European Fertility Trends and Prospects

BACKGROUND

- Despite recent rise, period fertility remains ‘low’ in most European countries

Many demographers suggested that very low fertility is here to stay:

David S. Reher (2007): Extremely low fertility “has been around for too long”…

W. Lutz - V. Skirbekk - M. Rita Testa (2006): The “Low fertility trap” hypothesis

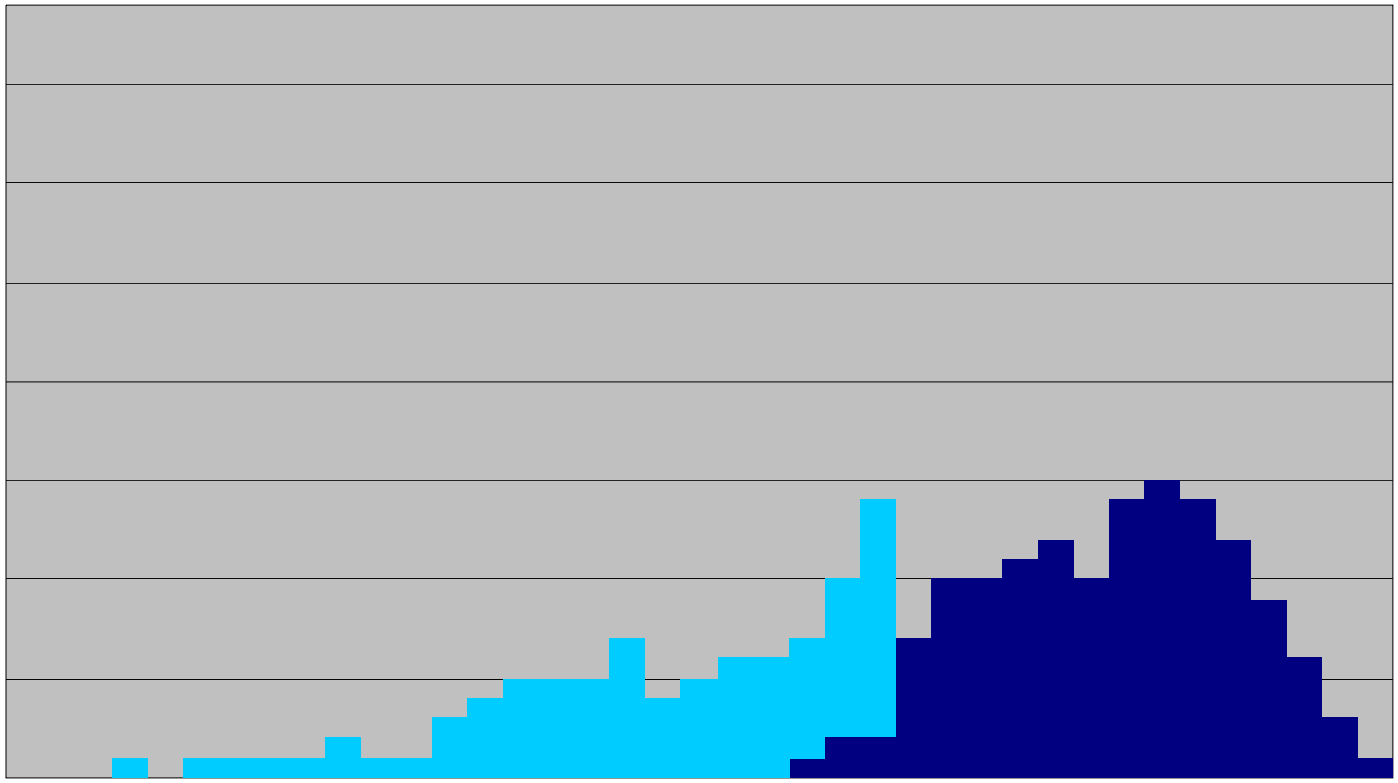
Peter McDonald (2006): cultural divide; TFR of 1.5 a ‘dividing line’

➢ Is extreme low fertility difficult or impossible to reverse?

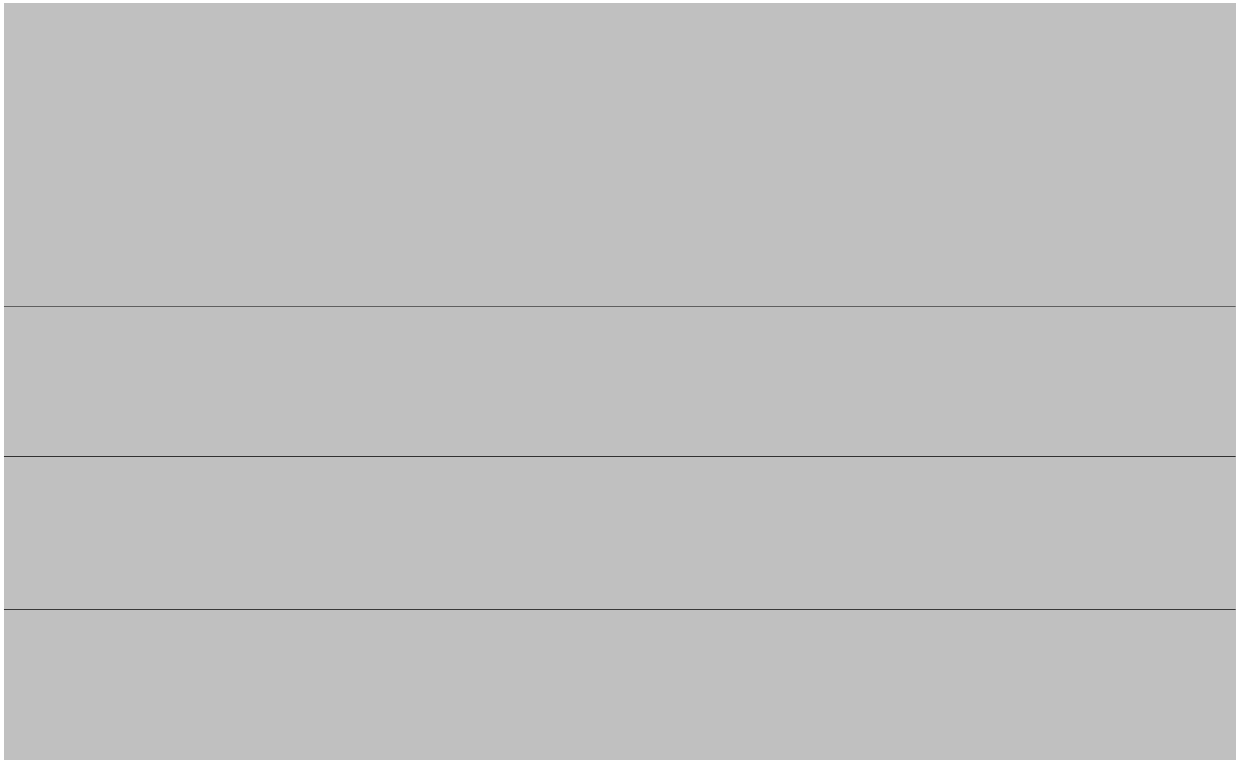
Phil S. Morgan (2003): There is nothing inevitable about very low fertility; largely caused by structural and institutional factors (“obstacles”)

