

Diminishing differentials? Persistent education gradients in fertility in post-transitional countries

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EURREP

FERTILITY AND REPRODUCTION
IN 21ST CENTURY EUROPE



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Introduction

Increasing attention to education-fertility relationship and its interpretation in low-fertility settings (& different institutional contexts)

- Long-term gradient in education-fertility differentials documented among women (e.g. Skirbekk 2008), less clear among men
- But unclear how this gradient evolves over time – different conclusions in different studies, some suggesting reversals, U- and V-shaped associations

Introduction (2)

In the past research exploring the education – fertility links often

- Focused on individual countries
- Used period data that are often affected by *tempo effects* & changing education status of mothers
- Applied a short-term perspective
- Used regression analysis, frequently with a focus on partnered women & single-parity transition

More cross-national comparative papers in recent years (e.g., Wood, Neels & Kil 2014; Klesment et al. 2014, Van Bavel et al. 2015)

Debates on causality

→ *The “big picture” is often lost*

Agenda

Research on long-term changes, & inter-country variation in the relationship between education and fertility (and fertility intentions) by the ERC-funded EURREP project (VID / Wittgenstein Centre) & collaborators

- Focus on completed fertility, childlessness and parity distribution of women (and men) aged 40+
- Europe & selected low-fertility settings outside Europe

Selected papers – project & collaborations:

Beaujouan, Éva, Zuzanna Brzozowska and Kryštof Zeman. 2015. “Childlessness Trends in Twentieth-Century Europe: Limited Link to Growing Educational Attainment”, *VID Working Papers* 6/2015.

Brzozowska, Zuzanna. Female education and fertility under state socialism in Central- and South-Eastern Europe. Forthcoming in *Population*.

Brzozowska, Zuzanna. 2014. “Fertility and education in Poland during state socialism”, *Demographic Research* 31(12).

Brzozowska, Zuzanna, Beaujouan, Éva and Kryštof Zeman. “Two is best. The two child family most common across Europe and across education strata” *Work in progress*

J. Van Bavel et al. “Women’s Education and Cohort Fertility during the Baby Boom” *Work in progress*

Agenda

- Long-term change in 20th century cohorts: Diminishing education gradient in completed fertility?
- Post-transitional fertility: Contrasts in educational gradients

The *Cohort Fertility and Education* (CFE) database

Data

- Census data (1970s to 2011, full sample or 5-10% samples) and large-sample surveys (France, *Mikrozensus* in Germany)
- Women (& men) aged 40-80
- Completed fertility, parity distribution; women born 1930-1971
- 12 European countries and South Korea; CEE overrepresented
- Data in the *Cohort Fertility and Education (CFE)* database and Belgian Census data
- 3 education levels, using 1997 ISCED categories:
 - LOW: ISCED 0-2, up to lower secondary / second stage of basic educ.
 - MEDIUM: ISCED 3+4: upper secondary & post-secondary education
 - HIGH: ISCED 5+6: tertiary / university education



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Diminishing education gradient in completed fertility
across cohorts?

