Graduate ICT skill development in 4 European countries: Gender-related findings from three international surveys

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Research questions

- Education and Youth employment within the knowledge society.
- “We define the knowledge economy as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence” (Powell & Snellman, 2004).
- Knowledge society is linked to significant development of new information and communication technologies (ICT) in highly competitive markets, and higher education is a key stakeholder in this development (OECD, 2019).
- To what degree are graduates’ ICT skills valued at work over years?
- Compare access to employment for women and men in 4 European countries based on the skills acquired during higher education and the first years of work.

Data

- **Cheers** (Careers after Higher Education: A European Research survey): Covering 11 European countries and Japon, 35,000 graduates from 1995 responded four years after graduation (Teichler, 2007).

- **Reflex** (Research into Employment and Professional Flexibility): In 15 countries 40,000 graduates from 2000 interviewed five years after graduation (Allen & Van der Velden, 2007).

- **Eurograduate Pilot Study:** covering around 16,000 graduates, surveyed in 2018, one and five years after graduating in eight countries (Meng et al., 2020).

Data

- The originality of these three surveys is that they compare the skills acquired by students in their studies with those required in their jobs using graduate self-assessment.

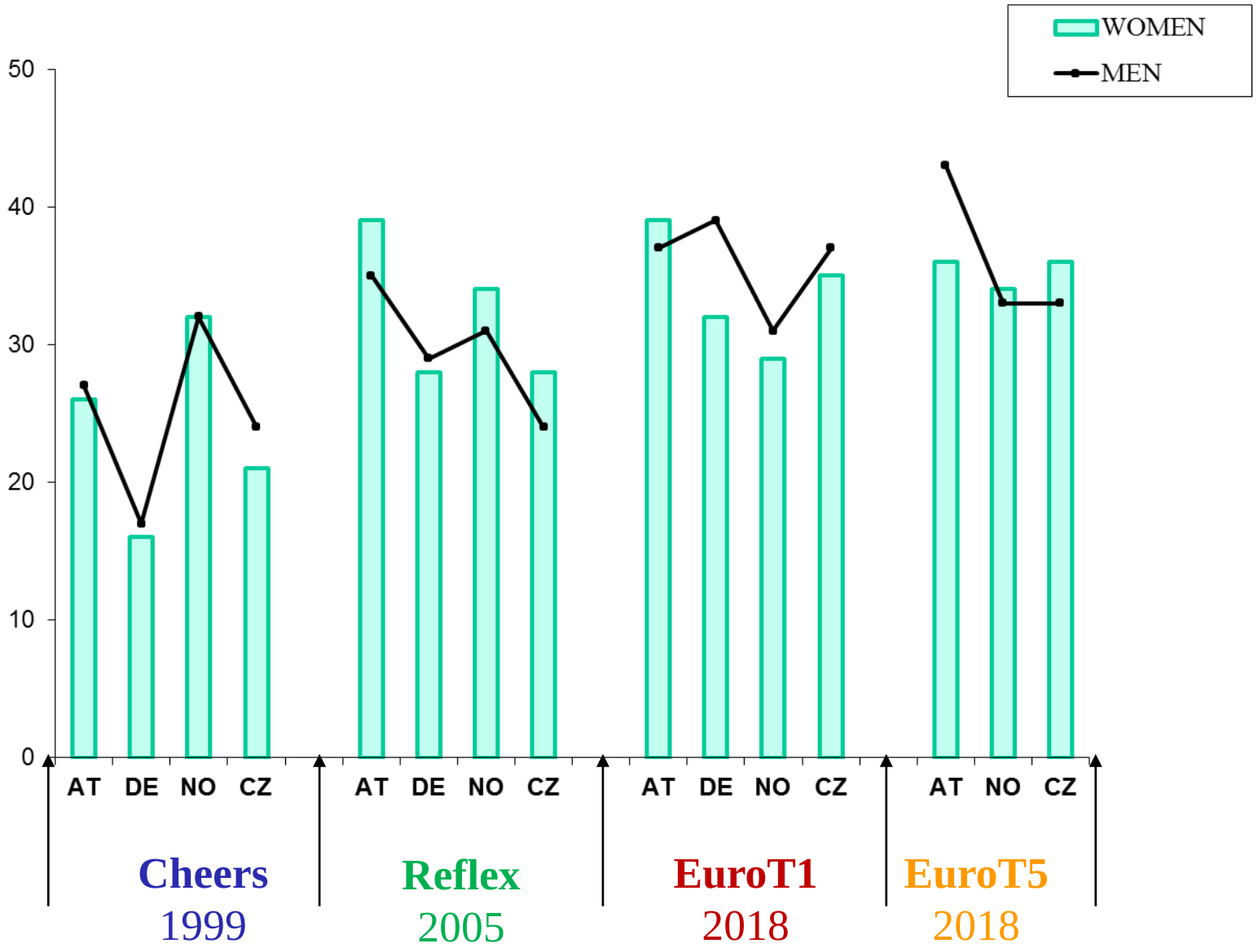
- The paper looks over time at skill development in the countries common to the three surveys: Austria, Czech Republic, Germany, Norway

Context

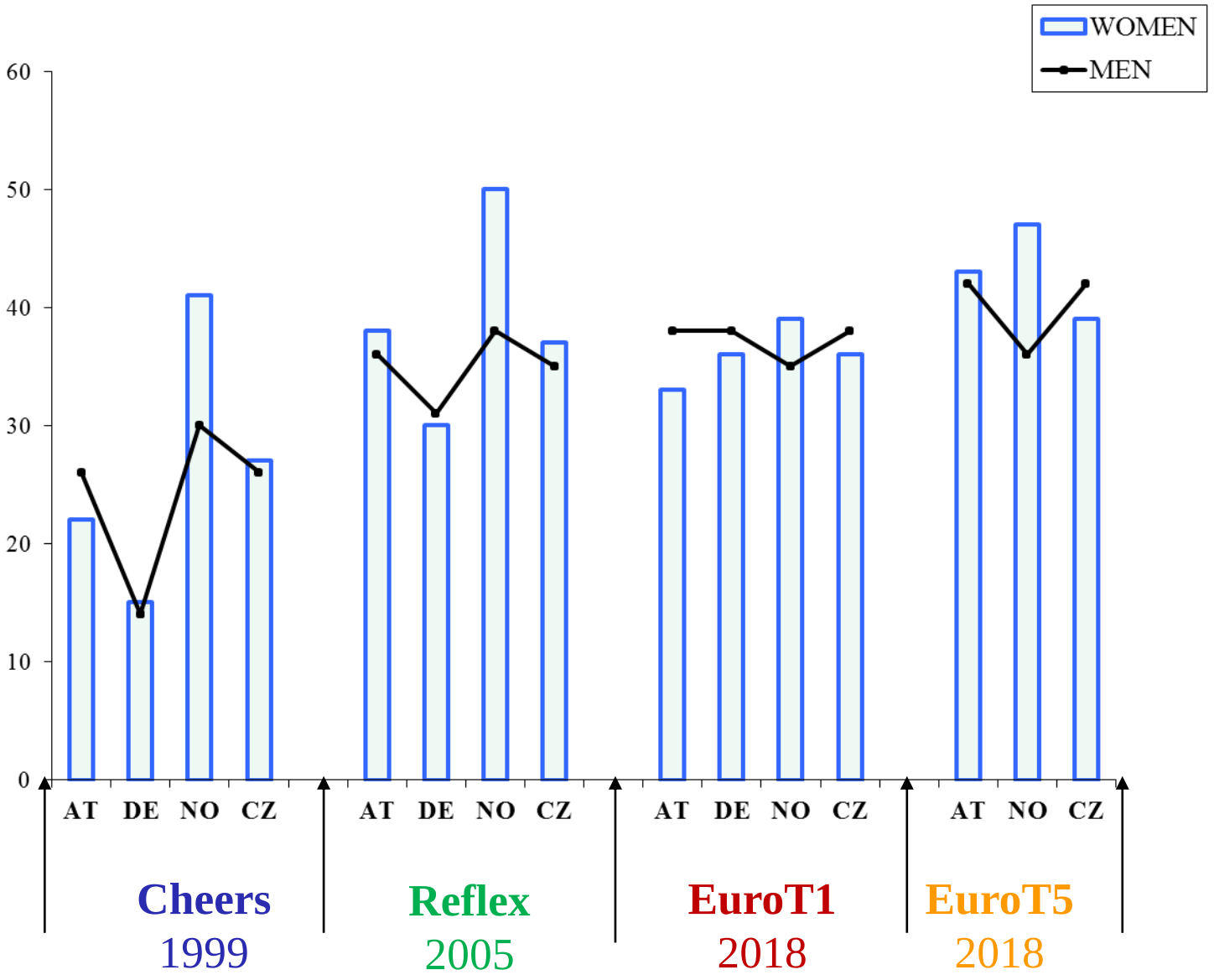
- In 2020, 52% of 25-34 year-old women held a tertiary degree compared to 39% of men on average across OECD countries.
- Science, Technology, Engineering and Mathematics (STEM): the predominant field of study for male graduates.

OECD indicators 2020 in %	AT	DE	NO	CZ	OECD
Tertiary education (25-34)					
Women	46	37	**60**	**40**	52
Men	37	33	42	26	39
STEM (tertiary graduates field)					
Women	16	19	10	16	13
Men	**50**	**54**	36	42	39
Unemployment rate (25-34 tertiary graduates)					
Women	4	3	3	3	7
Men	3	**4**	**5**	2	6

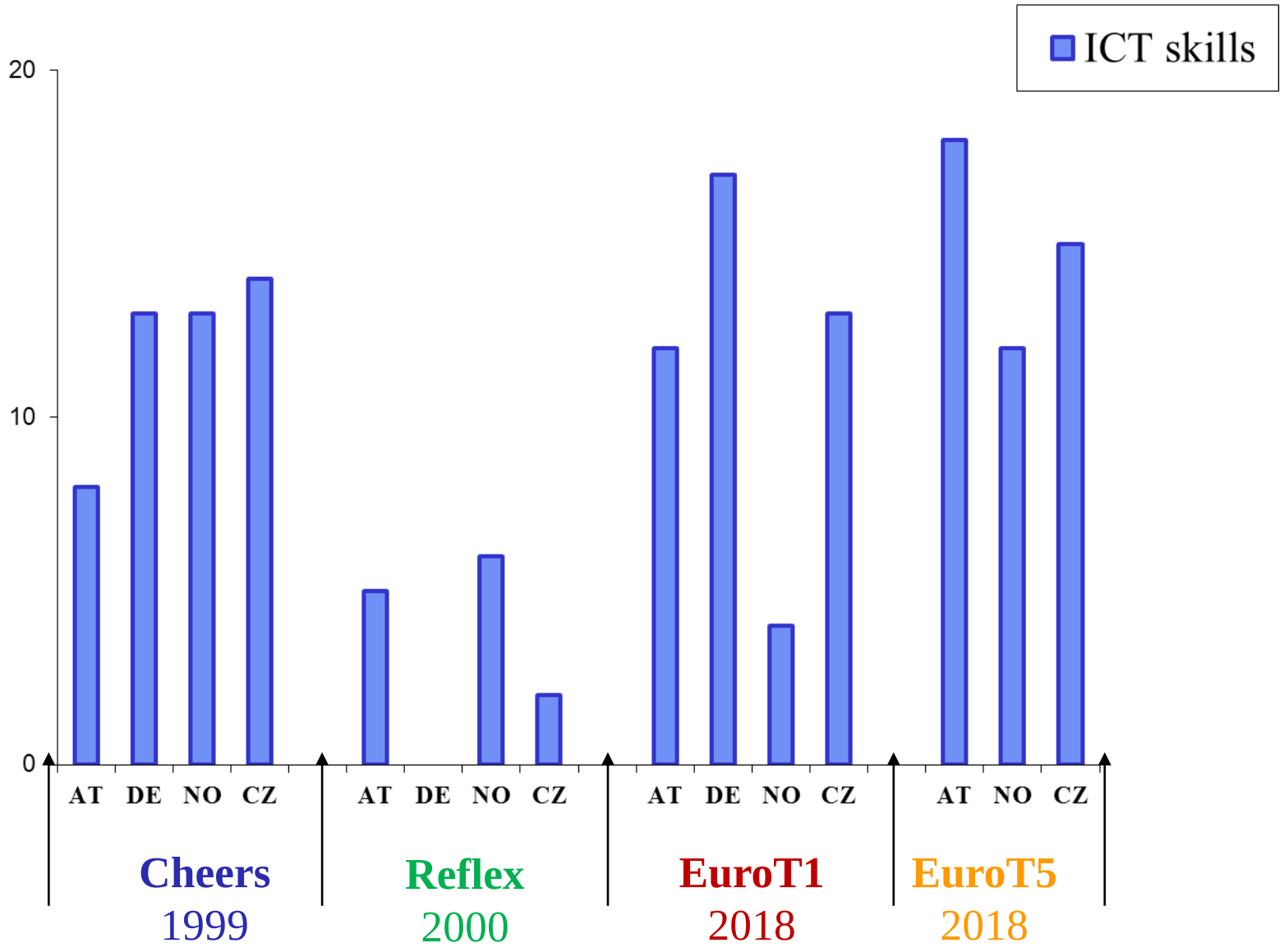
Analysis: job satisfaction (very satisfied)



