



Wittgenstein Centre

FOR DEMOGRAPHY AND  
GLOBAL HUMAN CAPITAL



# The gap between reproductive intentions and reproductive outcomes

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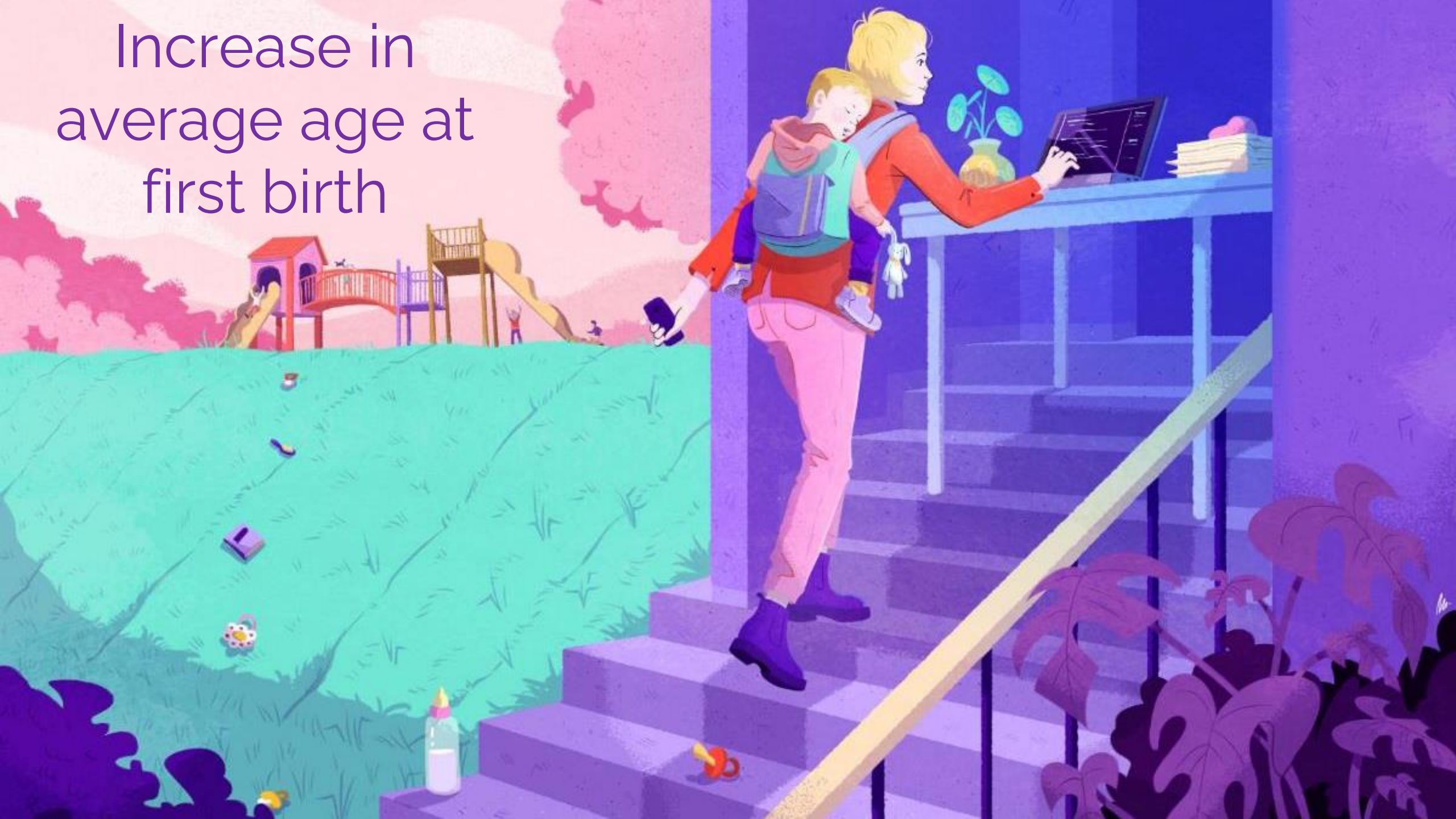
# This talk

- Elements on delayed childbearing and on the implications for individuals and for fertility levels
  - Trends in late childbearing and late intentions to have a child
  - Gap between late reproductive intentions and family size across birth cohorts
- May biological constraints become more prominent?
  - Cross-country exploration of women without children at age 40-59 who experienced issues having children ("biologically childless")
  - Elements suggesting that more women may be experiencing infertility as childbearing is being postponed
- Definition: fertility (to speak of the number of children women have) and infertility (issue to conceive)
- Data about women, but men are important actors

# Data sources

- Human Fertility Database
  - Aggregate data on fertility across countries
- Generations and Gender Surveys
  - Detailed (individual) data on reproductive intentions and on past experience of infertility
  - 7 countries, 2020s
- Country surveys
  - Austrian microcensus (series of 7 surveys)
  - Others

Increase in  
average age at  
first birth



# People have children later and later in the high-income countries

- People did not have children at earlier ages

- Longer time spent studying
- Economic uncertainty, youth unemployment
- Competing activities

(Ni Bhrolchain & Beaujouan 2012)

(Adsera 2017; Kreyenfeld & Pailhe 2015)

(Testa 2017)

- New reasons to have children late

- Longer life expectancy
- Change in partnership and repartnering
- Change in values and attitudes

