



Wittgenstein Centre

FOR DEMOGRAPHY AND  
GLOBAL HUMAN CAPITAL



# Linking childlessness, fertility timing and biological childlessness across postponing countries

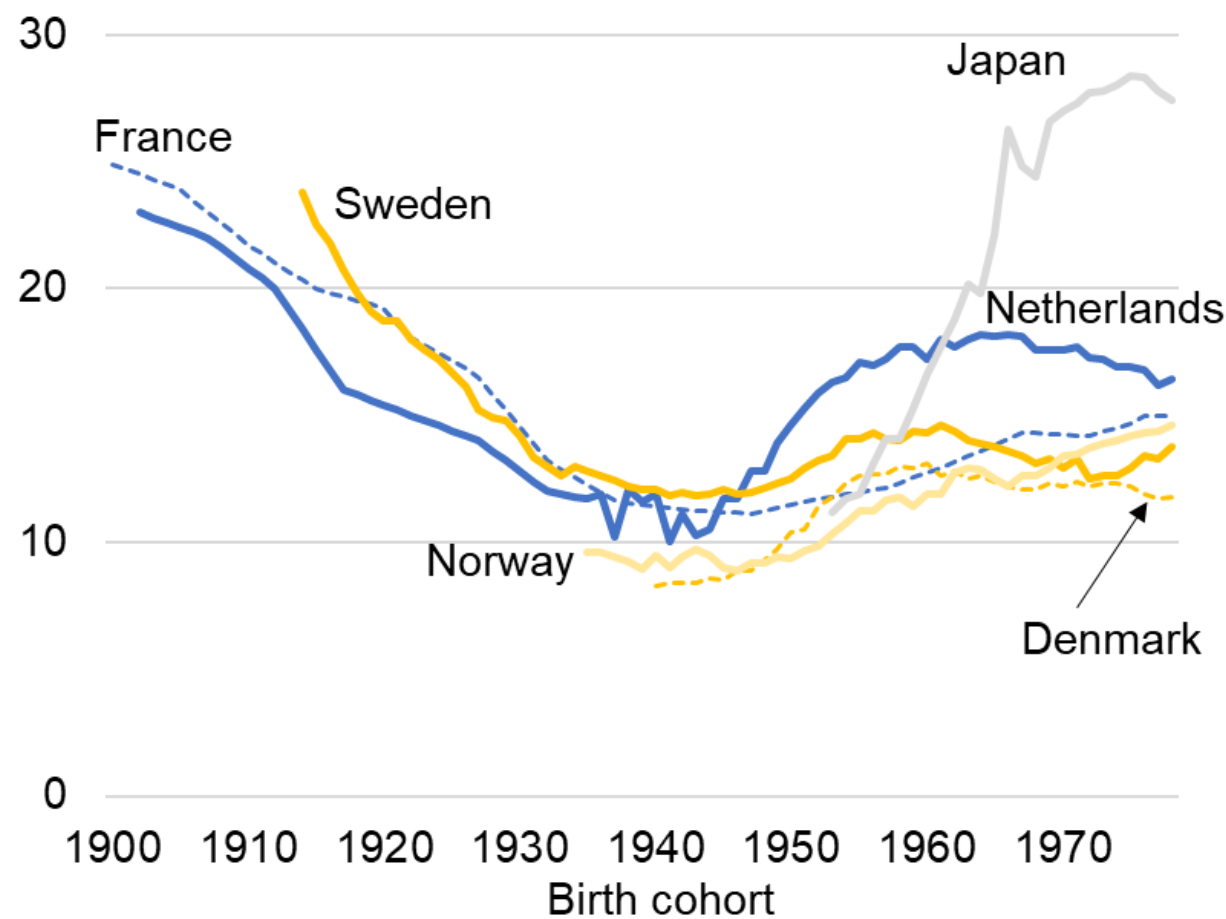
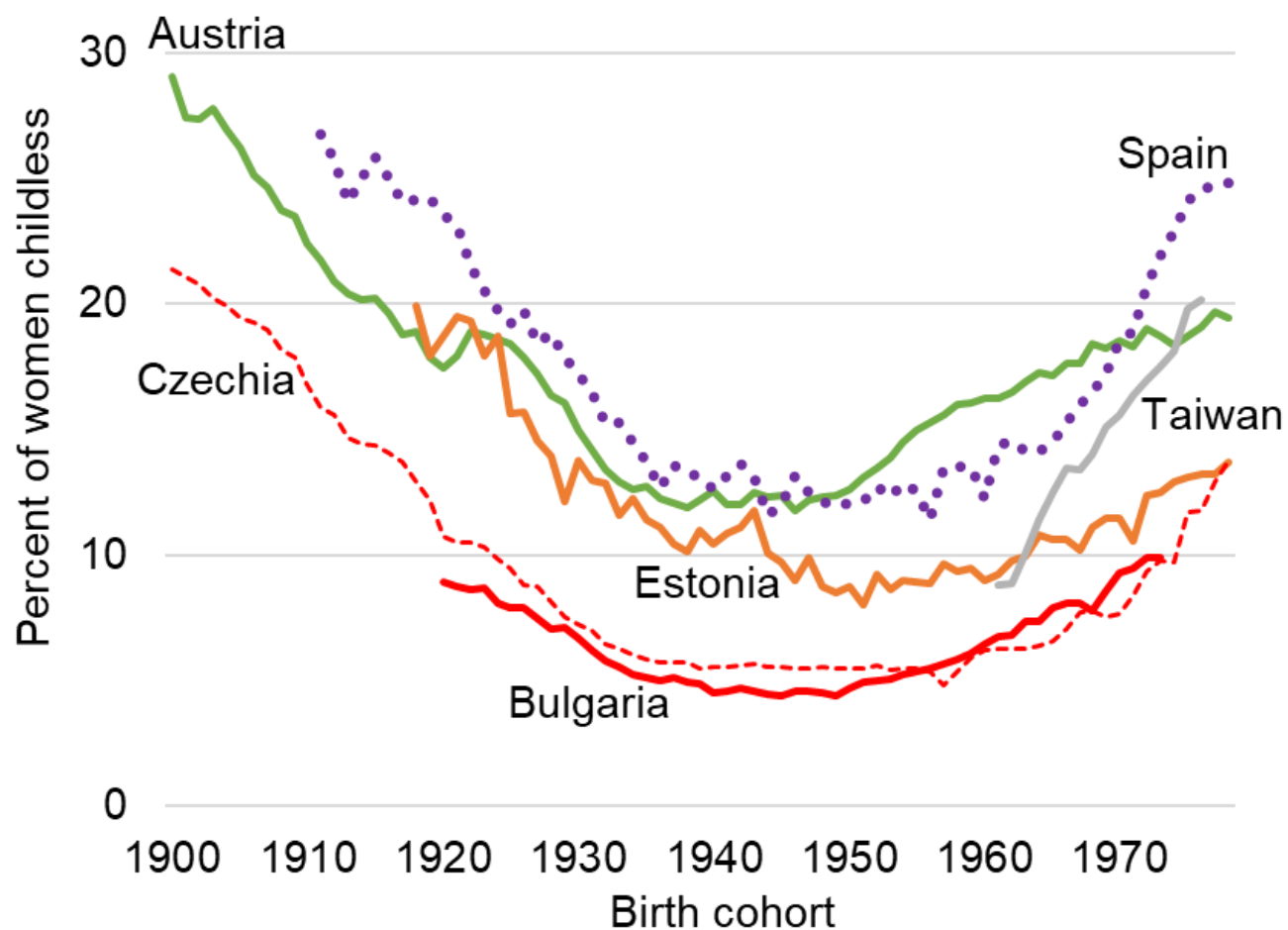
Eva Beaujouan, Ester Lazzari, Tomas Sobotka

