

The increase in late childbearing in Europe, Japan, and the United States

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Session 32, 2007 Annual Meeting of the Population Association of America, New York, 29 March 2007

INTRODUCTION

By the 1970s childbearing among women aged 40+ became rare in most advanced societies

- fall in higher-order fertility rates & early family formation

Prioux (2005): “late fertility seemed destined to disappear”

Trend reversal in many countries since the 1980s: rising fertility rates, numbers of births, and the fraction of total fertility at ages 40+ (Billari et al. 2007)

- Trend towards later childbearing, especially among highly educated
- Rescaling of the life course? (Lee-Goldstein 2003)
 - rather strict biological limits (‘deadlines’) to postponing childbearing
- Late childbearing (i.e., childbearing at ages 40+) comes close to these limits – the notion of ‘biological clocks’
- Also linked to advances in assisted reproduction (ART)

Trends, determinants and consequences of changes in late childbearing remain little documented (Billari et al. 2007, Prioux 2005, Toulemon 2005)

Popular literature: more books on late motherhood and infertility

Birrittieri (2004): “What Every Woman Should Know About Fertility and her Biological Clock”

Why focus on late fertility?

Medical research:

- Health consequences of late pregnancies for mothers and their children
- Advances in assisted reproduction technology (ART)

Involuntary childlessness and infertility:

- Infertility linked with substantial long-term distress for childless women (McQuillan et al. 2003)
- Ethical issues and practical considerations on ART use at ages 40+; limited success rates at ages 40+ (Leridon 2003)

Social norms:

- Age 40 frequently considered as a normative ‘deadline’ to childbearing (Settersten and Hägestad 1996, Testa 2006)

Other issues (Intergenerational relations, Human capital & income of late mothers)

Aim of our RESEARCH

Starting point: the analysis of Billari et al. 2007; focus on women

1) To analyse trends in late (age 40+) childbearing in Europe, Japan, and the United States

- Is the trend reversal universal?
- Is ‘very-late’ and ‘extreme late’ (ages 45+ & 50+) childbearing on the rise as well?
- Importance of very late childbearing from a historical perspective
- Shifting distribution by birth order: More first and second births at ages 40+?

2) More evidence on parity-specific trends

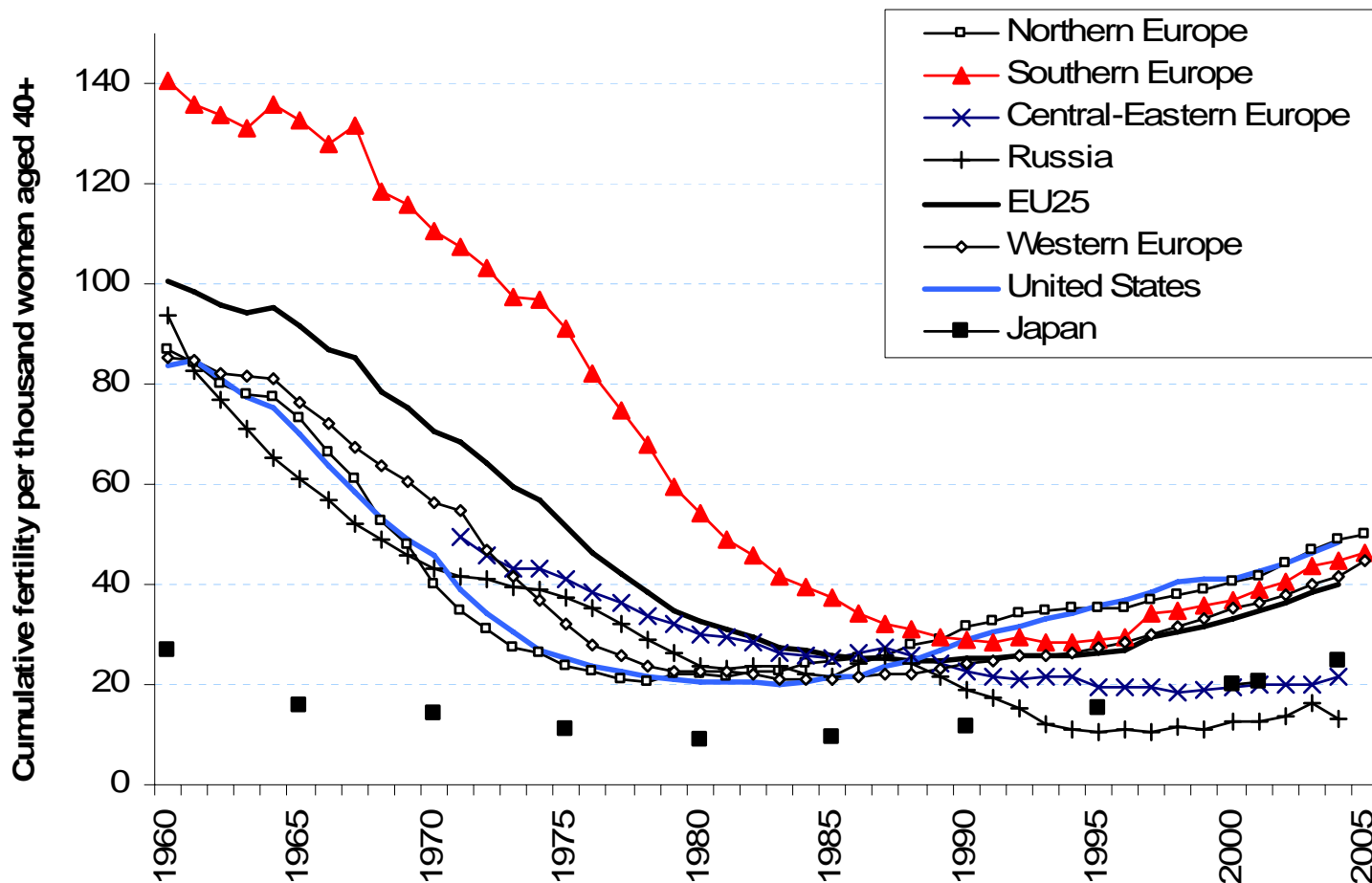
- A ‘genuine’ increase in parity-specific intensities of late childbearing?
- Is the intensity of late childbearing differentiated by parity?

