HCSO INSTITUTE FOR QUANTITATIVE POPULATION AND ECONOMIC RESEARCH

HUNGARIAN DEMOGRAPHIC RESEARCH INSTITUTE

Between two worlds: cohort fertility change in Hungary

Laura Szabó – Zsuzsanna Makay, HCSO Institute for Quantitative Population and Economic Research, Hungarian Demographic Research Institute

Contact: szabo@demografia.hu; makay@demografia.hu

Motivation & Question

The collapse of state socialism in Hungary profoundly transformed societal structures, including patterns of fertility and education.

This study examines whether changes in the completed cohort fertility rate (CFR) among Hungarian women born between 1920 and 1982 resulted from shifts in educational composition or from changes in fertility within educational groups.

Data & Methodology

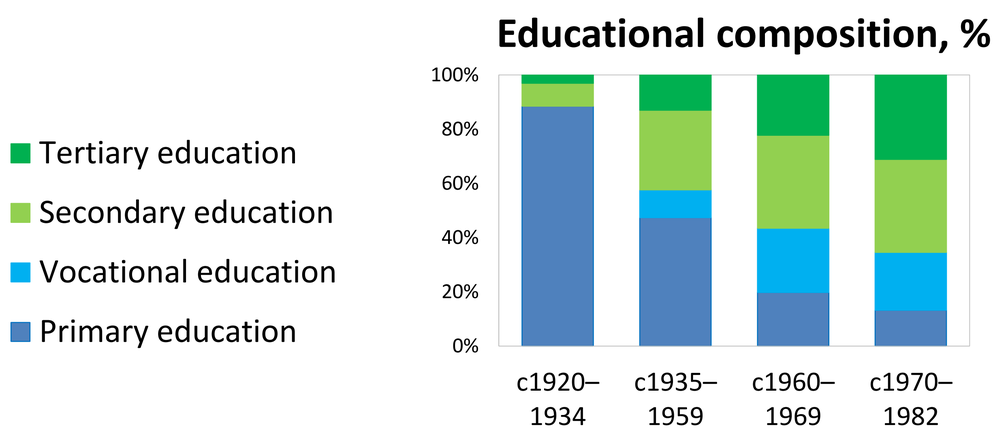
Using Kitagawa's decomposition method, we split changes in CFR into structural and rate effects using data from six full censuses (1970–2022).

Birth cohorts are grouped according to when most births occurred (based on quartiles of the age-specific birth distribution): before the regime change (1935–1959 cohorts), during the transition (1960–1969 cohorts), and after the transition (1970–1982 cohorts) using data from HFD*.

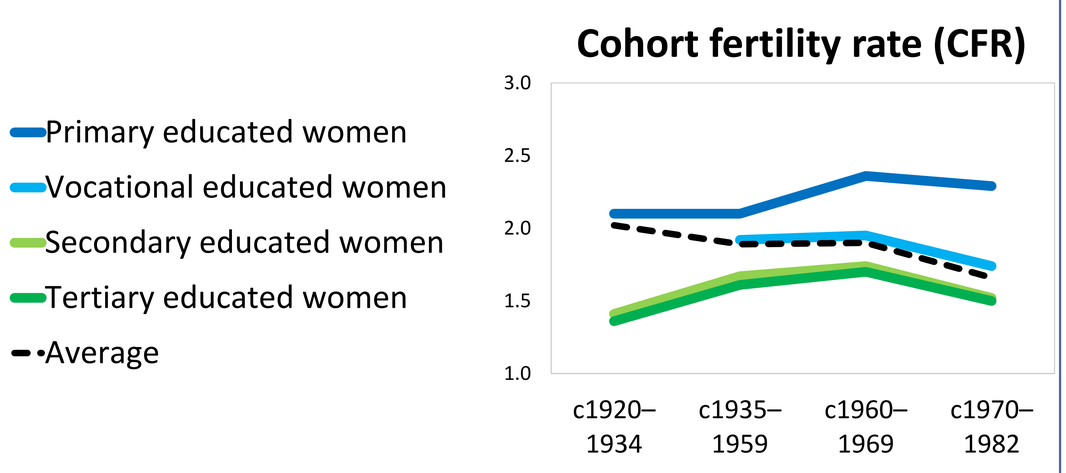
Research question: what drives changes in fertility across birth cohorts in Hungary?

Background

Educational composition and CFR for selected birth cohorts among women aged 40–70 (cohorts born 1920–1982)*



Educational expansion was most pronounced across cohorts born before 1960, followed by continued but more gradual shifts toward higher levels of educational attainment in later cohorts.



Completed cohort fertility declined across birth cohorts, remaining consistently higher among women with primary education and lower among women with tertiary education, with larger educational differences in the youngest cohort.