1. RECENT TURNAROUND IN THE TFR: THE END OF ‘LOWEST-LOW’ FERTILITY?

Countries by the period TFR level, 1970-2008



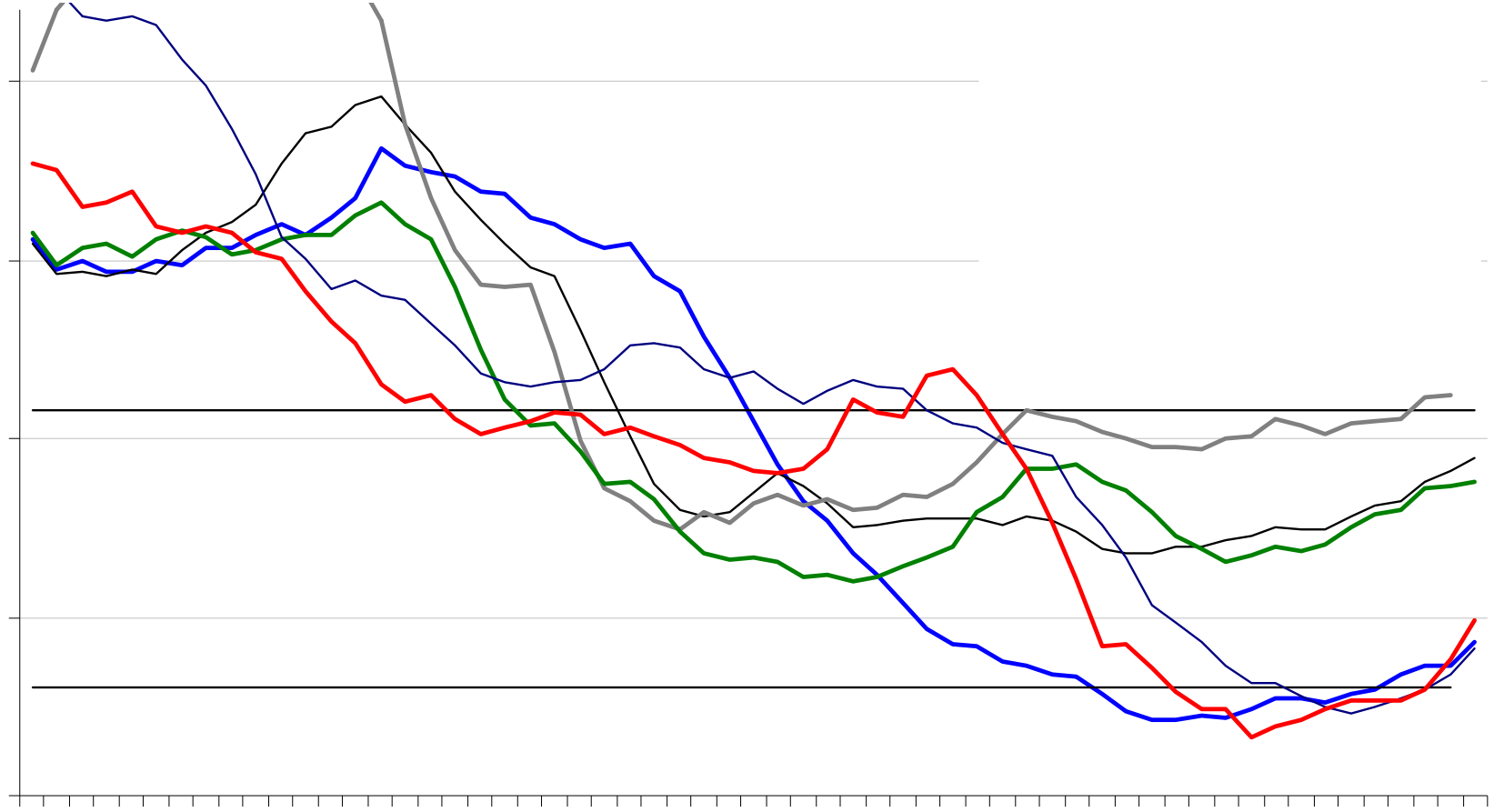
European population by country TFR level, 1970-2008



TREND REVERSAL AFTER 2000:

- A concerted rise in the period TFR across the whole developed world (except East Asia); first time since the 1970s

TFR: Regional contrasts in recent upturn



TFR: Regional contrasts in recent upturn

Often, consistent regional patterns in fertility trends; one country may represent the whole region (also data availability):

Western Europe: The Netherlands (France / UK)

German-speaking countries: Austria (Germany)

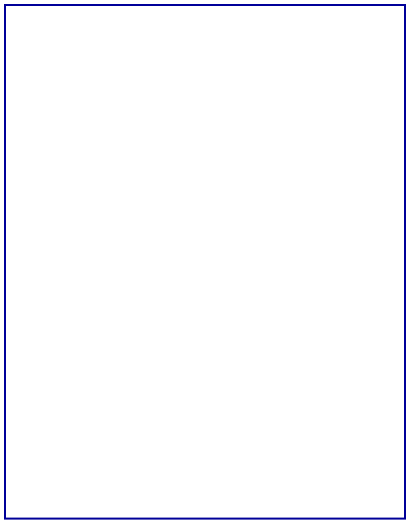
Southern Europe: Spain

Northern Europe: Sweden (Denmark)

Central Europe: Czech Rep

Eastern Europe (Russia)

Many developed countries have seen a substantial TFR rise



2. WAS THE FERTILITY INCREASE 'REAL'? THE ROLE OF THE 'POSTPONEMENT TRANSITION'

Universal trend to later childbearing across the developed world: the '***postponement transition***' (Kohler et al. 2002)