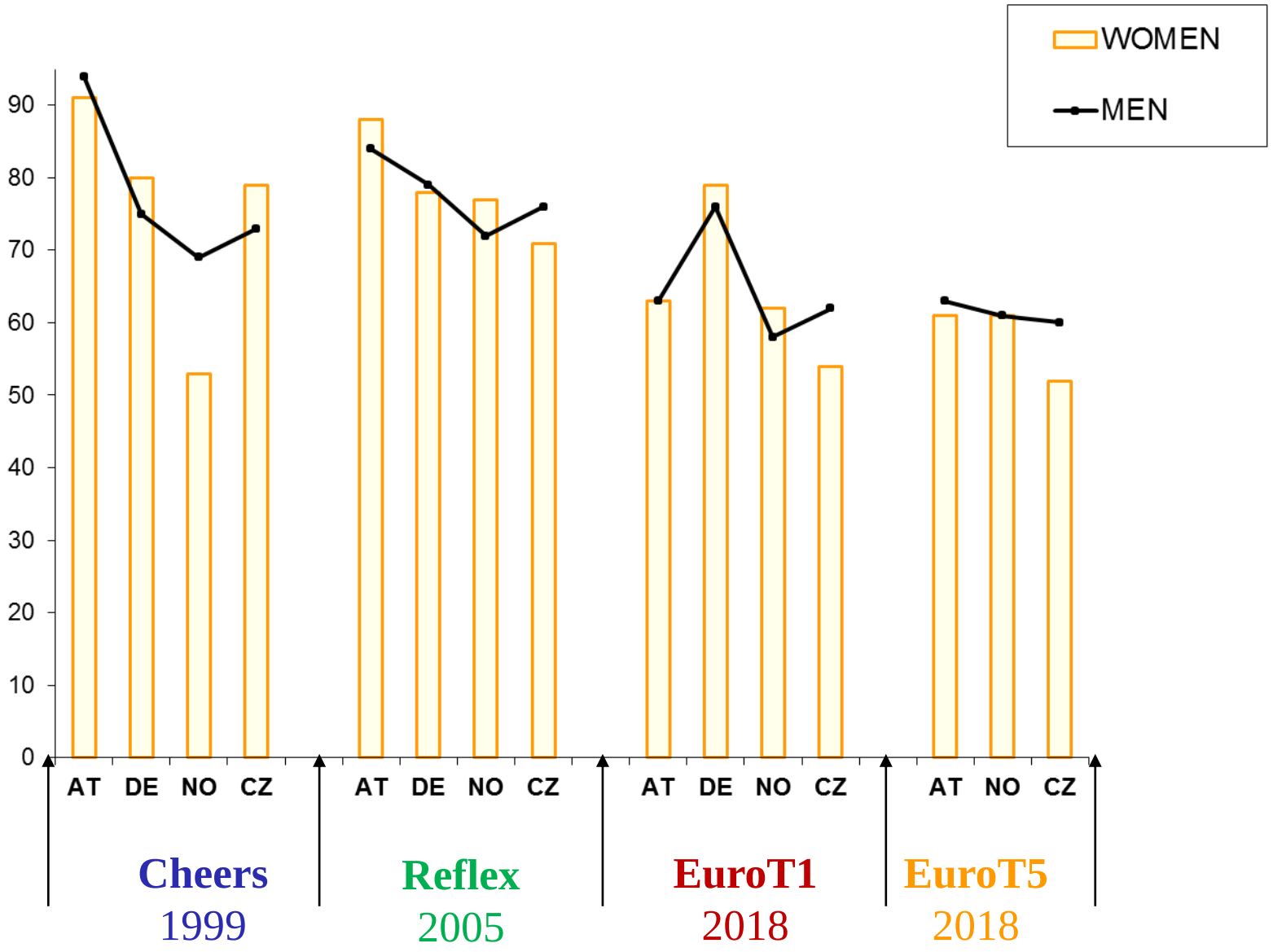
Analysis: knowledge and skills used at work



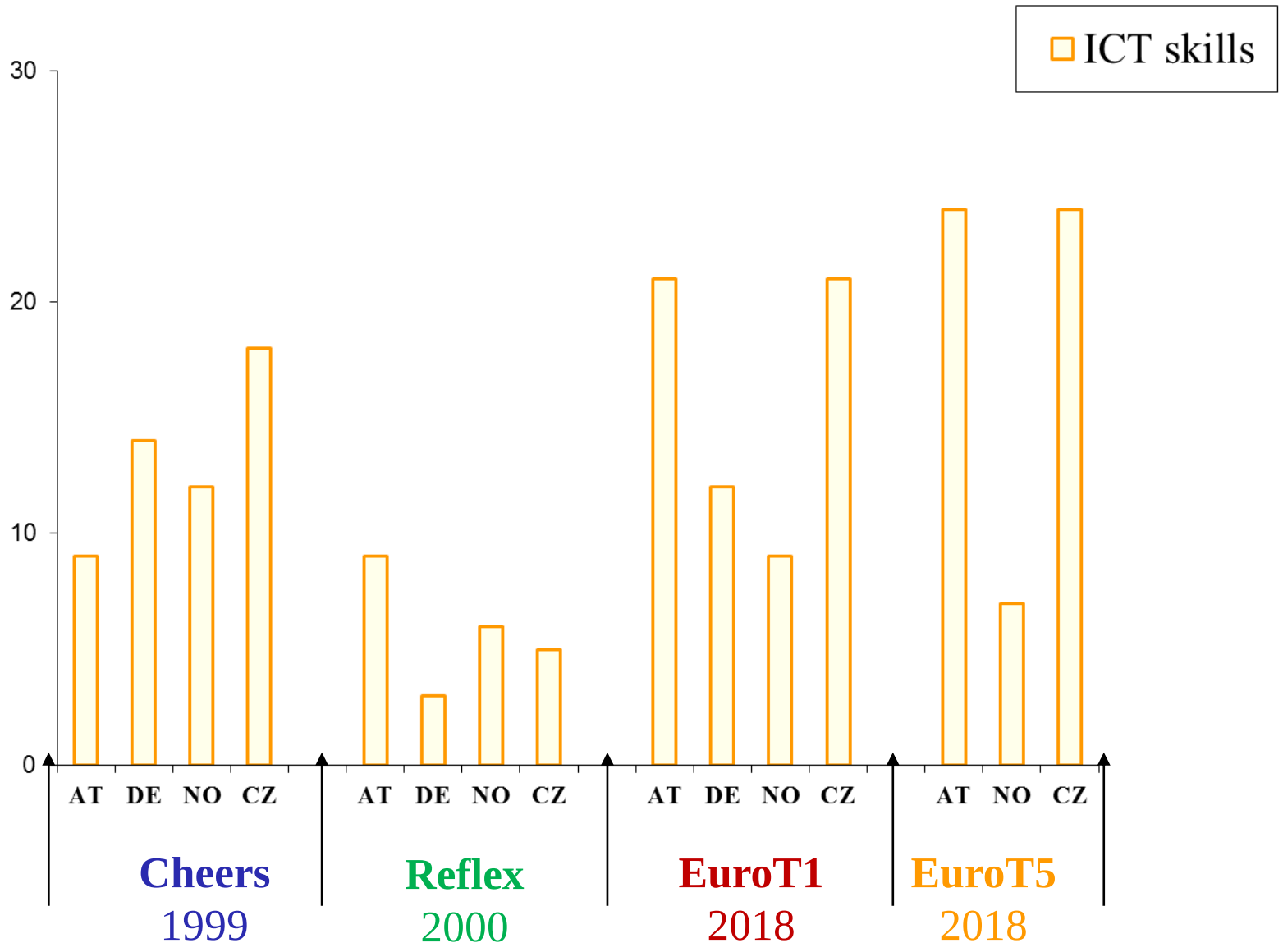
Analysis: Gender gap for required ICT skills