University of Vienna & Vienna Institute of Demography (Wittgenstein Centre)

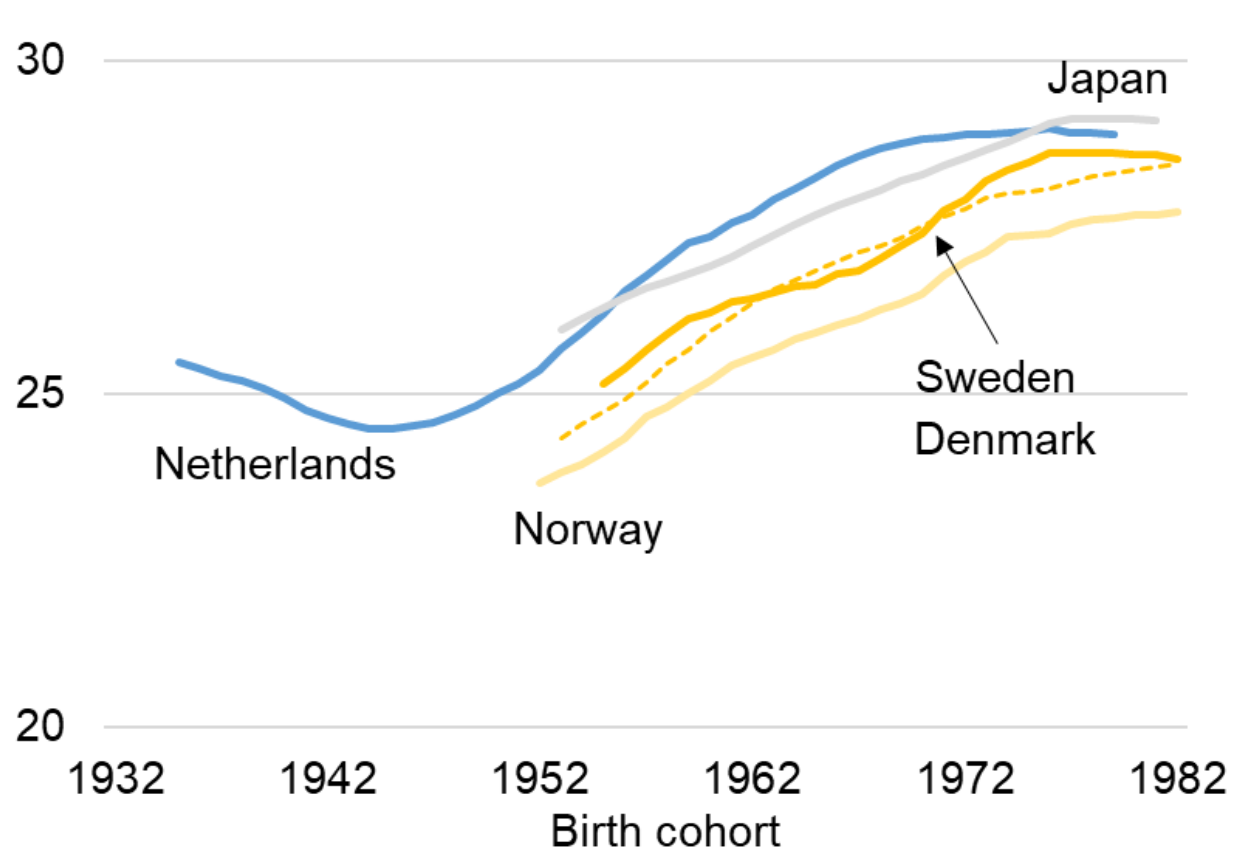
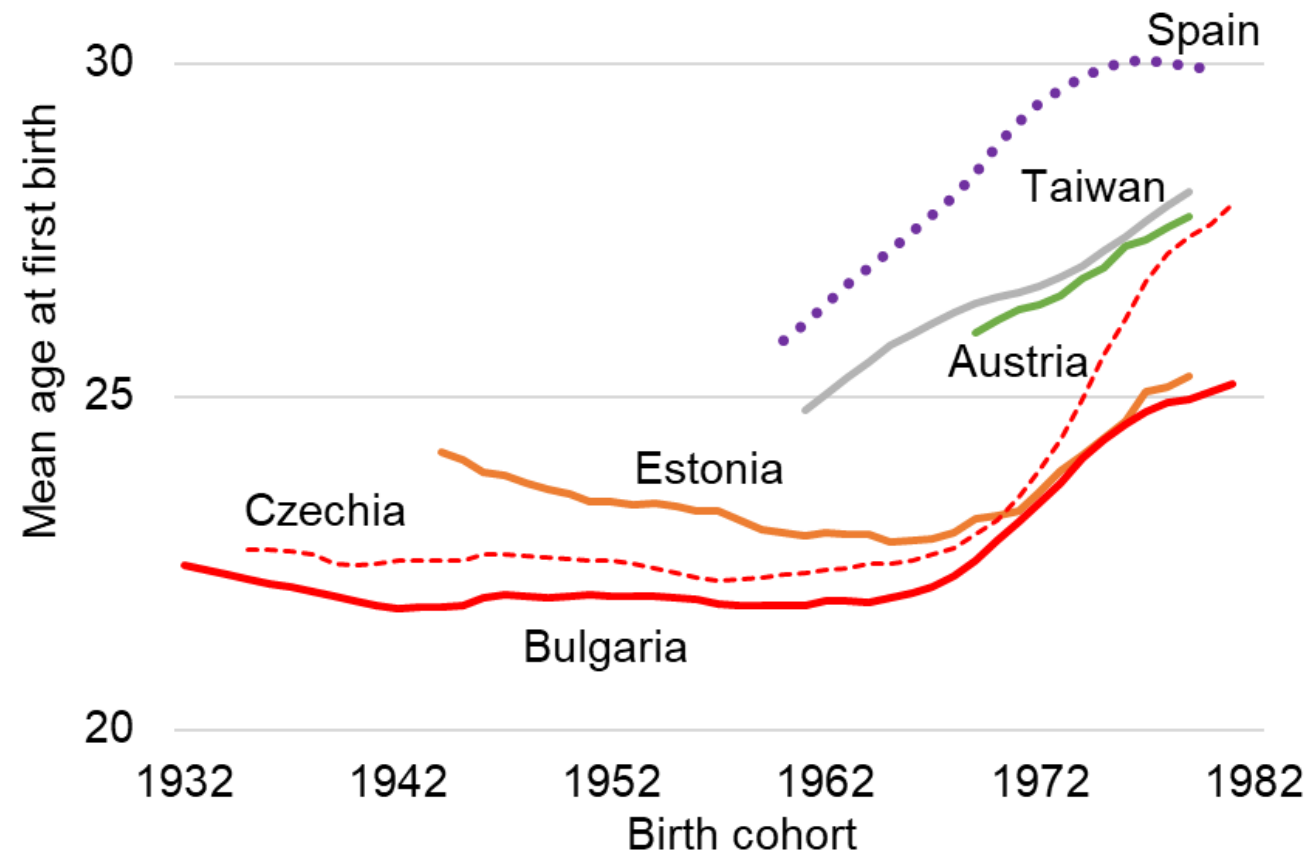
BSPS Conference  
Keele, 11-13 Sept 2023