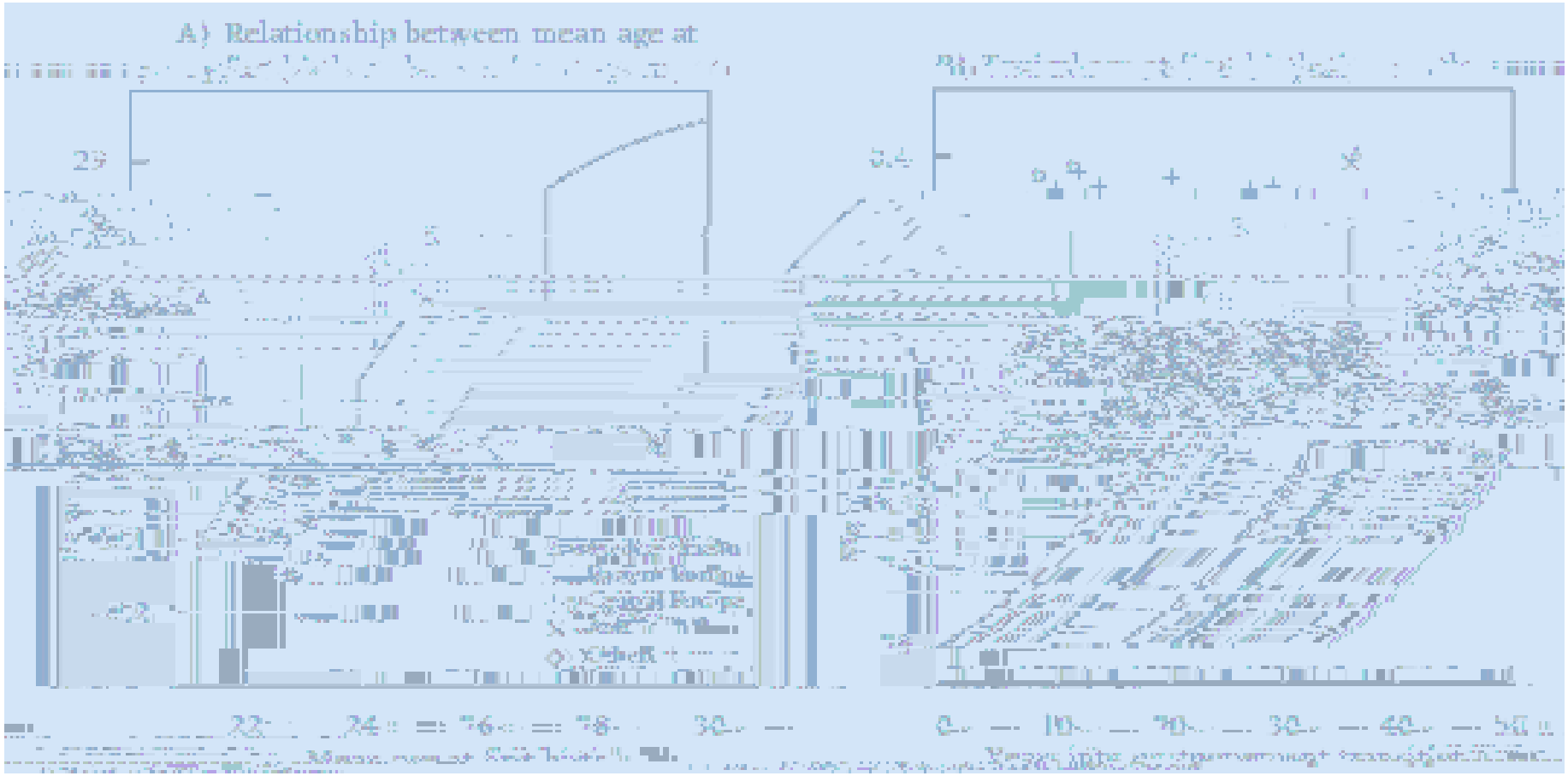
Tempo distortions: Affected period fertility rates (TFRs) from the 1970s (Europe, US, Japan)

Efforts to compute tempo-free TFRs (period fertility quantum; Bongaarts-Feeney 1998, Kohler-Ortega 2002, ….)

Adjusted TFR: assumptions, and interpretation:

- Hypothetical TFRs in the absence of birth postponement
- Not universally accepted
- Suggesting the future TFR levels if there is no change in the 'underlying' fertility quantum
- Closer approximation of cohort fertility?

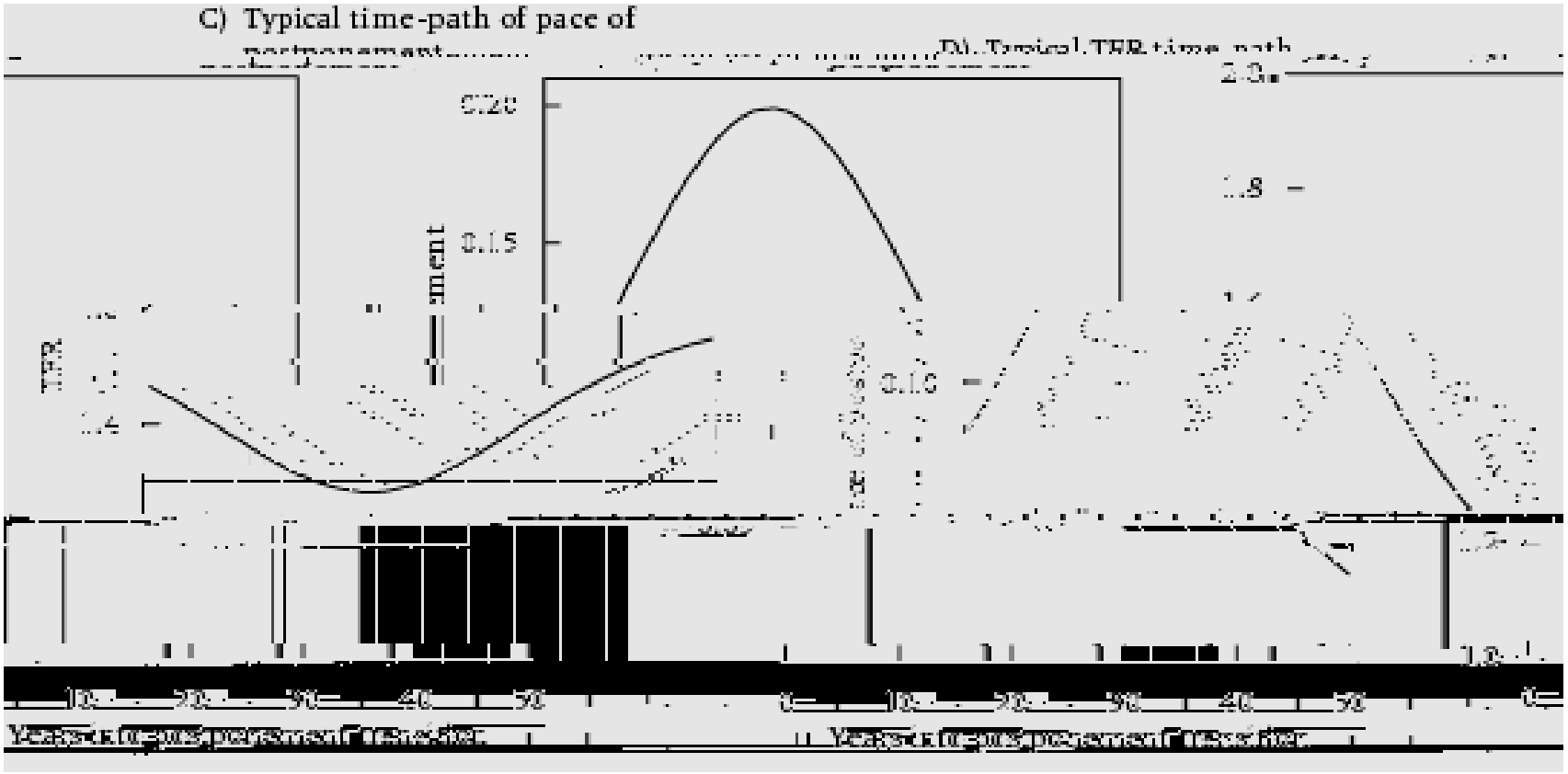
‘Postponement transition’: a stylised view (1)