Relative fertility differences

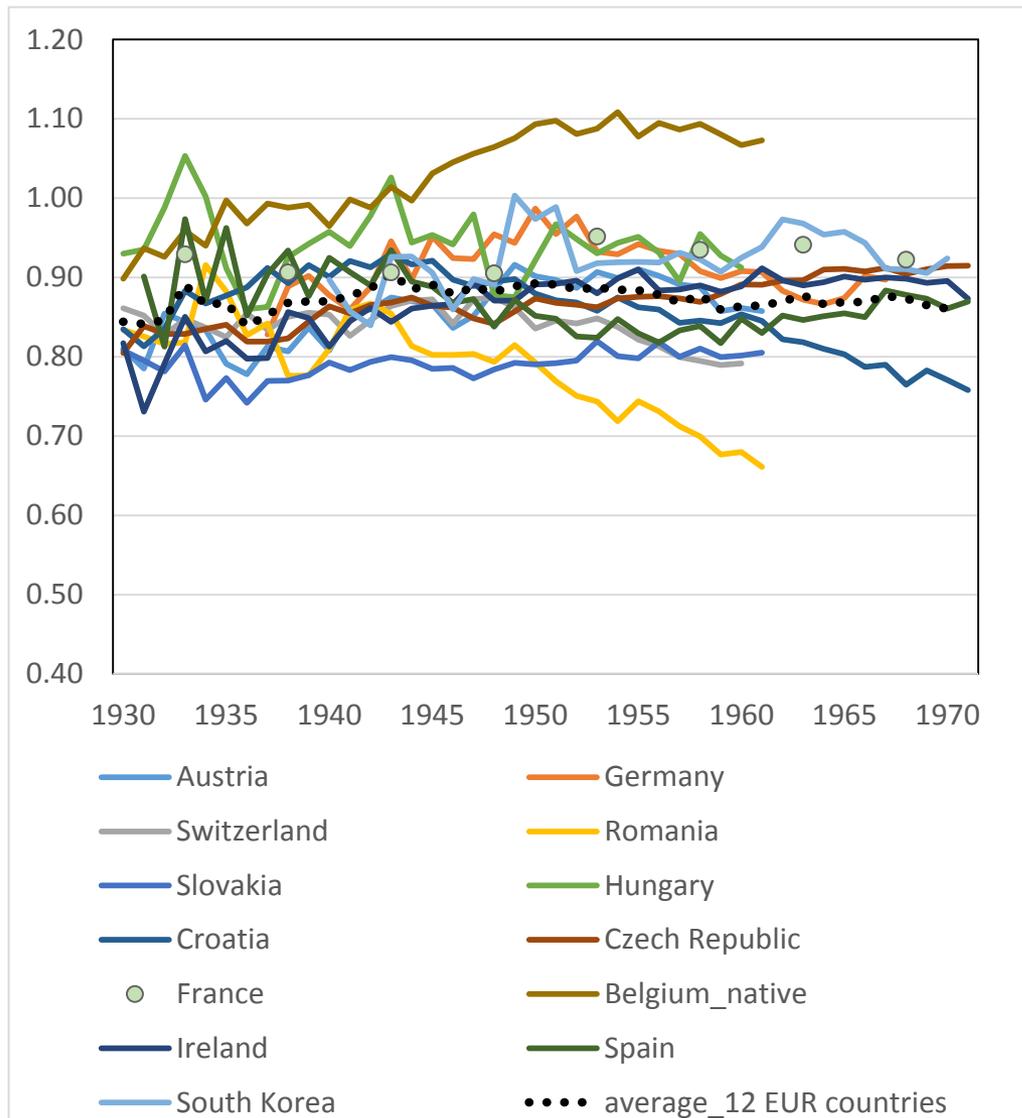
Is there a trend towards diminishing relative fertility differences in post-transitional countries?

- Many arguments & theories suggest such a trend (SDT as well as arguments centering on gender egalitarianism and reconciliation policies)

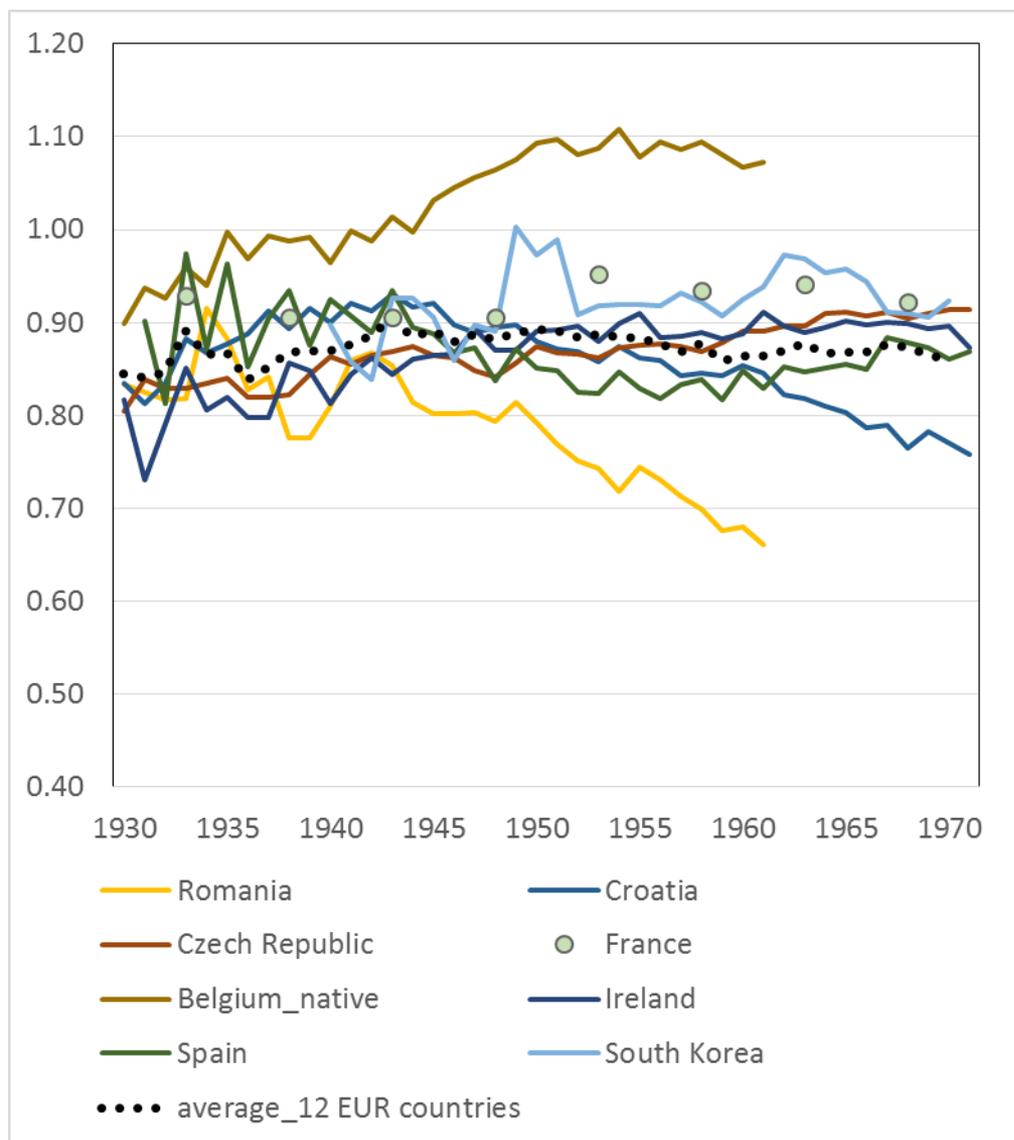
Measuring relative fertility differences