# Trends in share of childless women, 1900-1980 birth cohorts



# Trends in mean age at first birth, 1932-1982 birth cohorts



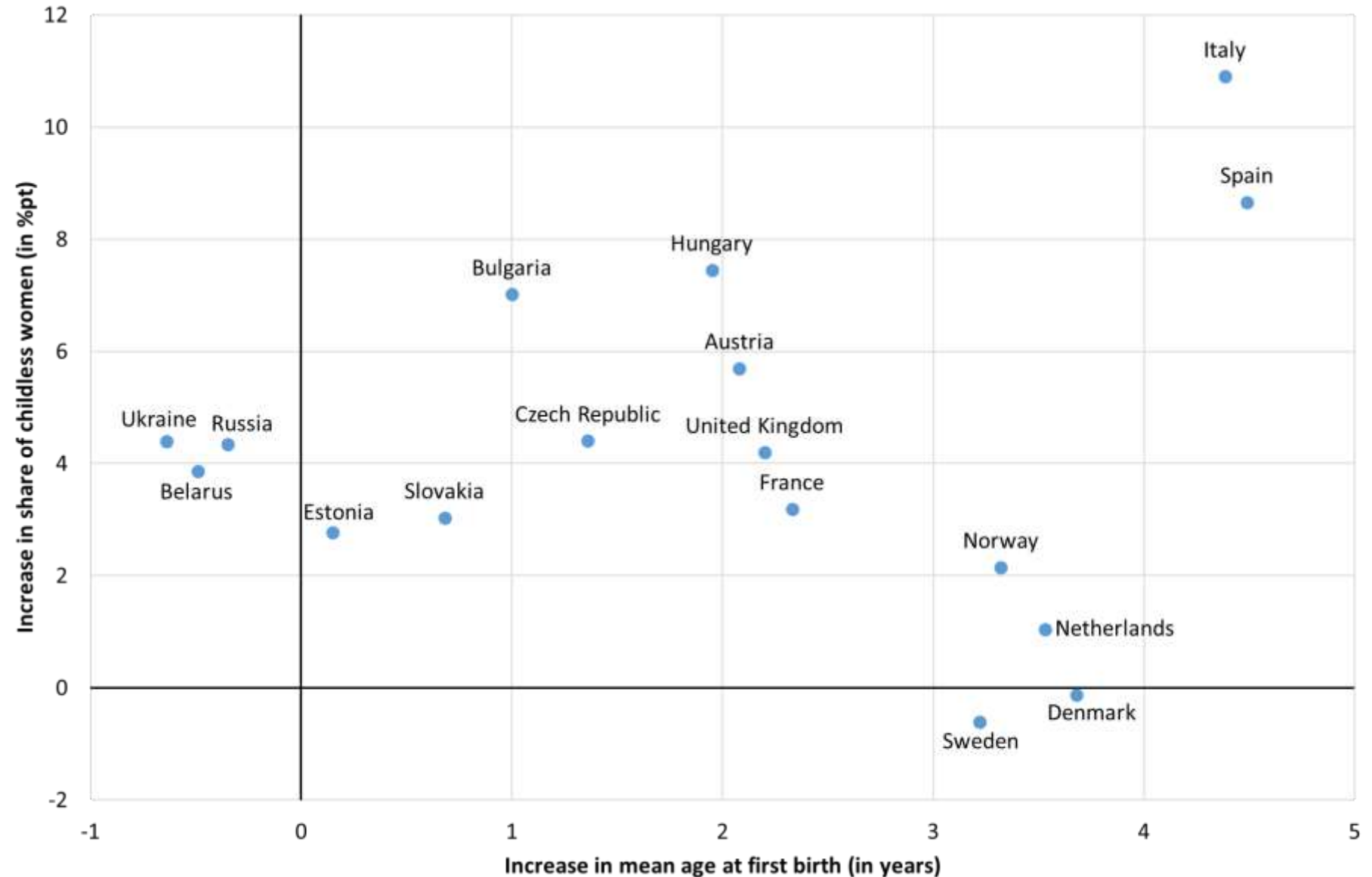
# Linking later fertility and childlessness?

- At the individual level, women who start trying to have a child late are more likely to remain childless
  - Because of the decrease with age in capacity to have a live child (e.g., Leridon 2004)
- However, across countries, fertility delay and change in childlessness levels are not related (Beaujouan and Toulemon 2021)