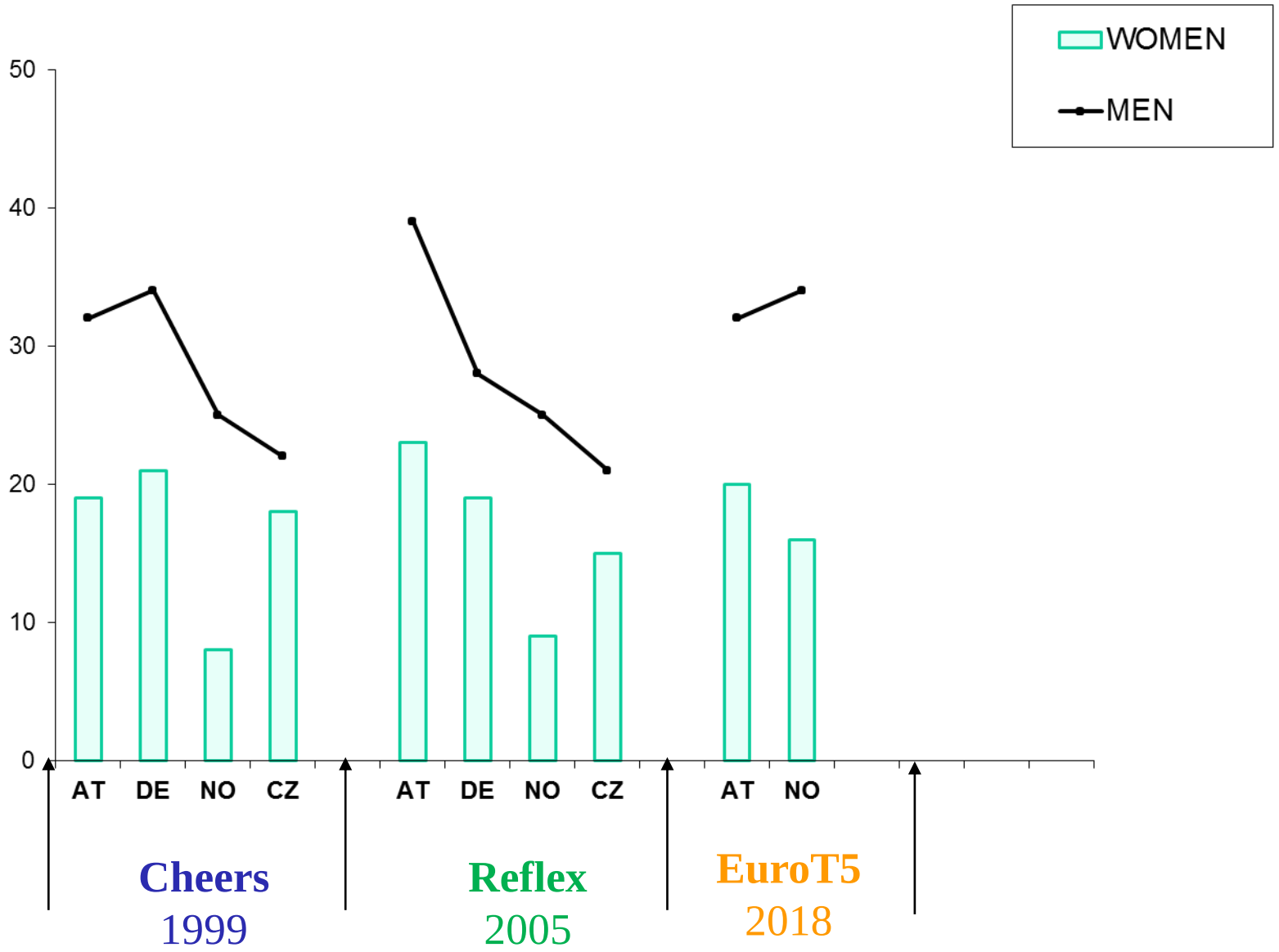
Job Analysis: professionals



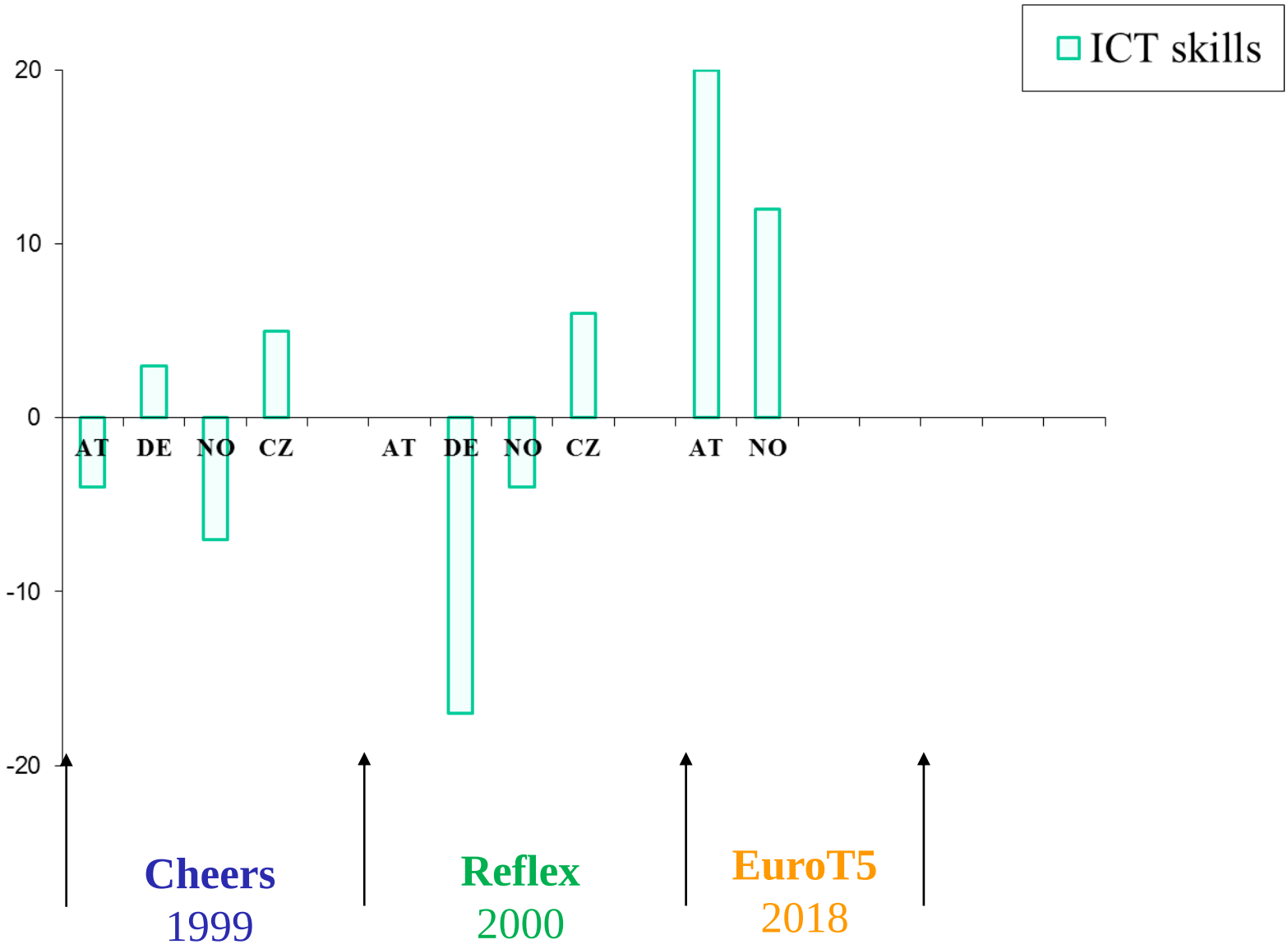
Professionals: Gender gap for required ICT skills



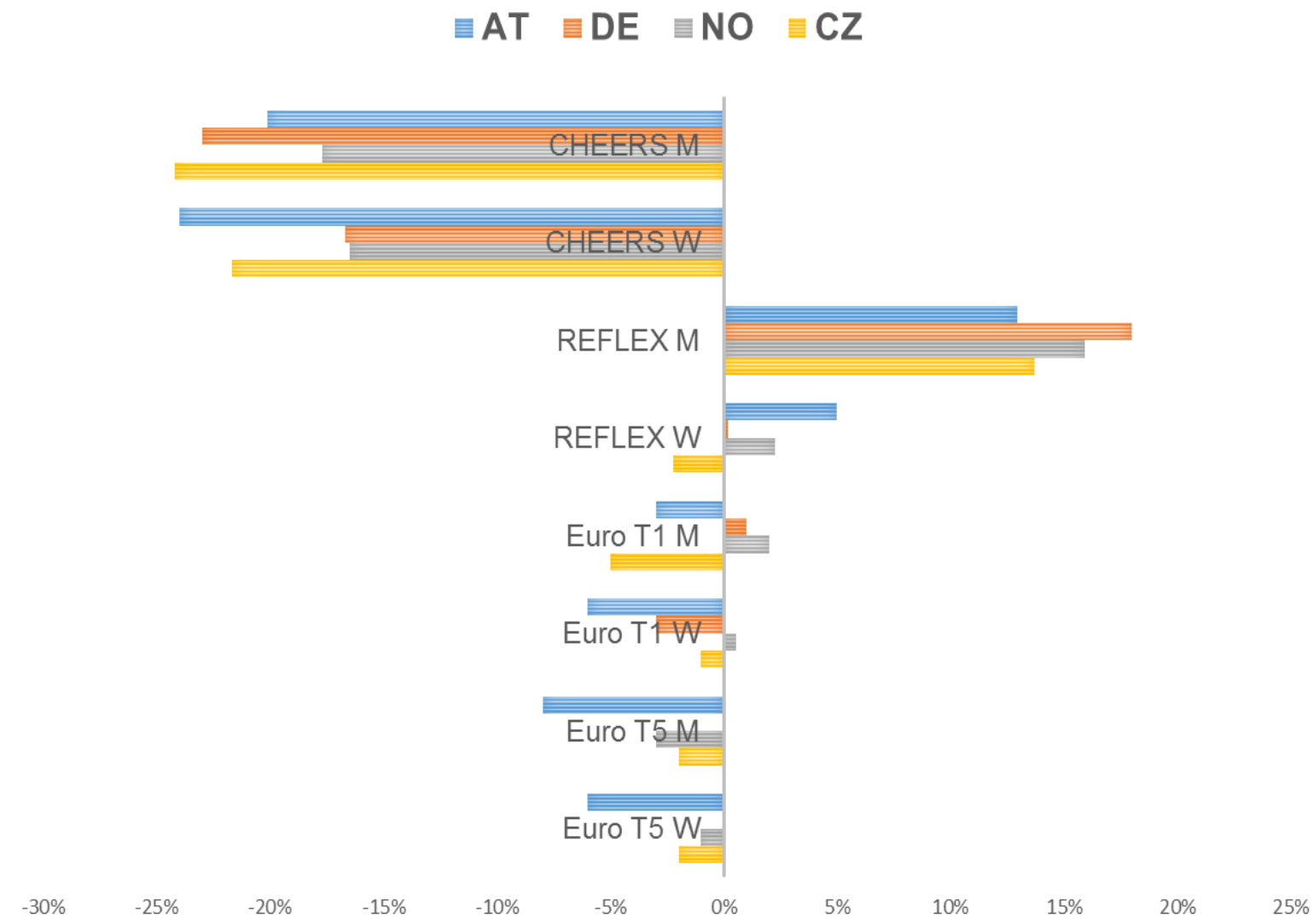
Sector Analysis: Business



Business sector: Gender gap for required ICT skills



Analysis: ICT skills mismatch



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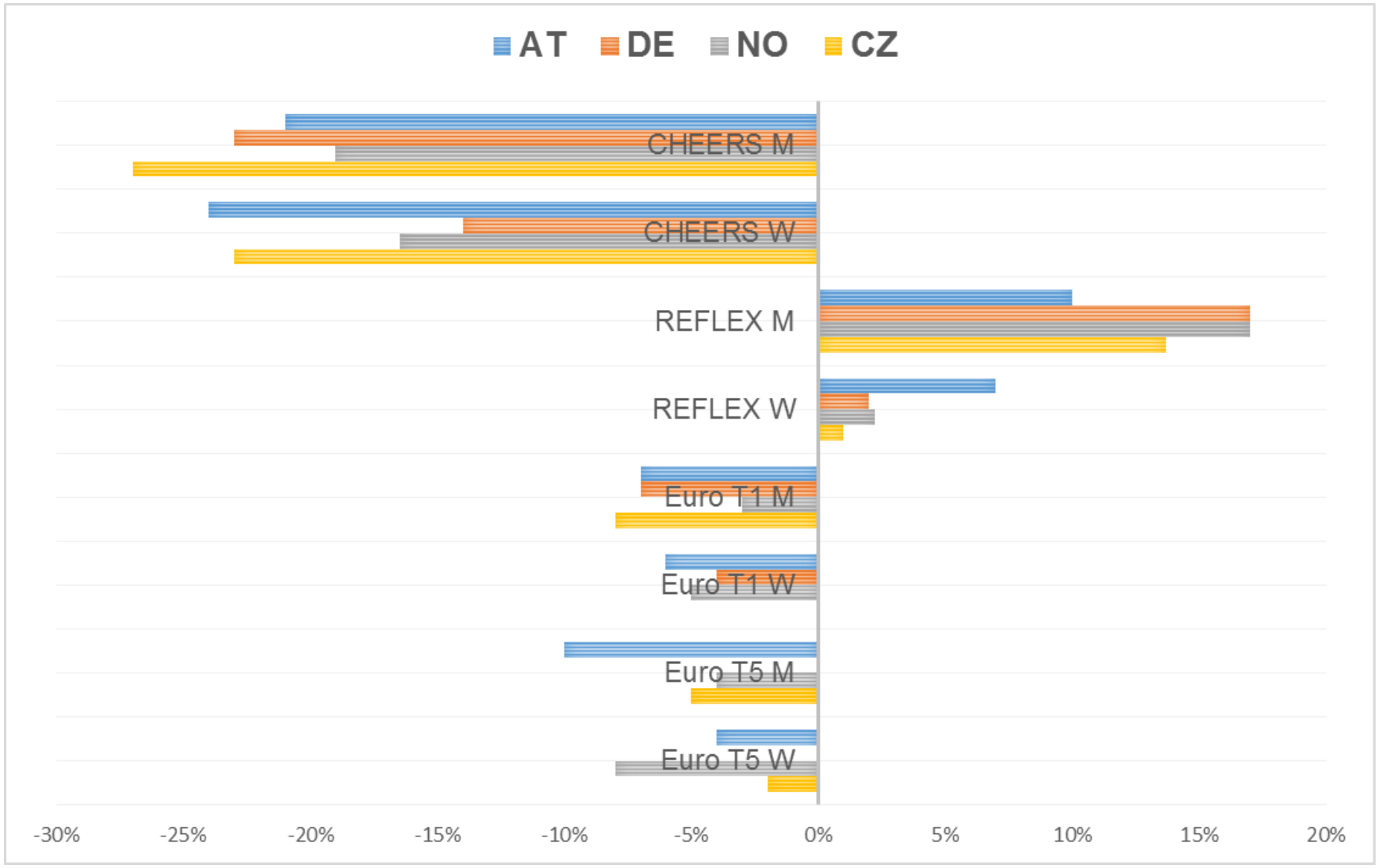