3) Some factors behind the increase of late fertility

- Decomposition of changes in late fertility: changing parity-specific intensities of late childbearing vs. changing parity composition of women aged 40-44
- Change in cohort behaviour (fertility ‘postponement’ and ‘recuperation’) as an ‘engine’ of the observed trends in very late childbearing?

1) TRENDS IN LATE CHILDBEARING

Trend reversal has occurred in almost all advanced societies; most recently in the countries of Central and Eastern Europe



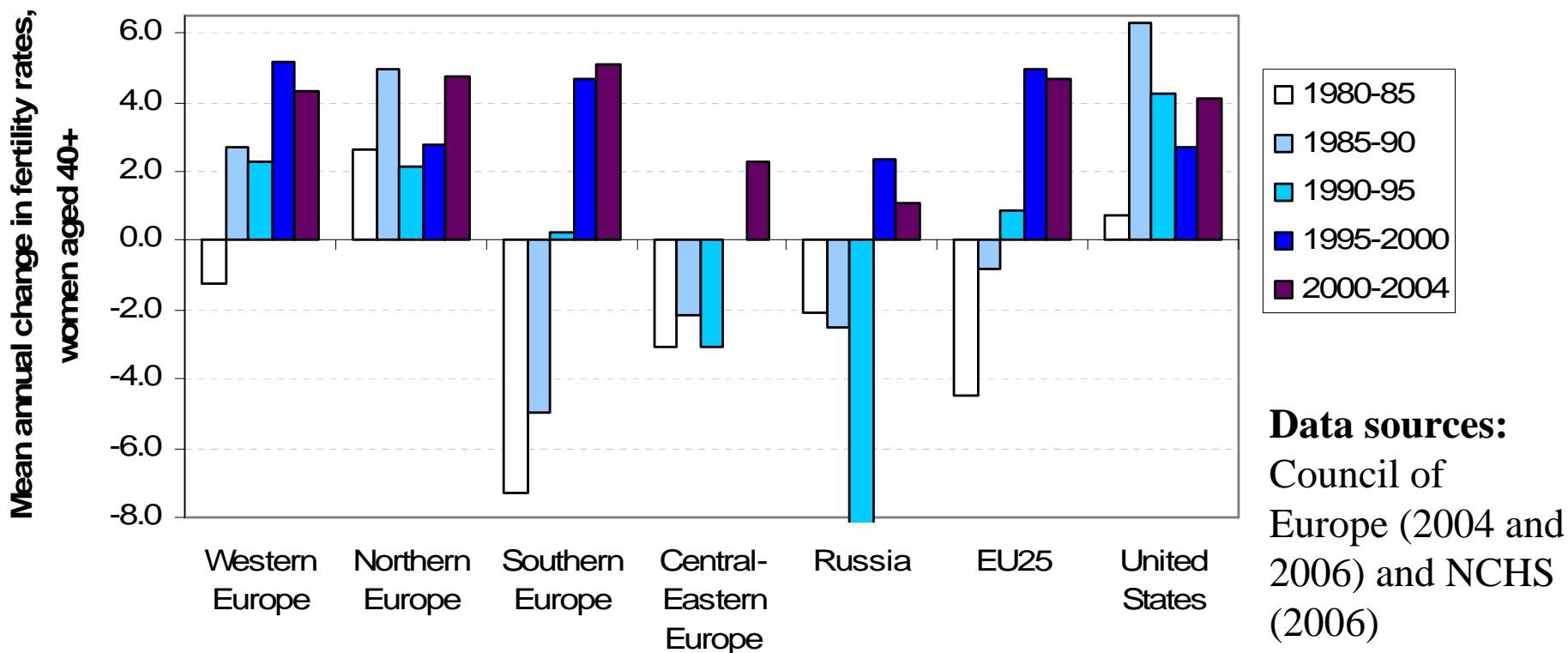
Data sources: Council of Europe (2004 and 2006), and NCHS (2006)