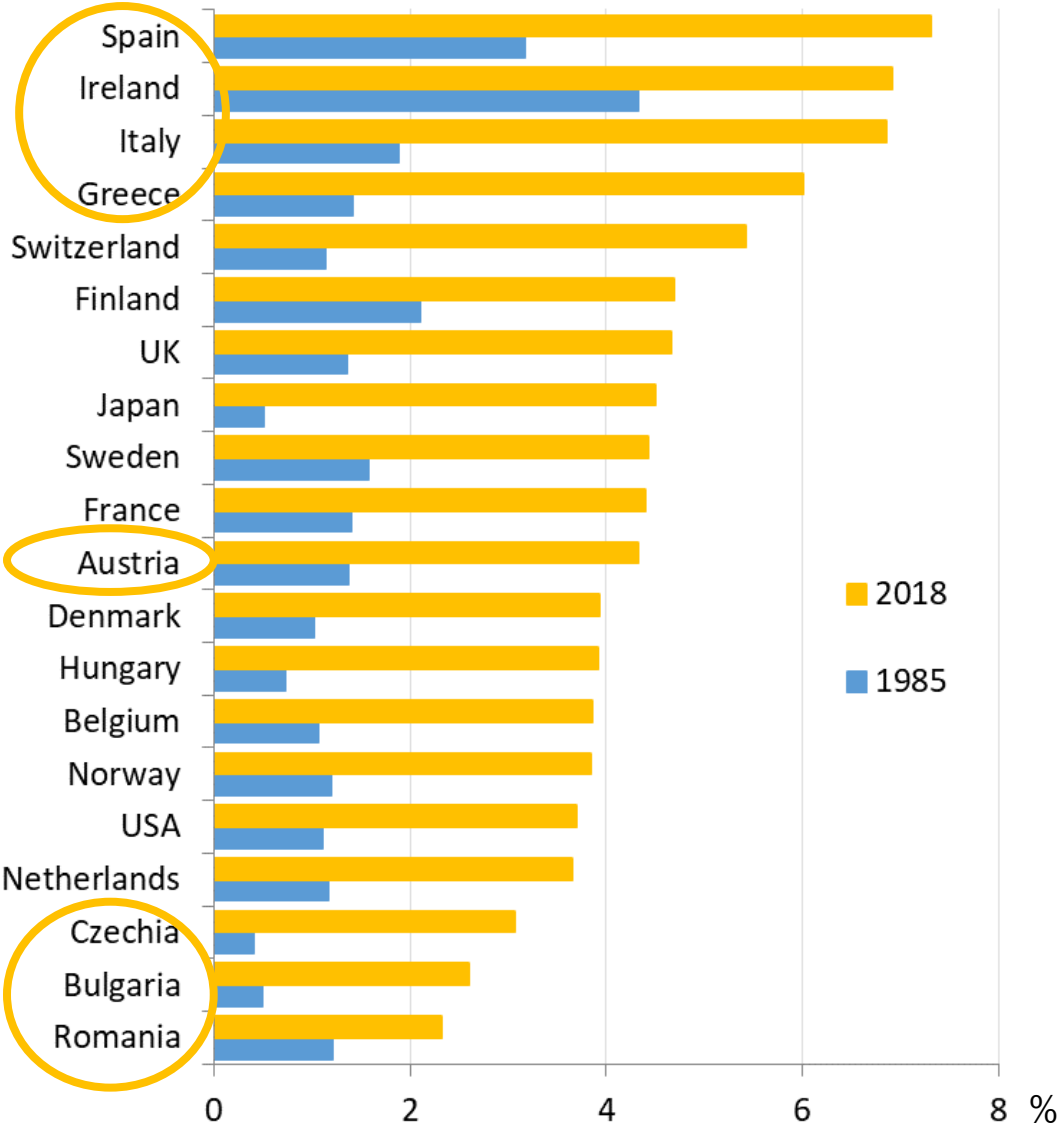
(Beaujouan & Toulemon 2021)

(Van Bavel et al. 2012)

(Lesthaeghe 2010)

# Remarkable increase in childbearing at ages 40+ across Europe, the US and Japan

Figure. Share of female fertility rates at ages 40+ in total fertility; selected European countries, 1985 and 2018



