# European Fertility: Continuity and Reversals

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EURREP
FERTILITY AND REPRODUCTION IN 21ST CENTURY EUROPE

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# Background: key trends - the very basics

## Four decades of sub-replacement fertility in Europe

- EU-wide period TFR fell below 2.1 births per woman in 1975, now at 1.55 (2013) (NL 1.68)

## Four decades of delayed parenthood

- Mean age at first birth in the EU countries around 23.8 in 1975, now at 28.8 (2013) (NL 29.4)

## Four decades of changing family context of childbearing

- Share of births outside in the EU marriage at 6% in 1975, now at 40% (2013) (NL 47%)

## Four decades of debates about the forces underlying the shift to low fertility

# Background: discussions and reactions

## Four decades of worries and policy discussions concerning low fertility

Governments & politicians are worried:

- Jacques Chirac (1984): "Europe faces a "demographic slump. (…) In demographic term, Europe is vanishing. Twenty years or so from now, our countries will be empty (…)" (Teitelbaum, 2000).
- European Commission: *The Green Paper* (2005): low birth rate is a "challenge for the public authorities"; "return to demographic growth" is one out of "three essential priorities"

Demographers and economists are worried:

- J. C. Chesnais (2001): population implosion in the 21st century may be particularly pronounced in Europe
- David S. Reher (2007): Extremely low fertility "has been around for too long"…
- Pritchett and Viarengo (2012: 55): Large parts of Europe committing "gradual demographic suicide"

# Background: discussions and reactions

…and even the popes are worried:

- Pope Benedict XVI (Christmas 2006): Europe "…seems no longer wants to have children" (…) and "seems to be wishing to take its leave of history"
- Pope Francis (interview 15 September 2015): "I think about the level of births in Italy, Portugal, and Spain. I think that it's almost 0%. So, if there are no children, there are empty spaces. (…) this not wanting to have children which, in part, (…) is a little bit the culture of "wellbeing," no? I think that the great challenge of Europe is to return to being mother Europe..."

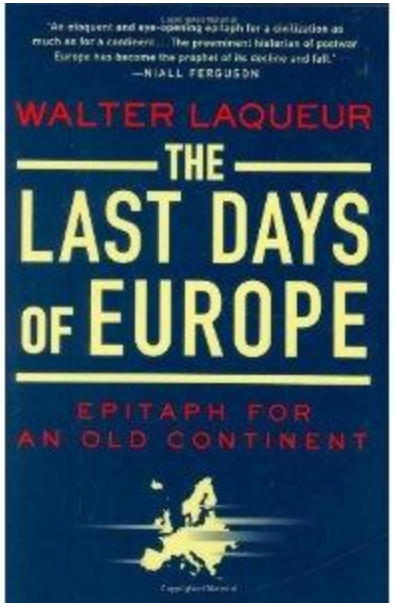
  (http://www.catholicnewsagency.com/news/full-text-of-pope-francis-interview-with-portuguese-radio-station-44460/)

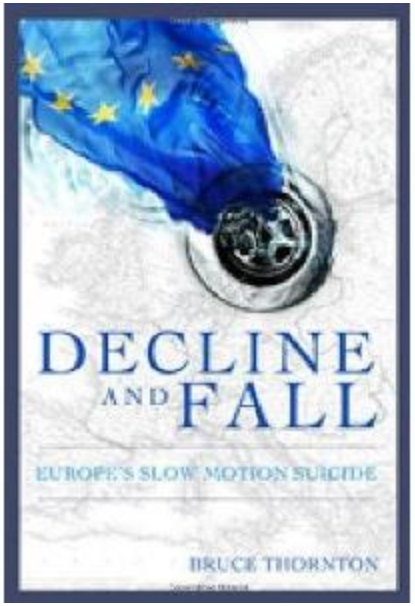
*The worries on low fertility often linked to concerns about population size (decline or potential decline), age structure (accelerated aging, lack of labour force), spatial distribution or population composition (by national or ethnic groups)*

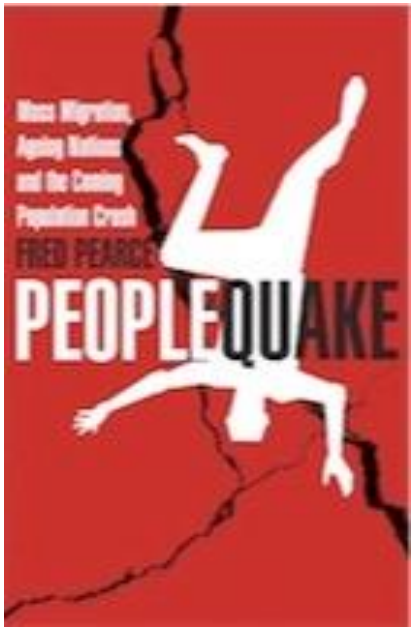
- *Even when real, higher fertility is often no solution or the least efficient solution*

# Popular media: doomsday scenarios

With population-related issues, doomsday scenarios abound



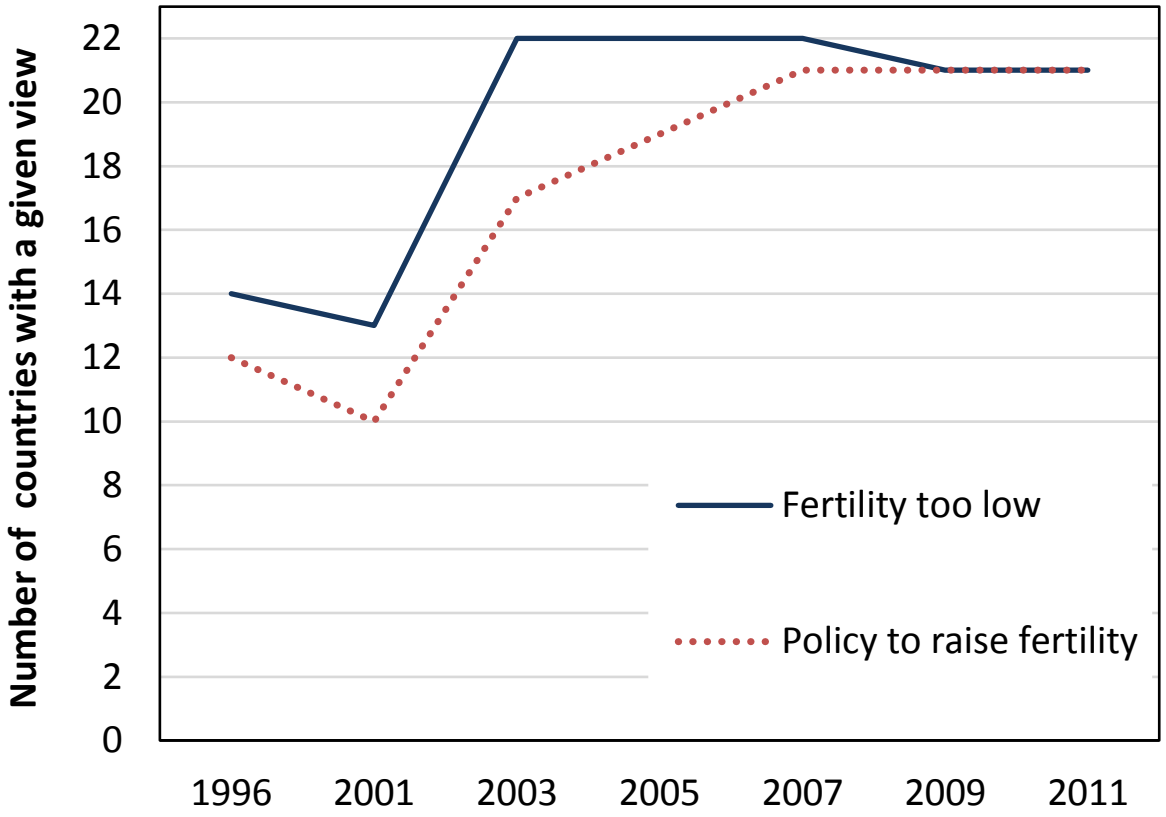




- 2009: YouTube video on "Muslim demographics" cleverly combining overblown bogus statistics with a few real facts got 15.7 million views (just the English version…)
"…in a matter of years Europe as we know it will cease"
- A widely documentary: Demographic Winter

# Many governments want higher fertility....

Government view on fertility level and government policy on fertility in 22 countries ever reaching a period total fertility rate of 1.40 or below




Source: UN reports, UN World Population Policy Database; http://esa.un.org/PopPolicy/about_database.aspx

# Key argument

- The fears of very low fertility are overblown

*The worries on low fertility often linked to concerns about population size (decline or potential decline), age structure (accelerated aging, lack of labour force), spatial distribution or population composition (by national or ethnic groups)*

- *Even when real, higher fertility is often no solution or the least efficient solution*

# Agenda

## Trends in fertility

- Low fertility is no longer (just) a European phenomenon
- Cross-country diversity in Europe; bifurcation?
- The fluidity of very low fertility

## Trends in reproductive preferences

- Remarkably stable ideals and intentions

## Underlying Forces and Explanations of Low Fertility

- The “postponement transition”
- The fertility & family reversals: debates and interpretations
- The “gender revolution” discussion
- Uncertain lives and economic shocks

## Interpretations & Future Outlook

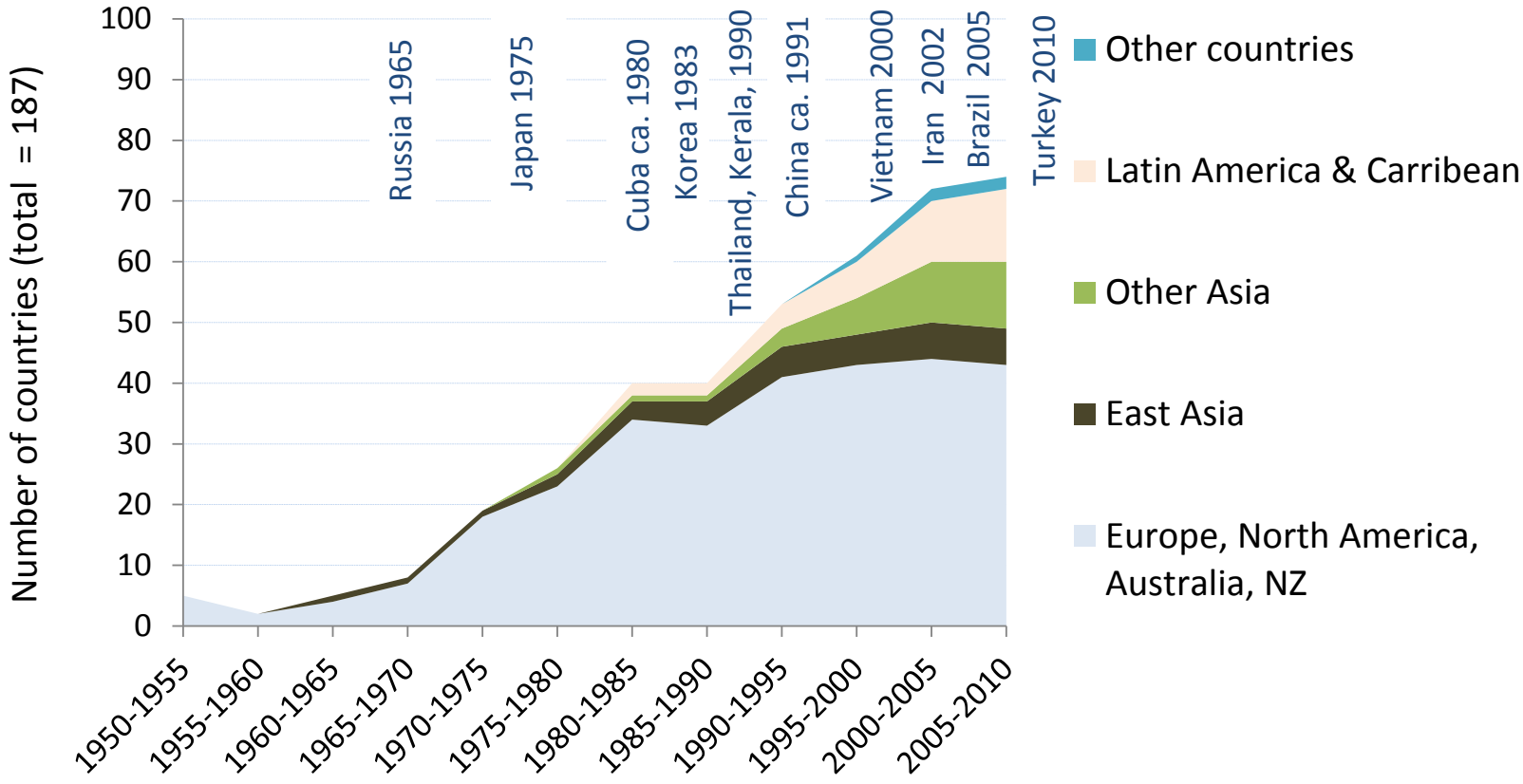
- The impact of migration on fertility and population trends
- Population replacement: The misleading fixation on replacement fertility