Rapid increase in fertility rates at age 40+

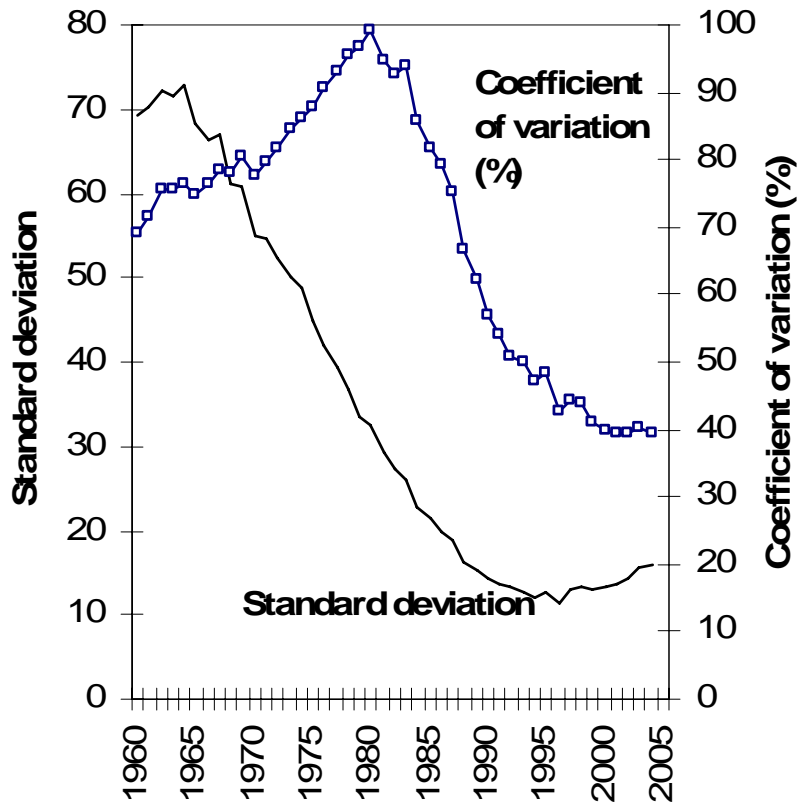
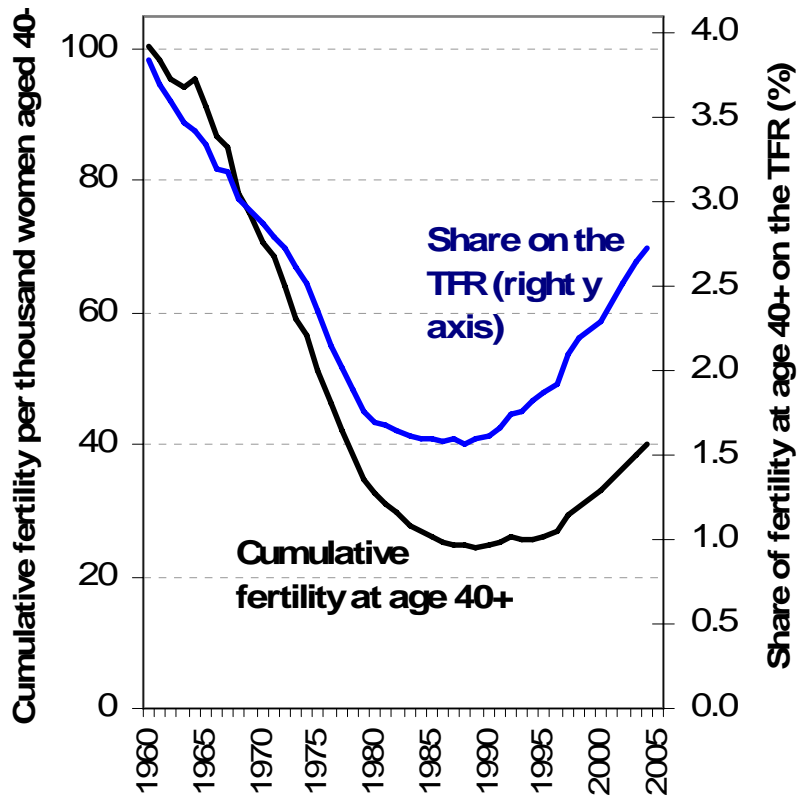
Onset later than the general trend of first birth postponement: US, Japan, Western & Northern Europe: late 1970s & the 1980s

Rapid relative increase: 5 % annually in EU-25 in 1995-2004

- total increase by a factor of 2 and higher in most 'Western' societies, including the US (also in Japan)



EU-25: Increasing share of fertility at ages 40+ and declining cross-country heterogeneity



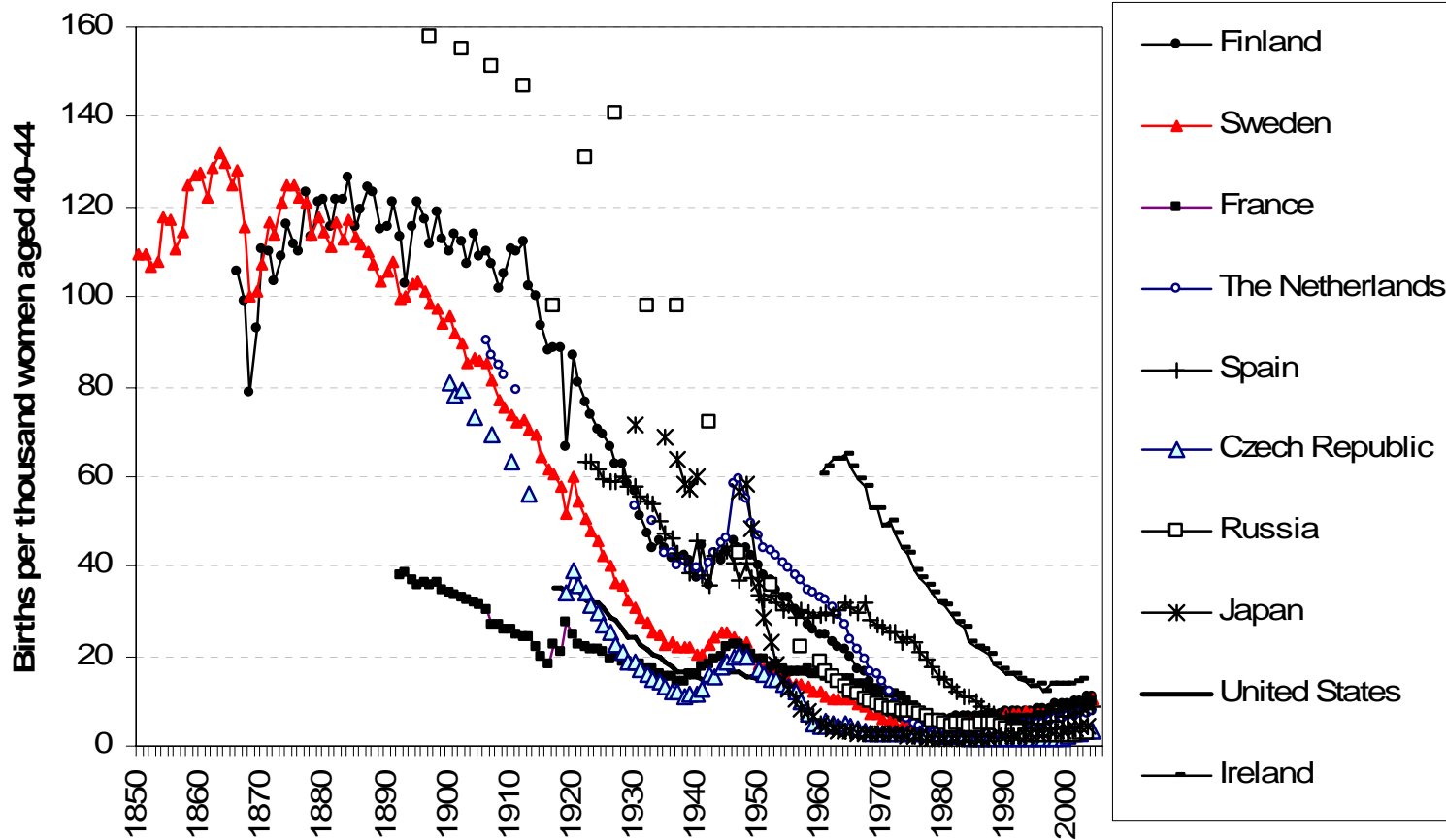
Data sources: Eurostat (2007), Council of Europe (2006)