Source: Beaujouan and Sobotka (2022)  
Data: EUROSTAT + Human Fertility database

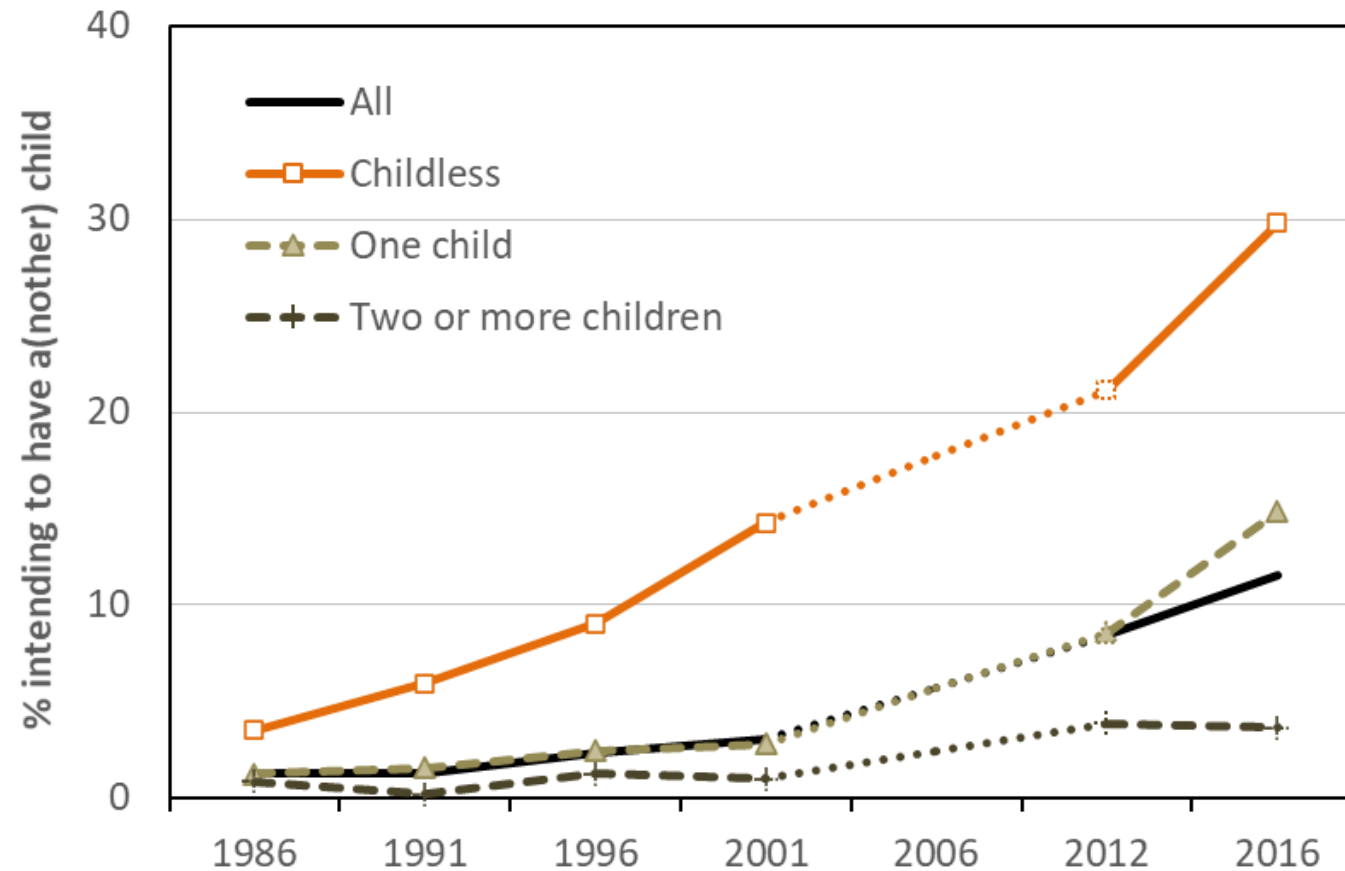


Intentions to  
have children  
are  
postponed



# Increase in the share of women aged 40-42 who wish to have a child in Austria

**Figure.** Share of women aged 40-42 who wish to have a child, by year and parity, **Austria**, 1986-2016



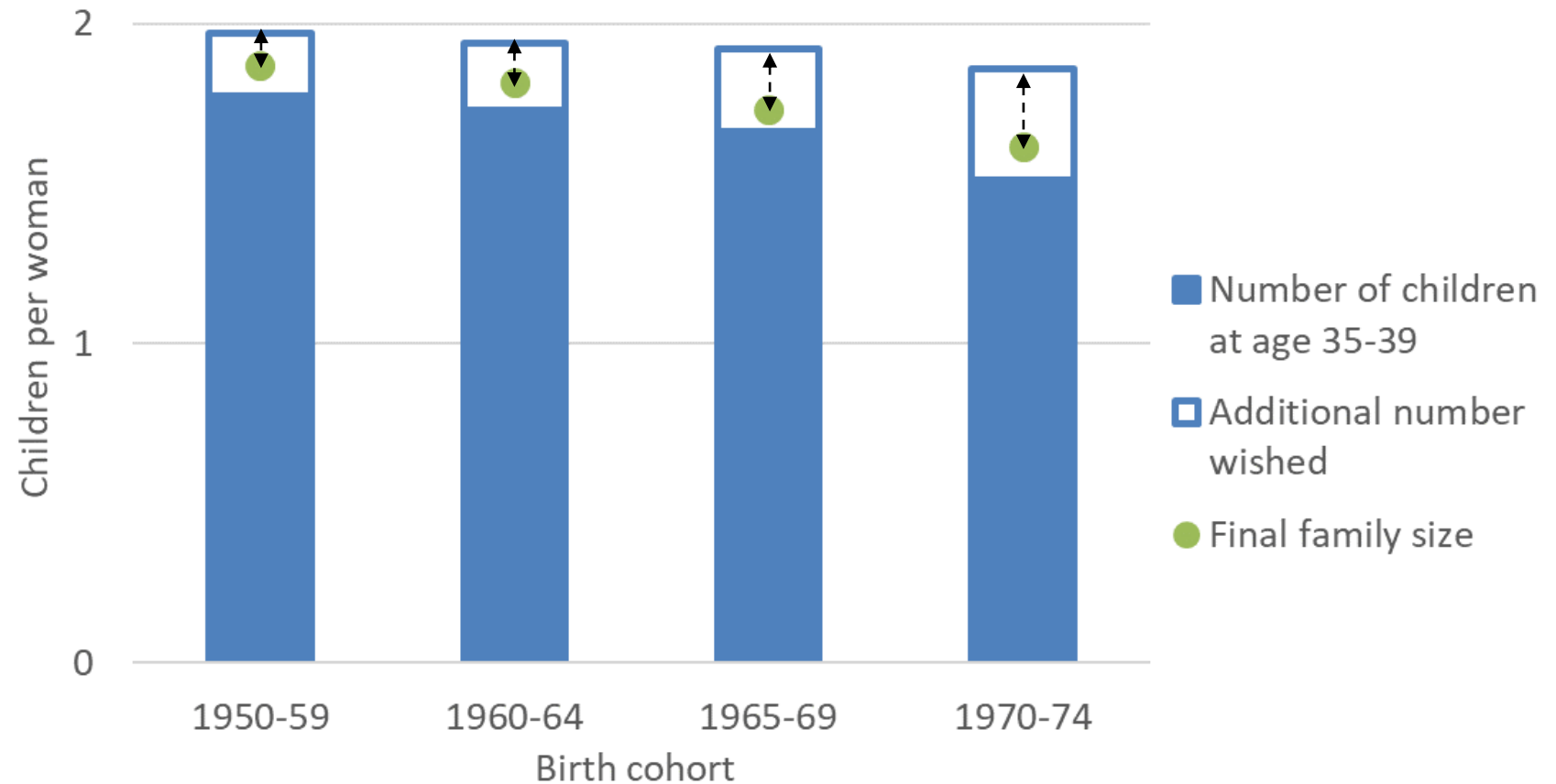
Source: Beaujouan 2022  
Data: Austrian Micro-Census