# Trends in fertility


economist.com

# The global spread of low fertility

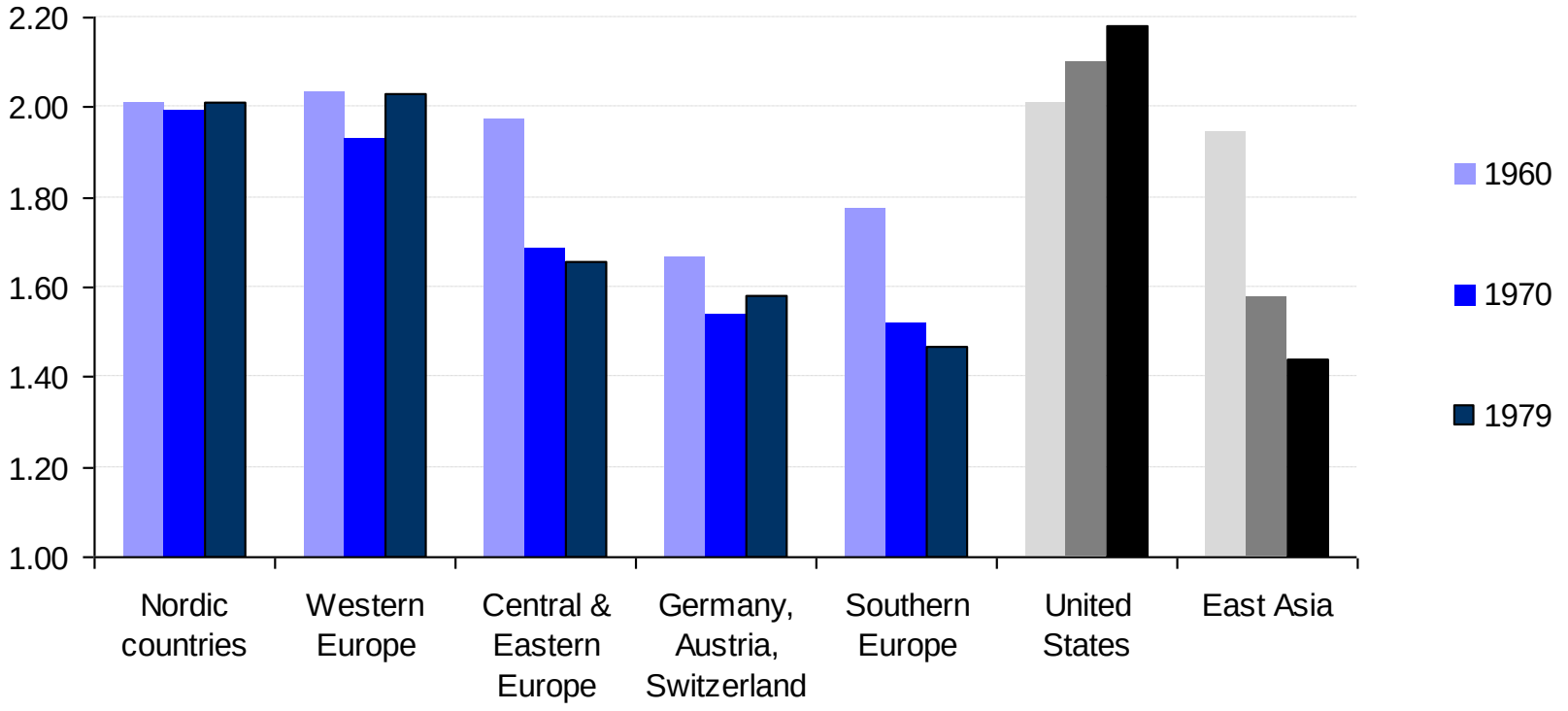
## Number of countries with period TFRs below 2.1 births per woman




*Source: own elaboration based on UN Fertility Database, 2013 and national statistical offices*

# East Asia a new “epicentre” of low fertility

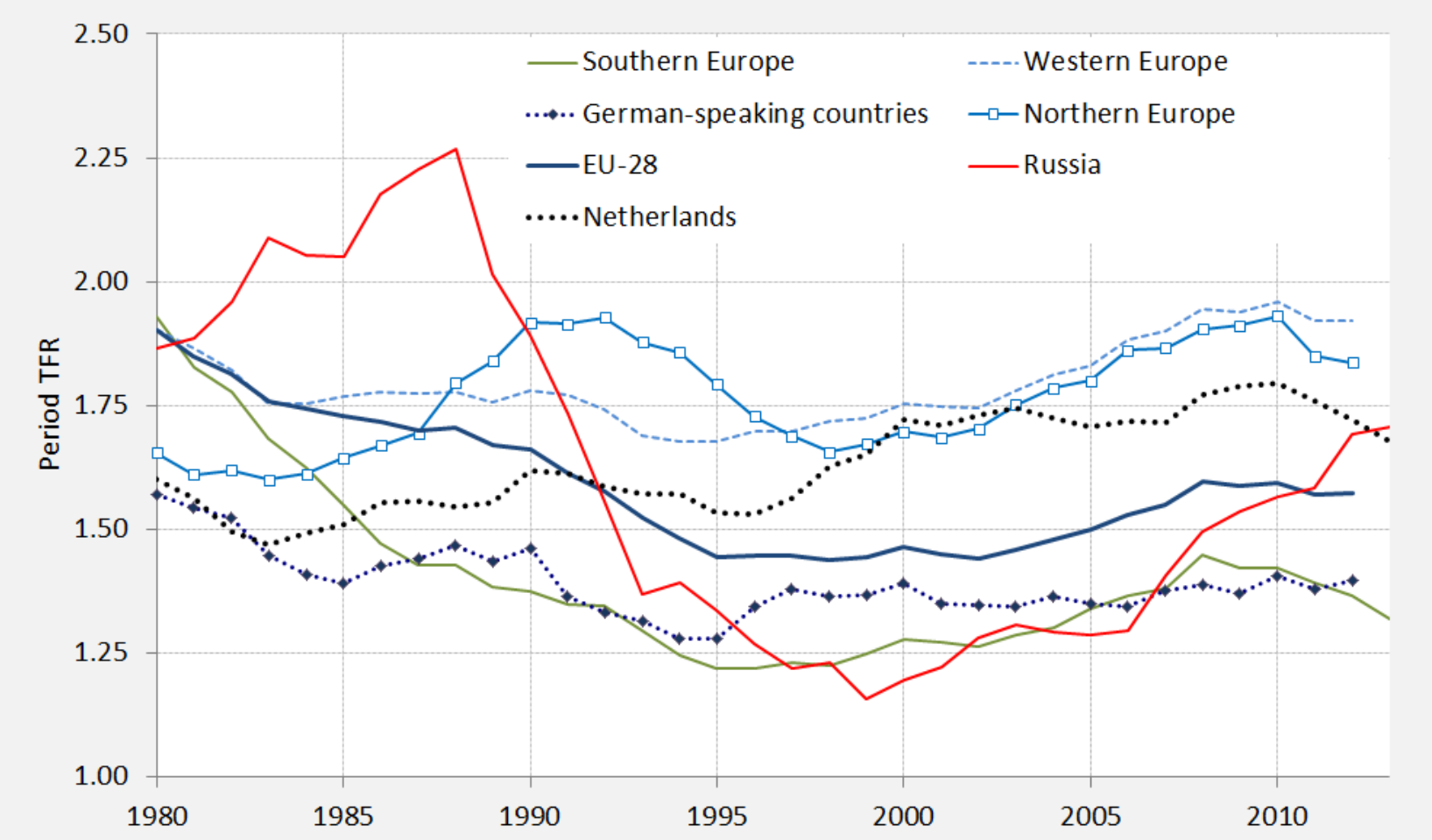
Observed and projected completed cohort fertility in selected regions in Europe, East Asia and in the United States, 1970-2012




Myrskylä, M., J. Goldstein, and Y. Alice Cheng. 2012. “New Cohort Fertility Forecasts for the Developed World: Rises, Falls, and Reversals.” *Popul. Dev. Rev.* 39 (1): 31–56.

# Regional diversity in Europe: a bifurcation? (1)

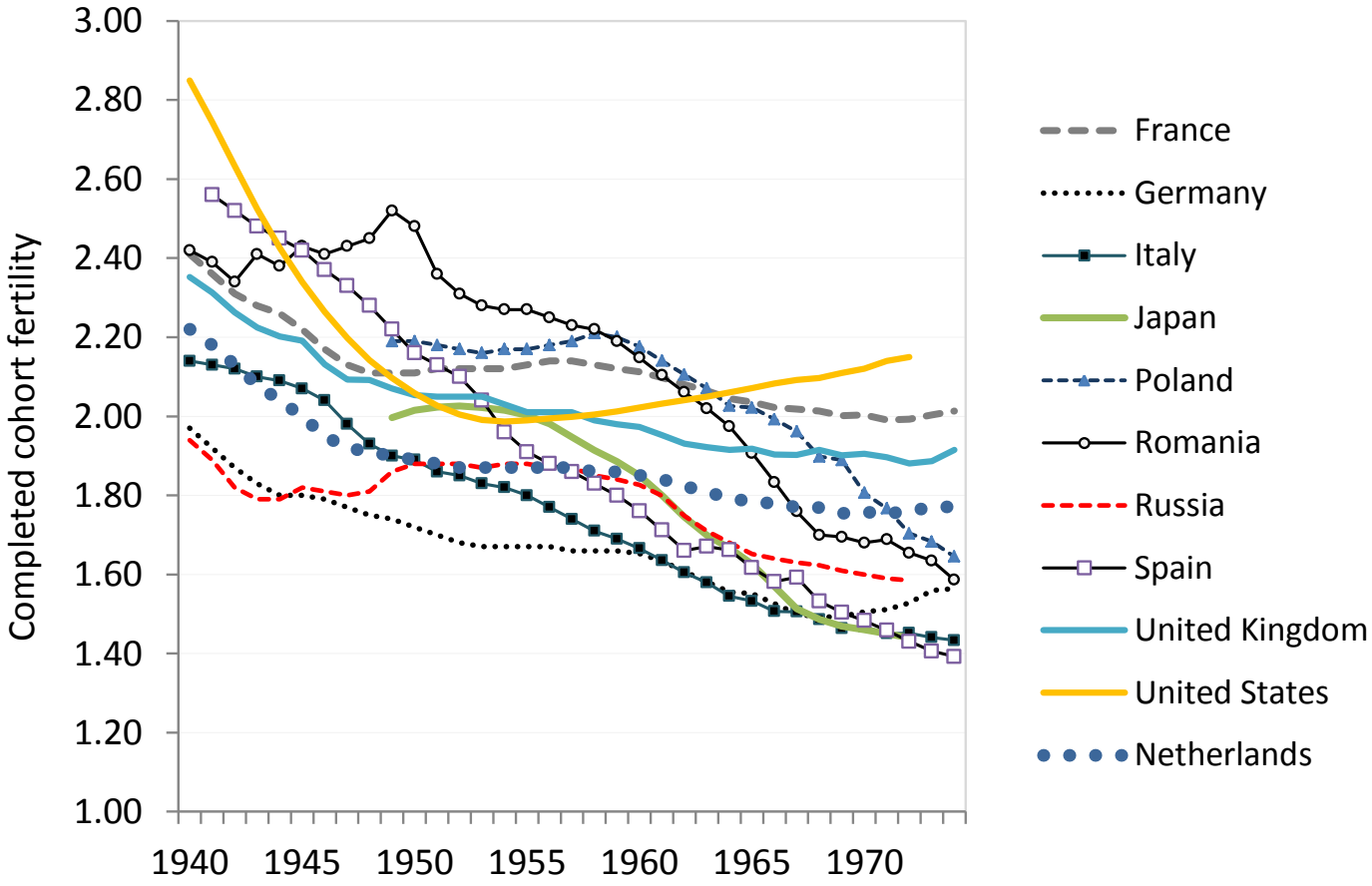
## Period TFR in broader European regions, 1980-2013




*Source: own elaboration based on Human Fertility Database, Human Fertility Collection, Eurostat and national statistical offices data*

# Regional diversity in Europe: a bifurcation? (2)

Completed fertility in larger countries of Europe (pop. > 20 mil.), NL, US, & Japan




*Source: own elaboration based on Human Fertility Database, Human Fertility Collection, Eurostat and national statistical offices data*

# Regional diversity in Europe: a bifurcation? (3)

## The ideas of bifurcation in fertility in developed countries

### McDonald (2006: 485): countries split into two groups

- fertility moderately below replacement, with the TFR staying above 1.5
- fertility below 1.5, i.e., below the "safety zone"
  - ➢ generation size will fall rapidly and massive migration would be needed to offset this decline (McDonald 2006: 485)

### Rindfuss, Choe & Brauner-Otto (2015)

– Apparent bifurcation of period fertility around 1.5 signifies an emergence of two distinct fertility regimes

## The problems with the "bifurcation" framework

- Mostly based on period TFRs, cohort bifurcation less apparent and the divide is higher (1.7)
- Many countries around the "critical" TFR level (Austria, Czech Republic, Slovenia, Canada, Switzerland)
- The boundary has been frequently crossed, also on the way up