# Except in Italy and Spain, childlessness did not increase more in countries with more first birth delay

Figure. Changes in the average maternal age at first birth and the proportion of childless women among the 1952 and 1972 cohorts of women



# Linking later fertility and childlessness?

- At the individual level, women who start trying to have a child late are more likely to remain childless
  - Because of the decrease with age in capacity to have a live child
- However, across countries, fertility delay and change in childlessness levels are not related
- The share of late births and childless women are not related either

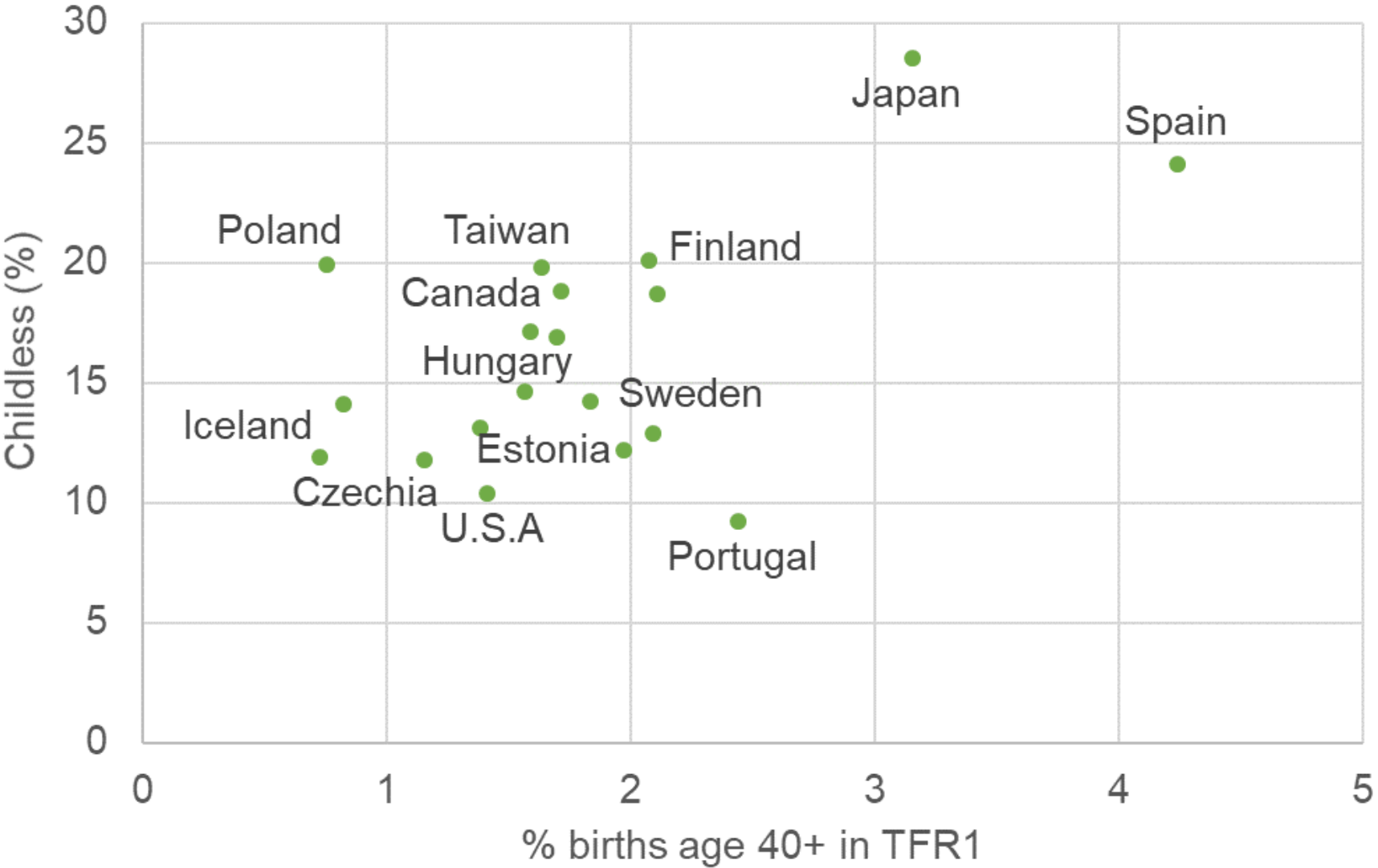
(e.g., Leridon 2004)

