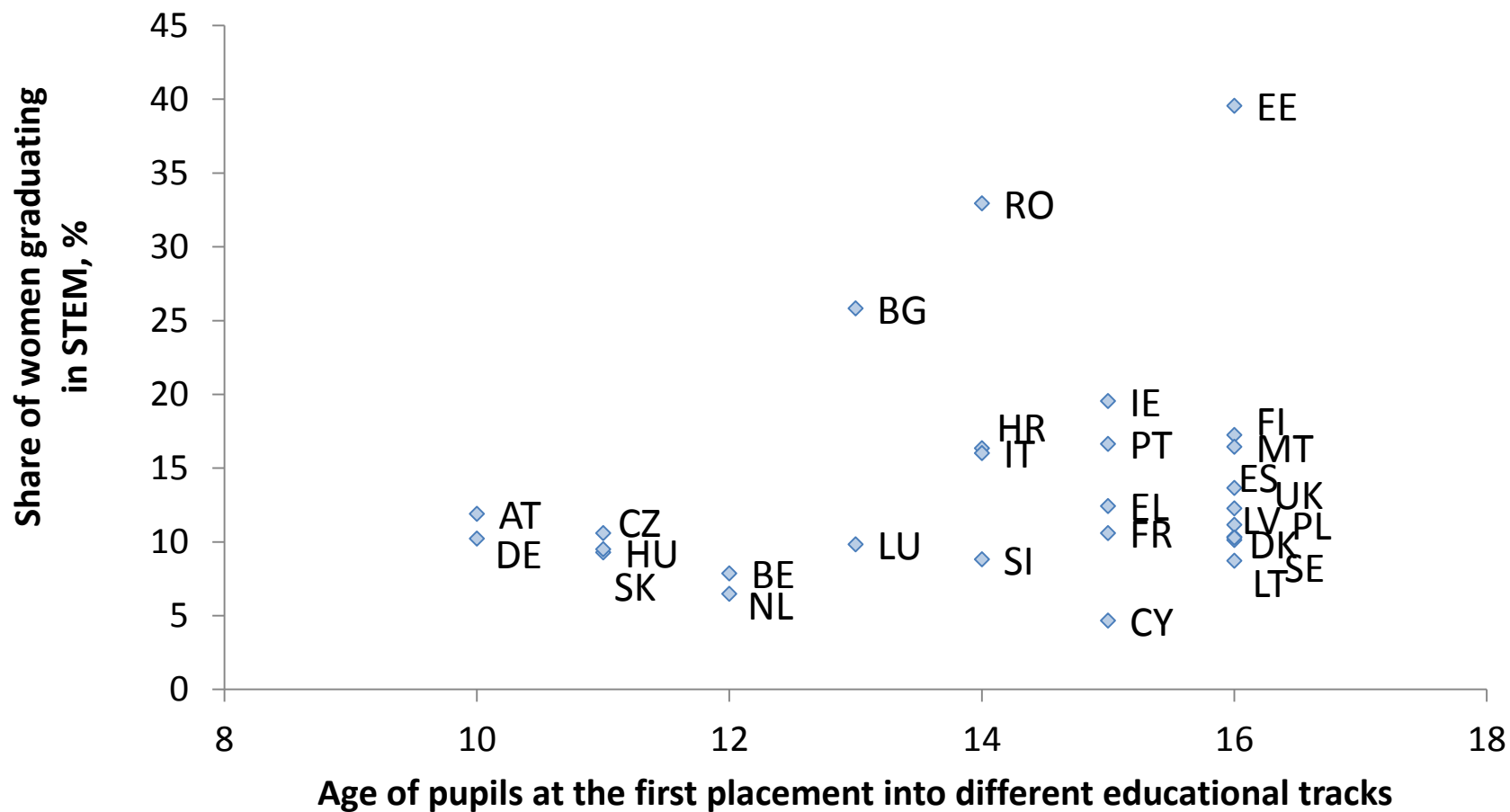


# **SELECTED INFLUENCES**

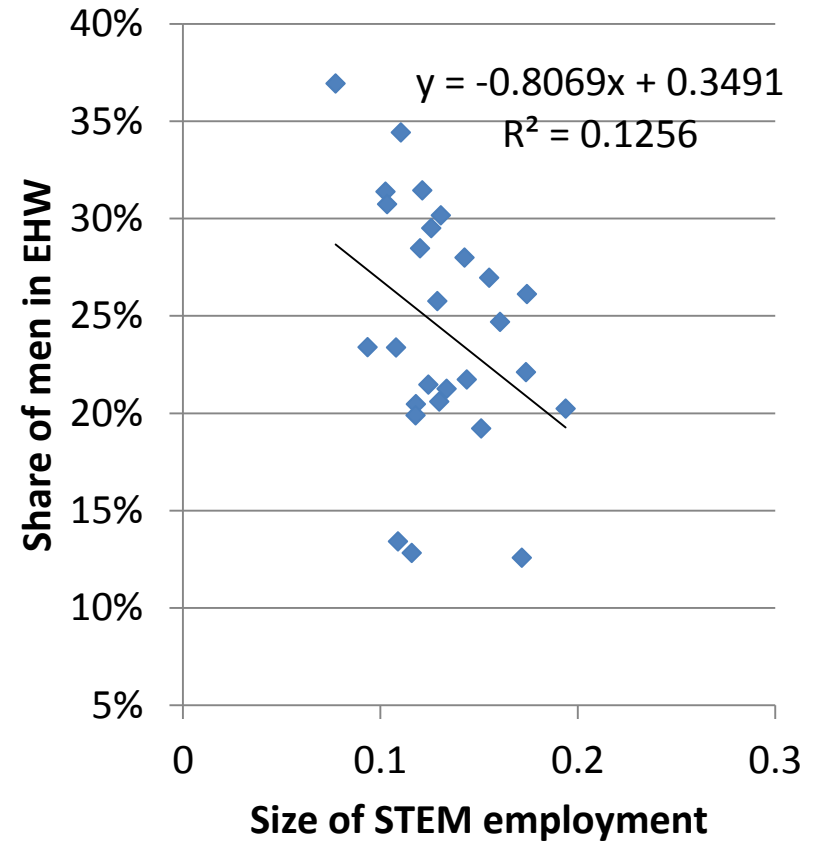