# The fluidity of very low fertility

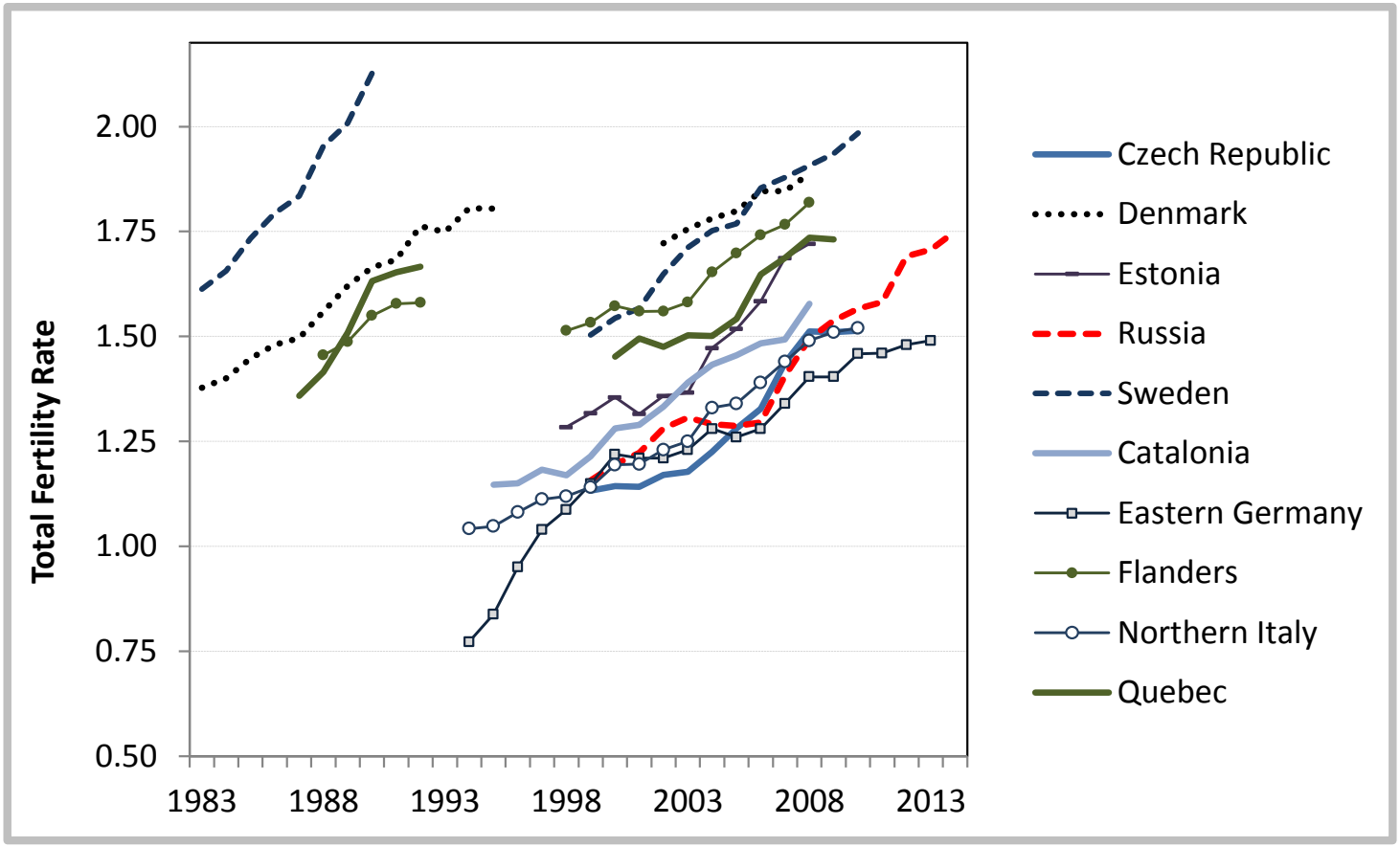
## The boundaries of very low fertility are often crossed, also on the way up

### Period TFRs: rapid downturns but also upturns common

- Around 2000 half of Europe's population lived in countries with TFR<1.3 (Sobotka 2004); by 2008 no European country was below the threshold
- Changes in the timing of births contribute to the TFR volatility

# Selected notable upward shifts in the TFR

## Trajectories of TFR increase in selected countries and regions in Europe and in Quebec, 1983-2014 (only periods of increasing TFR shown)




*Source: own elaboration based on Human Fertility Database, Eurostat, Council of Europe (2006) and national statistical offices data*

# Trends in reproductive preferences

http://4.bp.blogspot.com

# Remarkably stable reproductive preferences in Europe

*What do European women and men want?*

# Remarkably stable reproductive preferences in Europe

*What do European women and men want?*

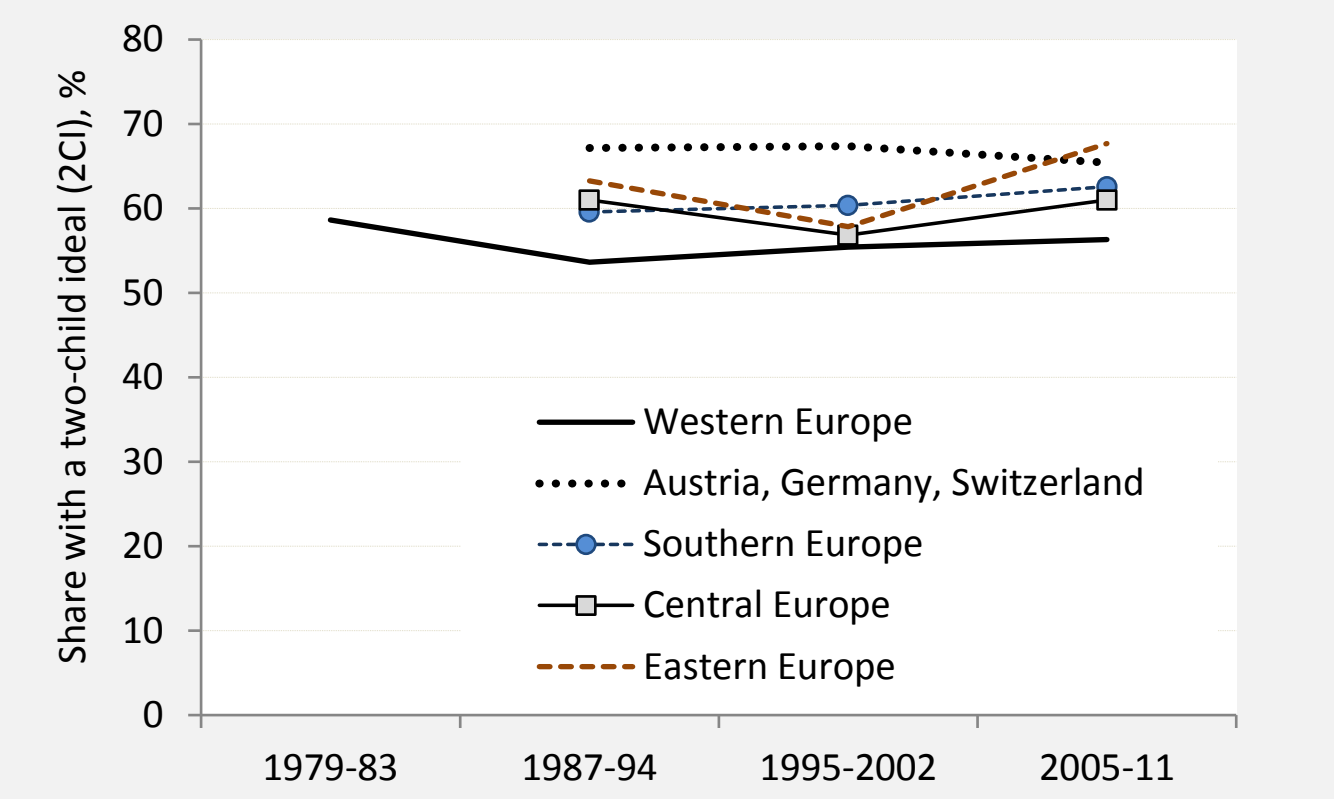
2 kids, typically…



…ideally a boy and a girl….

# Ideal and intended family size in Europe strongly centered on having two children

Share of women with an ideal of having two children: European regions, 1979-2011



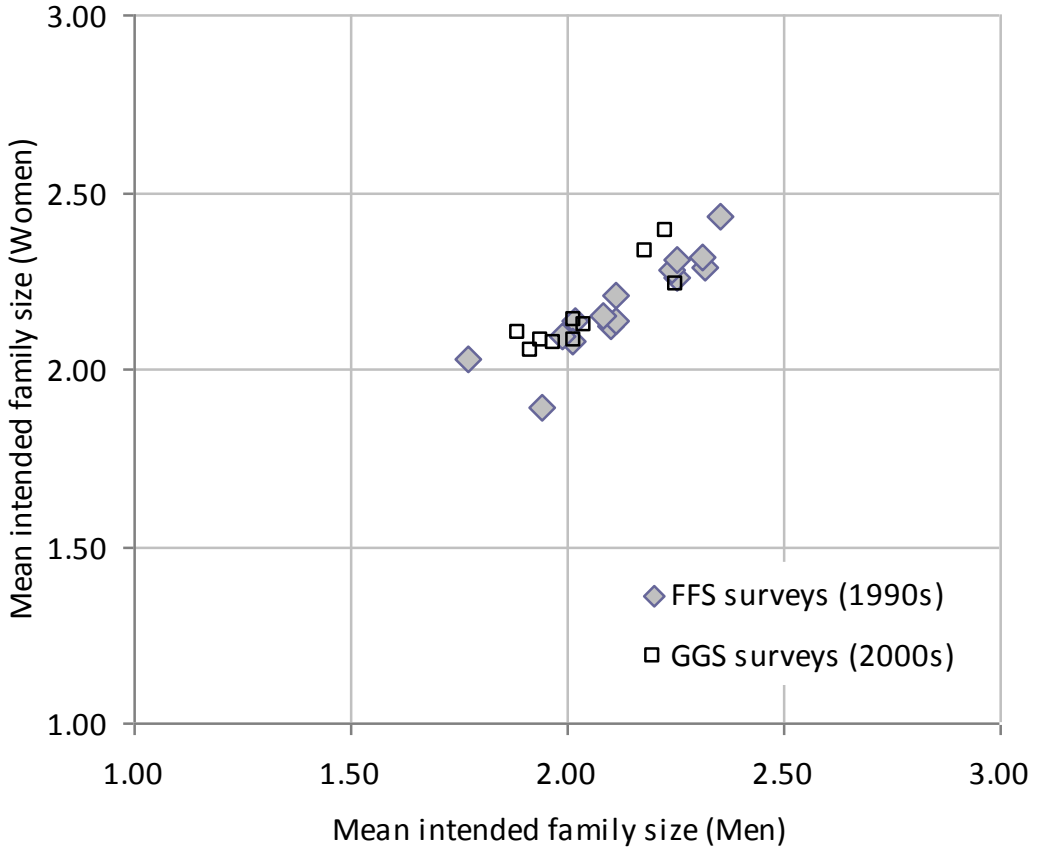

Sobotka, T. and É. Beaujouan. 2014. "Two is best? The persistence of a two-child family ideal in Europe." *Population and Development Review* 40(3): 391-419.

# Fertility intentions in Europe

Remarkable lack of variation, two-child family norm almost universal

Also no systematic variation by social status, very little difference between men and women

Mean intended family size of men and women aged 25-29, selected European countries, 1990s (FFS survey) and 2000s (GGS survey)




Mean, women

1990s (15 countries): 2.18

2000s (10 countries): 2.16

GGS and FFS data analysed by Éva Beaujouan

# Explanations of low fertility & fertility change


www.beingtheparent.com


# The „postponement transition“

www.dailymail.co.uk/femail/article-1329255/Worlds-oldest-mother-Adriana-Iliescu-broody-72.html

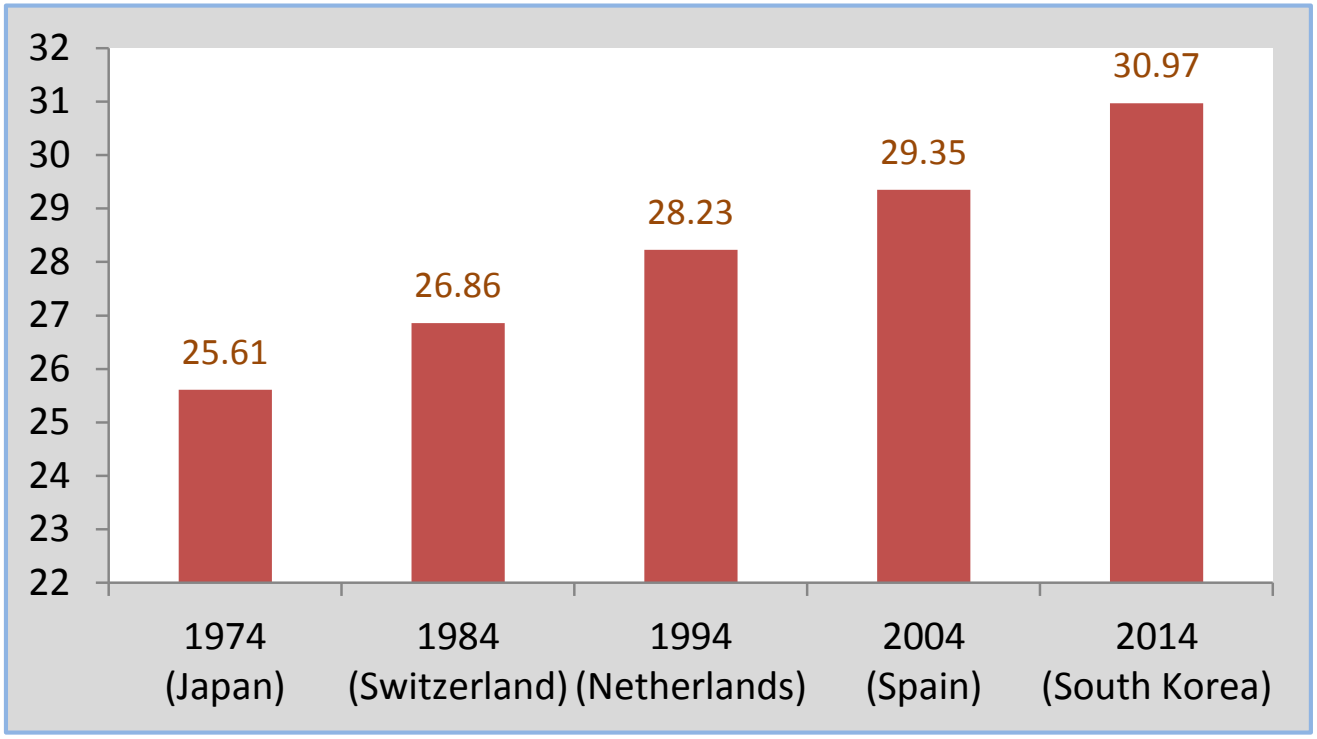
# The „postponement transition“

"Postponement transition" (Kohler, Billari, Ortega 2002) key characteristic of fertility trend in higher-income countries

- Childbearing increasingly shifted after age 30, sharp rise after age 40
- "Temporary" effect on the period TFR: The main driver pushing the TFR to the "lowest-low" fertility levels, esp. around 2000
- Potential effect on completed fertility through increased infertility: shifting family formation to ages beyond 30 will negatively affect the likelihood of having a second or a third birth (Billari and Borgoni 2005)
- Multiple underlying factors, expansion of tertiary education most important (e.g., Ní Bhrolcháin and Beaujouan 2012)