(Beaujouan and Toulemon 2021)



# With exceptions, childlessness is not larger where late births are more numerous

Figure. Proportion of childless women in the 1975 birth cohort *versus* contribution of births at age 40+ to first birth rate



Data. HFD-stat reports

# Linking later fertility and childlessness?

- There is no direct link between birth timing and childlessness at the country level
- Hence, context appears still more important than age-related infertility to define childlessness at the country level
  - Cultural expectation towards men and women to have children
  - Cost of childbearing in a context of “intensive parenting”
  - in conjunction with organisation in terms of gender roles and work-family balance

(Beaujouan and Toulemon  
2021)





# Research question

- Despite this, it is possible that more people are experiencing biological childlessness in countries with later fertility, linked to a later age at trying to have a child
  - Which is not visible when looking at all childlessness types together because biologically childless are a relatively small group
  - So far, no systematic cross-country study
- How does biological childlessness vary across countries?

# Evidence on biological childlessness?

- Around 3% of all women, idem for men
  - have encountered infertility problems that prevented them from having a child
- Women more likely to declare biological childlessness than men
  - Less decrease in capacity to have a child for men than women + age difference with partner
  - Less awareness among men/ lower declaration
- May be linked to how late people have their children in the country
  - Decrease in capacity to have a child from age 35 (w)/40 (m)

(Beaujouan 2020; Slama 2012; Van Roode et al. 2015; Poston and Cruz 2010; Toulemon 1996)

(La Rochebrochard et al. 2006; Sartorius and Nieschlag 2010)

(Greil 1997; Lazzari et al. 2022)