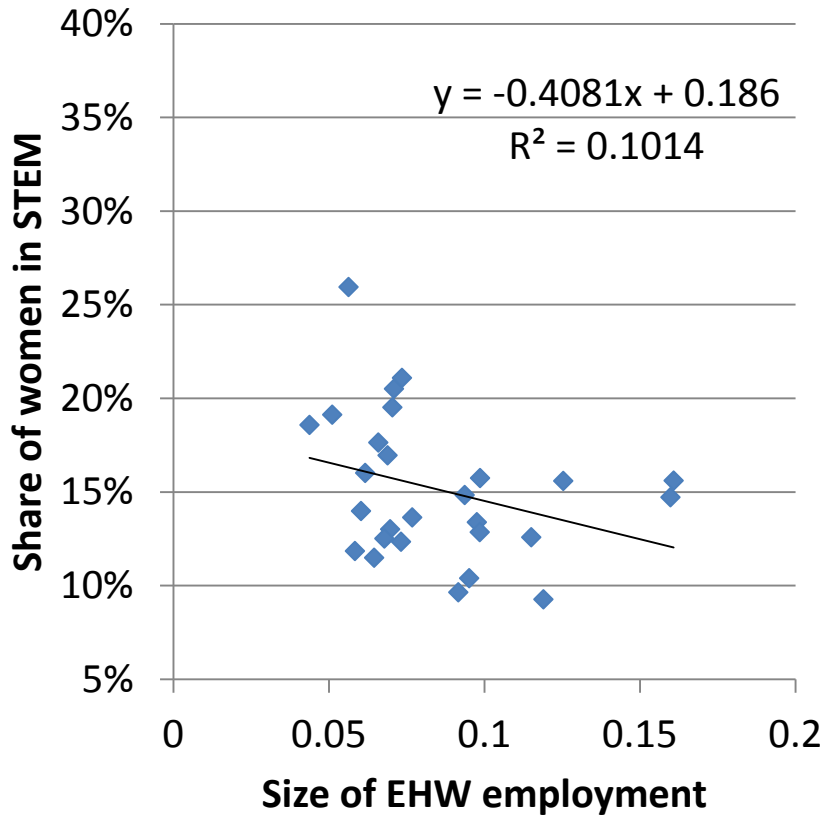
## Barriers to the participation of women in STEM