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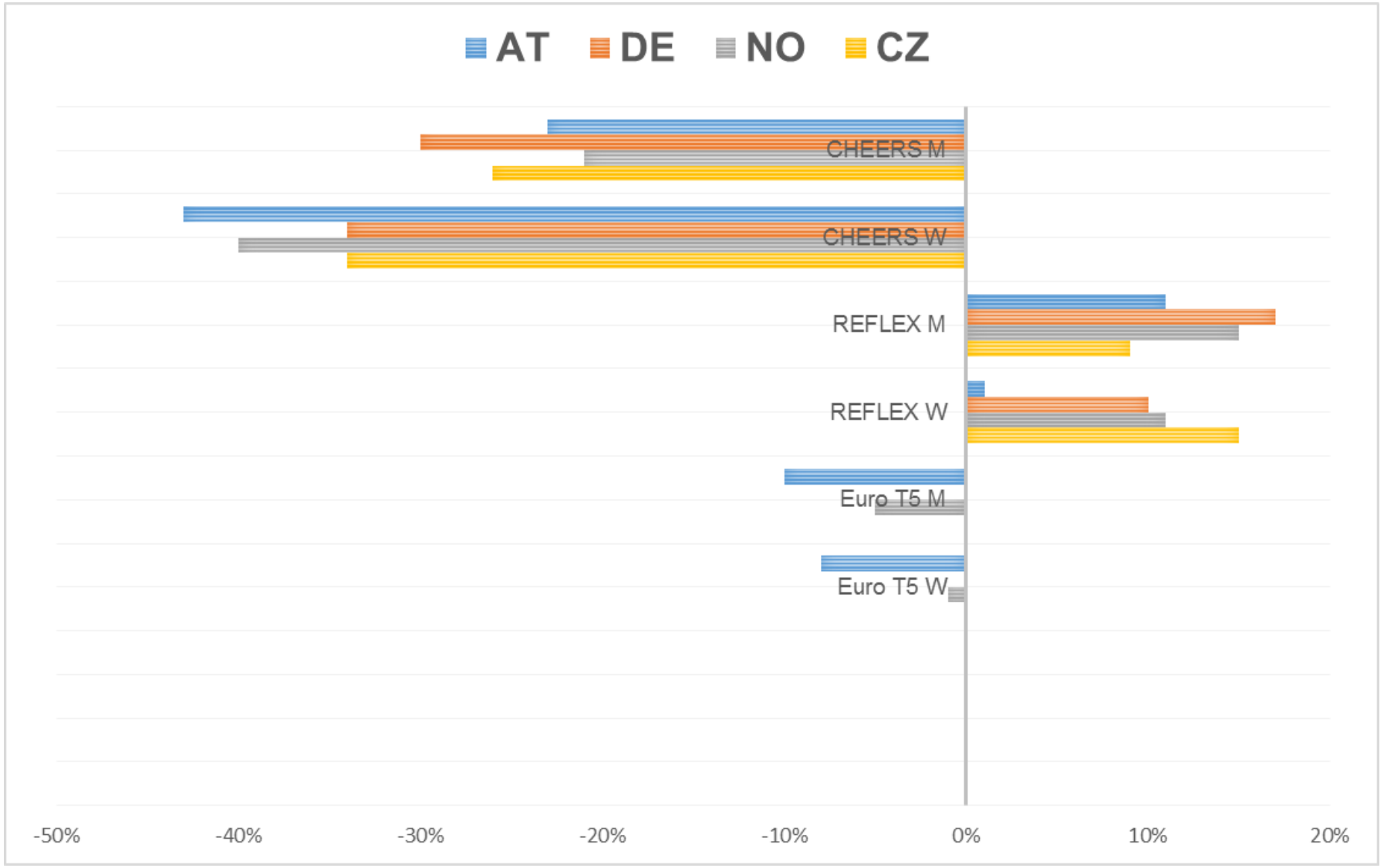
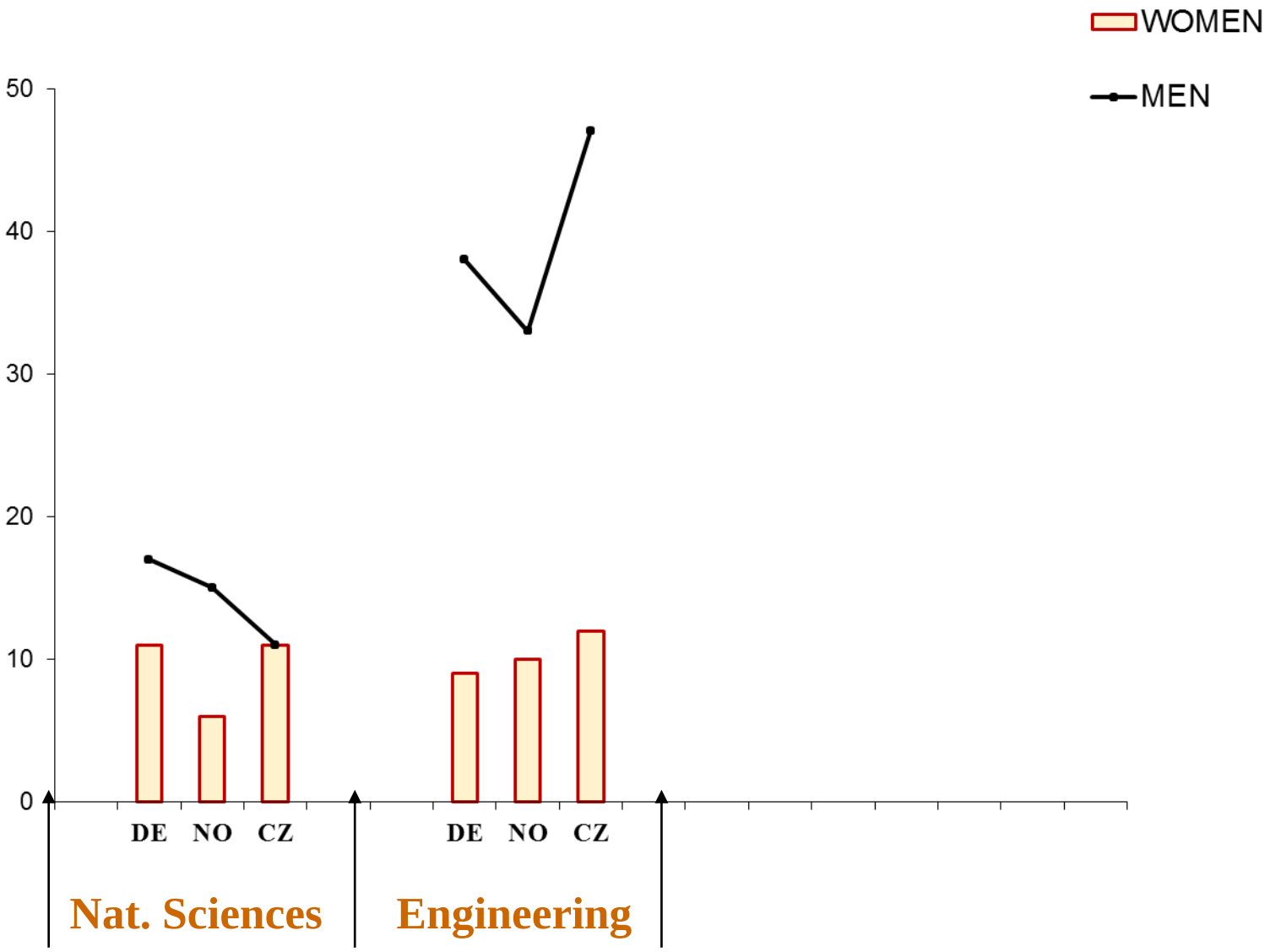
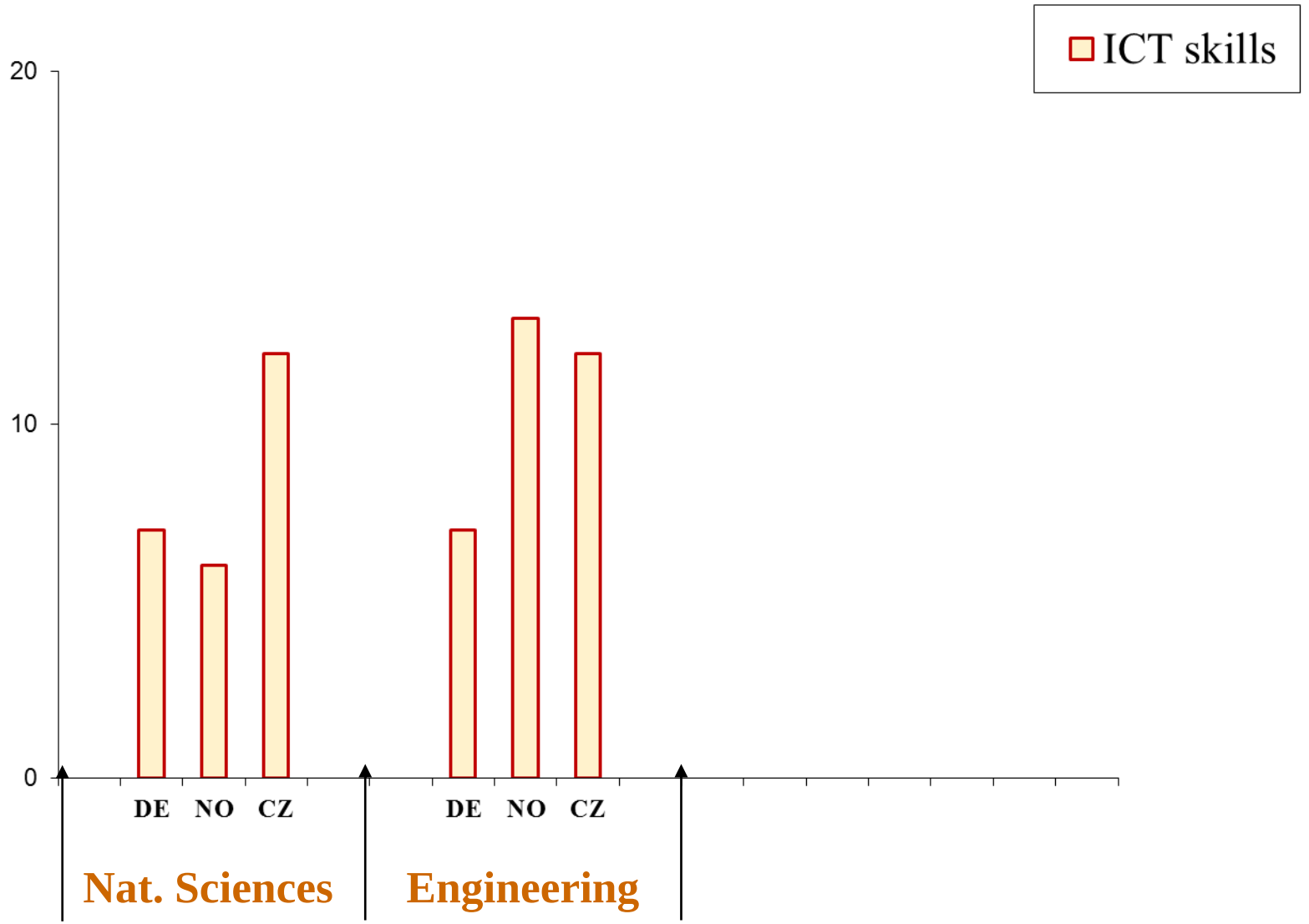