Data



# Data sources for biologically childless

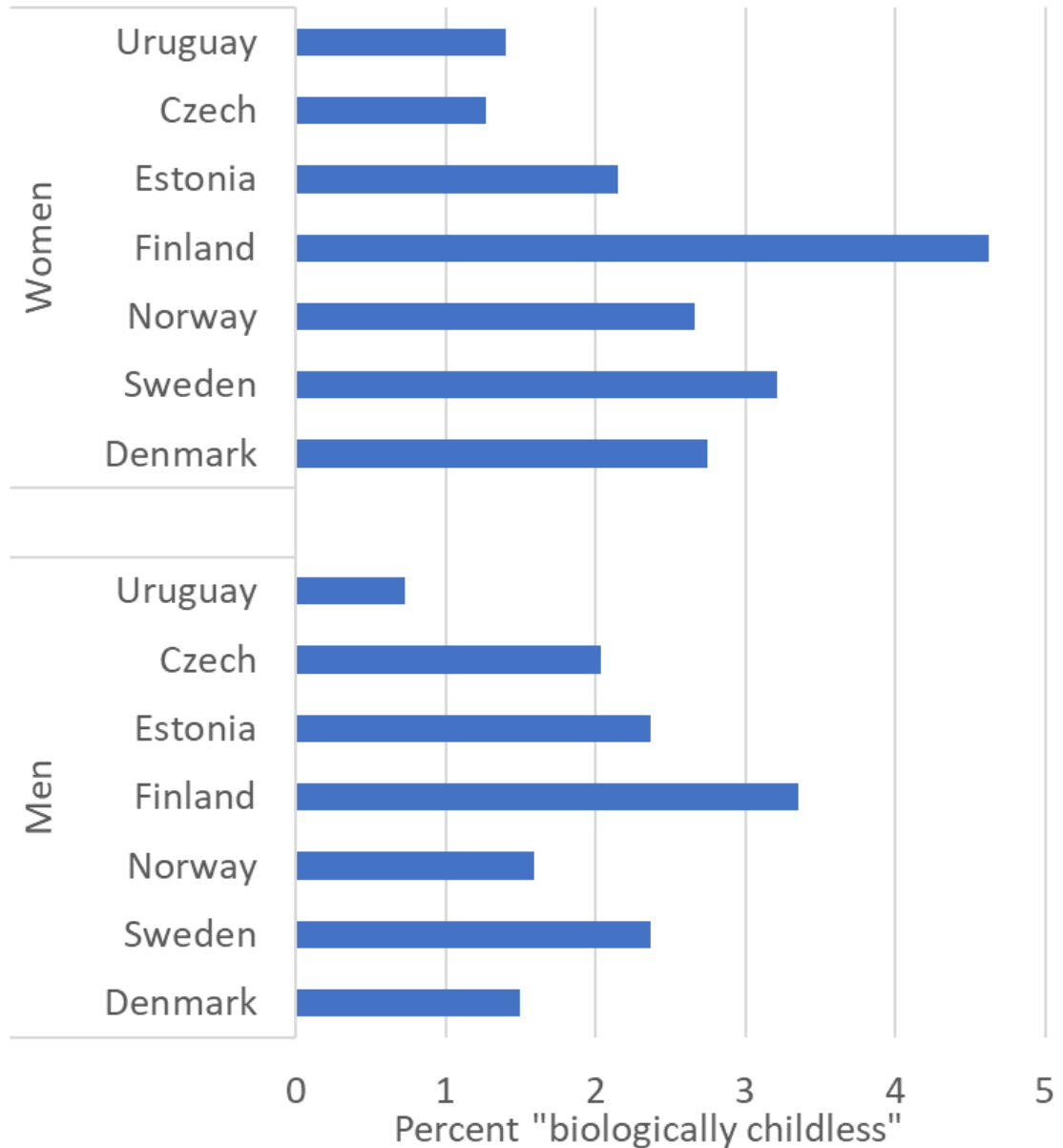
- Generation and Gender Surveys II
  - Seven countries so far (checked by Leocádio et al. 2023)
  - Question on experience of infertility asked up to age 59
    - Was there ever a time when you and a partner were trying to get pregnant but did not conceive within at least 12 months?
    - Allows to identify infertility experience and “biological childlessness”
  - Parity at age 40-59 (0 child = childless)
- Spanish fertility survey 2018; pairfam (Germany); Fecond (France) – Thank you Shalini Singh and MC Compans

# Biological childlessness across countries



# Estimating the share of “biologically childless” men and women

Figure. Share of women and men without child and who experienced infertility; age 40-59 at survey, by country, 2020s



- Between 1.3 and 4.6% of women are childless and declare infertility issues
- Between 0.7 and 3.4% of men