- Relative Fertility Index (RFI): simple measure comparing relative differences in fertility level between two education categories
- Comparing women with Higher (H) and Medium (M) education level for any cohort c: $RFI (H/M) = CTFR (H) / CTFR (M)$
- Comparing women with Medium (M) and Lower (L) education: $RFI (M/L) = CTFR (M) / CTFR(L)$

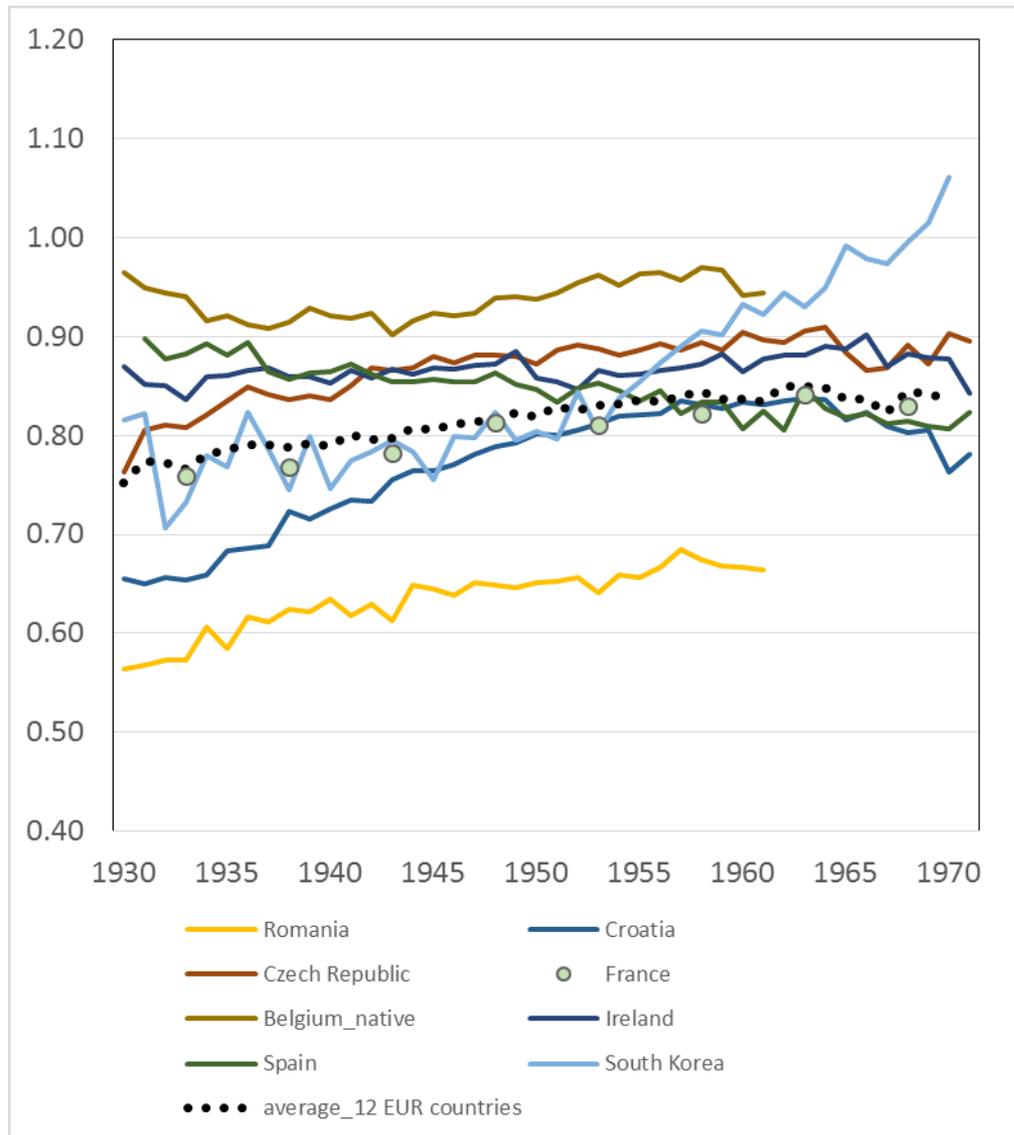
Relative fertility: High vs. Medium education (RFI (H/M))