*Q: "Do you wish to have one or several (additional) children ....?"*



# The number of children wished at age 35-39 and the number had by age 45 are increasingly disconnected

**Figure.** Mean number of children had and intended at age 35-39, and mean number of children achieved by age 45 by birth cohort, Austria, all women



Source: Beaujouan 2022  
Data: Austrian micro-census 1986-2016

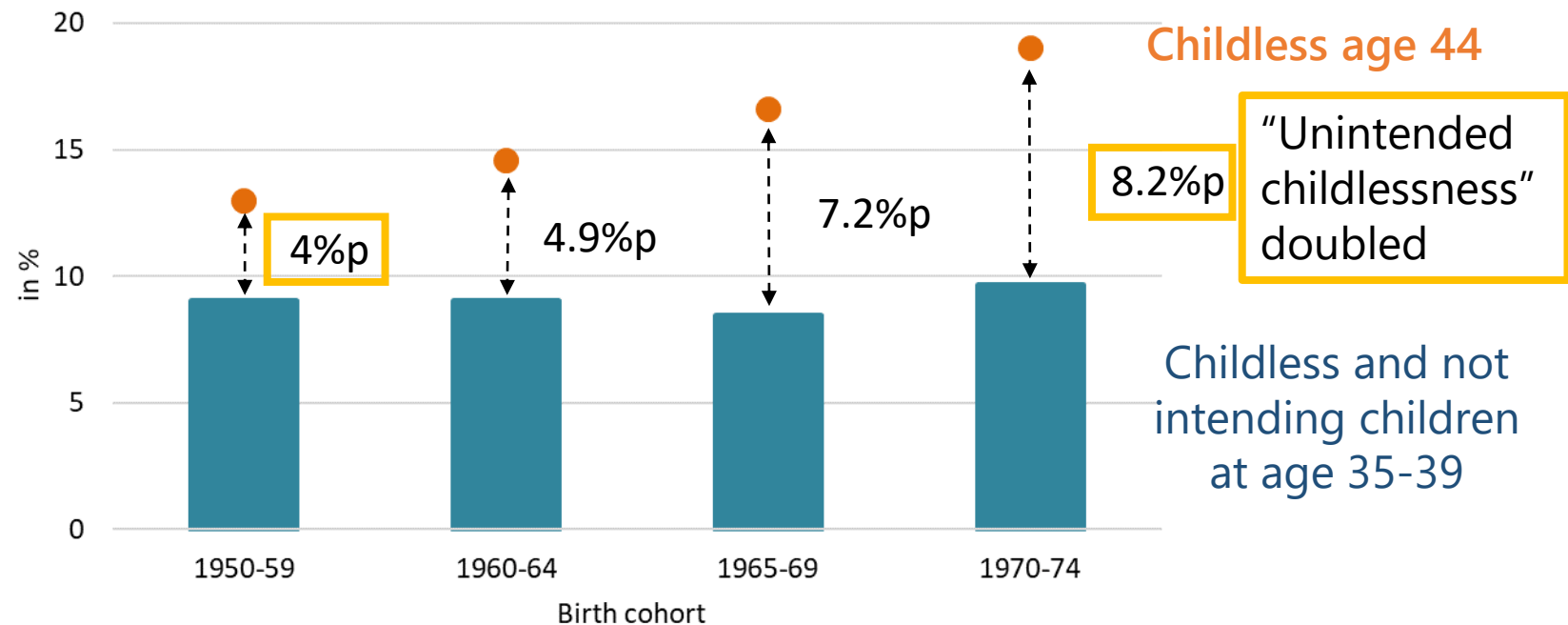
# An increasing share of women want a child at age 35-39 but do not have one by age 45

Figure. Share in the population of women childless and not intending a child at age 35-39