EU (25): Due to the decline of the TFR the fraction of fertility to women aged 40+ has increased faster than their fertility rates

Historical evidence

Fertility rates at age 40+ still remain very low at present

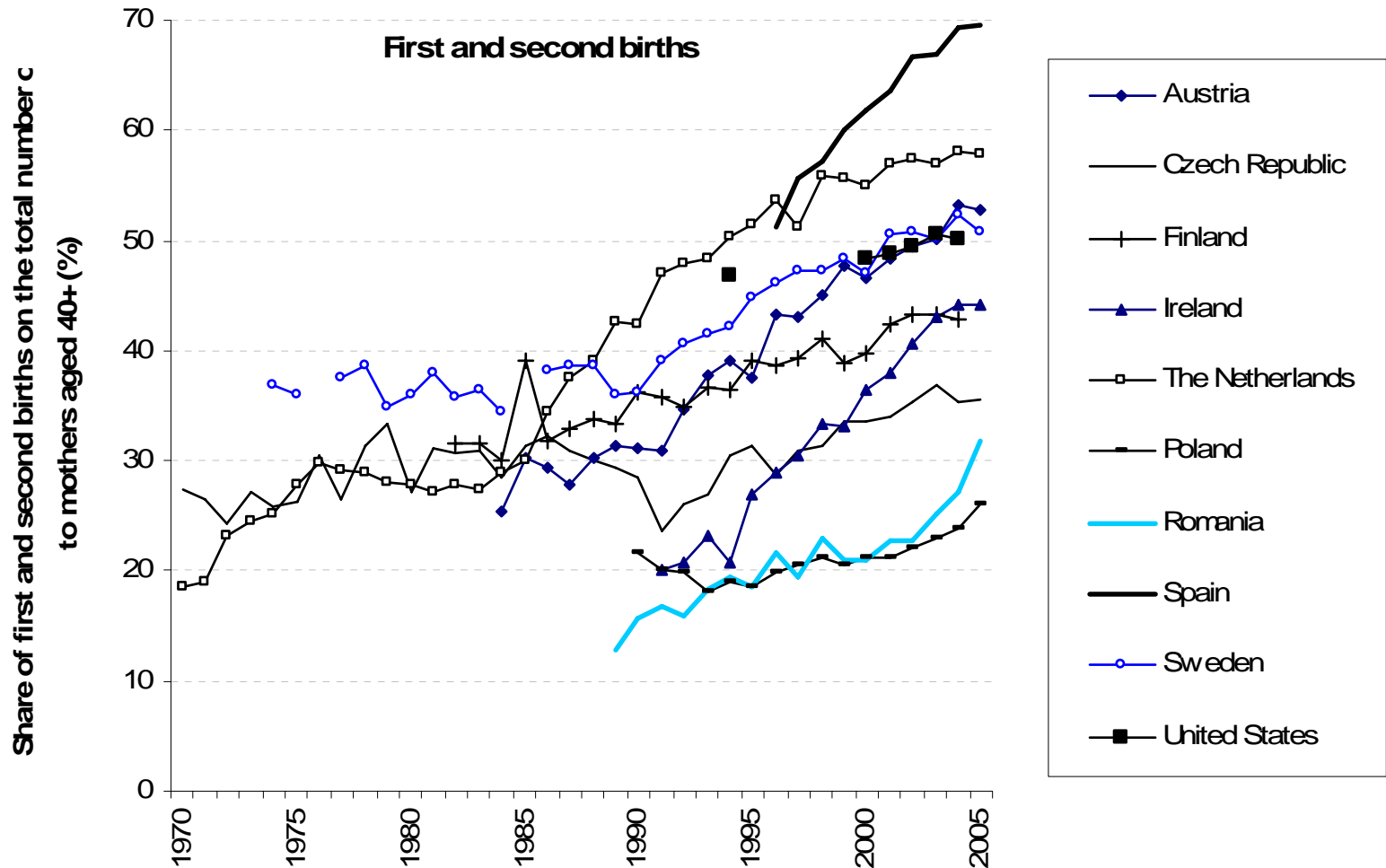
- Women use only a small fraction of their 'reproductive capacity' at ages 40+ (less than 10% of fertility in the 19th and the early 20th Century)
- Also the share of fertility at ages 40+ remains well below the values recorded in the past (e.g. Finland 12 % in the late 19th Century, 3% in 2005)



Data sources:
Festy (1979),
Schoen (2004),
Heuser (1982),
Vishnevskiy (2006),
CBS Japan (2006),
Council of Europe (2004) and NCHS (2006)