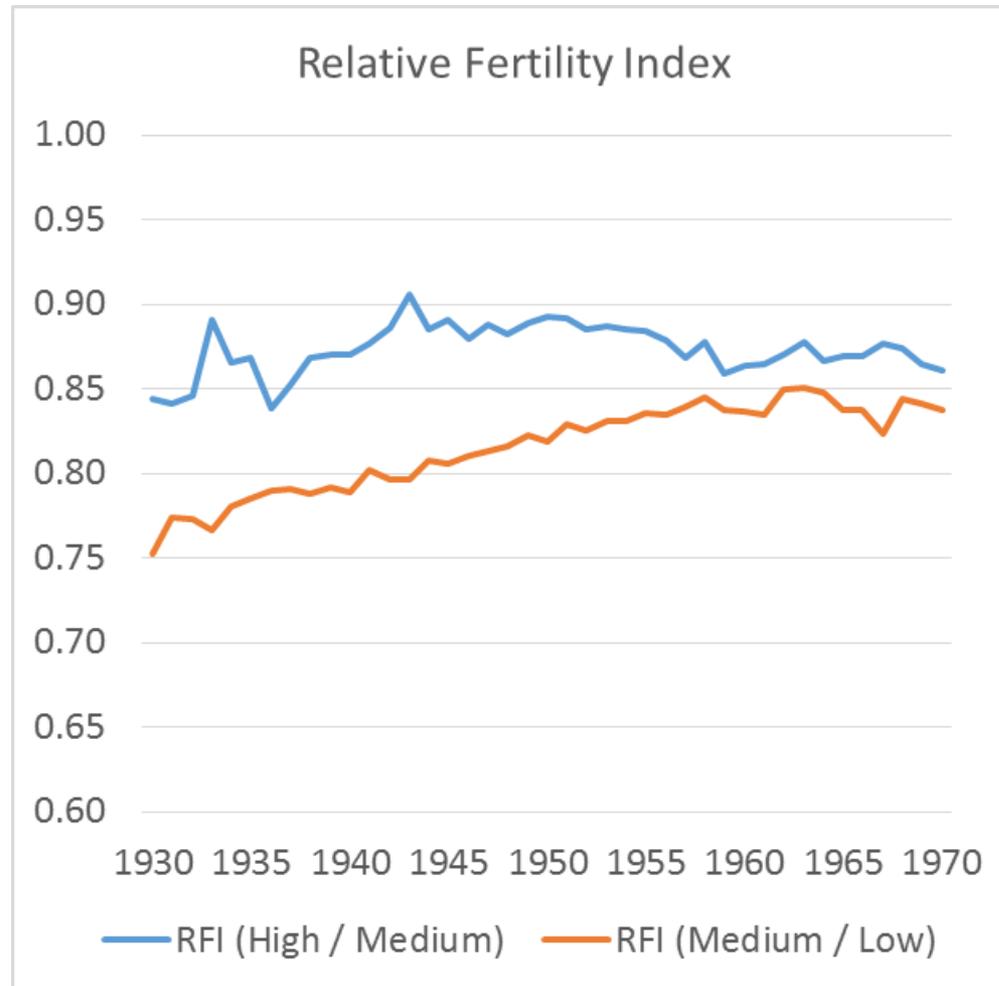
Relative fertility: High vs. Medium education (RFI (H/M))



Relative fertility: Medium vs. Low education (RFI (M/L))



Relative fertility: Summary for European countries





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Convergence vs. polarization: Diversity of post-transitional trends in fertility gradients