Summary

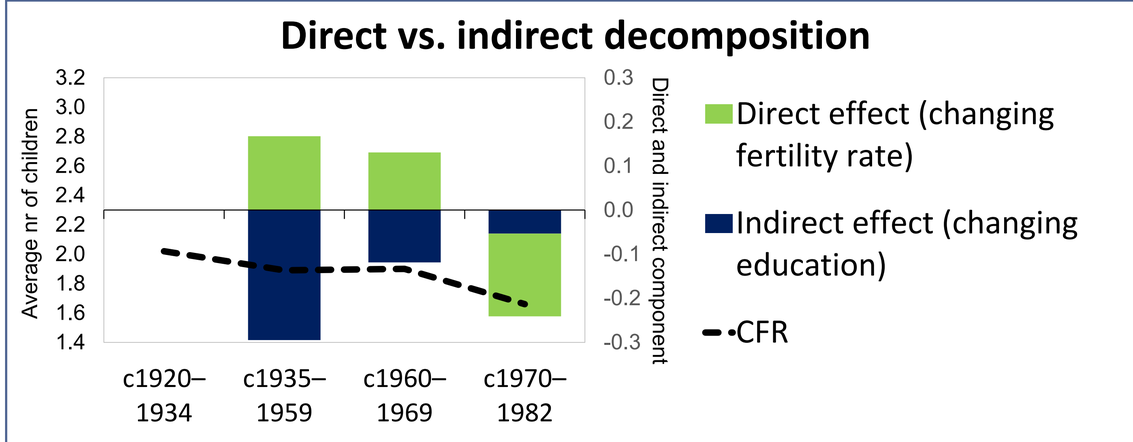
Educational expansion reshaped women's educational composition and widened fertility differences across cohorts.

Structural effects were stronger in earlier cohorts, whereas fertility-rate effects became more important in younger cohorts.

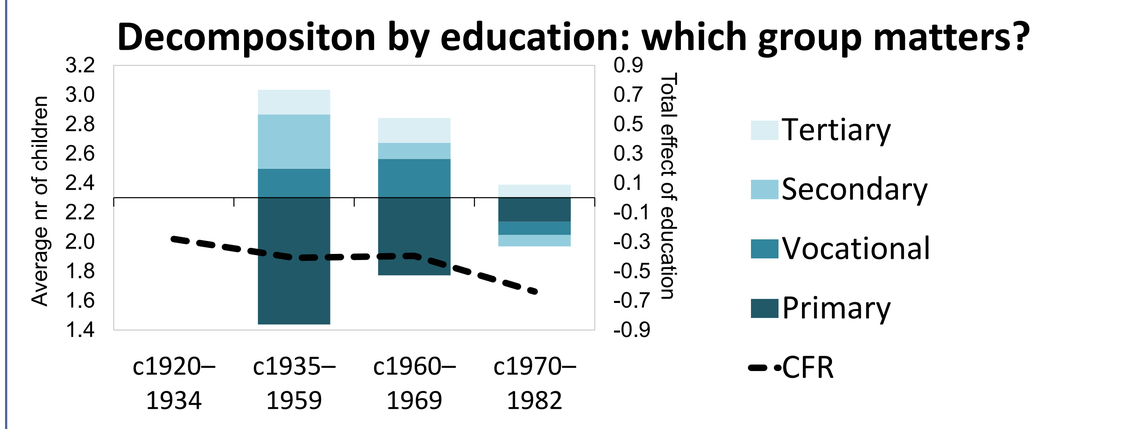
Fertility decline was driven mainly by changes among women with primary education and increasingly linked to rising childlessness.

Results

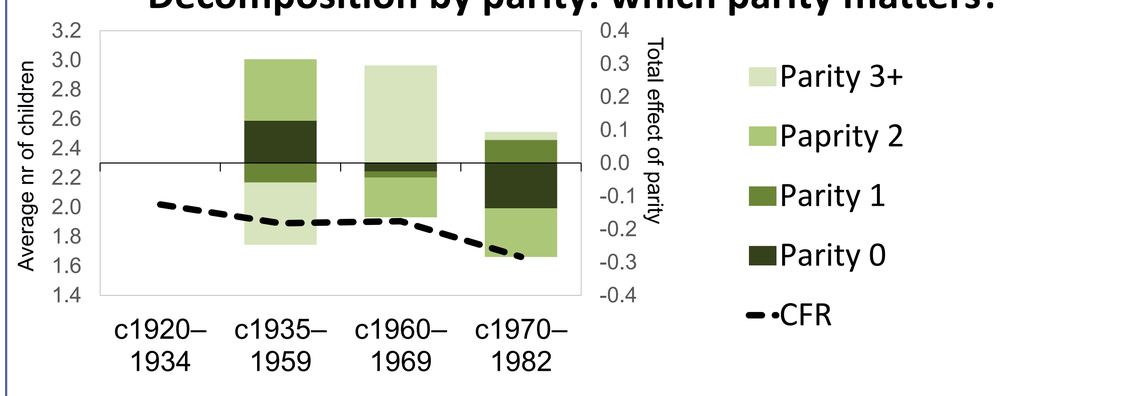
CFR change and its decomposition for selected birth cohorts among women aged 40–70 (cohorts born 1920–1982)*



Structural effects are larger in earlier cohorts, while rate effects play a greater role in the youngest cohort.



Changes among women with primary education contribute most to CFR change, largely driven by the declining share of high-fertility women in this group.



In earlier cohorts, fertility decline was driven more by reductions in higher-order births, while rising childlessness played a larger role in the youngest cohort.

Conclusions

Fertility decline shifted from being driven mainly by changes in women's educational composition to changes in fertility rates and childbearing patterns across cohorts.

Note: Own calculations based on full individual-level data from the Hungarian national censuses of 1970, 1980, 1990, 2001, 2011, and 2022, and on data from the Human Fertility Database (www.humanfertility.org; accessed 04 June 2025).