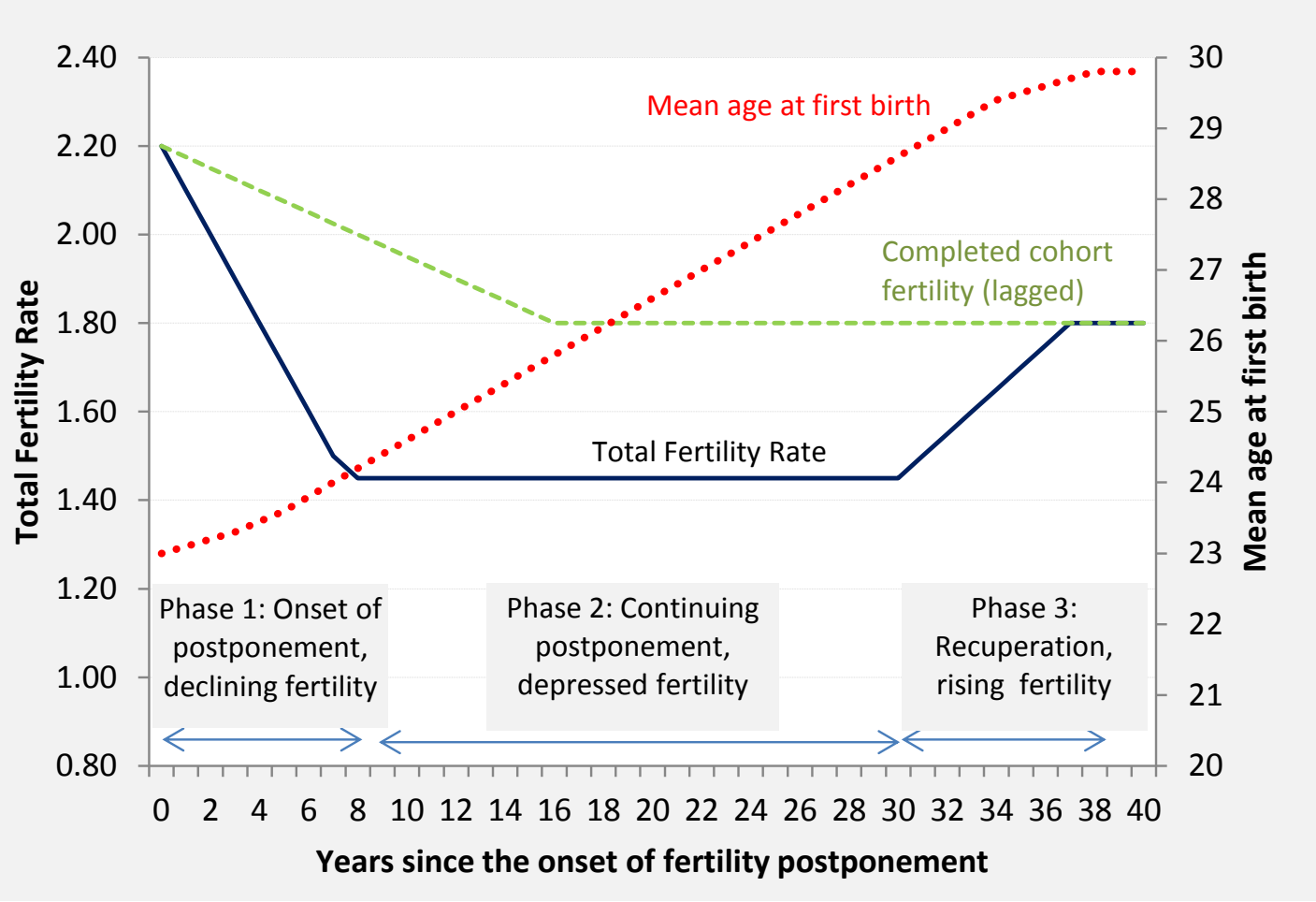
# The steady rise in the mean age at first birth

The highest mean age at first birth in higher-income countries, 1974-2014



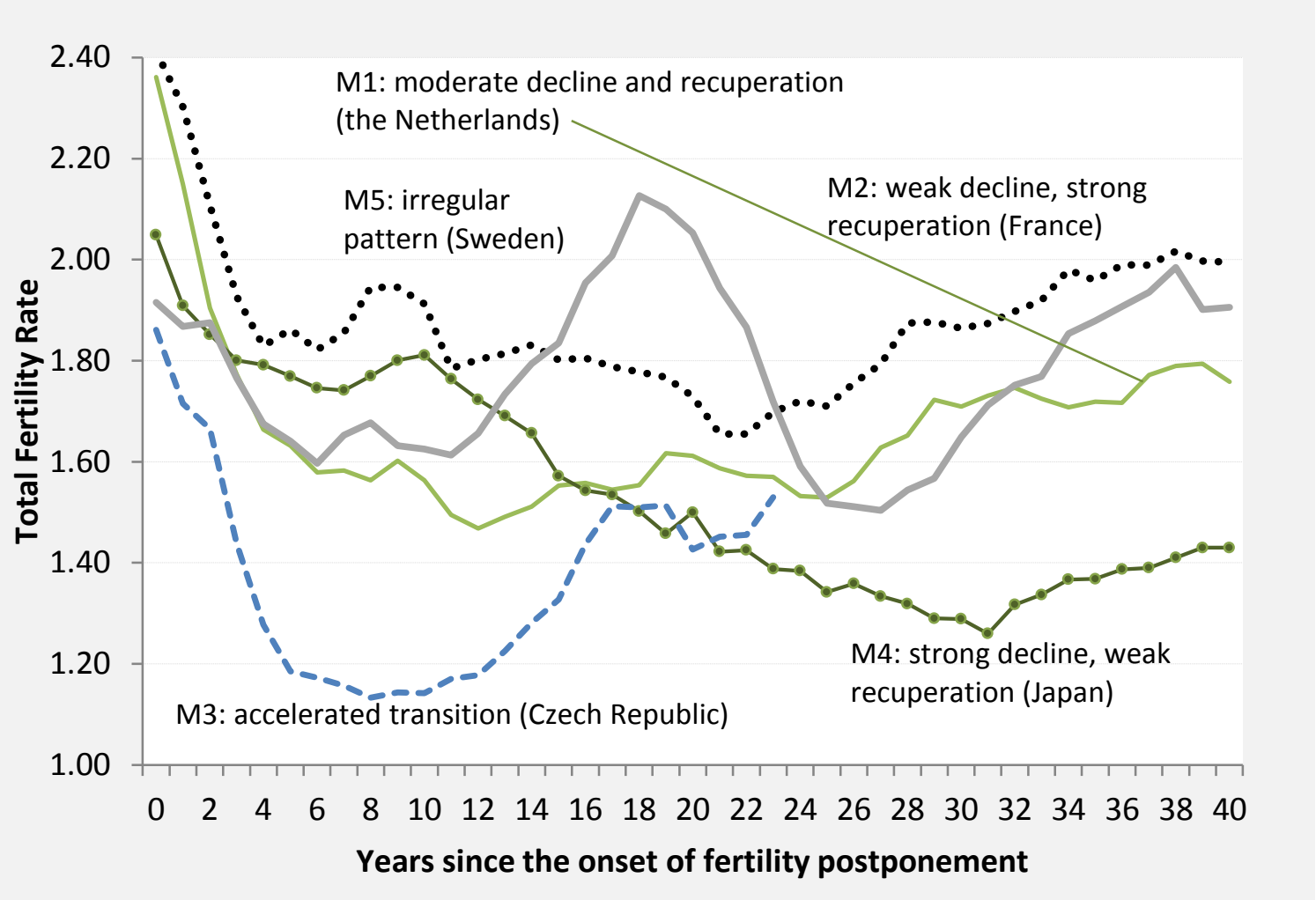
# The stages of the postponement transition: a stylised view vs. the observed patterns (1)

## Three distinct stages: A stylised view

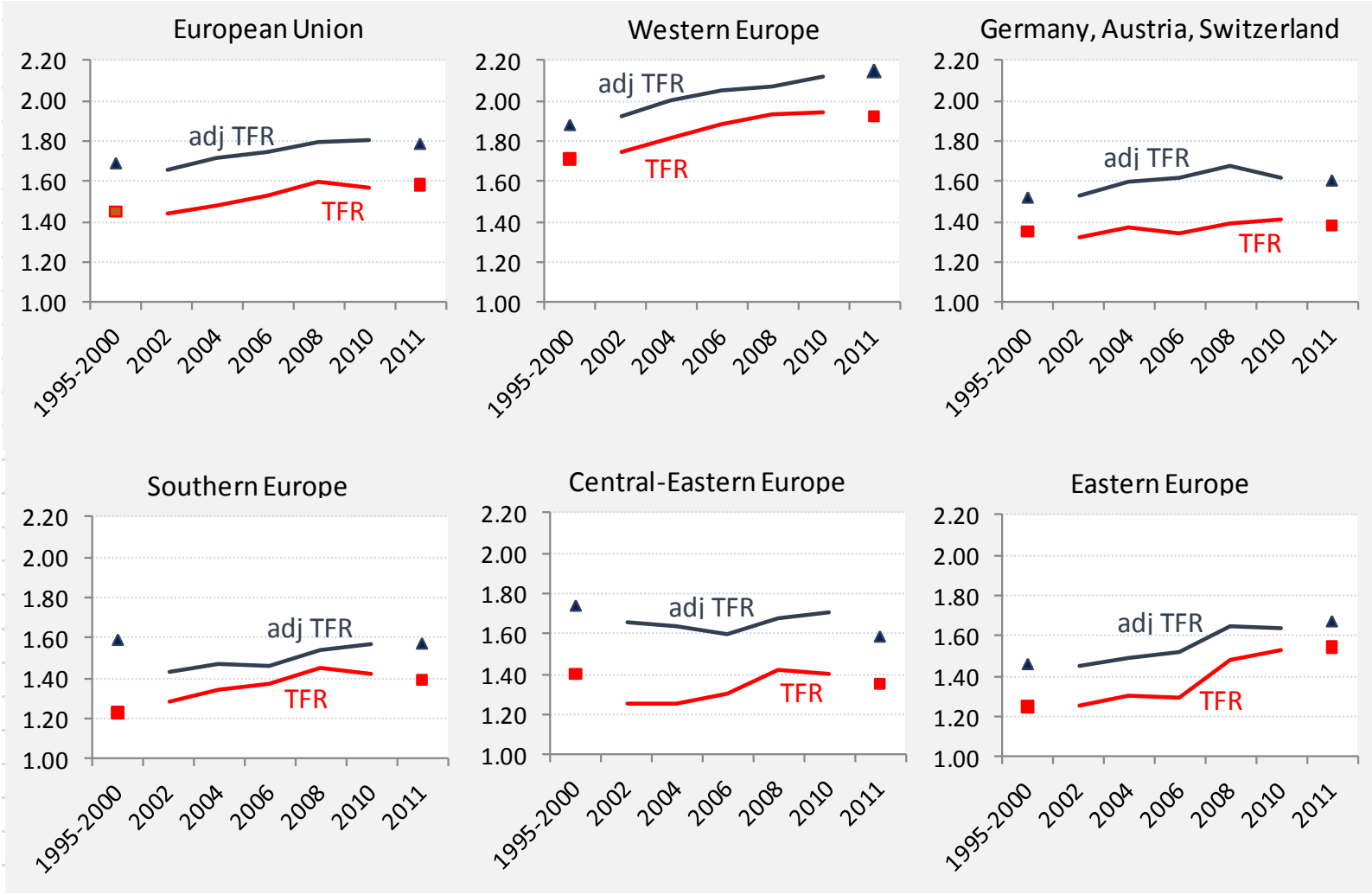


# The stages of the postponement transition: a stylised view vs. the observed patterns (2)

## Diversity of the observed patterns



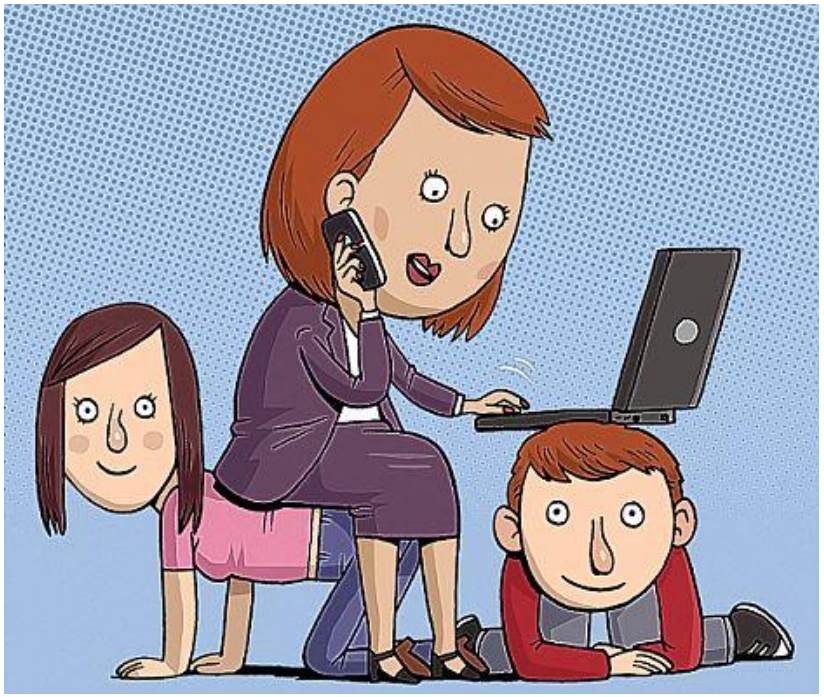
# Estimating the influence of fertility postponement: Conventional and tempo-adjusted TFR in Europe




Tempo effect in the EU in 2011 estimated at -0.20 (TFR 1.59, adjTFR 1.79)

Source: *European Fertility Data Sheet* 2015

# Fertility and family reversals



thehrjuggler.wordpress.com

# The fertility and family reversals (1)

Simple bivariate analyses of TFR (cohort TFR) and selected socio-economic and cultural indicators show the correlation has changed or an unexpected correlation has emerged regarding