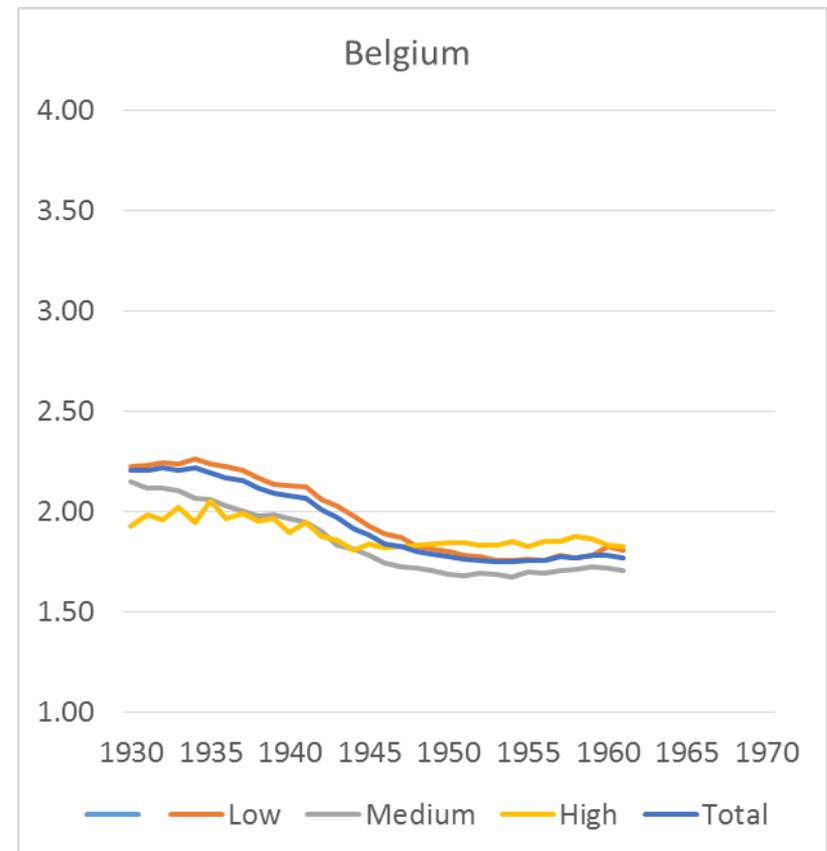
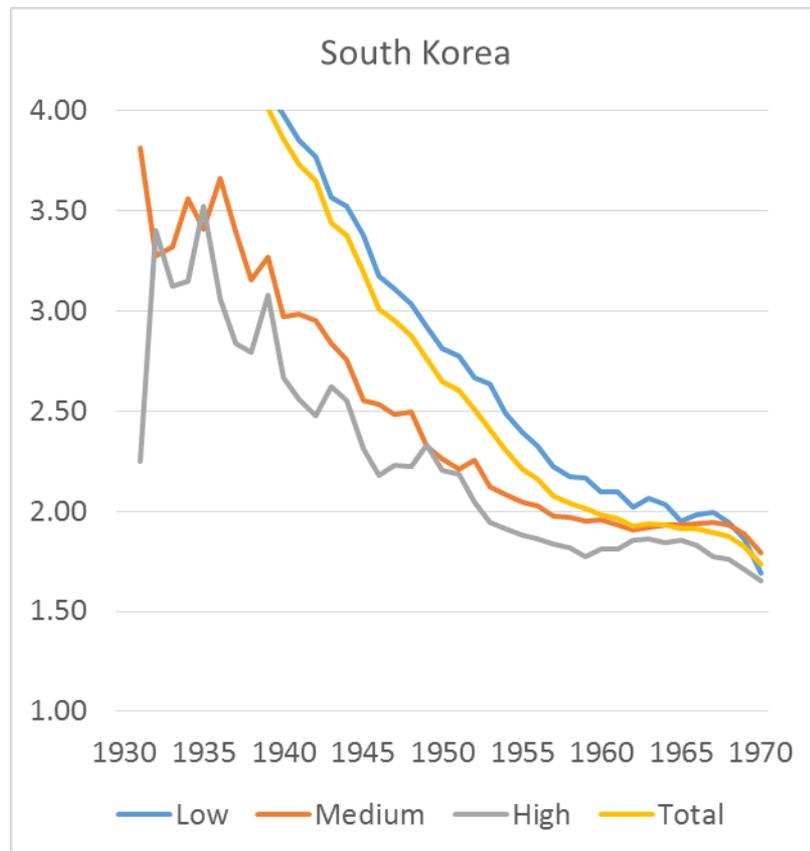
Diversity in post-transitional gradients

- No consistent trend in relative fertility differences at low fertility levels
- Convergence, increasing polarization or stable pattern can be seen in different countries with different fertility levels
- Persistence of long-term patterns