Source: Goldstein et al. 2009

‘Postponement transition’: a stylised view (2)

A ‘typical TFR time pathway’: Low-fertility population with a constant cohort TFR at 1.6



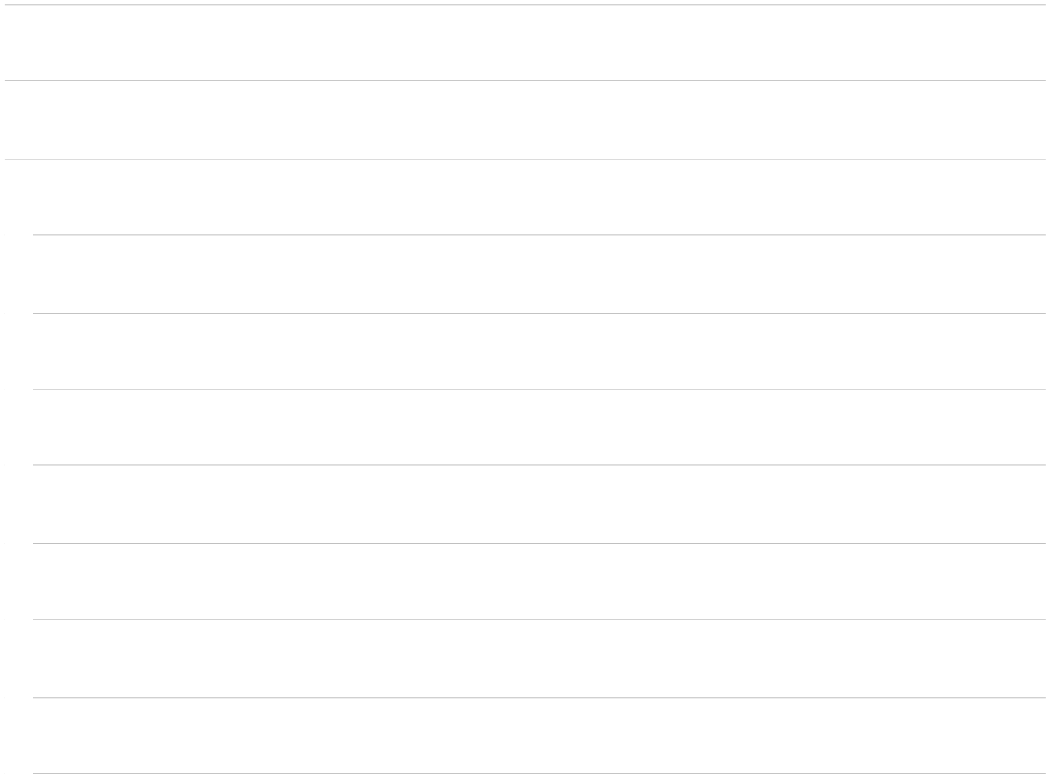
Source: Goldstein et al. 2009

‘Postponement transition’: selected countries

The peaks in postponement and the largest tempo distortions appear to be over

A ‘low scale’ postponement may continue for 1-2 decades

Tempo effects in the period TFR in Europe, 1995-2006: Regional diversity



Estimates using the Bongaarts-Feeney (1998, 2000) method

Postponement has slowed down but has not completely run its course: Europe, US and Japan around 2004-2006

- Still some scope for a modest TFR rise

	Population (2006, mill.)	Observed TFR	Adjusted TFR	Tempo effect
Western Europe	153.3	1.88	2.00	-0.12
Northern Europe	24.6	1.86	1.97	-0.11
Germany, Austria, Switzerland	98.2	1.34	1.58	-0.24
Southern Europe	125.4	1.37	1.45	-0.08
Central-eastern Europe	77.4	1.30	1.59	-0.29
South-eastern Europe	39.5	1.36	1.56	-0.20
Eastern Europe (incl. Russia)	204	1.29	1.47	-0.18
EU-27	**491.4**	1.53	1.72	-0.19
United States (2004)	299.2	2.05	2.13	-0.08
Japan	127.8	1.29	1.42	-0.13

- Regional differences persist
- Adjusted TFR does not decline below 1.4

Estimates using the Bongaarts-Feeney (1998, 2000) method

Can declining tempo effects explain recent TFR upturns?

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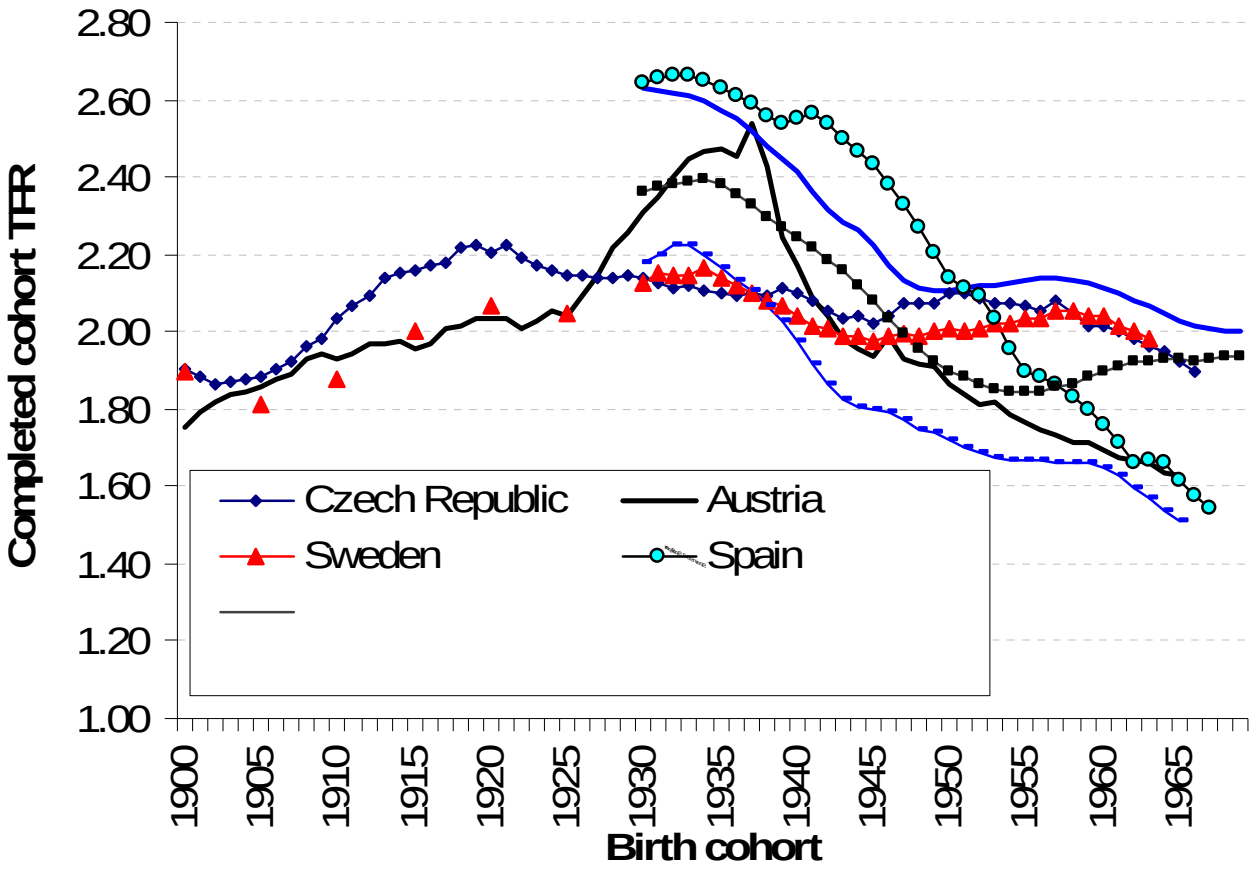
3. INSIGHTS BASED ON COHORT DATA