*versus*

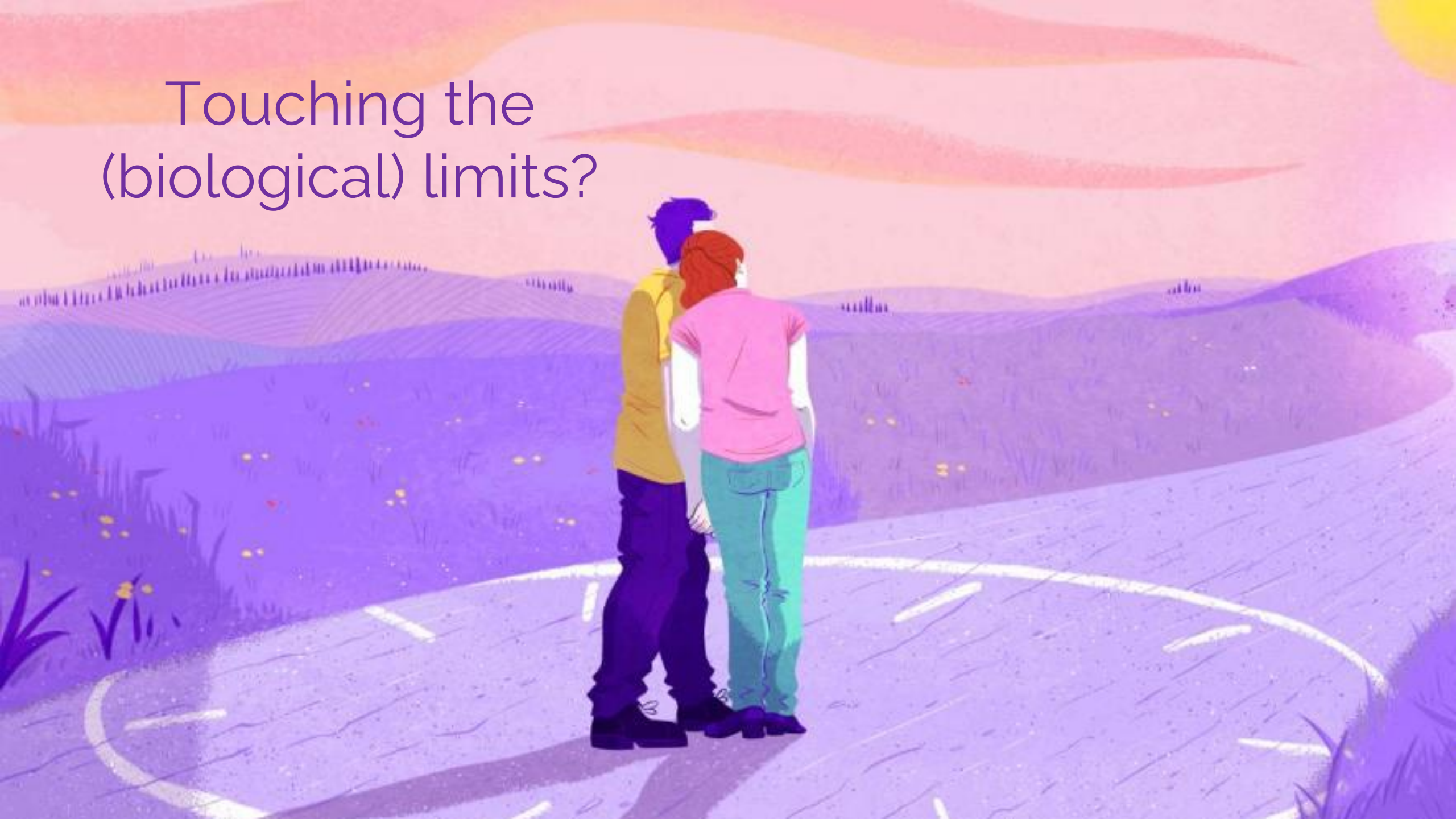
share childless at age 45,

by birth cohort, Austria, all women



Source: Beaujouan 2022  
Data: Austrian micro-census 1986-2016

Touching the  
(biological) limits?



# Linking later childbearing and infertility

- At the individual level, women who start trying to have a child late are less likely to have children by the end of their reproductive life
  - Also because of the decrease with age in capacity to have a live child (e.g., Leridon 2004)
- Do more people struggle to have a child in countries where births are more delayed?