Convergence

Korea: Convergence – decline to low levels

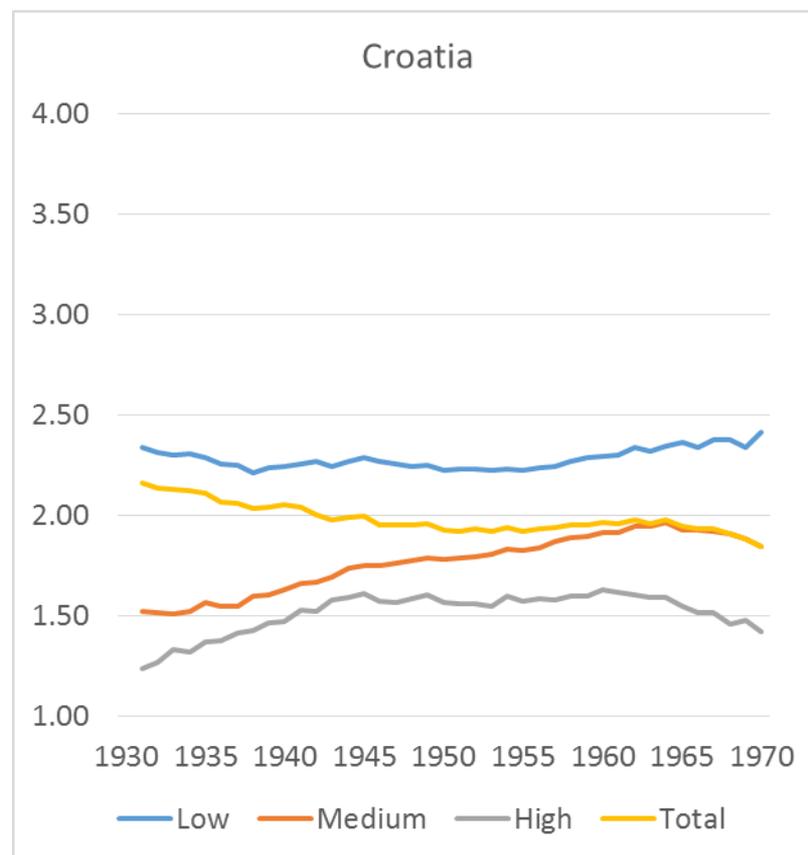
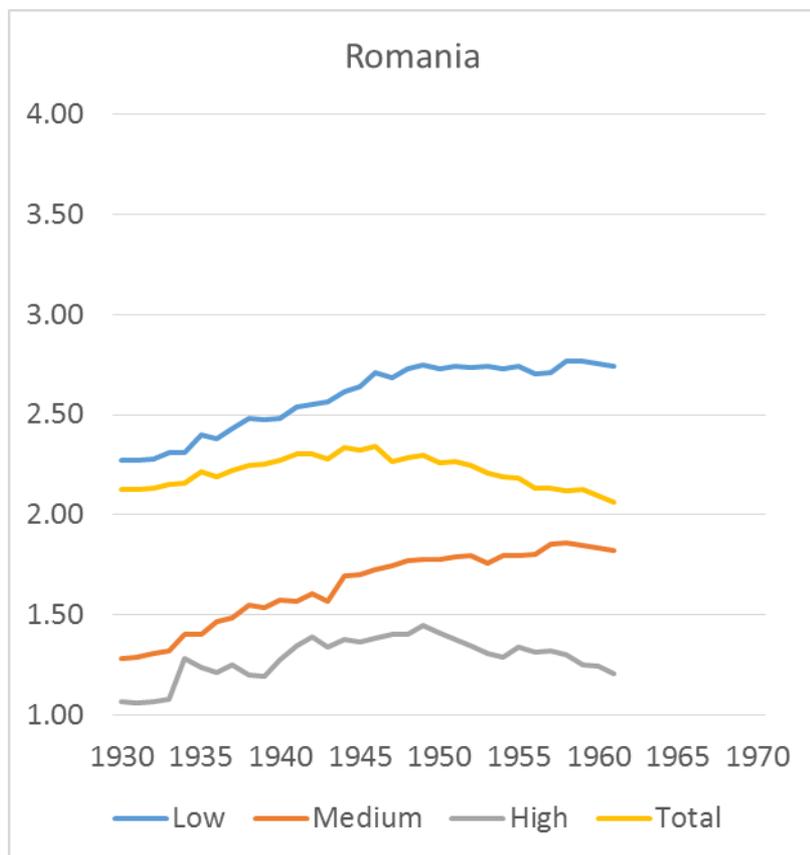
Belgium: Convergence – stabilization at higher levels



Increasing polarization

Romania: Prominent low-educated Roma minority + 'reproduction policies'