Regional contrasts similar to the adjusted TFR;

Some countries of Northern & Western Europe likely to retain the CTFR close to replacement threshold



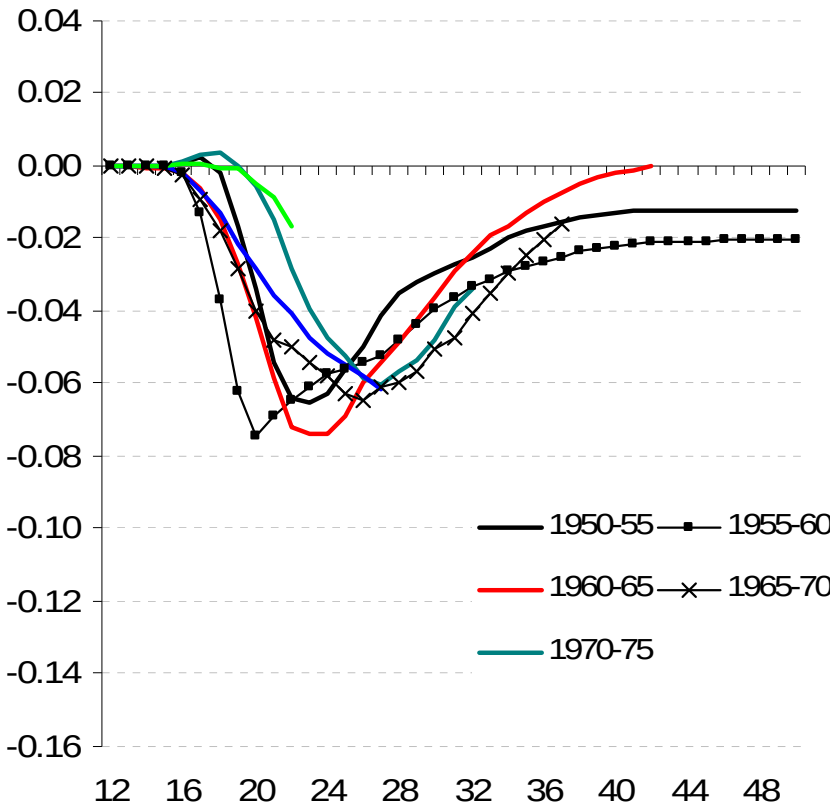
Sources: Council of Europe (2006), Prioux (2006), national statistical offices, own computations from Eurostat (2008)

Regional contrasts in cohort CTFR: Low & falling fertility

- Southern & Eastern Europe: falling second birth rates
- German-speaking countries: high childlessness (ca 20% in AT, CH, higher in D), but not very low second birth rates

Can also trends in cohort fertility reverse?

Spain: End of cohort postponement & stabilisation of younger cohorts' first birth rates at ages < 26



Mean intended, expected or desired family size among young adult women in selected countries of Europe, around 1996 and 2002

Country	Age	Period: 1995	Period: 2002
Austria:			
Main variant	20-25	1.72 (1996)	1.62 (2001)
High variant (excluding uncertainty)	20-25	1.88 (1996)	1.76 (2001)
Czech Republic	18-24	1.92 (1997)	1.85 (2005)
England and Wales:			
Main variant (excluding uncertainty)	21-23	2.13 (1994-96)	2.14 (1998, 2000-0
Alternative variant (including uncertainty)[a]	21-23	1.73 (1994)	1.85 (1998, 2000-0
Hungary (both men and women)	20-24	n.a.	1.82 (2004-05)
The Netherlands	23-27	1.77 (1998)	1.81 (2003)
Spain	20-24	2.20 (1995)	1.80 (1999)

Sources: See Sobotka 2009

Notes: *a*

Mean intended family size: Can it serve as a higher boundary for projecting fertility?

European regions: Mean intended family size of women aged 18-34, EUROBAROMETER 2006

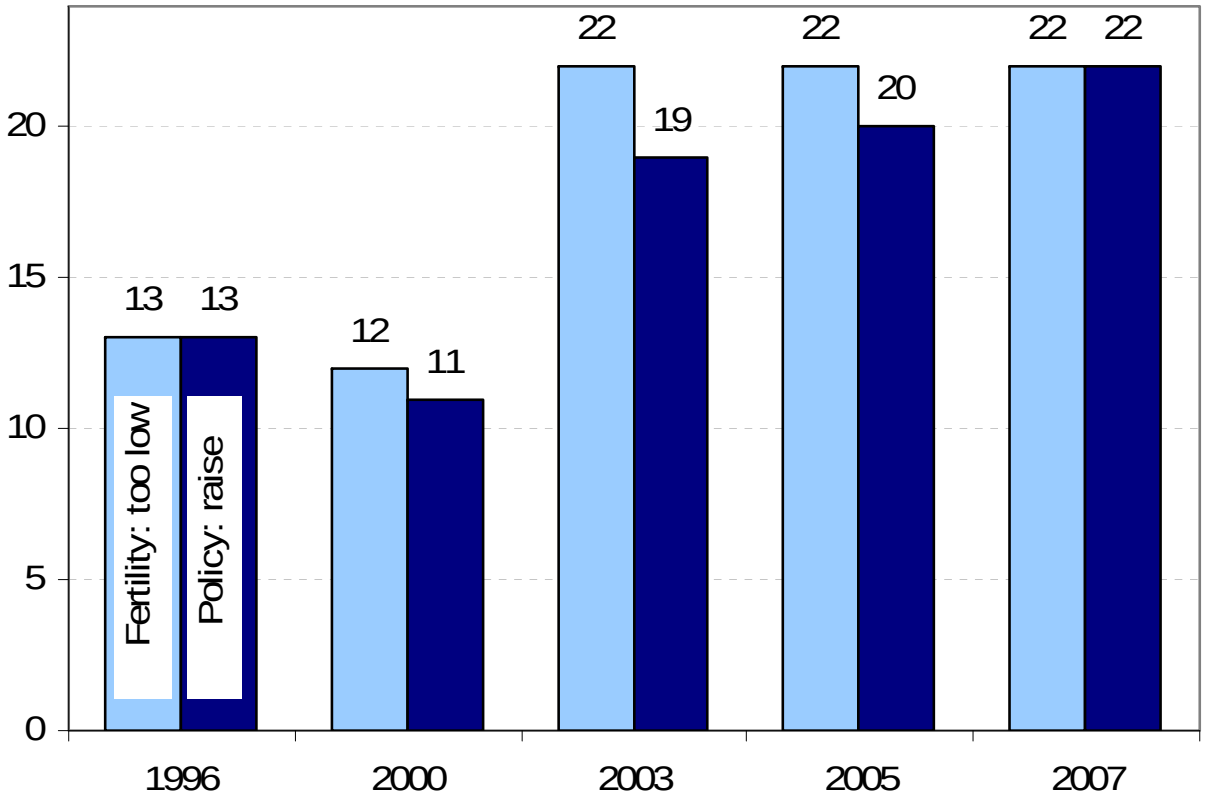
- Intentions by about 0.3-0.4 higher than the likely levels of completed fertility

