

# Will one replace two? Trends in parity distribution across education in Europe

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## Extended abstract

### Motivation and objective

The relationship between education and the transition to first, second and third child has been thoroughly explored in the low-fertility context in numerous micro-level studies (e.g., Kravdal and Rindfuss 2008, Kreyenfeld 2002, Gerster et al. 2007, Shang and Weinberg 2013). However, a long-term overview showing how education-specific parity distributions and progression ratios actually developed under different socioeconomic circumstances is still lacking. Consequently, we do not know what the observed general trends consist of: whether they comprise common developments across the board or whether they result from movements in opposite directions. The importance of such knowledge for understanding fertility changes has been demonstrated by van Bavel et al. (2015). They found that the post-war Baby Boom appeared only in countries, where educational differences in parity distribution weakened and where the increases in transition rates to first and second births surpassed the declines in transition rates to third and further births.

Van Bavel et al.'s analysis covers women born between 1900 and 1940. For younger cohorts the education- and parity-specific trends in fertility have not been studied yet. General studies show that the two-child family model maintained its dominance, though it started to fade in the 1960s cohorts (Frejka 2008). Childlessness tended to rise (in Northern, Southern and Western Europe) or stabilise (Belgium, France and countries behind the Iron Curtain) (Beaujouan et al. 2015), the share of women with exactly one child was increasing steeply in Central-Eastern and Southern Europe, while it bounced up and down in the North and West; the proportion of families with three and more offspring was shrinking (Frejka 2008). However, the existing contributions, although indispensable, do not capture the complexity of the fertility change. Neither do they analyse how the educational differences in fertility changed in times of life course plurality and family form diversity that have been brought by the ideational changes in the 1970s (Western Europe) and 1990s (post-socialist countries).

Our goal is to analyse long-term trends in variation in parity distribution and progression ratios by birth cohort and education in 16 European countries. In particular, we will explore how the dominance of two-child families has been changing in Western and Eastern Europe and across educational strata after the post-war Baby Boom. We will give an overview of trends in parity distribution and then study the interlinks between changes in the share of two-child families and childlessness, share of women with one child, transition rates from first to second child and from second to third child, share of large families (with three or more children).

As half of the countries in our study lie on the eastern side of the former Iron Curtain, it is particularly valuable that we will analyse the entire period of state-socialism, the turbulent transition years of the 1990s and the stability of the 2000s. Thus, we will give a comprehensive picture of changes in the educational differentiation of fertility patterns between the beginning of the Baby Boom and around 2010 on the divided and then re-unified European continent.

## Data

We use census and large-scale survey data coming mainly from the CFE database (Zeman et al. 2014). In most cases they cover women born between 1916 and 1970. We are planning to update the data for most of the countries, for which data on the 1961-70 birth cohorts are missing now (Belgium, Hungary, Slovenia, Romania). The education categories correspond to the following ISCED 97 classes (in brackets): low (0-2), medium (3-4) and high (5-6).

## Results

### Trends in parity distribution

In short, among women born between 1916 and 1970 childlessness rates followed U-shape trajectories, with Eastern countries experiencing a longer-lasting bottom plateau stage. Also, trends in the share of women with one child seem to have differed between the two sides of the Iron Curtain: in the West, the proportion tended to decline in the early and middle Baby Boom cohorts and then started increasing, while in the East it first usually rose, decreased in the 1940s cohorts, and then rebounded among those born in the late 1950s and in the 1960s. The trends in the share of two-child families and families with three or more children displayed little variation across countries: the former kept increasing and started falling in

the youngest cohorts, and the latter declined steadily (showing reversals among the youngest cohorts in some countries).

#### Two-child families: a retreat led by the university graduates?

While the trends in the share of women with two children developed very similarly across countries and educational strata (peaking around the 1946-50 birth cohort, i.e., about ten years after the baby boom had come to an end), the two-child family model gained particular popularity among secondary school and university diploma holders in the East (Figure 1). Their figures reached between 40% and 60%, thus exceeding those seen for their Western counterparts by good 10-15 percentage points. The values for the low educated were lower and showed no clear-cut division between in the East and West. Thus, in the West, the two-child family model was equally spread across the board, while in the East it showed a negative educational gradient.

In the older birth cohorts, the trends in the share of two-child families usually varied little by level of education. In the 1940s cohorts, however, the direction of the changes started to diverge. In the East the figures among the low educated levelled off or started declining, preceding similar changes in other educational strata by good ten years. In contrast, in three Western countries (Austria, Italy and Switzerland) the prevalence of the two-child family started losing ground earliest among the university graduates. We hypothesise that in these three notoriously gender-unequal countries highly educated women were the first who, in view of the lacking possibilities of combining full-time professional career with family, challenged the two-child norm and more often stopped fertility at parity one or remained childless.

To examine our supposition, we analyse the education-specific trends in the transition rates from first to second child, in childlessness and in the share of women with one child in the East and West. As for the lower and/or declining prevalence of the two-child family model among the low educated in the East, we believe that it was driven by the higher and/or rising progression rates to higher parity births. Consequently, we investigate the trends in the education-specific transition rates from second to third birth and the share of women with three or more children.

The results support our hypotheses. Since the late 1940 and the 1950s cohorts, in Austria, Italy and Switzerland the transitions rates to second child have indeed been lower among

the university graduates than in other educational groups. In general, however, the Western countries exhibited weaker educational differences in the transitions rates to second child than the Eastern ones, where a clearly negatively educational gradient prevailed. As if compensating for the strong pressure on being a parent, women with a university degree in the East stopped at the minimal number of children, i.e. one, more often than their counterparts in the West. In contrast, the transition rates from second to third birth had a positive educational gradient on both sides of the Iron Curtain. However, as hypothesised, since the 1950s cohorts the figures have developed differently for the low and better educated in the East: among the former they were stable or increased, while for the latter they declined or levelled off.

### Cited literature

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