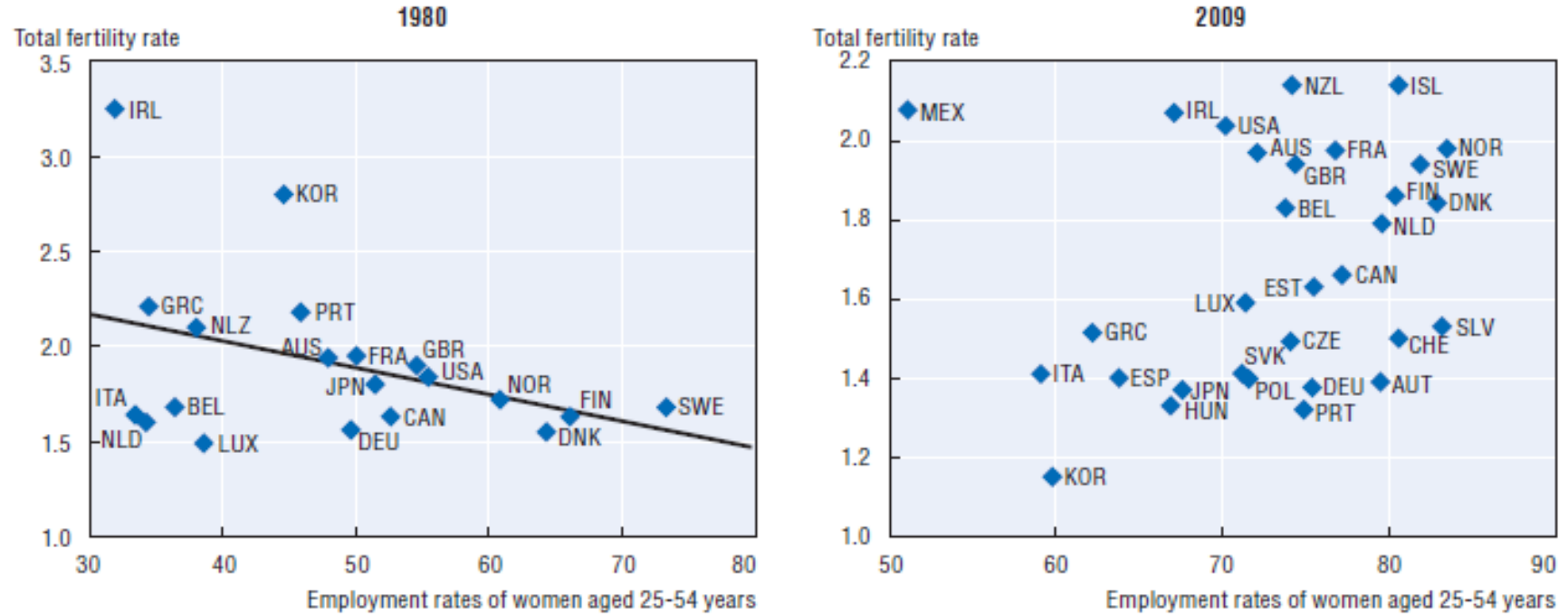
- Female labour force participation (Rindfuss et al. 2004, Engelhardt et al. 2004, Feyrer et al. 2008)
- Family bahaviour (divorce rate, marriage rates, % nonmarital births) (Rindfuss et al. 2004, Billari and Kohler 2004)
- Human development (Myrskylä et al. 2009), economic development (GDP per capita) (Luci-Greulich and Thévenon 2014)
- Enrolment of small children in public childcare
- The second demographic transition (Sobotka 2008)
- Gender equality; share of domestic work and childcare performed by men (Feyrer et al. 2008)

*Also reversals in family behaviours and their education gradients* (Esping Andersen & Billari 2015)

# The fertility and family reversals (2)

Figure 3.8. **Motherhood and employment are less incompatible now than in 1980**

Female employment and total fertility rates, 1980-2009




*Note:* The y-axis (total fertility rate) scale is 1.0-3.5 for 1980 and 1.0-2.2 for 2009.

*Source:* OECD (2010b), *OECD Family Database*, SF2.1.

StatLink http://dx.doi.org/10.1787/888932393179

OECD 2011 (*Doing better for Families*)

# The development-fertility reversal: High income = higher fertility? (Myrskyllä et al 2009, 2011; Luci & Thévenon 2010)

## Human Development Index and Completed Fertility

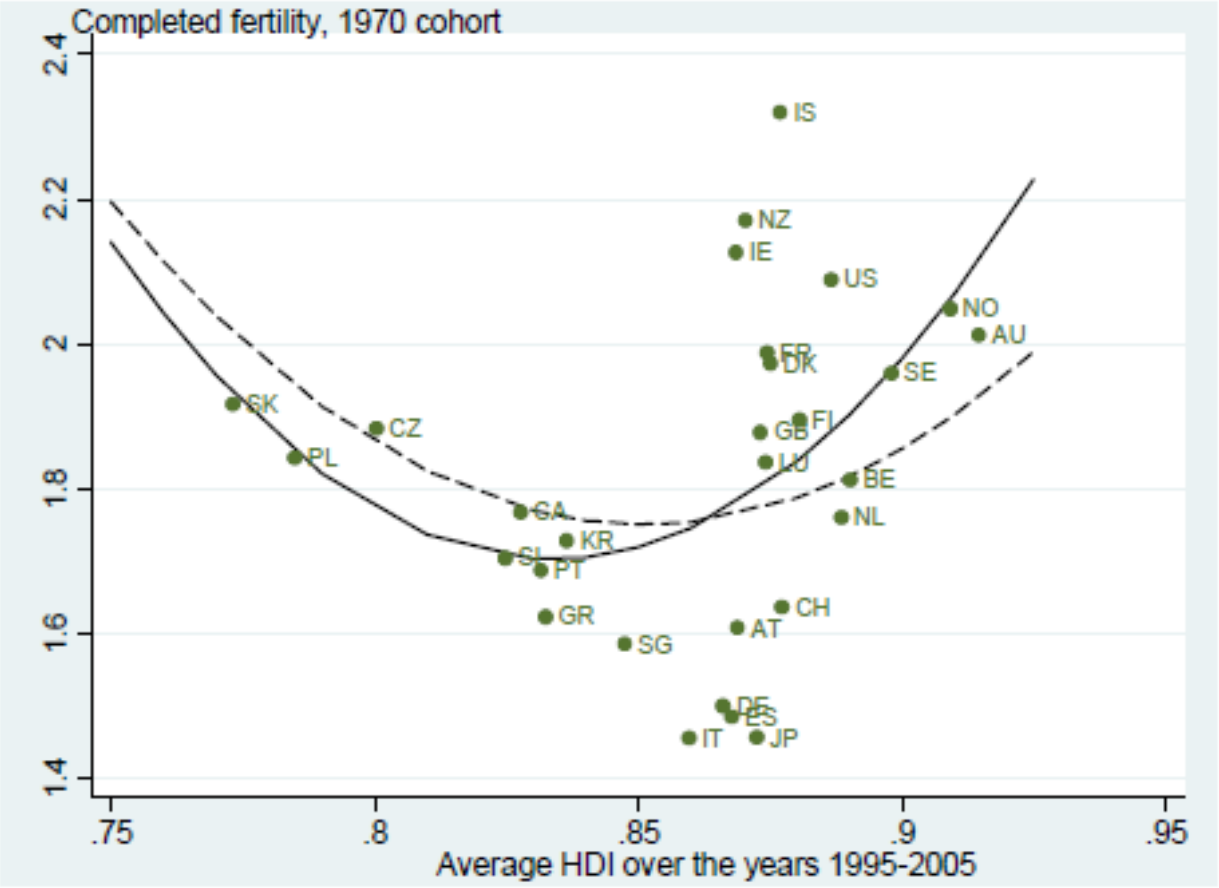



Figure 6 in Myrskylä, Kohler, Billari (2011)

# The fertility and family reversals: debates and interpretations

Rindfuss et al. (2004) and other: Role incompatibility, differential institutional responses and “accommodations” to low fertility between countries

These findings remarkable, but a close scrutiny often provides a more nuanced picture

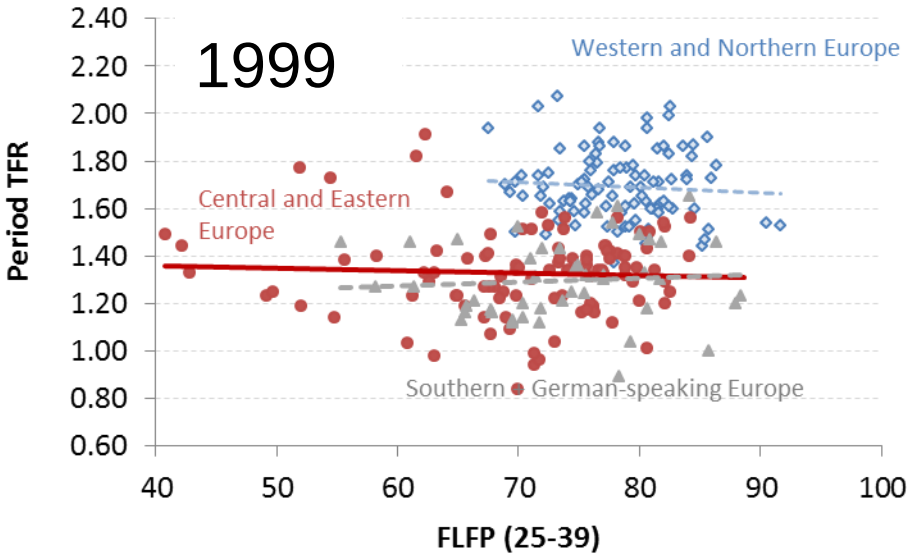
The reversals & correlations often less prominent

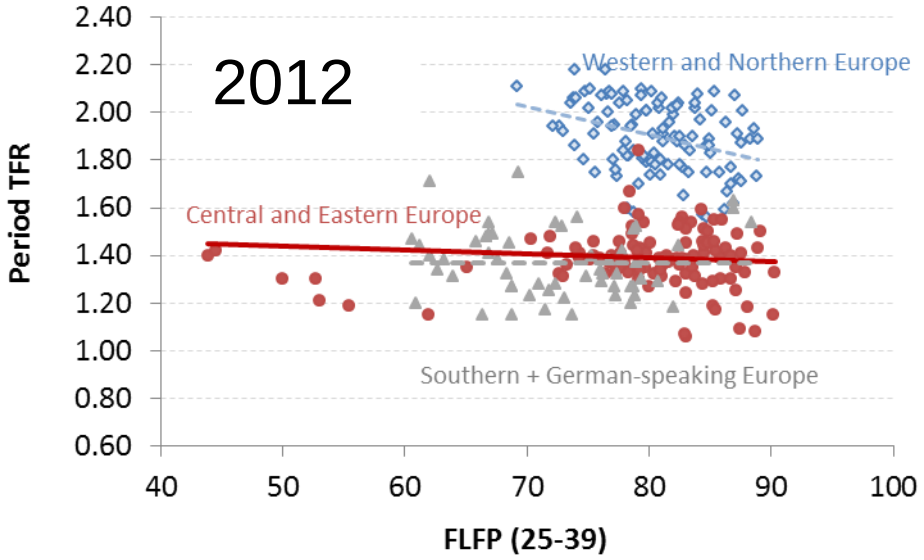
- When more countries included
- When broader regions distinguished
- When cohort fertility data used instead of period TFRs
- When smaller geographical units analysed

# Revisiting the TFR vs. FLFP correlation: a regional view

- Ca 300 NUTS-3 regions, nested into broader European regions

The cross-region correlation between FLFP and TFR by three large country groups




Source: T. Sobotka and A. Matysiak. "Reversing the reversal?
The cross-country correlation between female labour market participation and fertility revisited", work in progress

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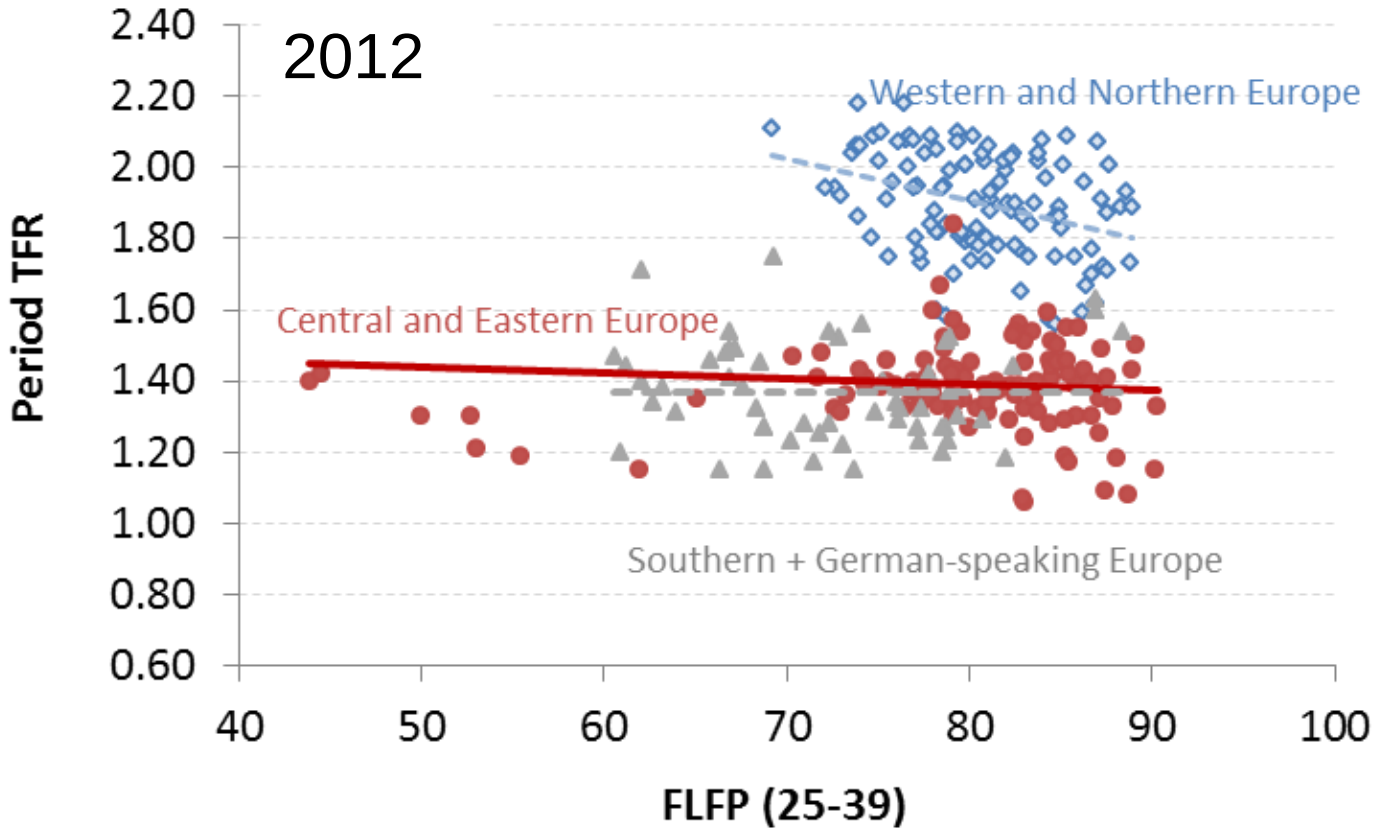
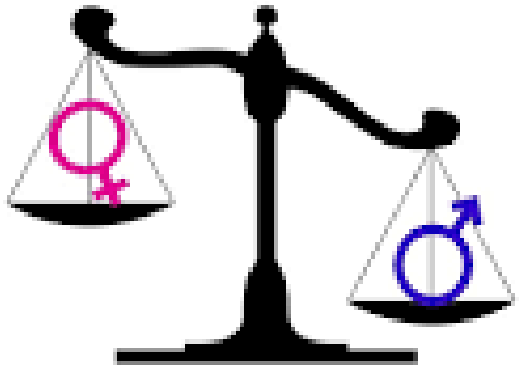