Field of studies (Cheers)

Field of studies: share of graduates (Cheers)

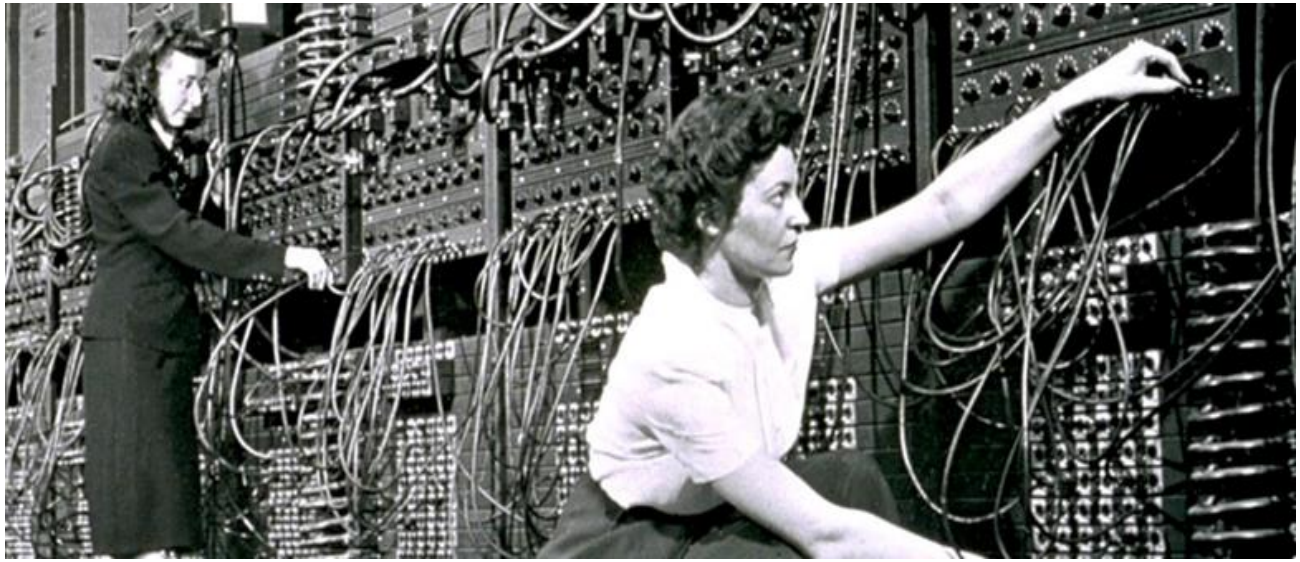


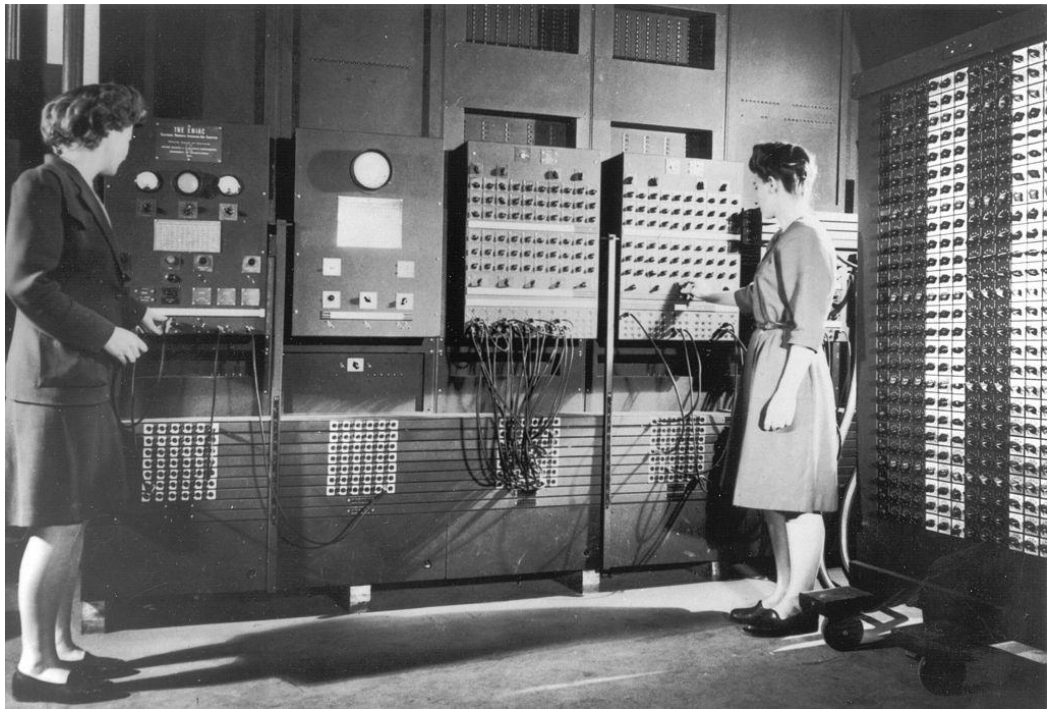
Field of studies: Gender gap for acquired ICT skills (Cheers)



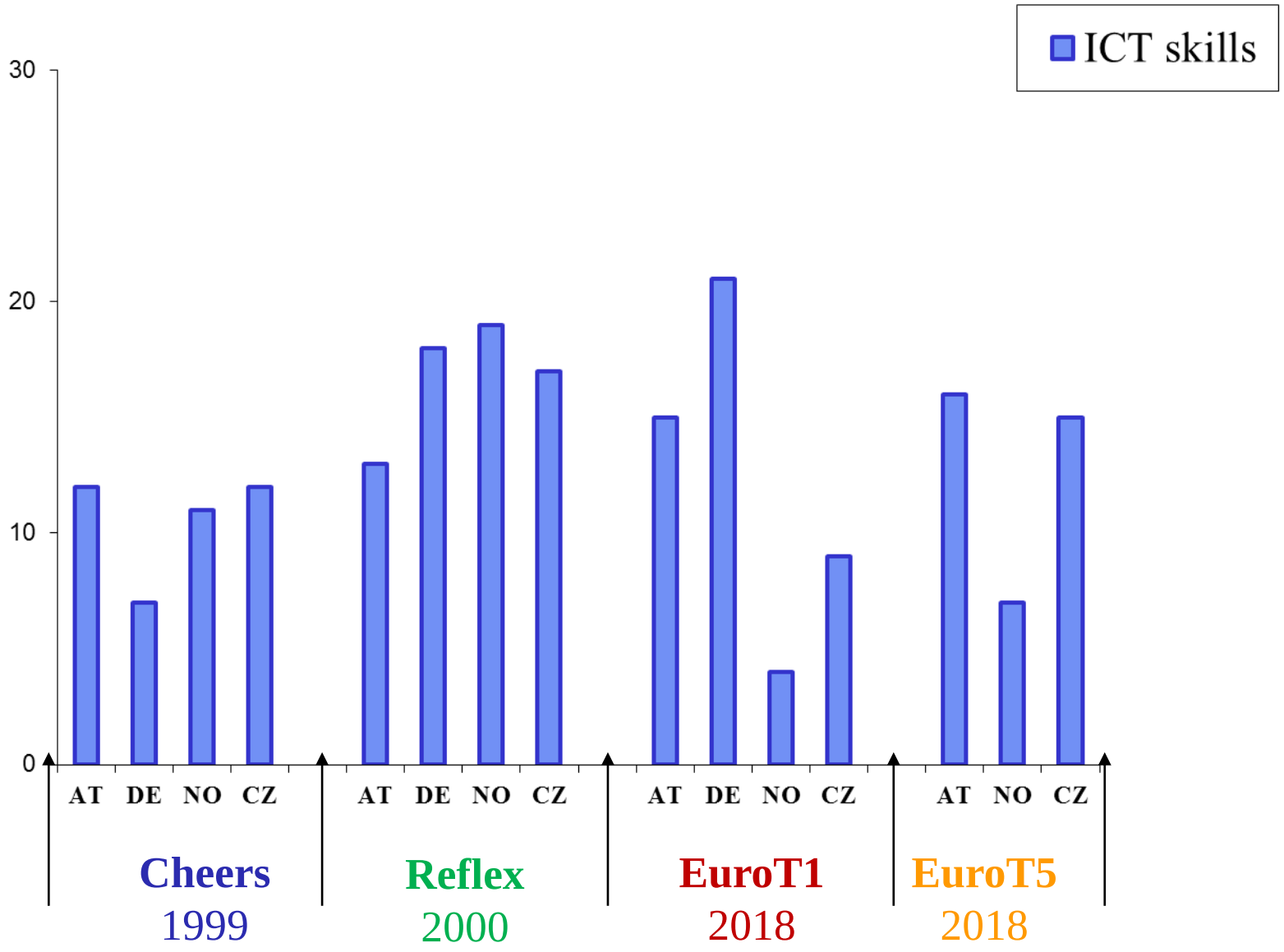
Conclusion

- Male graduates indicate higher levels of required ICT skills as well as higher skill mismatches
- However Female graduates can require more ICT skills in the Business sector than men and have more skill mismatches
- There are gender gaps in the level of acquired ICT skills even in STEM fields