- Stereotypes, social norms and cultural practices
- Negative image of STEM
- Welfare policies
- STEM fields not considered as family-friendly
- Family background and the absence of women role models
- Male dominated culture
- Biased recruitment, appraisal and promotion procedures
- Limited access to networks, information, funding or institutional support, biased research evaluation procedures, low recognition in the field

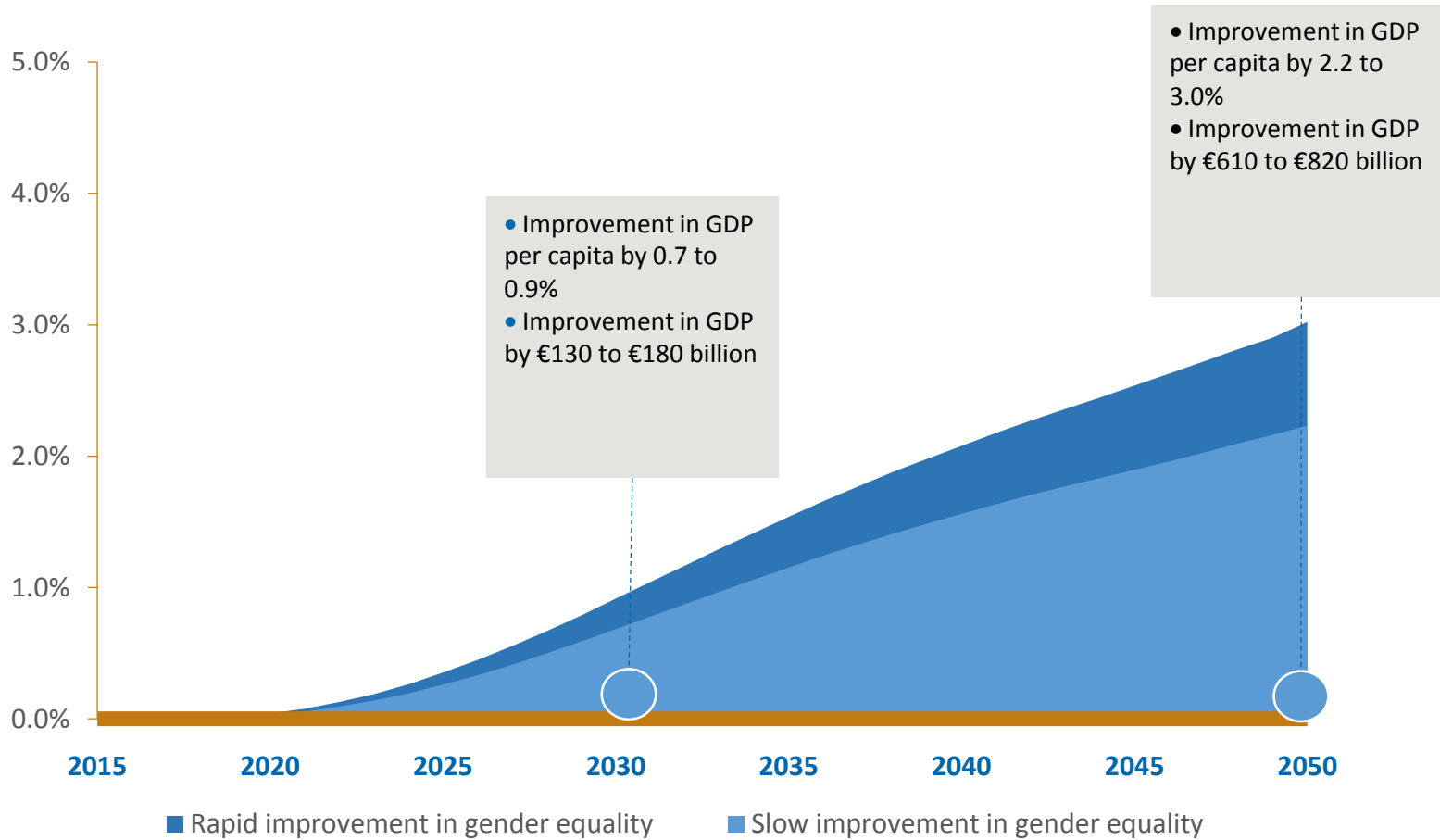
# Design of education systems matters



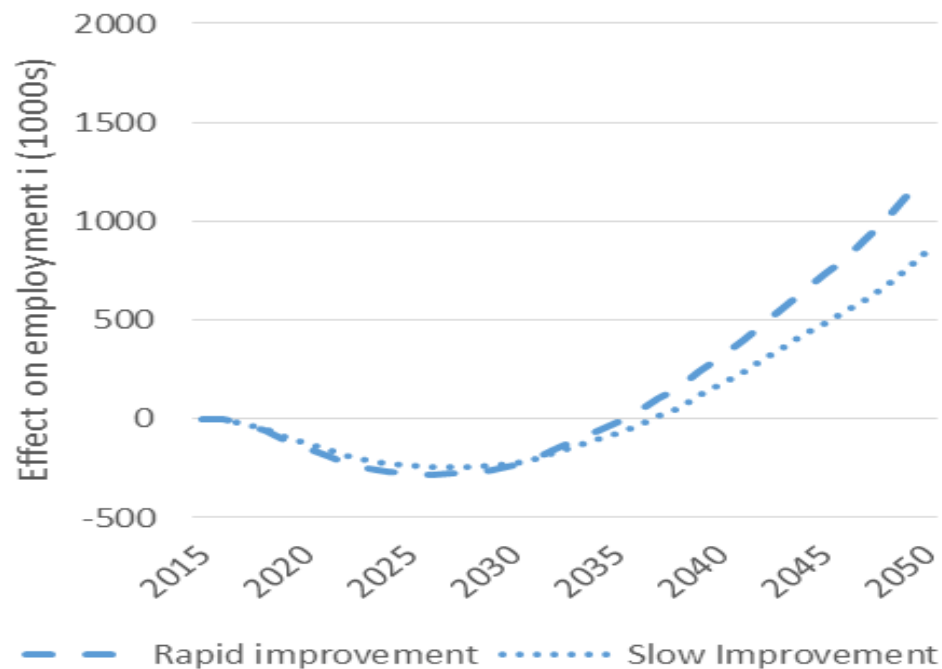
# Structure and size of labour markets



# Effect of narrowing the gender gap in STEM on GDP per capita



# Effect of narrowing the gender gap in STEM on employment



1.2 million  
jobs



## Conclusions

Gender segregation in education and the labour market is associated with **creating and perpetuating gender inequalities** in and beyond the labour market

Segregation **narrows employment choices** and **reinforces gender stereotypes**

The objective of gender equality policy should not necessarily be a homogenisation of the labour market by gender, although **gendered roles shall be equally valued and remunerated**

# Conclusions

**Gender inequalities** are **dragging down** women's economic opportunities and affecting the **entire EU economy**

Leading to **shortfall** in terms of achieving inclusive and sustainable growth

To **reach** the goal of **smart, sustainable and inclusive economic growth**, the **EU must** improve existing and introduce further **gender equality measures**

# Thank you!



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