The rising importance of first and second births

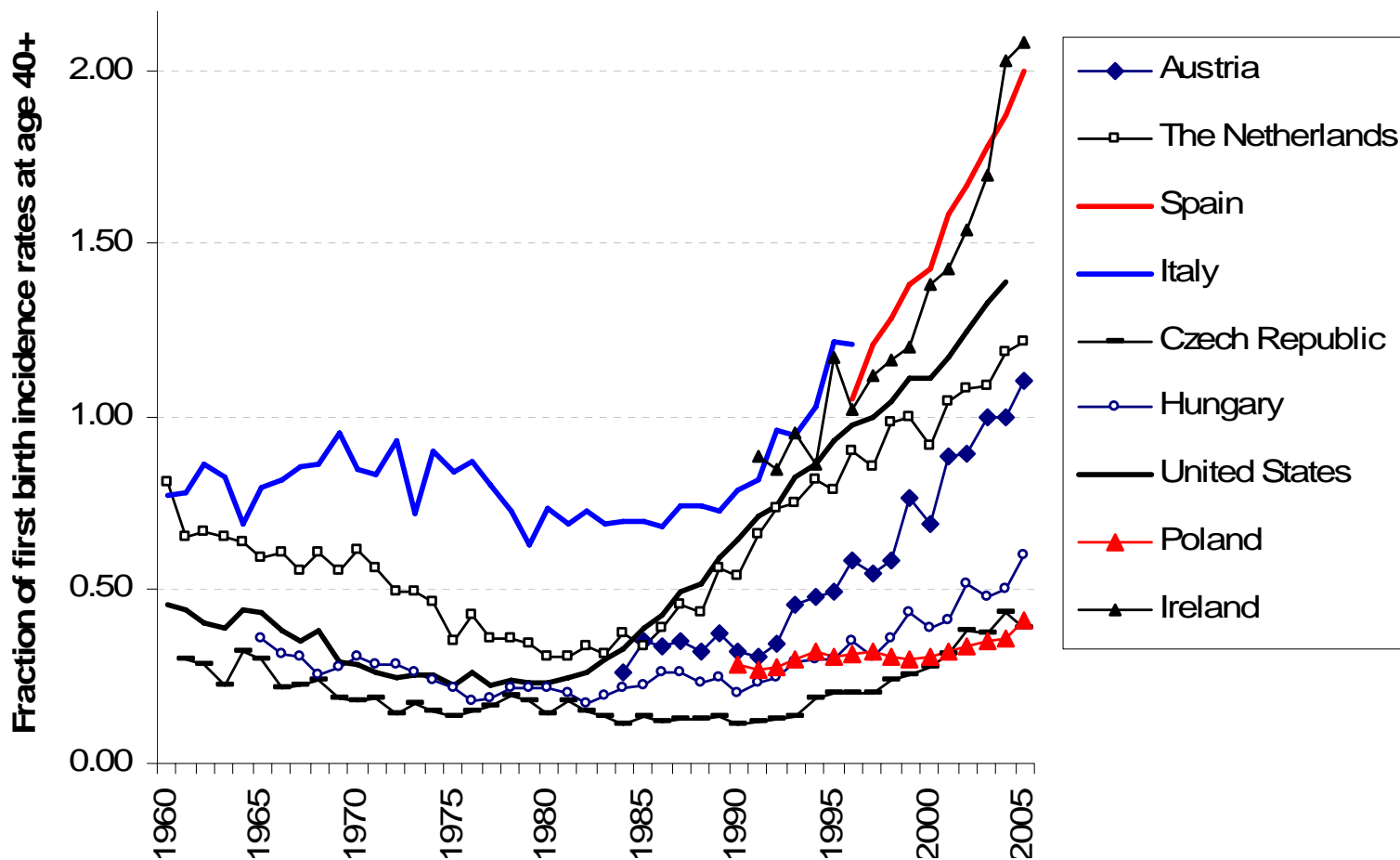
First and second births as a percentage of total births to women aged 40+



Data sources: computations based on Eurostat (2006), Statistics Austria and NCHS (2006)

First-time motherhood at late ages

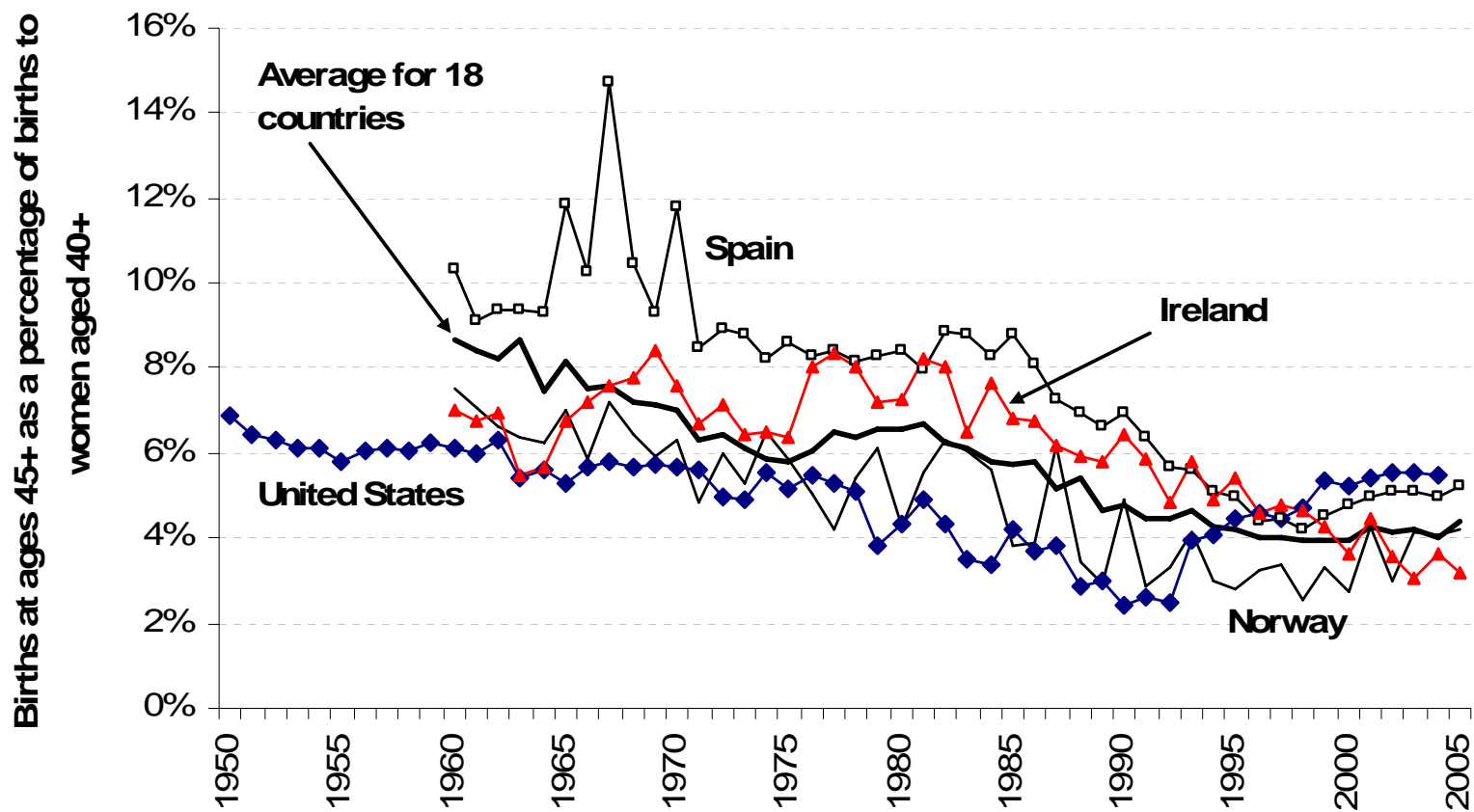
- First birth rates among women aged 40+ and their share on the first-order TFR increasing more rapidly than the overall late fertility rates
- Frequency of late first births at the record-high level in many countries