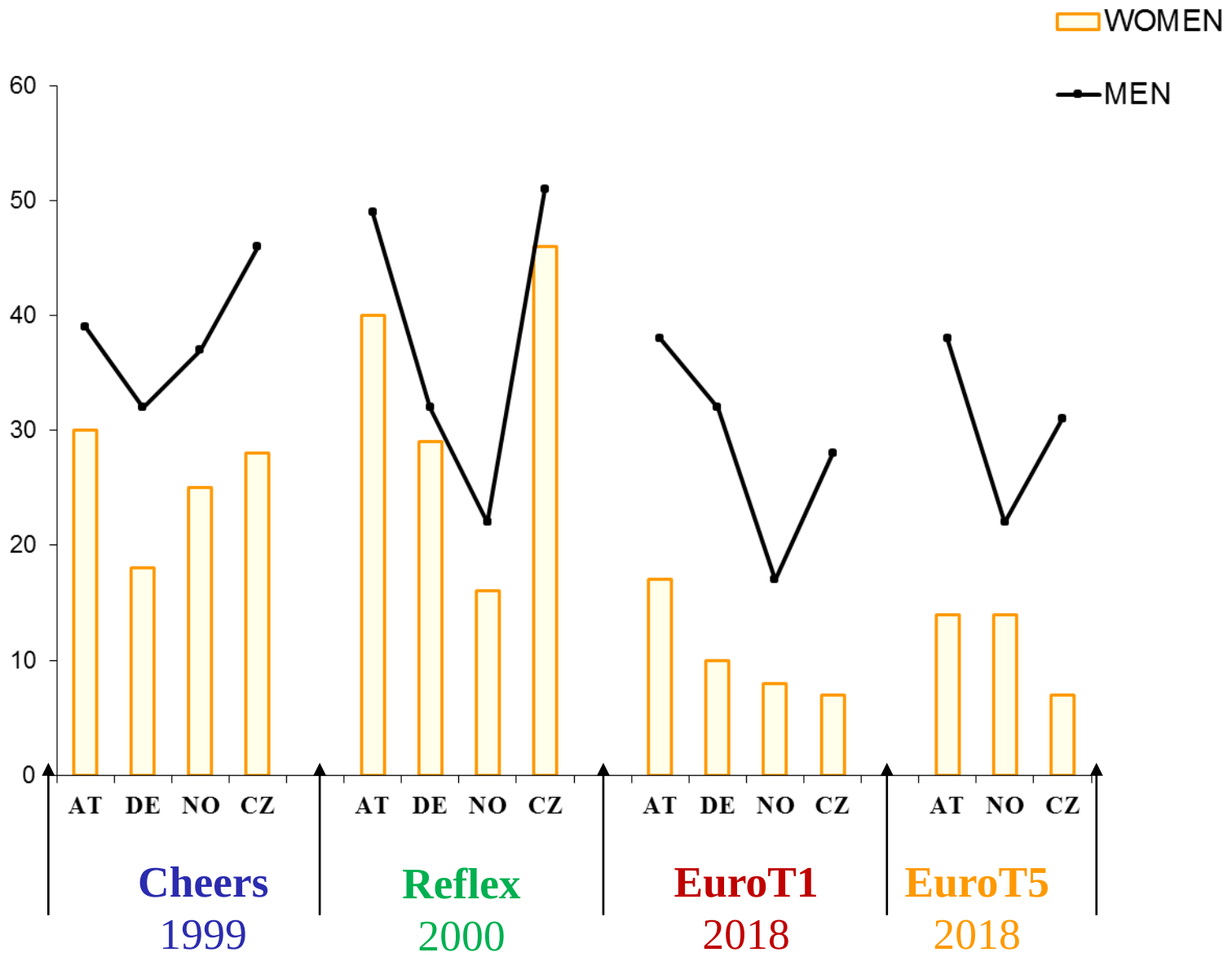




Analysis: Gender gap for acquired ICT skills



Professionals: required ICT skills



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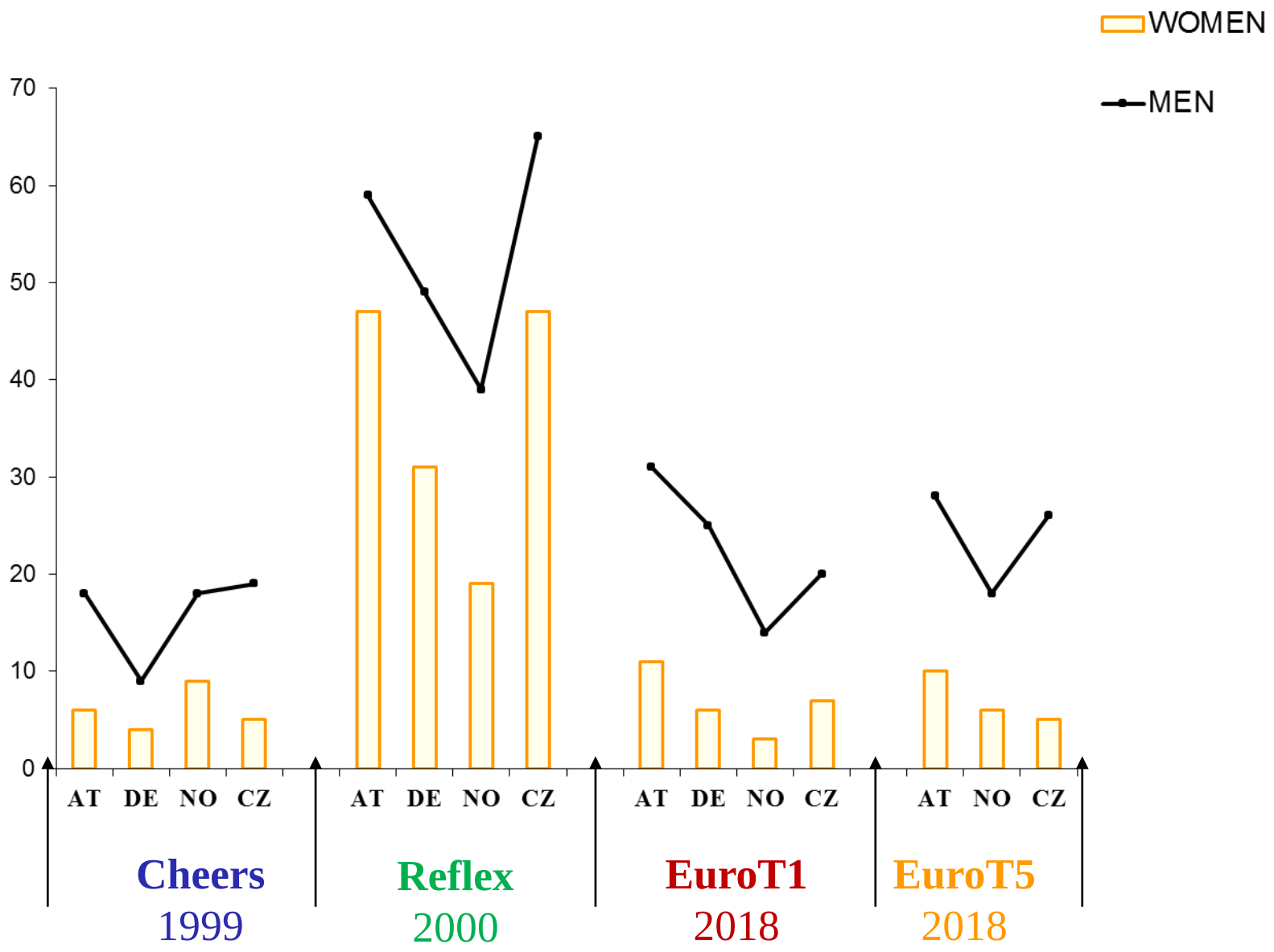

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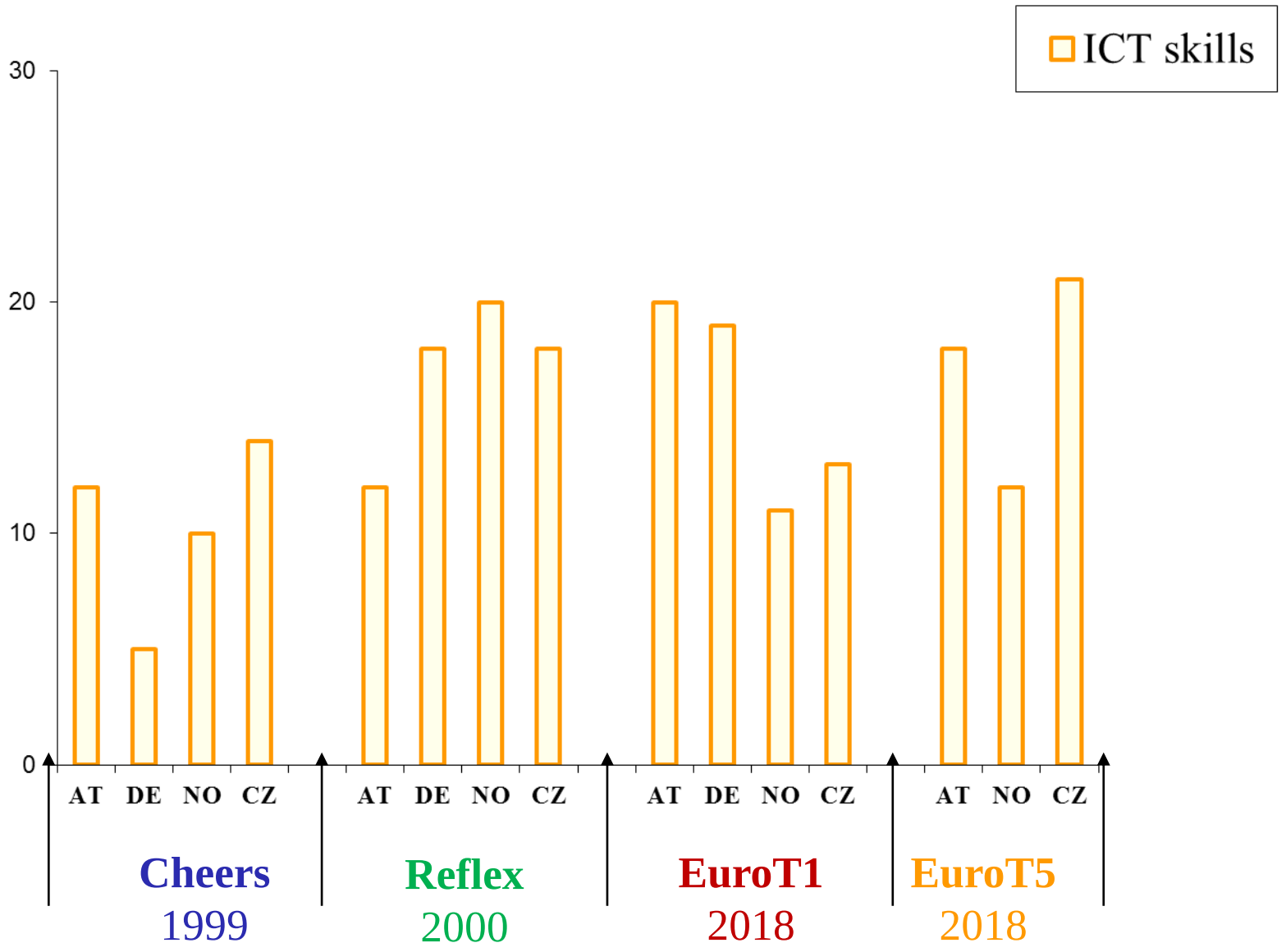
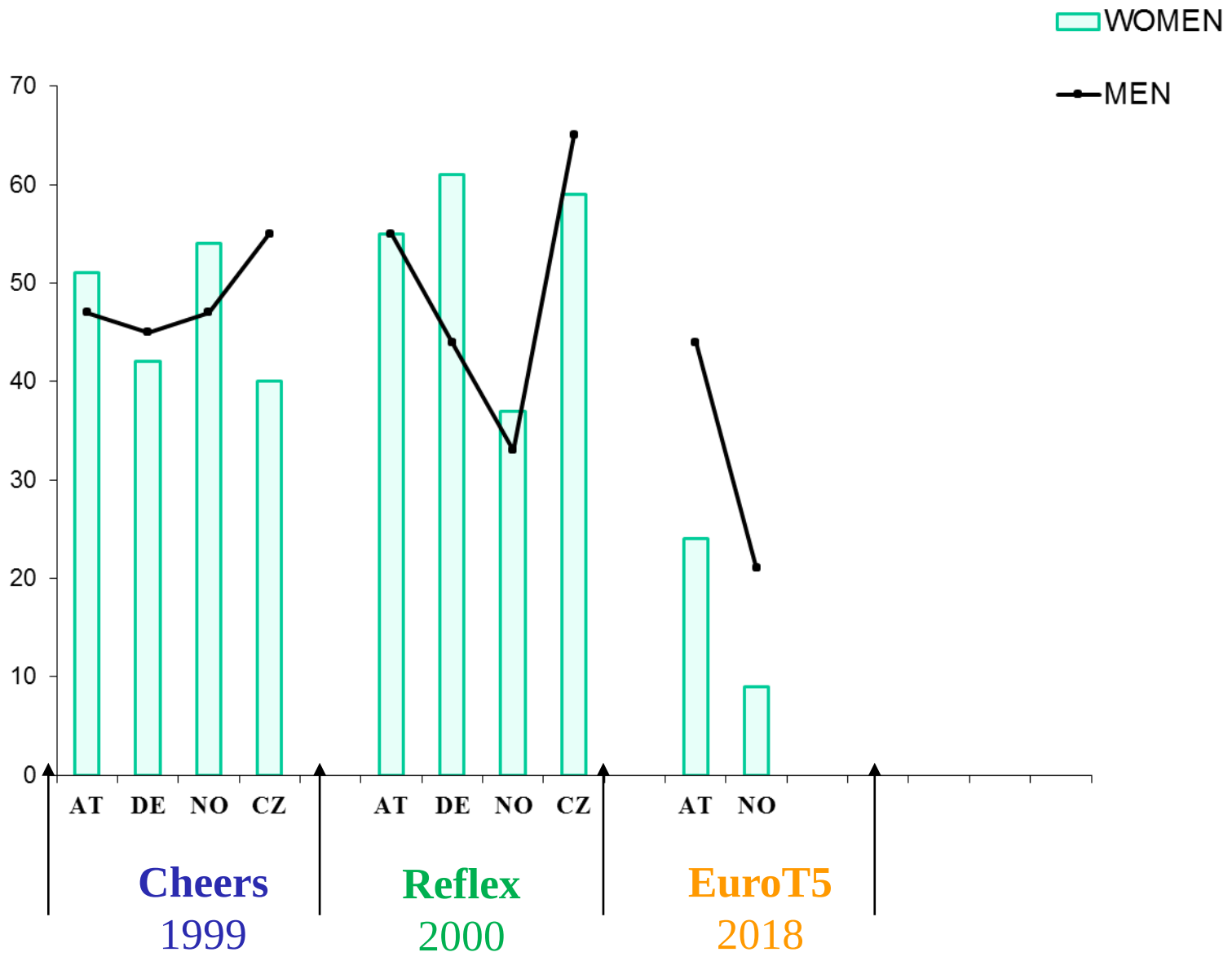