Data. GGP II, 2020s.  
Field. All respondents, weighted

# Identifying biologically childless people

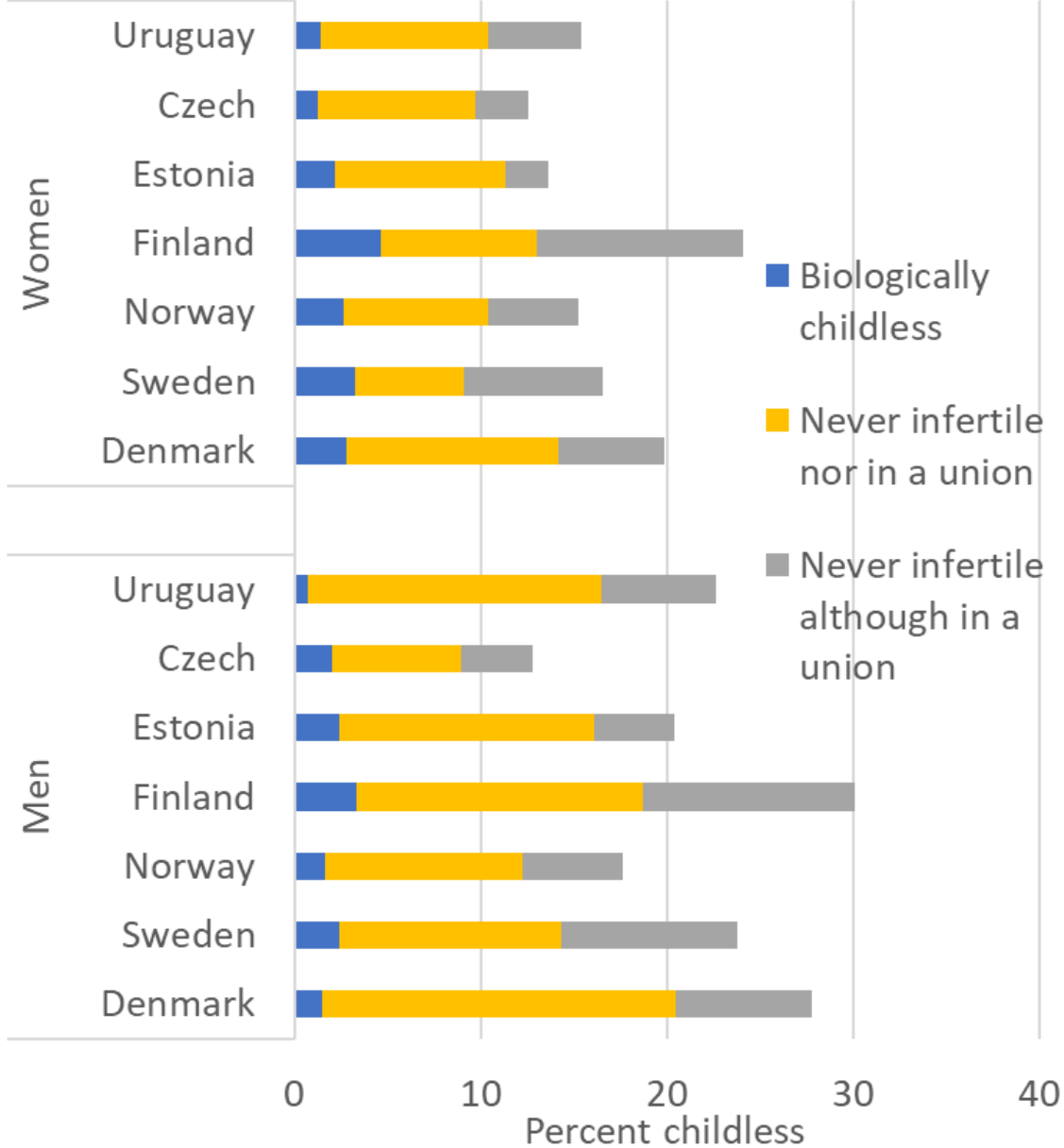


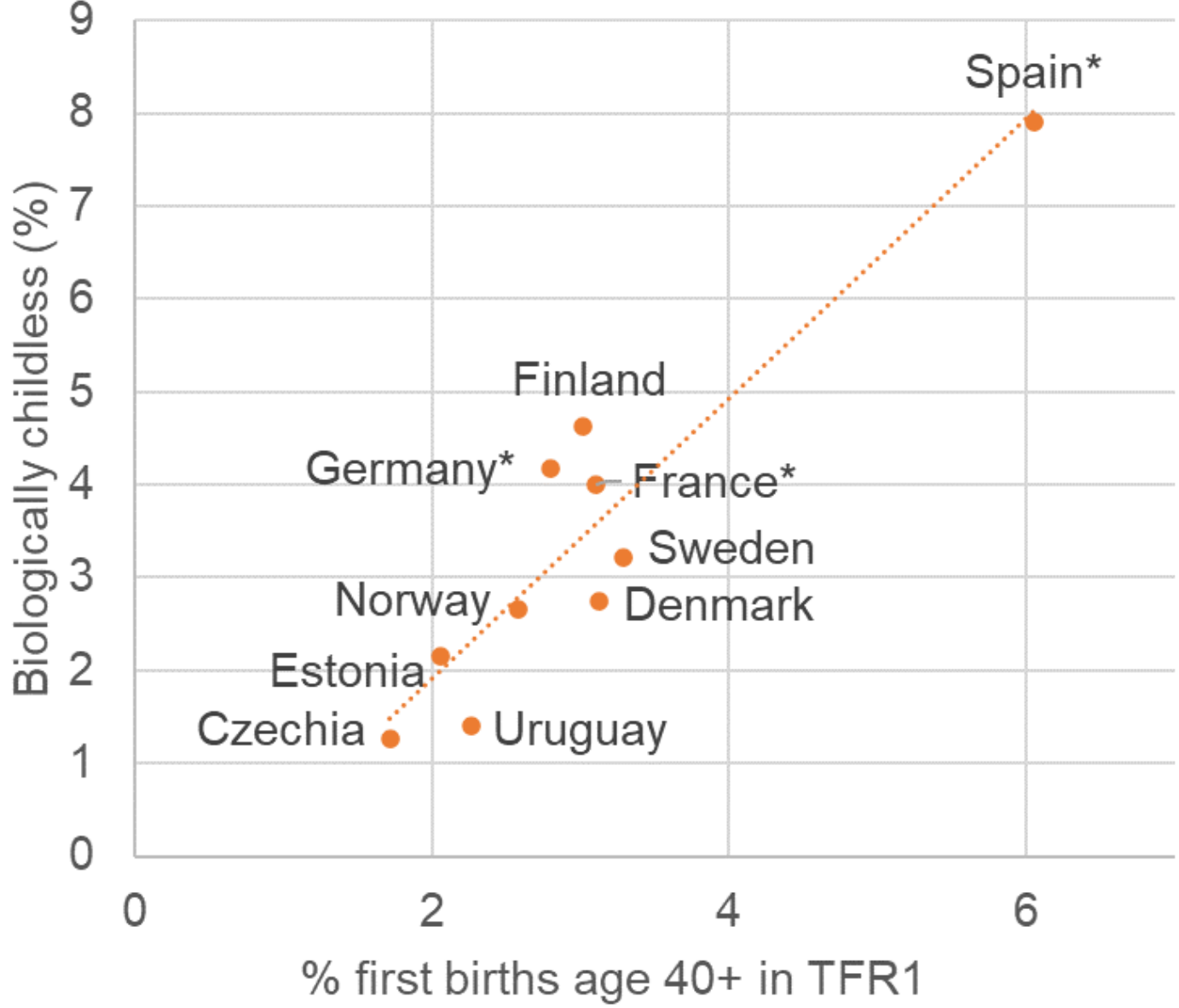
Figure. Share of women and men without child; age 40-59 at survey, by country, 2020s

- Some “biologically childless” individuals may have had a child if they had continued to try
- Others may not know (never tried)

Data. GGP II.  
Field. All respondents, weighted

# Cross-country correlation between share of biologically childless and share having a first child after age 40

Figure. Share of women biologically childless at age 40-59 vs. contribution of ASFR1 at age 40+ to TFR1, across countries, 2020s