Data sources: computations based on Eurostat (2006), CBS Statline, Statistics Austria and NCHS (2006)

Trends in very late childbearing

- Childbearing at ages 45+ remains marginal: only 1 per 1000 births in the EU takes place among women of that age

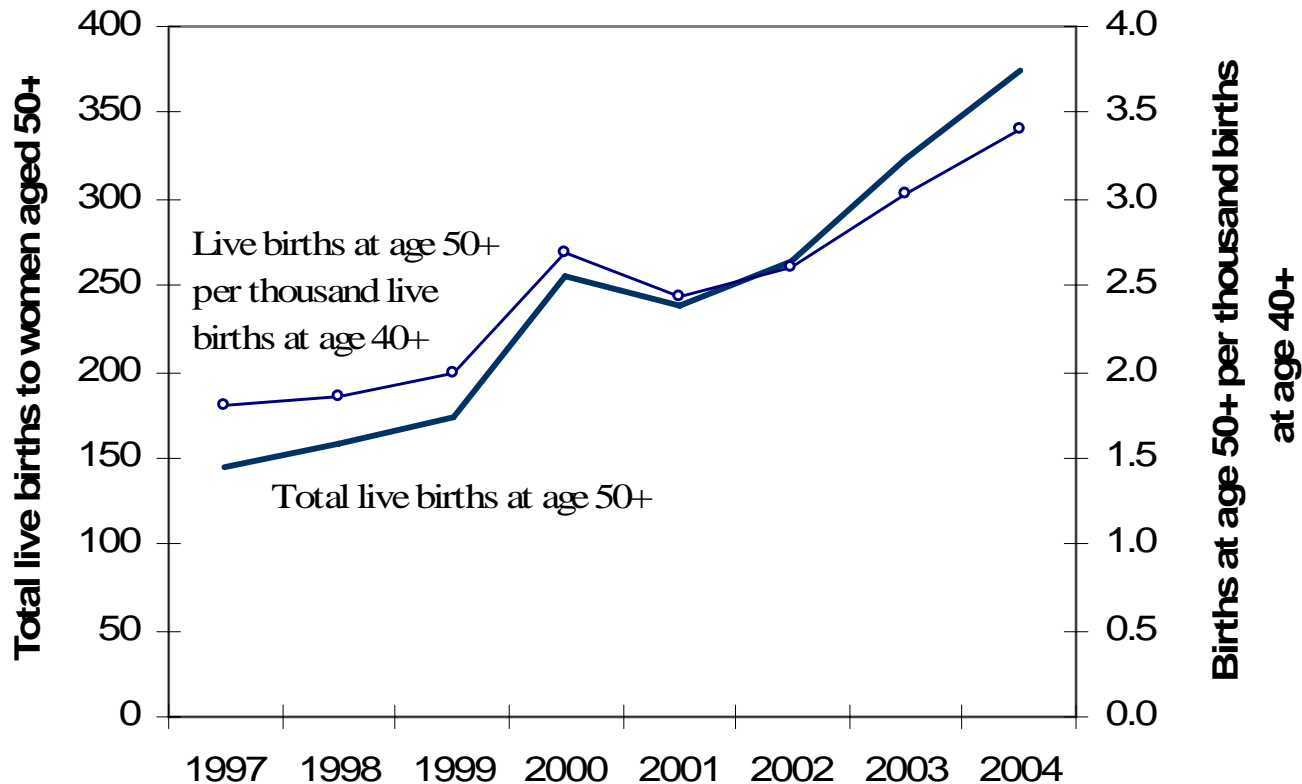


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Pushing the age limits? Childbearing at ages 50+

- Very rare: 0.5-1 births to women 50+ per 100,000 live births
- Increasing trend since the mid-1990s; link to ART use