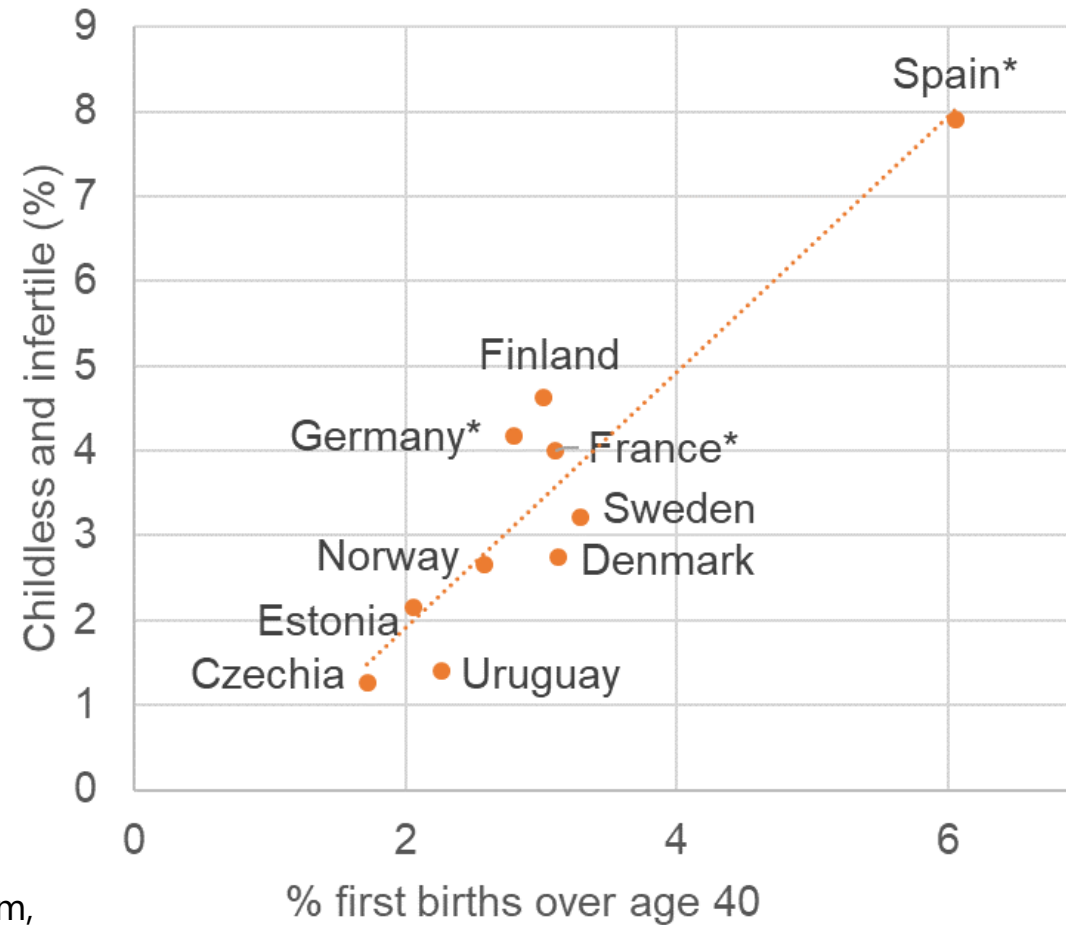


# Data sources for biologically childless

- Generation and Gender Surveys II
  - Seven countries so far (checked by Leocádio et al. 2023)
  - Parity at age 40-59 (0 child = childless)
  - 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”
- Spanish fertility survey 2018; pairfam (Germany); Fecond (France)

# More women end up childless with declared infertility in countries with later fertility

**Figure.** Proportion of women biologically childless at age 40-59 *versus* share of late first births, across countries, 2020s



- Between 1.3 and 8% of women are childless and declare infertility issues
- ART already available

**Data.** GGP II, \* Spanish fert survey, pairfam, Fecond. HFD, Cabella et al. 2023

**Field.** All respondents, weighted

**Ackn.** Shalini Singh, MC Compans, Ester Lazzari

May an increasing  
share of people hit  
the biological  
limits?