5. BEYOND TEMPO EFFECTS: SELECTED EXPLANATIONS OF RECENT TFR UPTURNS IN EUROPE

(based on Goldstein-Sobotka-Jasilioniene 2009)

POLICY INTERVENTIONS: RETURN OF PRONATALISM

Governments view on fertility and policy intentions, 22 countries ever experiencing 'lowest-low' fertility



Source:

UN, World Population Policies, various volumes

Policy interventions

RETURN OF PRONATALISM

Wide array of new policies, but unclear how much they contributed to TFR upturn

SPAIN:

Migrants' fertility

- Higher fertility of migrants & high immigration rates after 2000 could have pushed the TFR upward
- Relevant only for Southern, Western & Northern Europe (& English-speaking countries overseas)

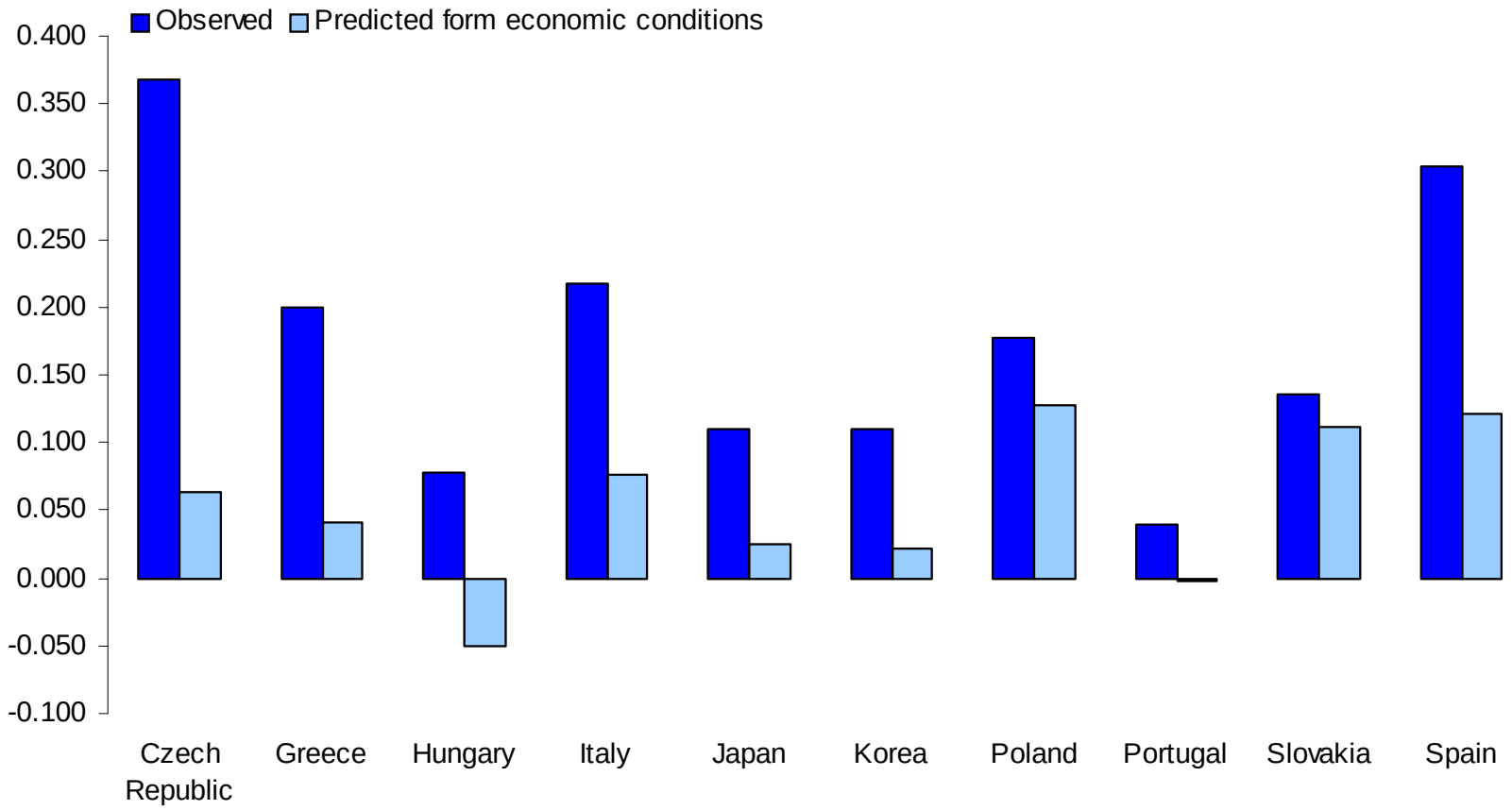
Immigrants contributed to a small portion of the TFR rise:

	UK	Sweden	Denmark	France	Spain
	2004-7	2002-7	2001-4	1999-2004	1998-2006
Change in TFR: all women	0.14	0.23	0.09	0.11	0.20
Change in TFR: native women	0.11	0.21	0.10	0.08	0.17
Change in TFR: contribution of immigrar	0.03	0.01	-0.01	0.03	0.03
Percent change due to immigrants	19	5	-15	27	16

Sources: Computations based on national statistical offices & demographic yearbooks

Positive economic conditions

Predicted upturn in the TFR attributable to economic conditions



REVIEW OF RECENT TRENDS, PERIOD AND COHORT: Major conclusions

- 'Lowest-low' TFR levels are over for now; all countries except Moldova have TFRs above 1.3
- Some countries and regions have seen impressive TFR gains by 0.3-0.5
- Broader regional differences retained, both in period and also in cohort CTFR trends
- Paramount importance of the 'postponement transition' and tempo effects in driving the TFR upturn
- Western and Northern European countries as well as the US, Australia, and New Zealand have TFRs close to or above 2
  - Return to (or even above) replacement-level TFRs possible!
- Still a pervasive desire to have a two-child family

THE NEXT 30 YEARS: FERTILITY IN EUROPE THROUGH 2040

Why 2040?