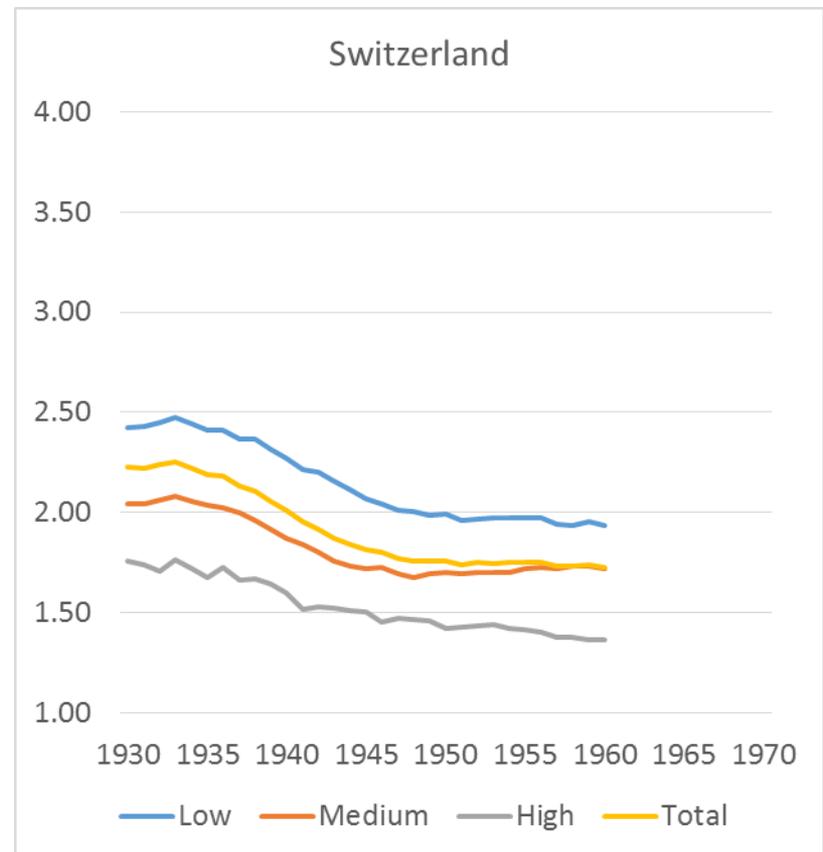
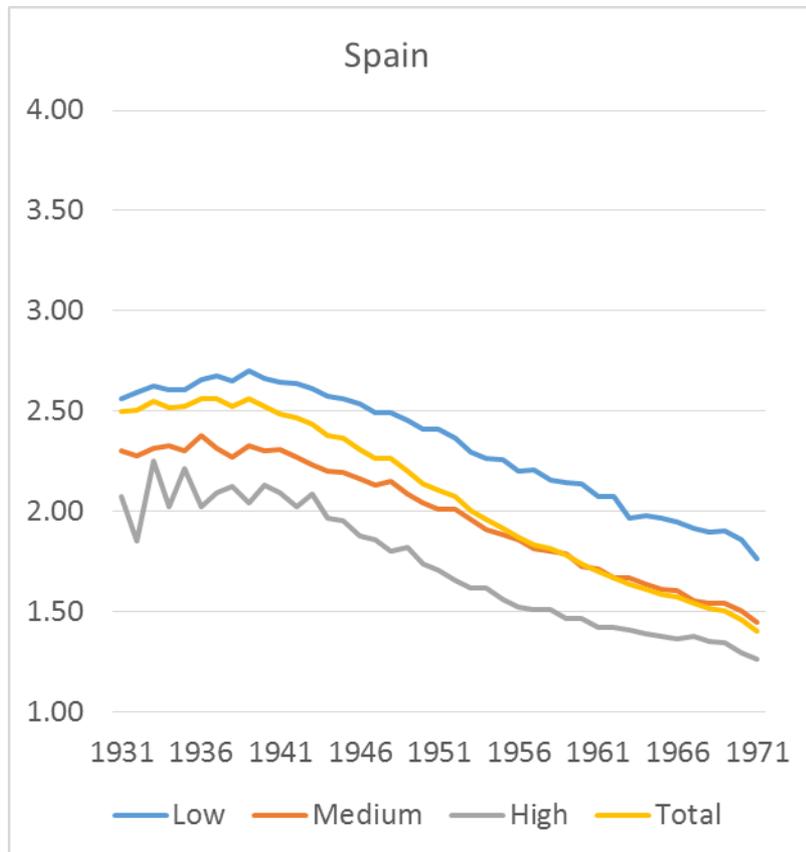
Strong polarization also emerging in Latin America (Brazil, Chile, Uruguay)