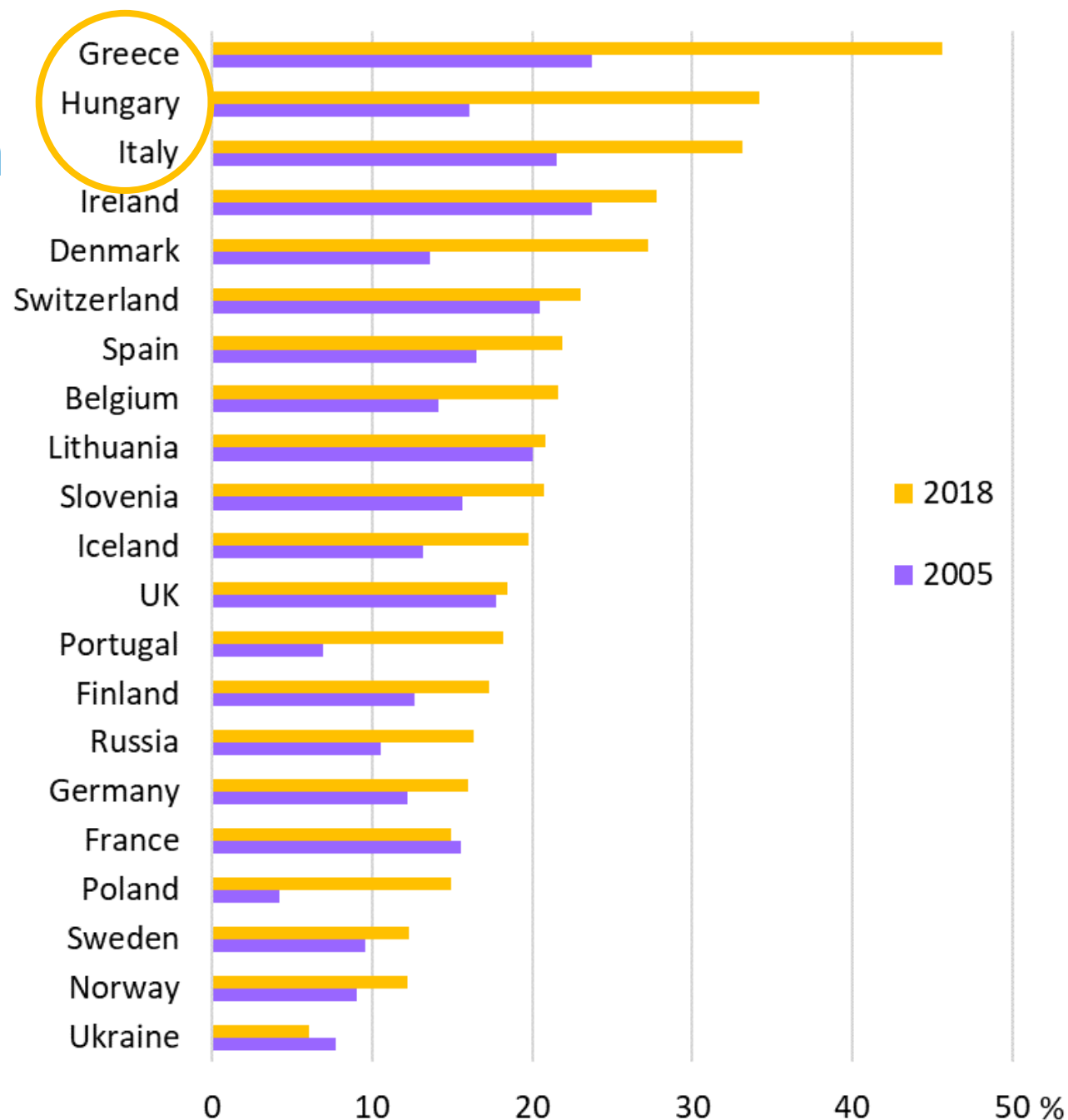


Across Europe, about 15% of IVF/ICSI treatments to women 40+ in 2005, 22% in 2018

**Figure.** Share of aspirations for IVF/ICSI treatments at ages 40+; selected European countries, 2005 and 2018

**Note.** Cross-borders ART frequent in Belgium, Spain, Czech Republic, Denmark...

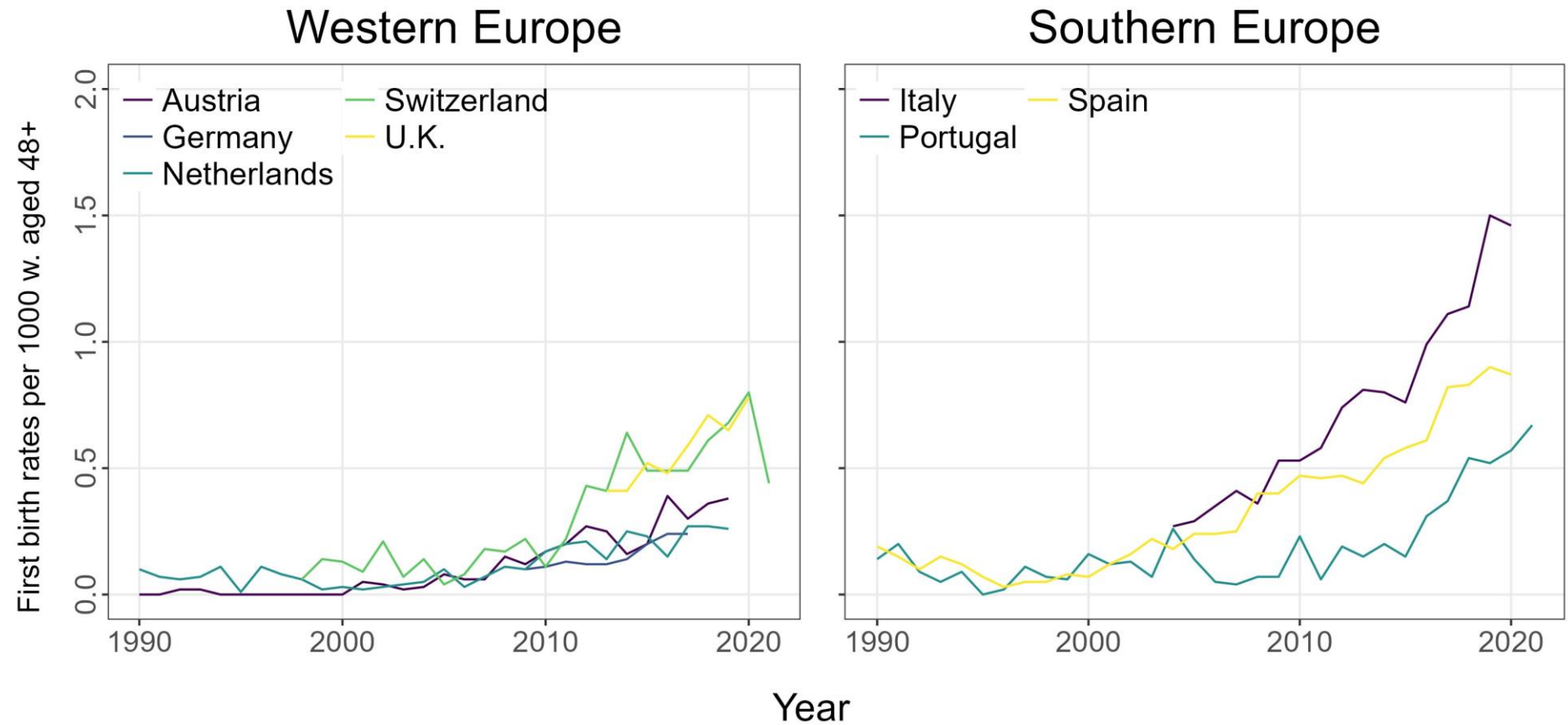
**Data.** Assisted reproductive technology in Europe, results generated from European registers by ESHRE