Business: required ICT skills



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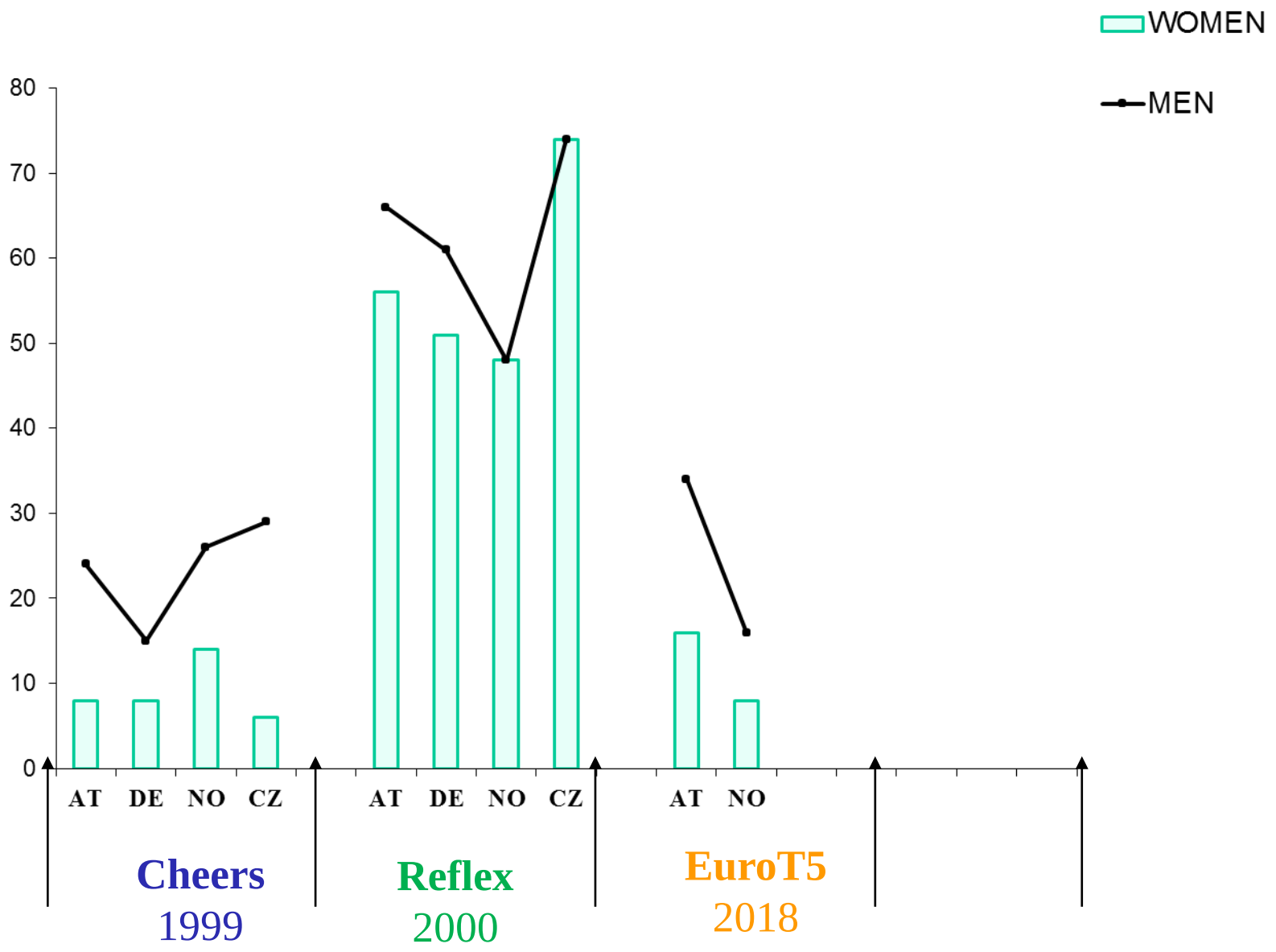
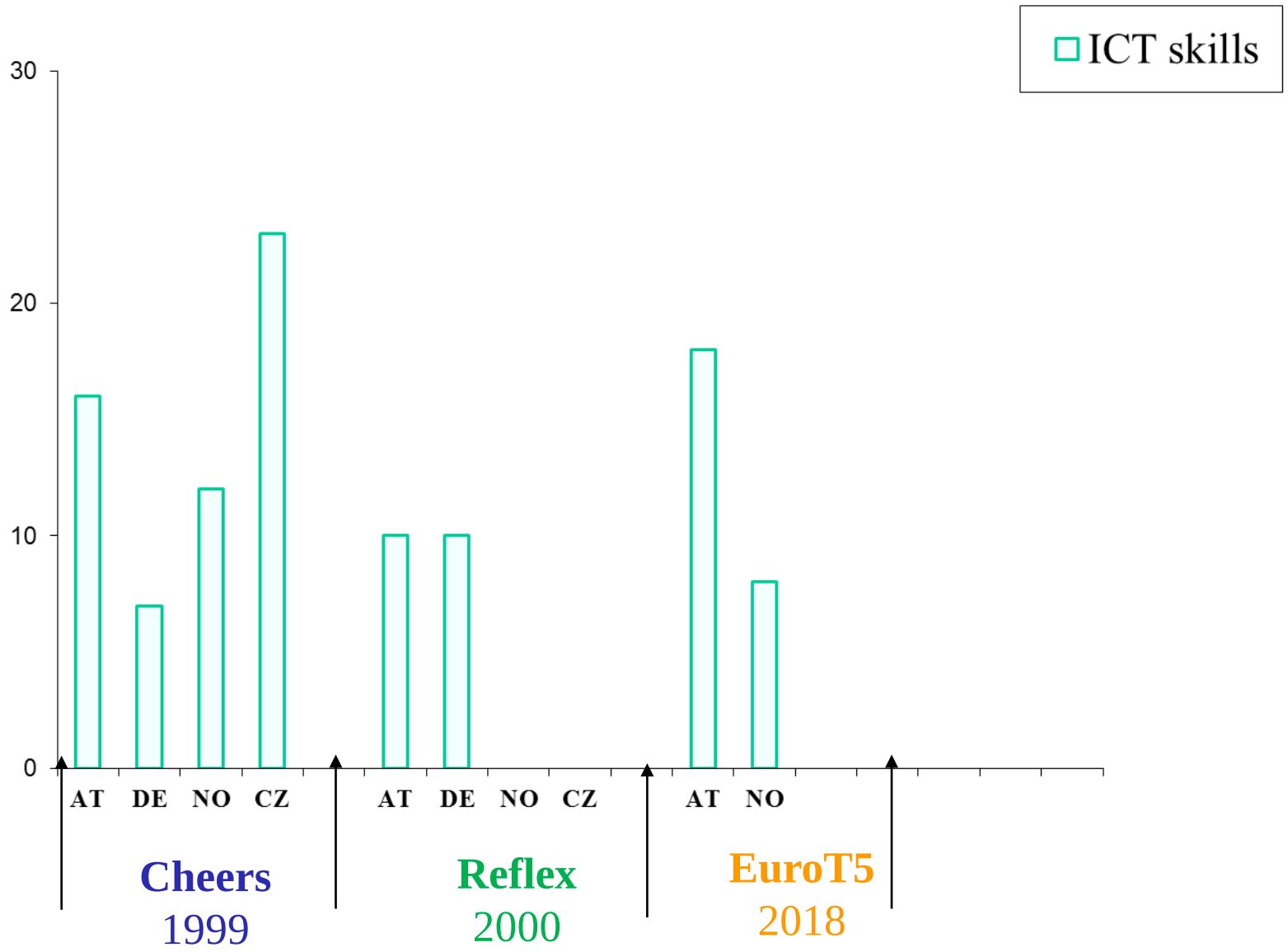


Business sector: Gender gap for acquired ICT skills



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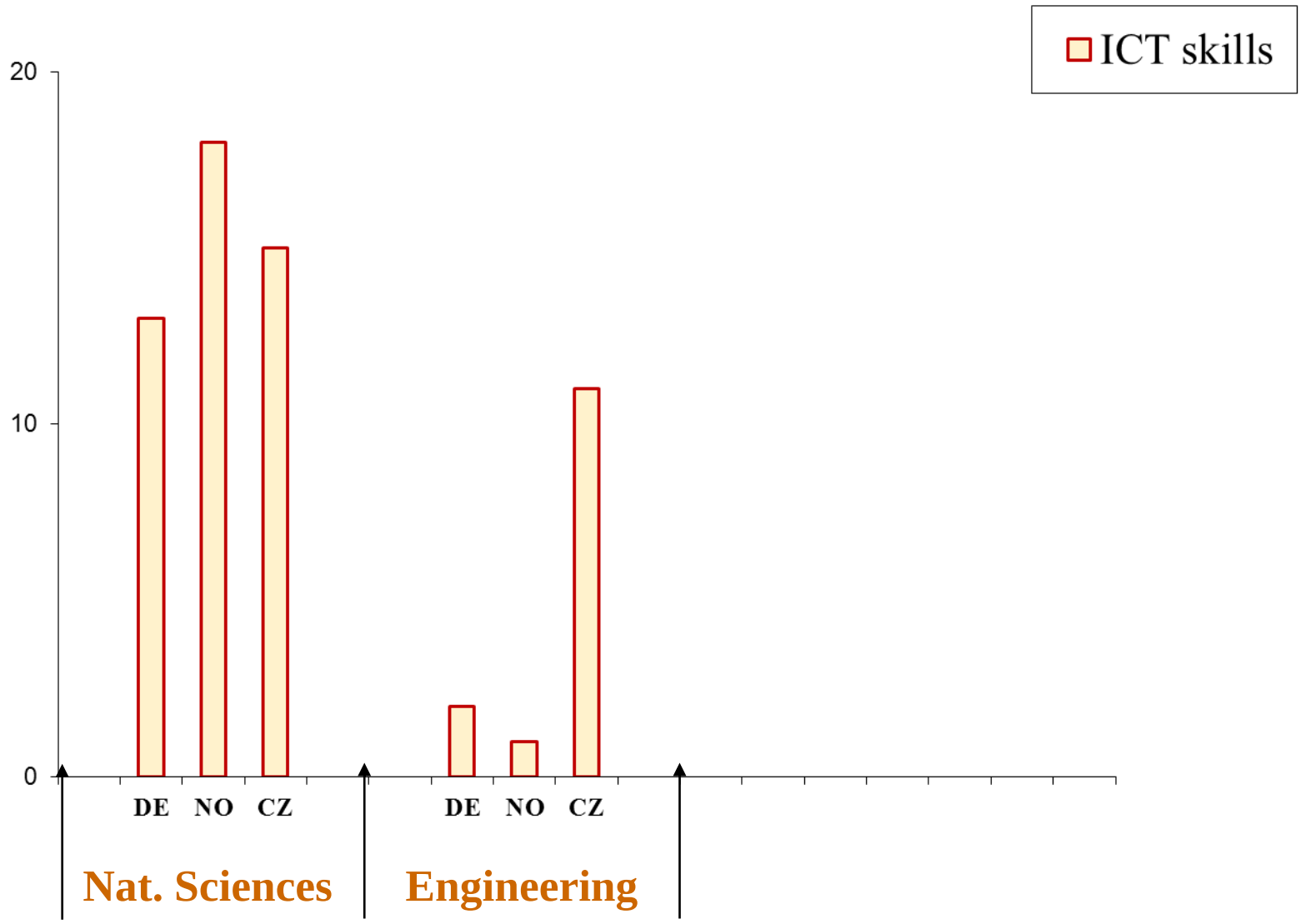