- Roughly a length of one generation
- Intentions unlikely to change radically
- Meaningful time horizon for speculating about social and economic changes ("how a society may look like 30 years from now?")

- The next 5 years: Economic recession
- The next 30 years: Factors that may lead to rising fertiity

THE NEXT 5 YEARS: ECONOMIC RECESSION

- Economic recession likely to put a downward pressure on the TFR for 2-5 years
- In countries where TFR was rising, the rise may stop
- A few countries may temporarily slide back below 1.3
- Not a major effect, in the order of 0.05-0.15
- Only short-term, unless the crisis (unemployment) protracted

Economic recession and the period TFR in 26 OECD countries

Period 1980 and later, 1-year time gap

	Spells	TFR decline	TFR increase	% decline
Recession (GDP growth <0.0%)	62	50	12	81
Stagnation (GDP between 0.0 and 0.99%	60	39	21	65
Economic growth (GDP growth > 1.0%)	568	297	271	52
TOTAL	**690**	**386**	**304**	**56**

Source: Sobotka-Skirbekk-Philipov 2009, GDP data based on OECD (2009)

THE NEXT 30 YEARS

Argument: Period and eventually also cohort TFR more likely to rise than decline

- Period TFR: Ending of the Postponement transition & negative tempo effects

Other factors, affecting also cohort fertility

- Institutional changes
- Compositional changes in the population
- Changing relationship between socioeconomic conditions and fertility
- Technological changes

1. INSTITUTIONAL CHANGE

FAMILY & PRONATALIST POLICIES

- Return of pronatalism: Governments intend to increase fertility
  - The "Green Paper" (Eur. Commission, 2005): low birth rate "challenge for the public authorities"; "return to demographic growth" essential priority
- Better childcare, parental leave, part-time and flexible jobs, more gender equality likely to have some effect (McDonald 2002 etc.)
- Innovative and unconventional policies may be tried;
  - subsidising childbearing in larger families (Demeny 2008, Hakim 2003)
  - linking retirement pension to the numf2 o&< Monanananj0 0 171tP -9.709 -1

1. INSTITUTIONAL CHANGE

ECONOMIC ADJUSTMENTS: THE POWER OF THE YOUNG?

- Deteriorating position of young adults in the 1980s-1990s at odds with their shrinking numbers
- Southern Europe: high youth unemployment one of the main reasons for low fertility (Adsera 2005)
- In the long run, labour market functioning may improve in many countries, pushing down unemployment
- Will economic position of the young adults improve as smaller cohorts enter labour market? (Easterlin connection)

Labour market reforms and lack of qualified labour may reduce unemployment and improve economic position of the young, which may increase fertility at ages <30

1. INSTITUTIONAL CHANGE

FAMILY ADAPTATION TO NEW SOCIETAL CONDITIONS

- Countries with most complete family transformation have highest fertility (Billari & Kohler 2004, Sobotka & Toulemon 2008)
- Societies not easily accepting extra-marital sex, residential independence of the youth, cohabitation, divorce and egalitarian family roles have low fertility and rapid postponement (also East Asia)
  - Prevailing societal norms, policies and parental control at odds with preferred lifestyle of younger women and men?
  - Partnership instability may increase fertility in low fertility settings (Thomson et al. 2009)

Changing family norms and acceptance of new behaviours may bring higher fertility

1. INSTITUTIONAL CHANGE

‘FEMALE FUTURE’: TOWARDS CHILD-FRIENDLY SOCIETY?

- Women overtaking men in educational attainment, but not (yet) in wages, job careers and political positions
- This disparity likely to diminish, men may be the ‘losers’ of this transformation
  - Will societies increasingly led and ‘dominated’ by women become more children-friendly and family-friendly?
  - ‘Female future’ might also mean higher fertility

core EU-Tc countries annual immigration over0 g5% in 24 T-24 7

2. COMPOSITIONAL CHANGE

THE RISE OF MIGRANTS & ETHNIC MINORITIES

3. CHANGING RELATIONSHIP BETWEEN SOCIO-ECONOMIC FACTORS, FAMILY, AND FERTILITY

A new branch of literature & contributions since ca. 2004: Changing correlations between socio-economic and cultural factors and period TFR in cross-country comparisons (most developed countries)

SOME REVERSALS:

- Richer = more fertile?
- High share of working women = higher fertility?
- Gender equal = more fertile?
- Low marriage rates = more children?

CAUTION:

- Correlations, NO CAUSALITY
- Usually based on problematic measure of fertility – the period TFR
- Cross-country comparisons, no individual-level findings

BUT these findings still important

3. CHANGING RELATIONSHIP BETWEEN SOCIO-ECONOMIC FACTORS, FAMILY, AND FERTILITY

WOMEN'S LABOUR FORCE PARTICIPATION

Rindfuss et al. (2003): Reversal in the correlation between female labour participation (FLFP) and period TFR; mid-1980s

- Moderately strong positive correlation
- Country-specific institutional responses: better compatibility of work & childrearing in higher-F-LFP countries

Engelhardt-Prskawetz (2004):

- Not a causal relationship, other factors responsible

Recent period TFR rise fast in many high-LFP countries

- Changing nature of female work and higher relative wages may positively contribute (Feyrer et al. 2008)

The future: More women at work = better work-family combination and more men's domestic work = higher fertility?

3. CHANGING RELATIONSHIP BETWEEN SOCIO-ECONOMIC FACTORS, FAMILY, AND FERTILITY

HIGH EDUCATION MAY NOT HAVE A NEGATIVE EFFECT

- Women with university education: higher childlessness and lower fertility rates (Skirbekk 2008)
- Countries with lowest fertility: steepest education gradient and highest childlessness of the higher-educated

Will further increase in education lead to lower overall fertility?

Nordic countries:

3. CHANGING RELATIONSHIP BETWEEN SOCIO-ECONOMIC FACTORS, FAMILY, AND FERTILITY

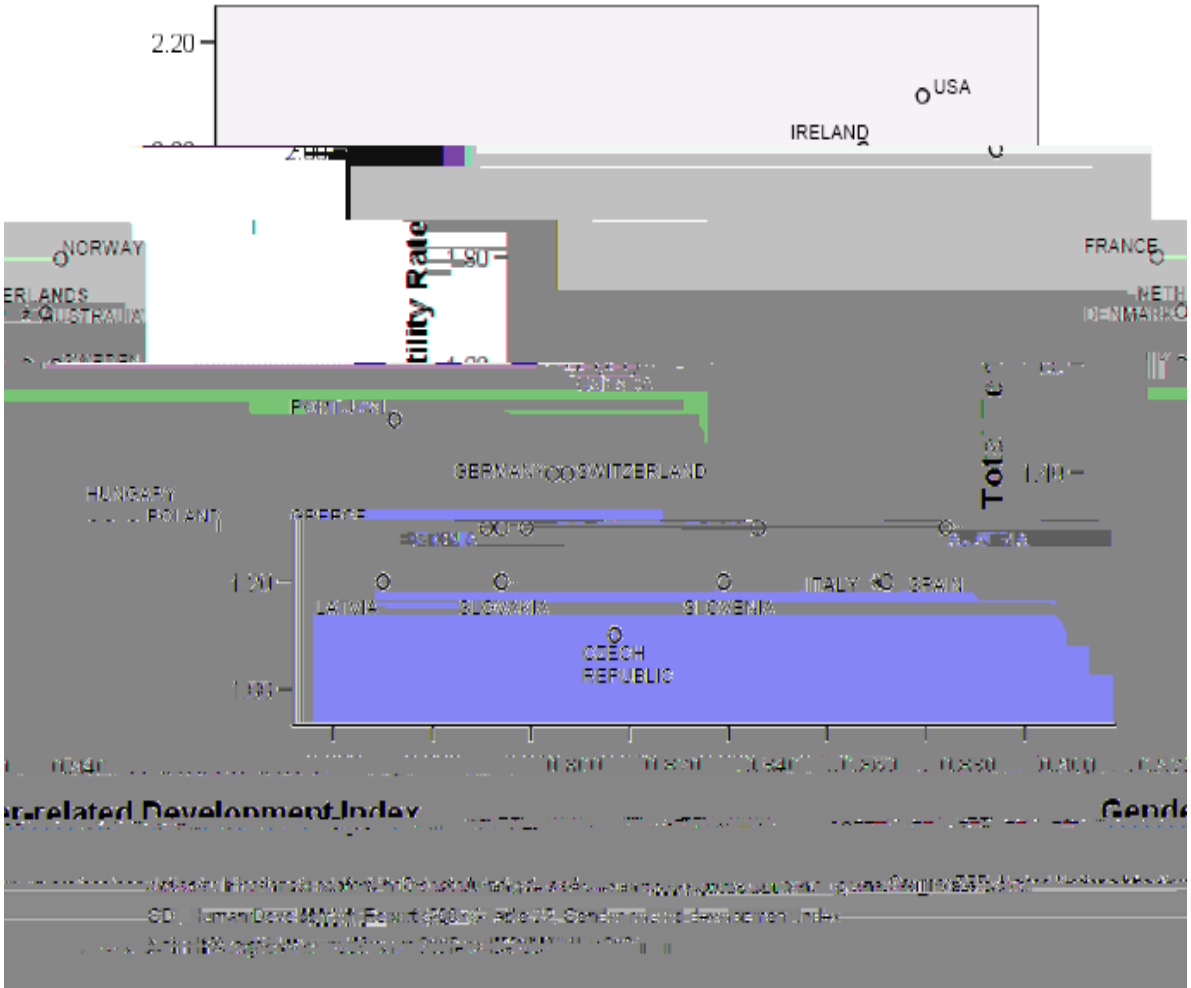
WILL MORE GENDER EQUALITY LEAD TO HIGHER FERTILITY?

- Countries with high gender equality have higher TFR (except German-speaking; Mills et al. 2008)
- Men's share of housework positively linked to the TFR (Feyrer et al. 2008)
- Intentions affected when household division unequal & women face heavy work burden (Mills et al. 2008 on Italy & NL)
- Also women's perception of the stressfulness of housework & little control over their work negative effect (Mills 2008)

As gender equality rises & household division of labour becomes less unequal, fertility may increase

3. CHANGING RELATIONSHIP BETWEEN SOCIO-ECONOMIC FACTORS, FAMILY, AND FERTILITY

Figure 1: **Total Fertility Rate (TFR) and gender-related development index for selected countries**



WILL MORE GENDER EQUALITY LEAD TO HIGHER FERTILITY?

Melinda Mills et al. 2008:

Gender-related Development Index and TFR in 2001

4. TECHNOLOGICAL ADVANCES: ASSISTED REPRODUCTION AND BEYOND

INFERTILITY TREATMENT: WIDER COVERAGE, HIGHER EFFECTIVENESS

- Assisted reproduction (ART) often subsidised only for specific groups: married, heterosexual, with no children, below age 40…
- Very limited success rates above age 40
- Trends towards re-definition of infertility as a ‘disease’ or ‘medical condition’ -> broader access to ART
- Efforts to make ART a part of pronatalist policies (Grant et al. 2006)
- Technological advances: cryopreservation (‘egg freezing’), embryo donations, higher success rates

SUMMARY & DISCUSSION

What importance attached to different factors?

Potentially strong effect:

- “Completing the second transition” – gender equality and new family arr.
- An end of tempo distortions (only for period fertility)
- Labour market functioning & improved income of the young

Potentially moderate effect:

- The rise of higher-fertility ethnic and religious groups
- Pro-natalist and family-oriented policies
- Higher wealth, more affluence
- Higher education no longer negatively linked to fertility

Potentially small effects

- Partnership instability
- Wide provision of infertility treatment, improved technology

SUMMARY & DISCUSSION

Two (plus) pathways towards higher fertility:

1. More countries like Sweden: Gender equal, developed welfare, advanced family transformation, cheap housing, high female LFP, high childcare provision and close-to-replacement fertility

2. More countries like the US: Competitive labour market, rather low unemployment, large share of high-fertility migrant & ethnic groups, and around-replacement fertility

(Plus): More countries a bit like France: Wide system of pronatalist and pro-family policies & around-replacement fertility

WHAT KIND OF SCENARIOS FOR EUROPE?

Europe in 2040-2050

- Regional heterogeneity likely to persist
- Some countries may reach above-replacement TFRs
- Current intentions may constitute higher boundary, TFR unlikely to rise above 2.3 - 2.4 in the West and in the North and above 1.8-2.0 in German-speaking countries, in the South & in the East
- Current adjusted TFR may constitute a main (medium) variant for the West & North (2.0)
- In other regions, assuming that the above-listed factors will have some impact, medium variant may lie at 1.7-1.8
- Lower variant: Assuming declining intentions & unfavourable economy: West & North at 1.6, other regions 1.4

WHAT KIND OF SCENARIOS FOR EUROPE?

UN Probabilistic Scenarios

- Realistic for Europe, close to the scenarios sketched above

Impressive, but:

- Entirely theory-free
- Work with tempo-distorted TFRs
- Do not account by design for the ‘postponement transition’
- Do not take into account cohort fertility trends
- Do not allow long-term continuation of regional differences
- Take an arbitrary level of 2.1 as an endpoint without saying why
- A few odd trajectories for Europe (ireland,Iceland)

HUMAN FERTILITY DATABASE

www.humanfertility.org

- High-quality, detailed data on period and cohort fertility in the developed countries
- Age, period, cohort, parity/birth order dimensions

Free access, detailed, comparable, documented

- Launched October 2009
- 6 countries as of now (US, Russia, Austria, Czech Republic, the Netherlands, Sweden)
- 10-12 countries in April 2010