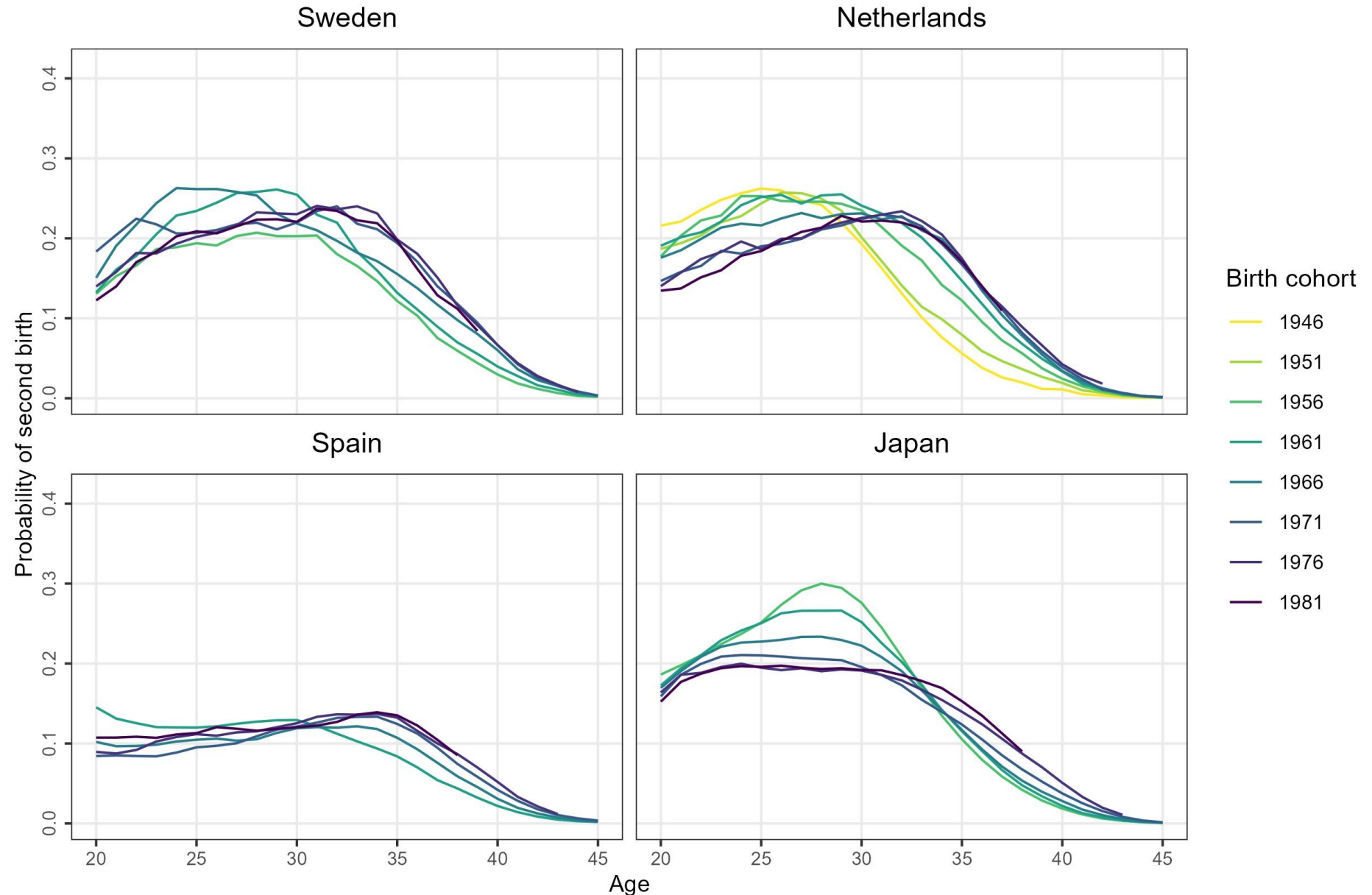
# More and more births beyond the biological limits (mostly linked to Medically Assisted Reproduction)

**Figure.** First birth rate for all women ages 48+, selected European countries



# No “bulking” in 2<sup>nd</sup> birth risks over age 35

**Figure.** Probability of second birth by age among those who have a first child



# Discussion



# Summary

- People are having their children later and later in most high-income countries
- In Austria, we observed that an increasing number of women are not having the children they wish at later ages
  - In particular, the proportion of childless people wanting a child late but not having it increased strongly
- Eventually, 1-8% of people tried to have a first child but did not manage
  - This share was larger in countries where fertility was postponed most
- A growing proportion of people may be reaching biological reproductive limits
  - And this number will probably continue to grow as fertility is delayed further



# Discussion: Implications of late fertility for family size and individuals

- For family size
  - In large part, the fertility decline remains linked to change in fertility behavior and not to biological constraints
  - But variation across contexts, extreme cases of Italy and Spain
  - **Decreasing room for further fertility delay**, depending on stage of fertility postponement
- For individuals
  - In non-extreme cases, many people may still manage to have the first child they wish, but less often further children because they will be starting “too late”
  - More frequent use of IVF and donor eggs, also prone to fail
  - More complex and distressing reproductive experience
- Overall, biological limits will certainly become increasingly important in the future reproduction landscape



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