Extreme late childbearing in the US

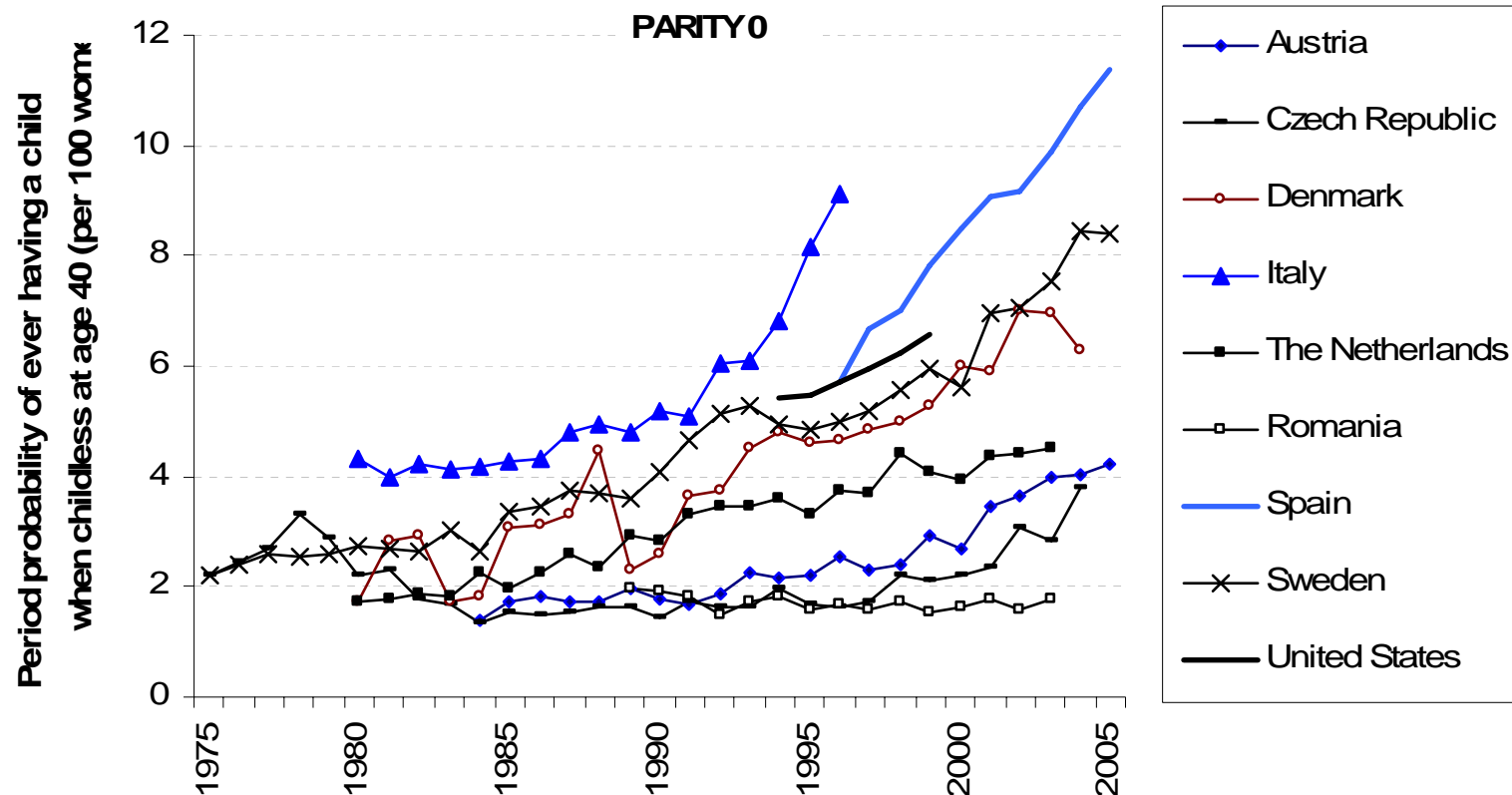


Media attention to record-late childbearing ages:

2007: Carmela Bousada (Spain) had twins at age 67

2) WAS THERE A 'GENUINE' INCREASE IN LATE CHILDBEARING INTENSITY?

Life table indicators of late childbearing intensities: (Period)
probability of ever having a(nother) child specified by parity at age 40



Notable rise in late childbearing intensity observed in most countries among childless & those with one child

3) DECOMPOSITION OF TRENDS IN LATE FERTILITY RATES

Decomposition of changes in late births and fertility rates (focus at ages 40-44):

- a) Changes in total births to women aged 40+ decomposed into
- Changes in the female population aged 40-44
 - Changes in late fertility rates (at age 40-44)
- b) Changes in late fertility rates decomposed into
- Changes in late childbearing intensities among women of different parity categories
 - Changes in the parity distribution of women aged 40-44
- >>> The contribution of different parities (birth orders) can be distinguished

Decomposition of change in late births and fertility rates in four European countries, 1995-2005

	Austria	The Netherlands	Spain	Sweden
a) CHANGES IN THE TOTAL NUMBER OF 'LATE' BIRTHS				
Index of change in the total number of women aged 40-44 (Population size effect); (1) 2005 (1995=1.0)	1.34	1.14	1.31	1.06
Index of change in late fertility rates (2) 2005 (1995=1.0)	1.55	1.69	1.82	1.50
Change in total births to women aged above 40; (3) = (1) * (2)	2.07	1.93	2.38	1.59
b) CHANGES IN LATE FERTILITY RATES				
Due to changes in the intensity of late childbearing (%)	100.3	91.0	78.3	103.2
Due to changes in the parity composition of women aged 40-44 (%)	-0.3	9.0	21.7	-3.2

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4) SUMMARY OF MAJOR FINDINGS

- **Trend reversal** in late childbearing ‘universal’ and significant
 - Late childbearing still infrequent when compared with the late 19th and the early 20th Century levels
 - Also increasing rates of very late and ‘extreme late’ childbearing
 - Total number of late births increasing faster than late childbearing rates
- **A shift towards late first and second births**; record-high fraction of first birth rates at ages 40+ in many countries
- **Childbearing intensities** at age 40+ rising rapidly among women at parities 0 and 1
 - Most prominent ‘proximate’ factor in the overall increase in late childbearing and in the total number of late births
 - Link to fertility postponement, late ‘catching-up’ effects
 - Appears to be largely a cohort-driven change (analysis not shown here)