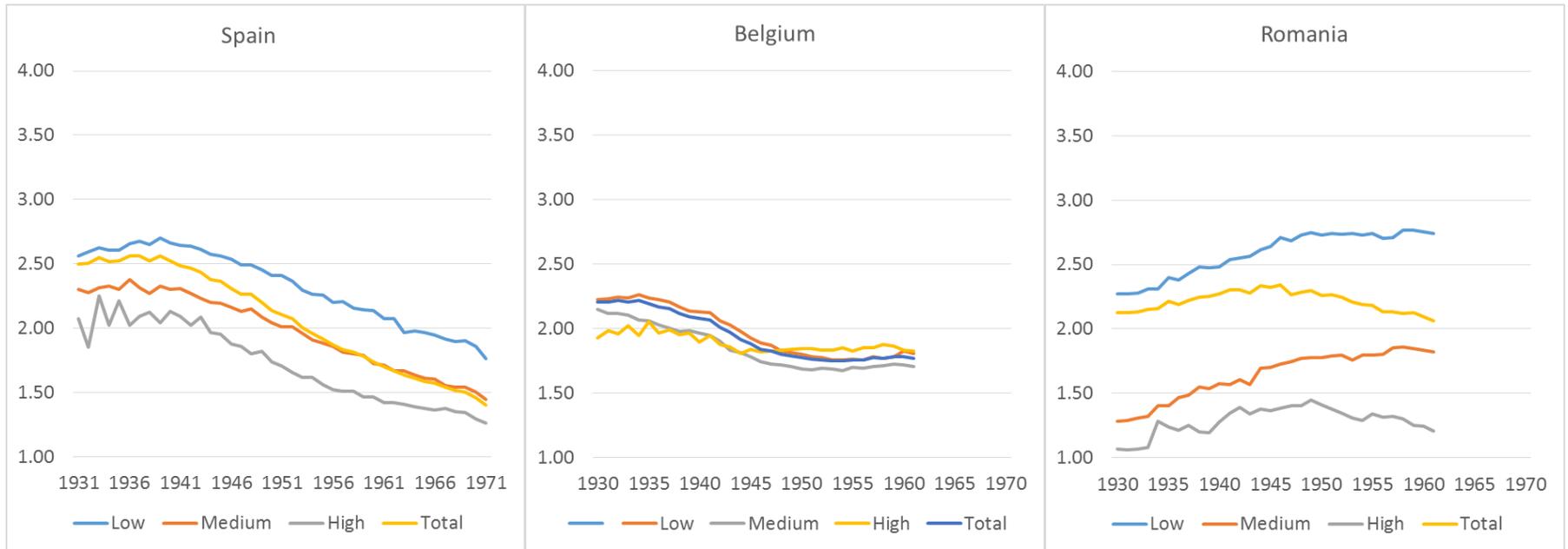
Stable differences

Spain: Stable differences, declining fertility

Switzerland: Stable differences, stable fertility



No European-wide common trend



Seemingly similar overall cohort fertility levels & trends can be fueled by diverse education differentials & trajectories



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Conclusions & future plans

Conclusions

- No clear convergence in fertility by education
- Contrasting trends between countries, wide differences often persist
- In most countries, a clear negative gradient persists – despite massive changes in educational composition & “meaning” of low / high education
- U-shaped pattern & reversals in education gradients uncommon
- No obvious association with the trend towards gender egalitarianism
- Convergence can occur both at higher (Sweden, Belgium) and Low (Korea) levels
- Cross-country convergence unlikely in the near future → strong path dependency / continuity within countries

Future plans

- Adding more countries including Nordic countries, USA, Japan, Latin America & the Balkan countries; adding more recent data
- Aiming for a more systematic analysis of education gradients
- Studying the role of childlessness
- Trying to “explain” the observed patterns and trends //

labour market, inequality, education systems, family policies, ethnic minorities, migrant populations, and gender egalitarianism

CFE database

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Analysing completed cohort fertility and parity distribution by level of education in low-fertility countries

- 15 countries, 43 censuses and surveys; more to be added soon!
- Birth cohorts from around 1900 to the 1971
- Censuses and surveys from 1966 to 2011
- Open access
- Standardised education categories (EDU-3 and EDU-4, ISCED)
- User-friendly interface
 - Dynamic tables
 - Interactive graphs
 - Downloadable csv-files
 - Data documentation

www.cfe-database.org

CFE database

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Home >> Database >> Database

DATABASE

Please select country and survey.

Dataset: Country: Data source: Documentation Get dataset as CSV

Data aggregation: Indicators: Filters:

Get filtered table as CSV Charts

COHORT ▲ **EDU** SEX ORIGIN WOMEN_TOTAL CHILDREN_TOTAL CFR CFR1 CFR2 CFR3P SHARE0 SHARE1 SHARE2 SHARE3P PPR01 PPR12

1933	ISCED0-2A	F	Total	169000	398440	2.358	0.899	0.698	0.760	0.101	0.201	0.314	0.385	0.899	0.7
1933	ISCED3C-4A	F	Total	124000	242000	1.952	0.863	0.629	0.460	0.137	0.234	0.339	0.290	0.863	0.7
1933	ISCED5B-6	F	Total	23000	38780	1.686	0.783	0.565	0.338	0.217	0.217	0.304	0.261	0.783	0.7
1933	Total	F	Total	316000	679220	2.149	0.877	0.661	0.611	0.123	0.215	0.323	0.339	0.877	0.7
1936	ISCED0-2A	F	Total	203000	481130	2.370	0.911	0.719	0.740	0.089	0.192	0.320	0.399	0.911	0.7
1936	ISCED3C-4A	F	Total	212000	398640	1.880	0.877	0.618	0.385	0.123	0.259	0.368	0.250	0.877	0.7
1936	ISCED5B-6	F	Total	36000	58500	1.625	0.778	0.528	0.319	0.222	0.250	0.306	0.222	0.778	0.4
1936	Total	F	Total	451000	938270	2.080	0.885	0.656	0.539	0.115	0.228	0.341	0.315	0.885	0.7

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THANK YOU

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www.eurrep.org

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