# Gender (in)equality



www.chronicle.co.zw

# Gender (in)equality and fertility (1)

Gender inequality now in the center of debates on the drivers of low fertility (PDR 2015 contributions: Esping-Andersen & Billari 2015, Goldscheider et al. 2015, Anderson and Kohler 2015)

Different dimensions:

- labor marker participation (& equal treatment)
- work hours (esp. part-time work)
- attitudes and norms (including on the import of mother's stay at home with small children)
- parental leave take-up
- actual household division of domestic work & childrearing

- *The ability of women to combine career and family life emerges as a key precondition to achieving a higher fertility → link to policies*

# Gender (in)equality and fertility (2)

McDonald (2013): the notion of gender equity → perceptions of fairness and opportunity rather than strict equality of outcomes

Esping-Andersen (2009): *Incomplete gender revolution*

- Lagging adaptation of the family to new opportunities and aspirations of women → fostering family instability and depressing fertility

Goldscheider, Bernhardt and Lappegård et al. (2015): two stages of the gender revolution and changes in family behaviours:

- 1) *A weakening of the family:* female employment, emancipation, family instability, alternative family forms, Second Demographic Transition
- 2) *Gender revolution:* increased involvement of men → more family, less instability

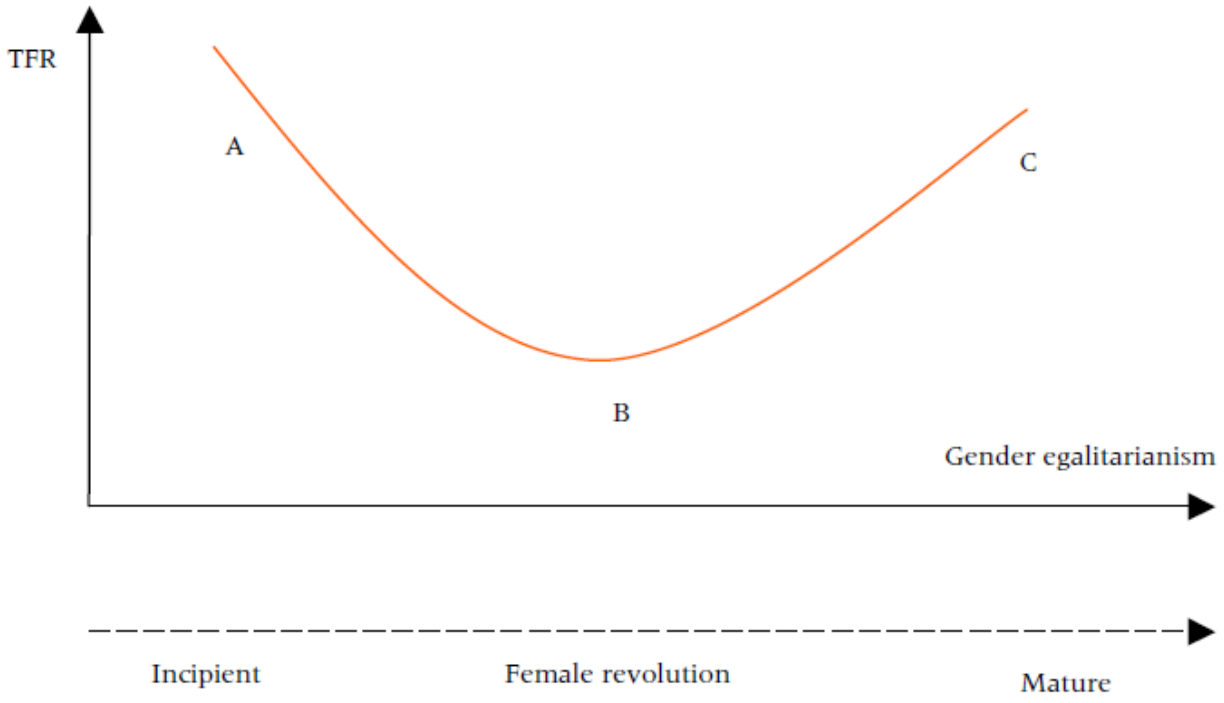
Myrskylä, Kohler, & Billari (2011): high levels of gender equality precondition to achieving higher fertility in countries with higher development levels

# Gender (in)equality and fertility (3)

*Esping-Andersen and Billari (2015): Expected fertility fall and recovery during the shift to gender egalitarianism*



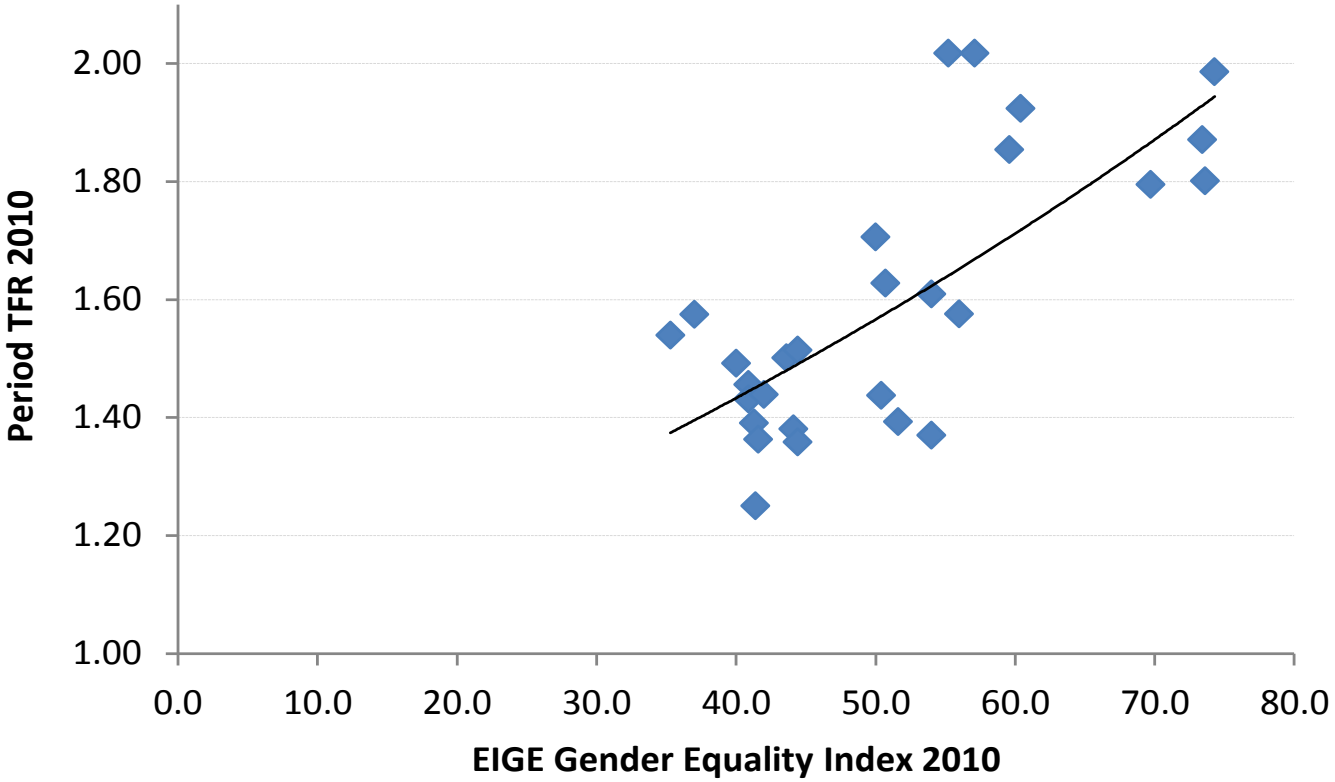
**FIGURE 1 Schematic fertility trend over the "female revolution"**




Esping-Andersen, G., & Billari, F. C. (2015). Re-theorizing Family Demographics. *Population and Development Review*, *41*(1), 1-31.

# Gender (in)equality and fertility (4)

*Correlation between EIGE Gender Equity Index for European countries and the TFR (2010)*




*EIGE Index for 2010: European Institute for Gender Equality, http://eige.europa.eu/*

www.msnbc.msn.com/id/28624299/

# Economic & labour market instability

# Three types of labor market / economic instability affecting fertility

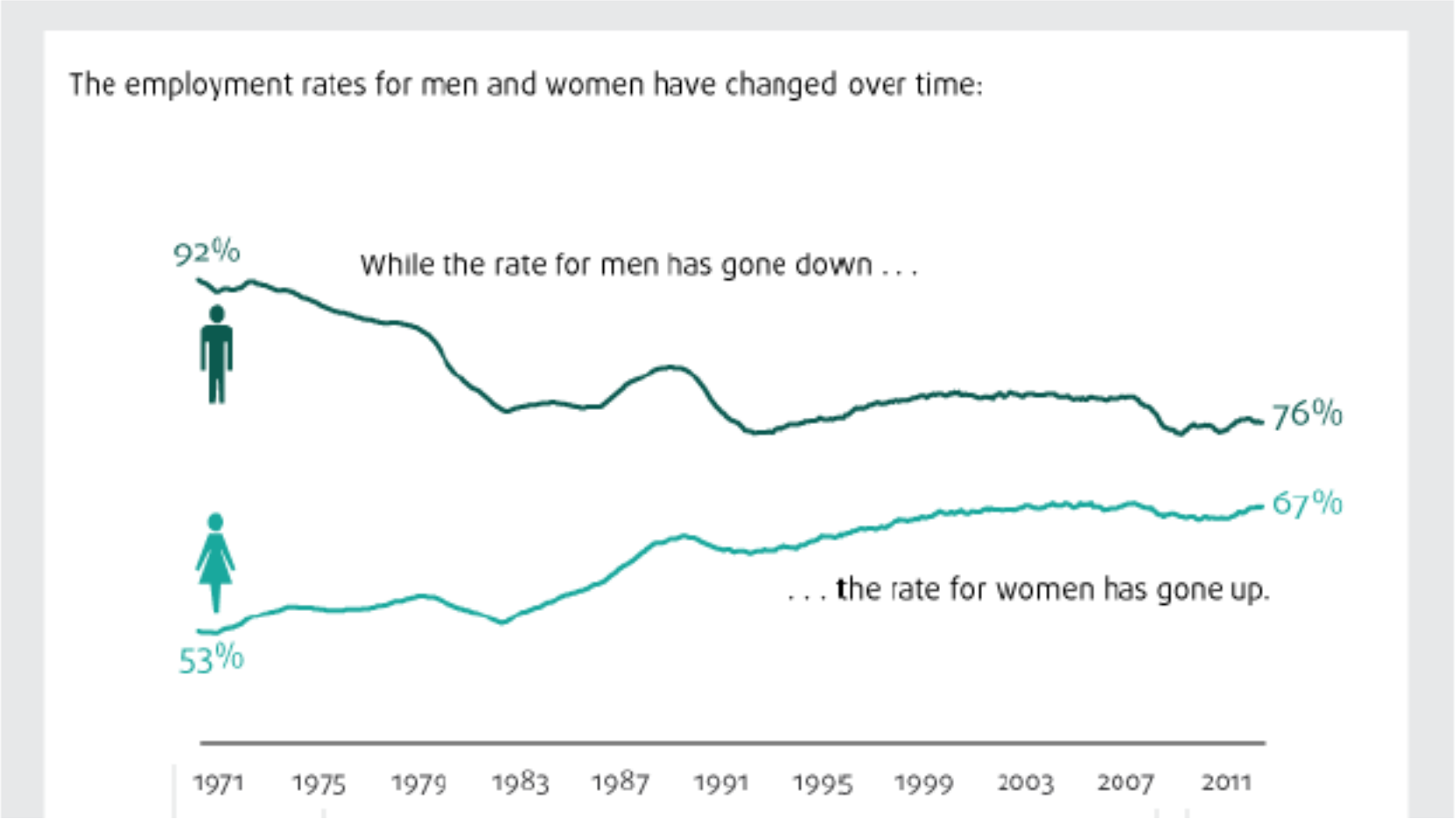
1. Globalization, increased competition & technological change (McDonald 2002, Mills and Blossfeld 2005) → Long-term
2. Stagnating economy & poorly functioning labor markets (Adsera 2004, 2005) → Long-term, some regions only
3. Economic downturns and other shocks → shorter term