5) DISCUSSION

- **Educational stratification** in late childbearing
- **ART and late childbearing**: delayed childbearing fuelling the demand for ART
 - Low success rates at ages 40+
 - Unrealistic perception among women of their ability to conceive at late childbearing ages
- **Health consequences** of very late childbearing
 - Possible aggregate effects on infant mortality rates, congenital anomalies, and health of newborn children and their mothers
 - More negative outcomes of late motherhood for childless women? (Gilbert et al. 1999)

Reasons to expect continuing increase in late childbearing rates:

- Women use only a small fraction of their ‘reproductive capacity’ at ages 40-50
- Cohort-driven change: Continuing fertility postponement will bring further rise in the proportion of women with 0 or 1 child at ages 40-49 and an increased desire to have children late in life
 - A double effect of increasing birth intensities & increasing proportion of women at lower parities
- Advances in Assisted Reproduction (improved success rate) combined with its increasing use will contribute to these trends

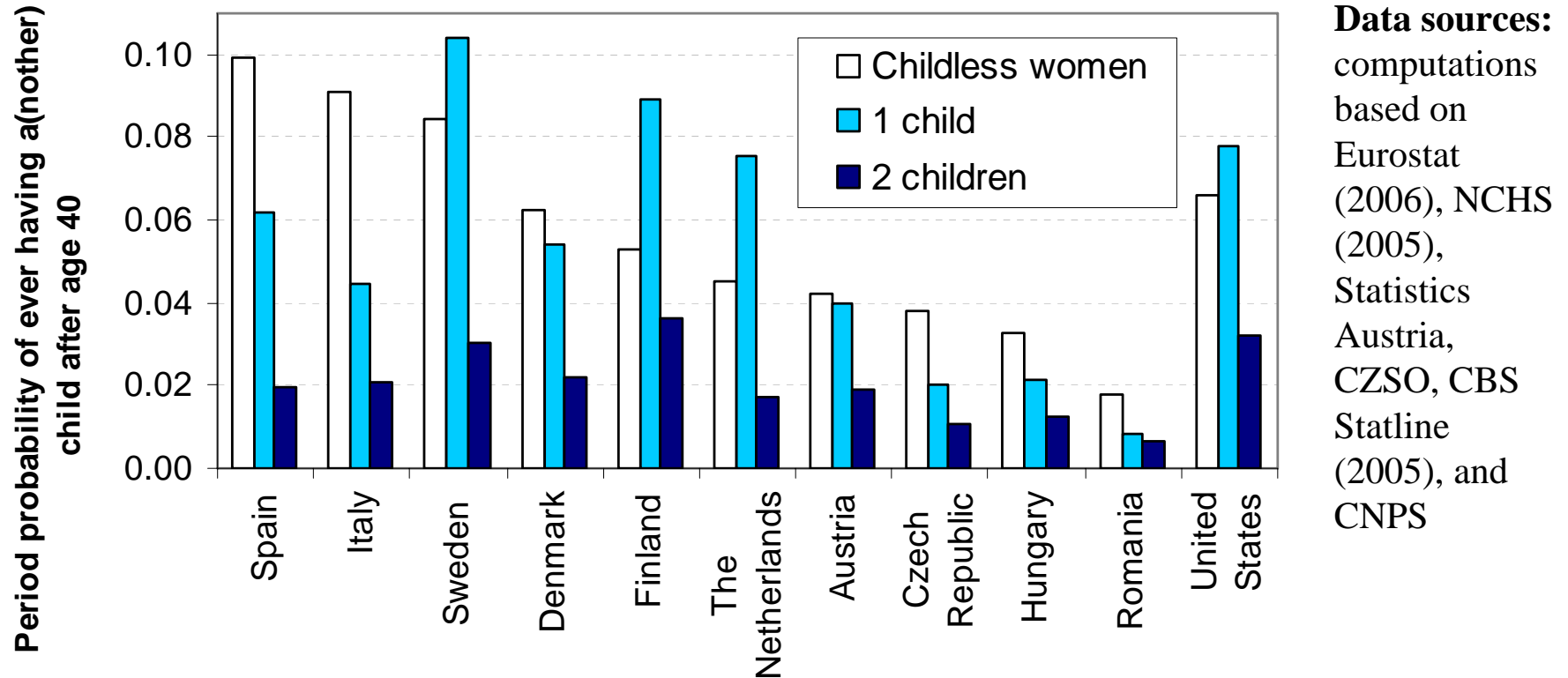
Questions?

Comments?

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‘Catching-up’ at late ages: Parity-specific differences in childbearing intensity at age 40+



A two-child family orientation manifested also at very late childbearing ages: (very) low childbearing intensities among women with two children
Emerging regional patterns: linked to institutional constraints & cultural norms?

FERTILITY POSTPONEMENT AS AN 'ENGINE' OF CHANGE IN VERY LATE CHILDBEARING?

How is the rise in late childbearing intensity linked to the process of fertility postponement?

Assumptions:

- Fertility postponement implies an increasing proportion of women childless and having one child at ages 30+
- 'Catching-up': More women aim to realise 'postponed' births even at very high reproductive ages
- This pertains especially to first and second births (two-child family norm)

→ COHORT PATTERN OF CHANGE

Strong support to the hypothesis on the import of fertility postponement (and cohort pattern of change)

Data for Austria, the Netherlands, Spain and Sweden

- Proportion of childless women & women with one child at age 30+ positively linked with the probability of having a(nother) child after age 40
- Women who experience an increase in late childbearing intensity at ages 30-39 subsequently experience an increase in childbearing intensities at ages 40+ (cohort 'catching up' effects)

Cohort shifts in first birth intensity at ages 40+