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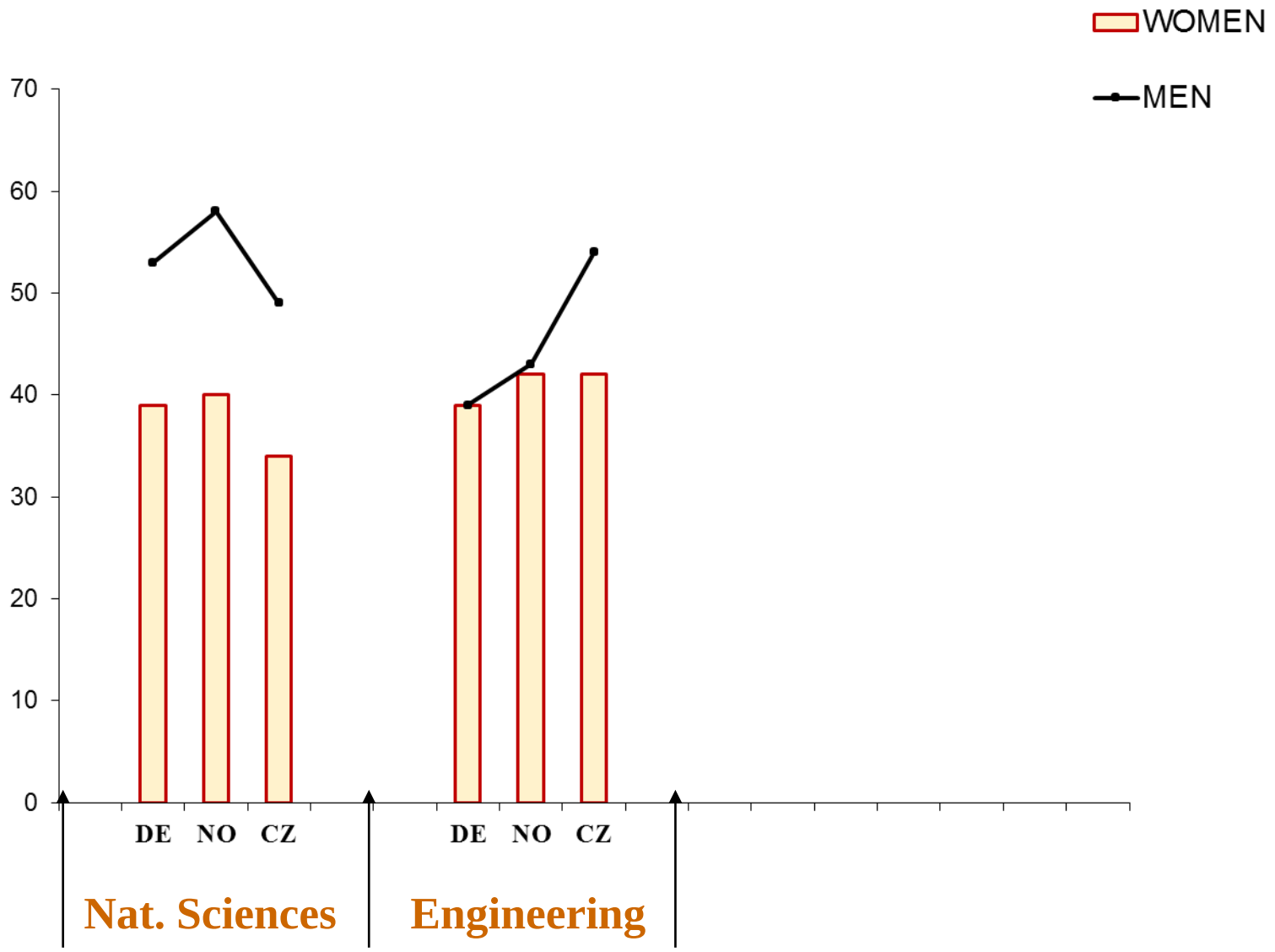

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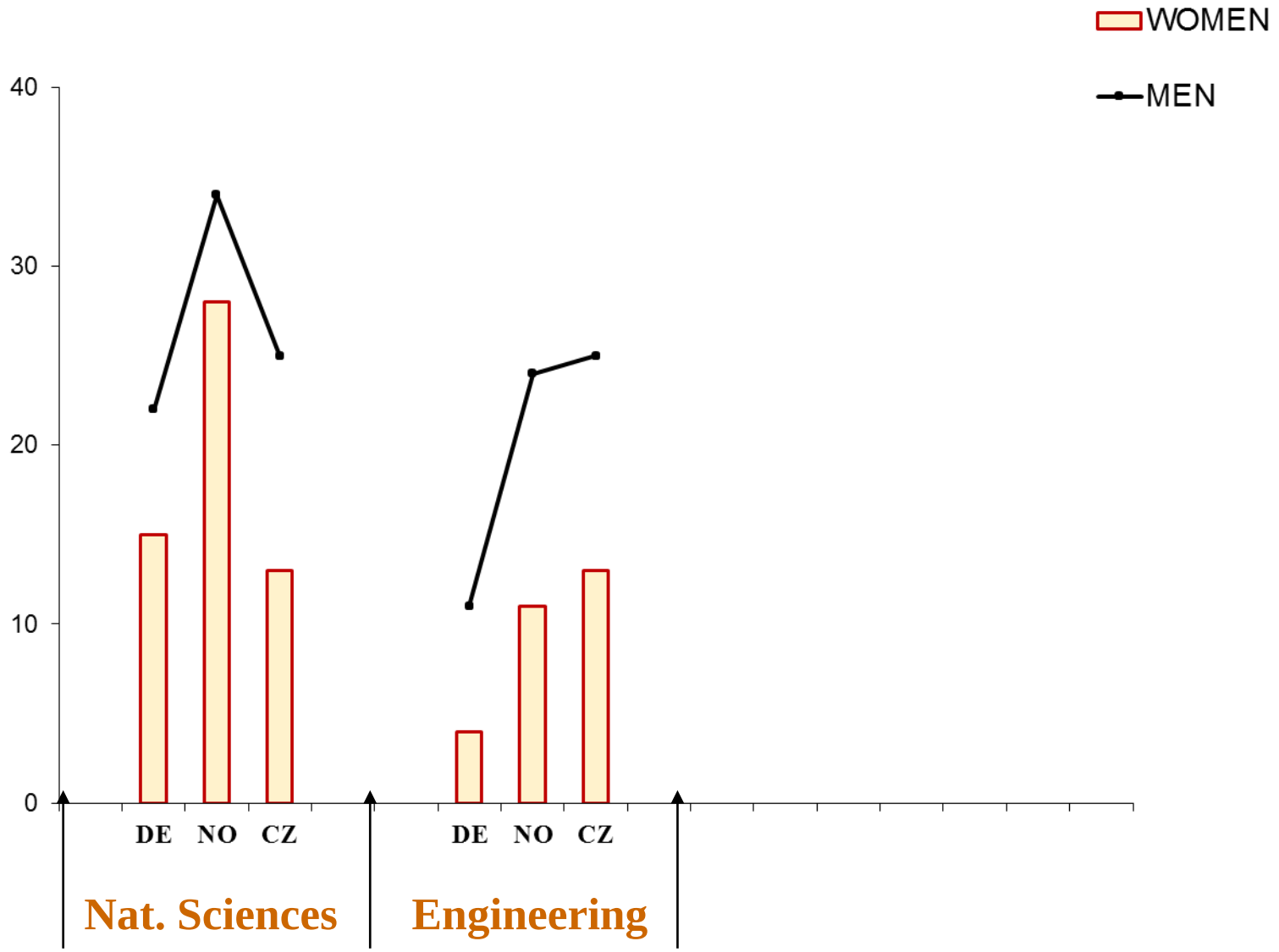
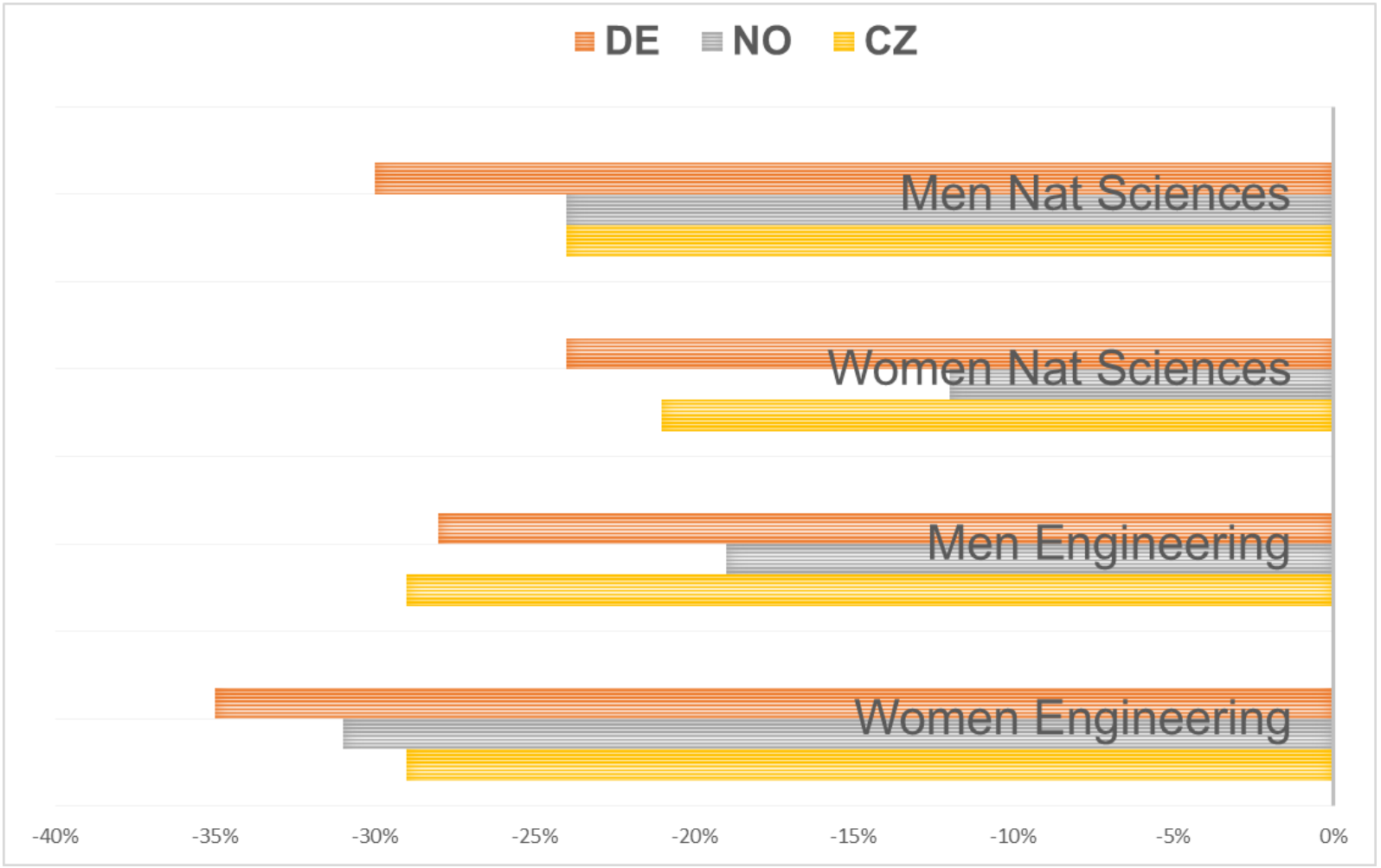
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