# 1. Globalization, increased competition & technological change

- Free market policies, international competition
- Long-term increase in economic uncertainty, rise of precarious jobs, fixed-term contracts, non-standard work schedules

- *Most accentuated among young adults (the 'losers' of the globalisation process, Mills and Blossfeld 2004)*
- *Rising women's involvement in labor market, a slow downward drift for M*
- *Declining income of younger men, relative to women and relative to the older generations (and arguably relative to their expectations)*

**Employment rates for men and women aged 16-64, 1971 to 2013, UK**




Source: Office for National Statistics 2013, *Women in the labour market,* Report available at http://www.ons.gov.uk/ons/rel/lmac/women-in-the-labour-market/2013/rpt---women-in-the-labour-market.html

# Three types of labor market / economic instability affecting fertility

## 2. Stagnating economy & poorly functioning labour markets

- Some economies & labor markets not well adjusted to the global economic change (Southern Europe, partly also south-eastern E.)
- Persistently high unemployment, the rise of NEETs, high (involuntary) self-employment, insider-outsider labor market, informal (grey) economy

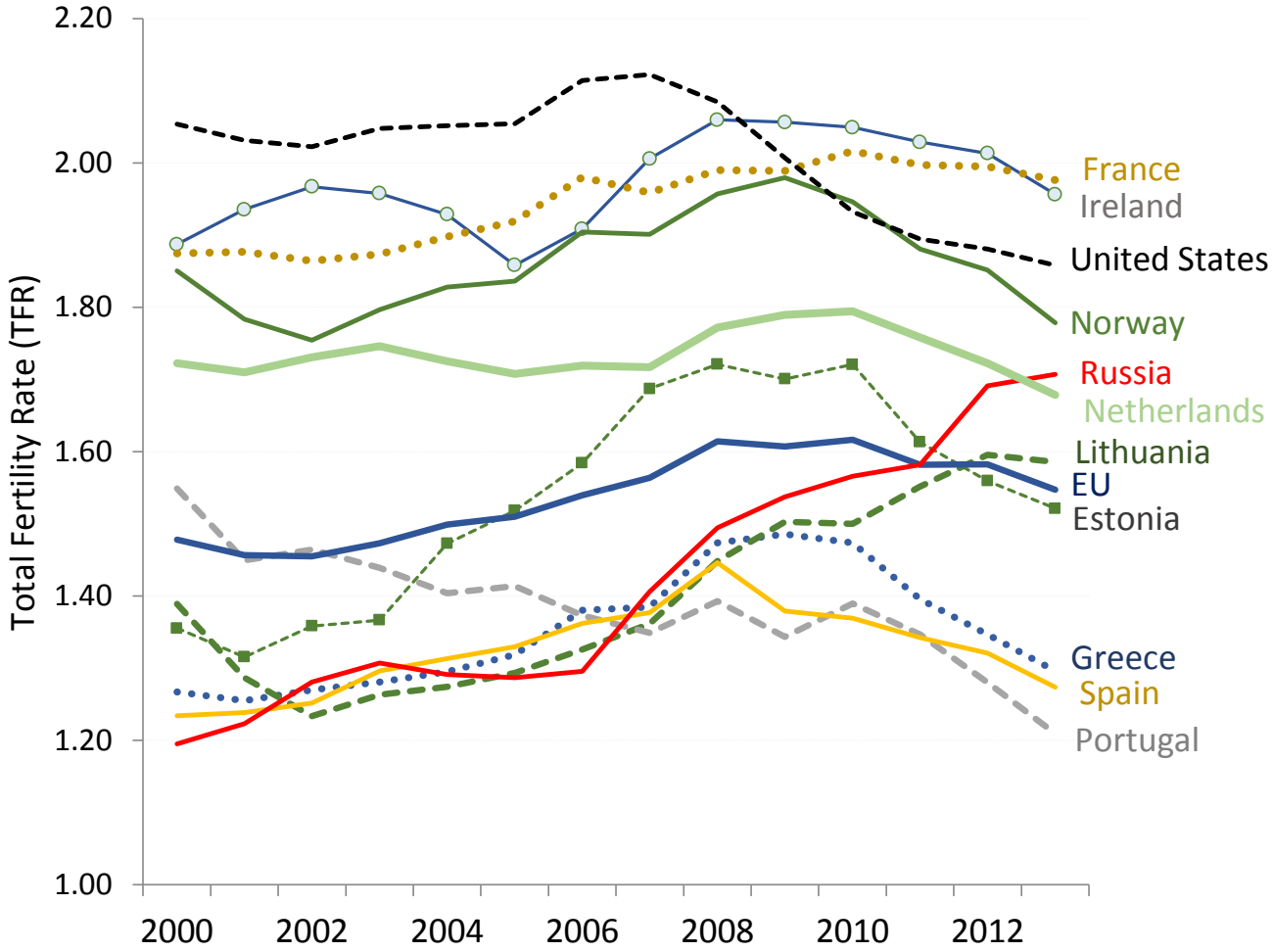
## 3. Economic downturns and other shocks

*All these three forces predominantly affecting young adults in the stage before and around family formation*

→ *fertility postponement, lower fertility*

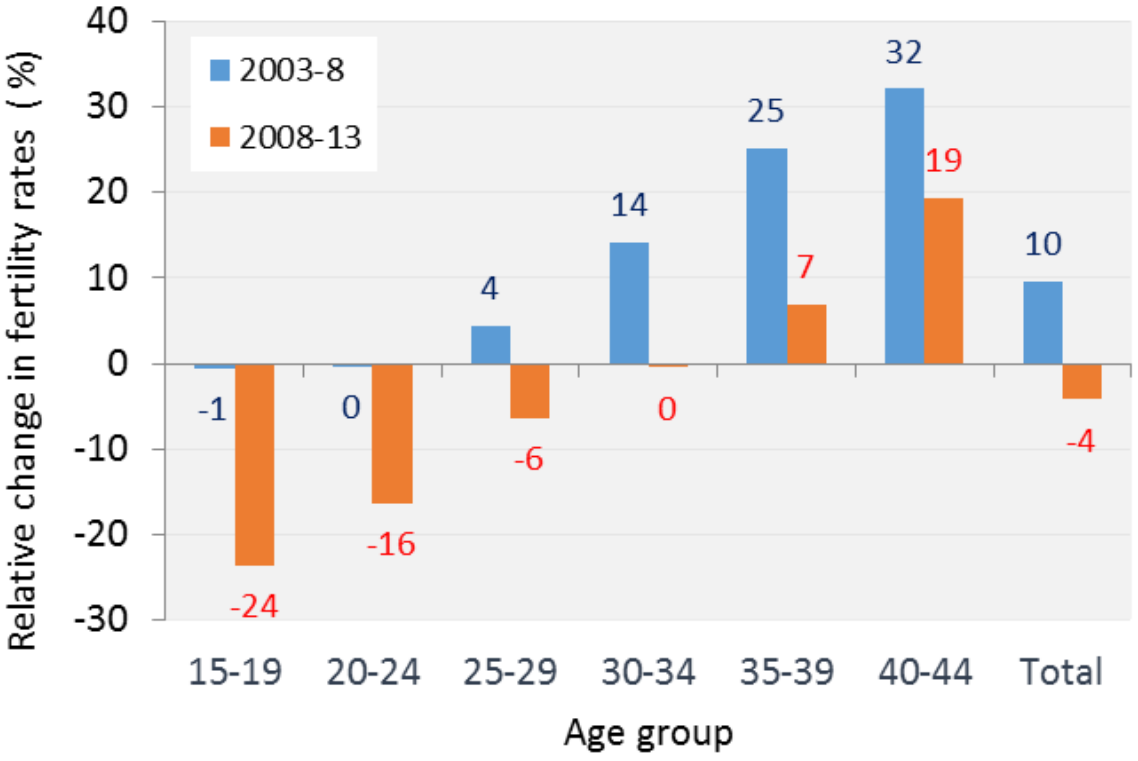
# Fertility changes in Europe & United States during the recent economic recession

Period TFR in selected European countries & in the US, 2000-13



# Fertility timing during the recession: accelerated postponement

Relative changes in age-specific fertility rates in the European Union five years before (2003-8) and five years into the recession (2008-13)




**Source:** Own computations based on Eurostat 2015 & national statistical offices

# Low fertility, migration and population replacement

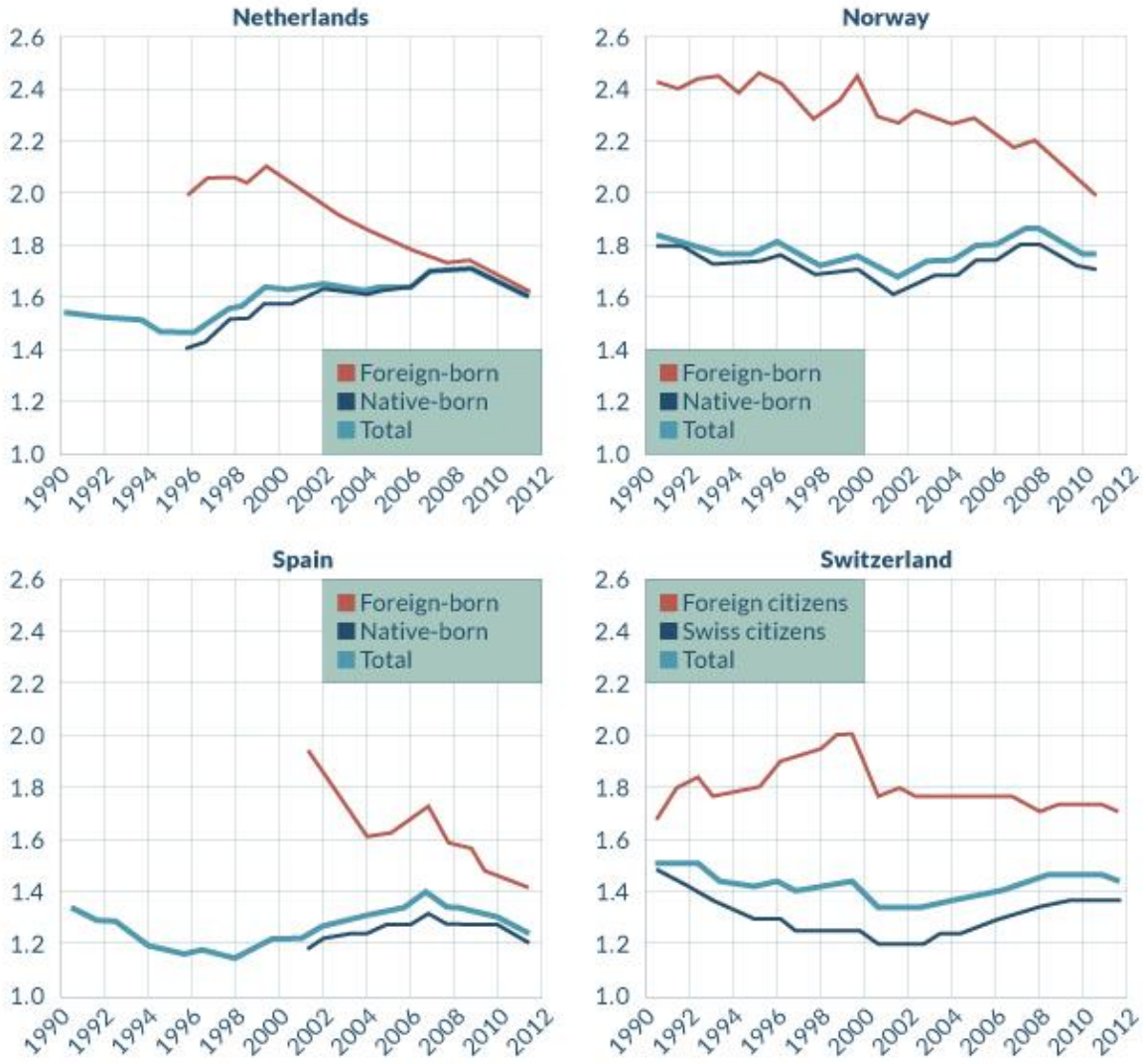

www.telegraph.co.uk

# The role of migration in European population changes

Higher fertility? Yes, but not much… plus a convergence over time

# TOTAL FERTILITY RATE OF IMMIGRANT AND NATIVE-BORN WOMEN

## IN THE NETHERLANDS, NORWAY, SPAIN, AND SWITZERLAND, 1990-2013




Source: *European Fertility Data Sheet* 2015

# The role of migration in European population changes

Higher fertility? Yes, but not much… plus a convergence over time

Boosting population & labour force size: Yes, a strong cumulative effect over time

- Also a strong increase in population of reproductive ages → subsequent effect on the number of births
- The opposite effect in emigration countries of Central & Eastern Europe

*Migration more than fertility appearing as a key force shaping population changes in Europe*