Data. GGP II, \* Spanish fert survey, pairfam, Fecond. HFD, Cabella et al. 2023  
Field. All respondents, weighted  
Ackn. Shalini Singh, MC Compan



# Which (individual) factors may explain cross-country differences in biological childlessness?

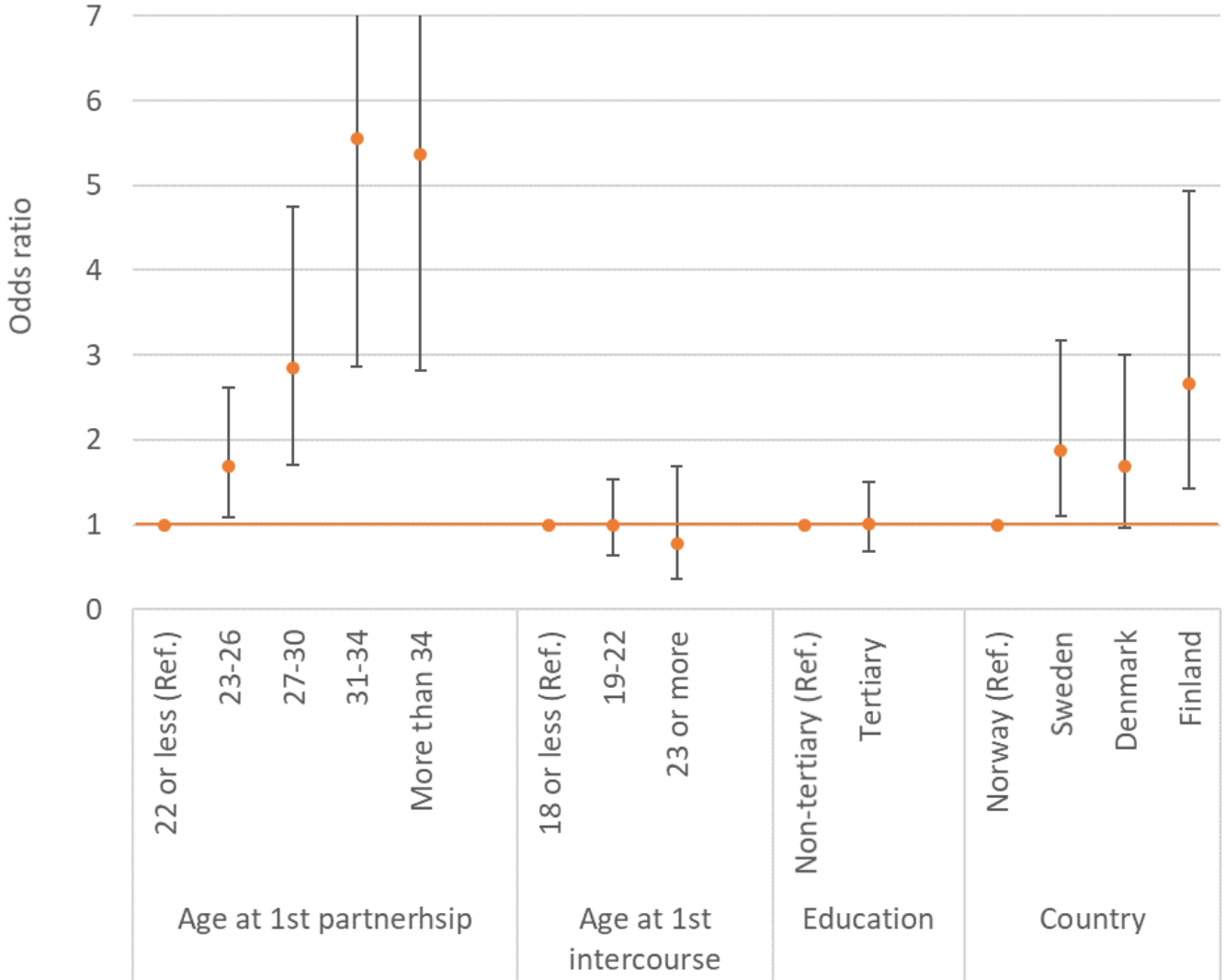
- People who started a union later possibly more limited in their capacity to reproduce
  - Reconstruction of age at first partnership
- Age at first sexual intercourse
  - As a marker of earlier start of family?
  - How old were you when you first had sexual intercourse? If you have not had sexual intercourse, select not applicable
- Highly educated people start trying to have children later, so probably more often experience issues to have children
  - But so far evidence rather shows that they are less likely to be limited at equal age

(Compans and Beaujouan 2022)

(Goisis et al. 2020; Choi et al. 2023)

# In the Nordic countries, contrast in biological childlessness between countries persists after controls

Figure. Logistic regression Odds ratio to be biologically childless at age 40-59, among women ever in a union Nordic countries, 2020s



Data. GGP II.  
Field. All respondents, weighted

# Discussion



# A correlation between age at first birth and biological childlessness across countries

- Despite the absence of relationship between childlessness and first birth timing across countries
- There is a relationship when focusing on biological childlessness
- The factors related to timing we could control for were however not sufficient to explain the cross-country variation in biological childlessness
- Men declared less often infertility issues
- More work is needed to also understand the other components of childlessness
  - Childfree and childless by circumstance



**Acknowledgement:**

Research funded by ERC grant BIC.LATE, European Union's Horizon 2020 research and innovation programme, grant Agreement No 101001410