# East-West division in relative population change, 1989-2013, in %


Decline 15-25%

Decline 10-14%

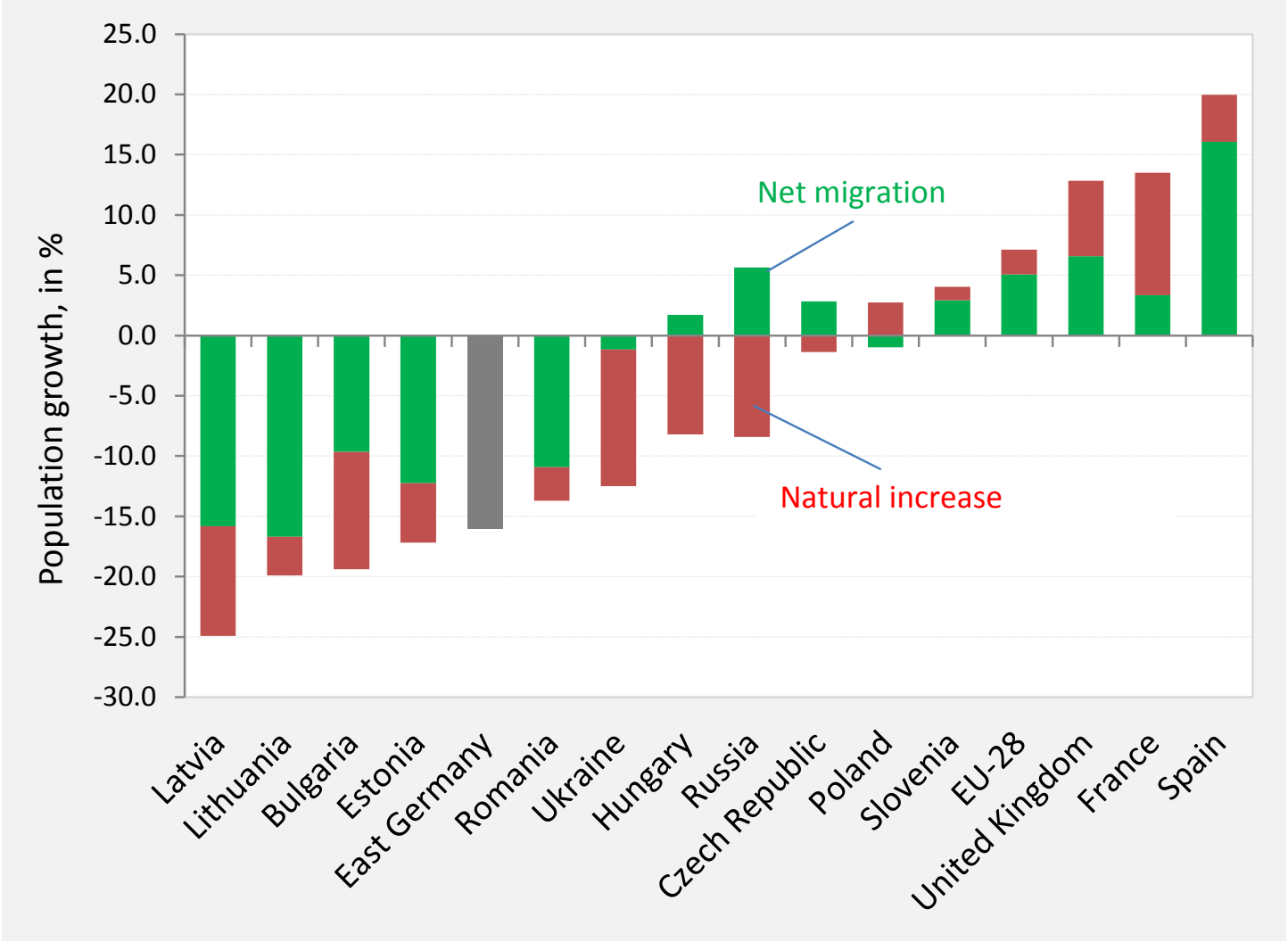
Increase 10-19 %

Increase 20+ %

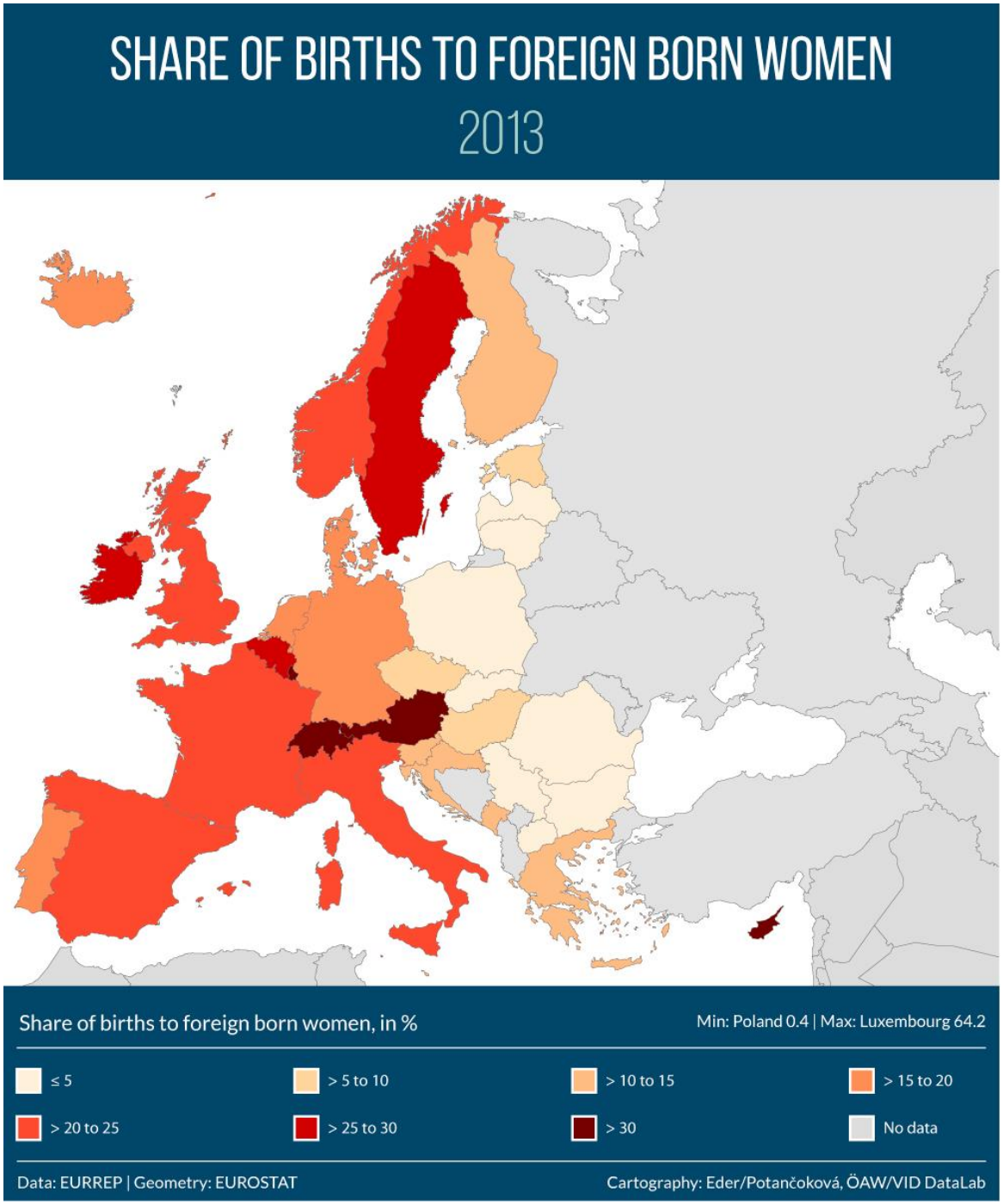
Data source:
Own elaboration of Eurostat 2015

Map creator:
http://edit.freemap.jp/en

# Relative population change, 1989-2012 or 2013: Net migration vs. Natural pop. increase




Data source: Eurostat 2015, national statistical offices, www.pdwb.de




Source: *European Fertility Data Sheet* 2015, online maps available from 2 December 2015 at www.fertilitydatasheet.org

# The misleading fixation on replacement fertility

The "golden standard" of TFR of 2.07 (or 2.1) is wrong

- TFR is unstable and distorted by *tempo effect*; temporarily depressed TFR may send wrong signals about long-term population replacement
- "Optimal fertility" may be below replacement level, perhaps at 1.7-1.8: environmental concerns, increasing education & productivity (Striessnig & Lutz 2013, 2014)
- Long-term immigration and emigration trends imply very different perspective on birth and population (intergenerational) replacement
  - Most of Southern, Western and Northern Europe "over-reproducing" with current TFR levels; population replacement often reached with the TFR around 1.6-1.8
  - Central, eastern, south-eastern Europe would need a TFR>2.1 to keep their generations replaced in the future
  - Population replacement-level TFR in 2009 accounting for migration: Switzerland 1.36, Bulgaria 2.40 (Sobotka and Zeman 2013)

# Discussion

# Discussion: Key messages

- The fears of very low fertility in Europe are overblown
- The epicentre of low fertility is in East Asia, not in Europe
- Very low fertility does not need to last for long, strong ‘recovery’ in TFR levels reported in many cases
- The concept of replacement level fertility is outdated and misleading
- Very low fertility fuelled by a combination of institutional factors, not just by one force
- A combination of gender equality, high economic development, well-functioning labor market and childcare availability key for achieving higher fertility
- *The shifts towards higher parenthood & child quality dimension: a neglected issue in fertility research?*
- *Fertility and family reversals: is the role of gender equality overestimated?*

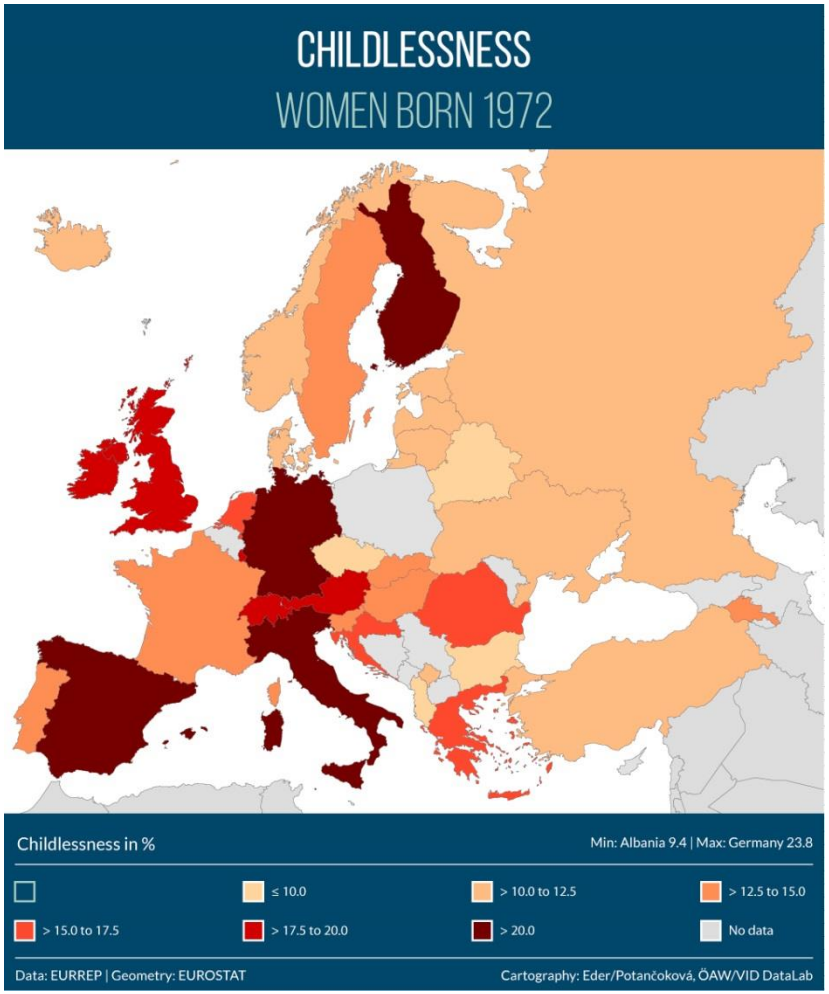
# Data & resource highlights

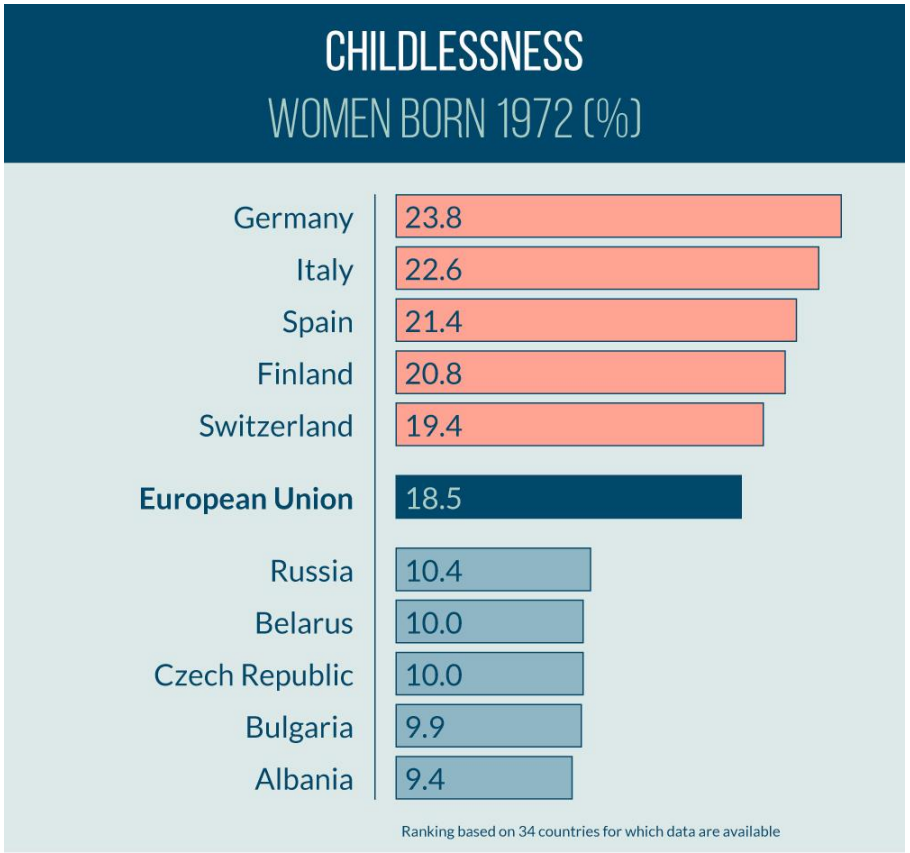

Online version forthcoming on December 2 at

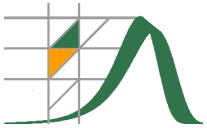
www.fertilitydatasheet.org

# European Fertility Datasheet 2015

Online version: Data, featured highlights & analyses, ranking charts, maps, and expanded documentation





The Human Fertility Database

www.humanfertility.org

**Human Fertility Collection**

www.fertilitydata.org

CFE database
COHORT FERTILITY AND EDUCATION

www.cfe-database.org

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