Estimating male fertility in eastern and western Germany since 1991

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Not even one child per man, but only 0.74: that was the birthrate in 1994 in eastern Germany - a new world record low. Credit: wronge57/photocase.de

Research on men's birthrates have so far been rather a blind spot. Max Planck researchers have now calculated the missing age data for men using statistical methods. Their figures show that men on average have less children than women and have them later in life. Differences are especially strong in eastern Germany, where men set a new world record for low fertility.

Scientists at the Max Planck Institute for Demographic Research (MPIDR) in Rostock, Germany have calculated birthrates for men in Germany for the first time. They found that in each year since 1991 the average number of children per man was lower than that per woman. In 2013 (latest available data) the birthrate was 1.35 for males and 1.42 for females. For 1994 they obtained a new world record low – the birthrate in eastern Germany was only 0.74 children per man. Until now, the 1994 female birthrate in eastern Germany had been thought to be the lowest value ever recorded around the globe.

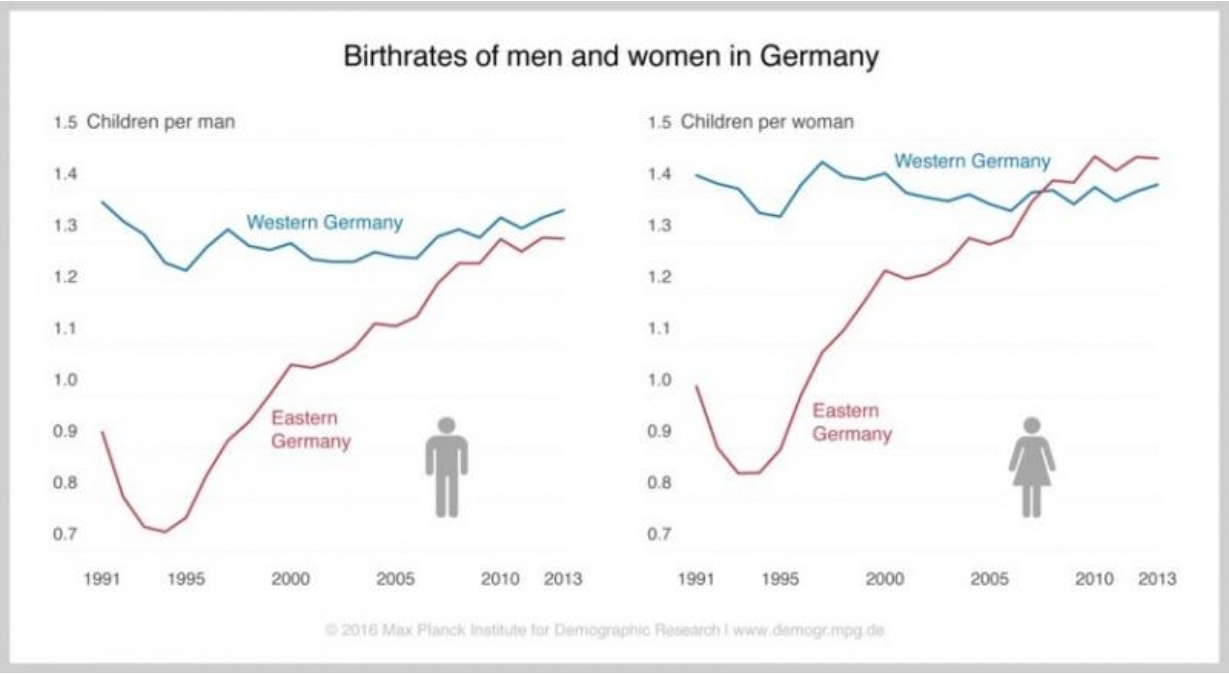
As in most other countries, birthrates for German men had not been available. They could not be calculated because the necessary data on the age of many fathers is missing in official statistics. While the age of the mother at the birth of a child is always recorded, fathers are only required to provide this information if they are married to the mother. For non-marital births the fathers are not obligated to give their age.

MPIDR researchers Christian Dudel and Sebastian Klüsener have now calculated the missing age data for men using statistical methods and have published their work in the journal "Demographic Research." Their technique could also be applied to male fertility data from other countries that have a similar problem.

Men and fatherhood – blind spot of fertility research

"Many questions concerning parenthood and family have only been

discussed with respect to women," says MPIDR researcher Christian Dudel. This was due to a lack of data on male behavior. "Research on men's behavior and fertility has so far virtually been a blind spot," says Dudel. With the new MPIDR method it will now be easier to investigate the topic from a male perspective.



Men are dropping behind: Since 1991 the mean number of children per man in Germany has permanently lagged behind that of women by between 5 and 10 percent. The difference is especially large in eastern Germany. Since the big dip after German reunification in 1990, the birthrate of eastern German women has already overtaken that of women in western Germany, but male fertility in the east is still below that in the west. Credit: German Federal Statistical Office/MPIDR calculations/Max Planck Institute f. Demographic Research

Surplus of men in eastern Germany reduces birthrate

One main reason that the male birthrate is lower than that of females is a surplus of men in the so-called "reproductive age" during which men and women usually have children. The birthrate is calculated by dividing the number of babies born by the number of men or women at reproductive age – including those who remain childless. Thus, the same total number of children gets divided up among more men than women in the age group, and the birthrate is therefore smaller for men than for women.

The surplus of men has the greatest effect in eastern Germany. There, the mean number of children per man is lagging behind that per woman by more than ten percent (values for 2013: women 1.46, men 1.31). In western Germany the difference is about four percent (values for 2013: women 1.41, men 1.36). While the gap in western Germany was similar to that in many other developed countries, the differences in eastern Germany were extraordinary, says MPIDR demographer Dudel. "Up until now the comparatively low birthrate of eastern German men was largely unknown".

There was a surplus of men at reproductive age in eastern Germany because in the 1990s and 2000s many young people migrated from the area of the former German Democratic Republic to the Old German Federal States in the years following German reunification. However, more women than men moved to the west, leaving a surplus of men behind in the east.

Consequently, during the second half of the 1990s the eastern German birthrate of men fell short of that of women by up to 15 percent. This gap is getting smaller every year, but it remains big enough to account for a distinctive difference between fertility in the east and in the west. After the big dip following German reunification, the birthrate of eastern German women has since reached and surpassed that of western German women, although male fertility in the East is still below that in the West (see graphics).

Low fertility of men could become a problem in the long run, because it means there are fewer children who can support their fathers when they are old and in need of care. Similarly, in cases where the state steps in to provide assistance, there are fewer children who could be held liable for the cost.

The clock is also ticking for men

In both parts of Germany men on average are about three years older than women when their children are born (see table). Men are rarely as old as the legendary Charlie Chaplin, who became a father for the eleventh time in his early seventies. On the contrary, the clock is also ticking for men. The MPIDR calculations show that only six percent of men have children after age 45 (for women that number is 0.2 percent).

More information: Christian Dudel et al. Estimating male fertility in eastern and western Germany since 1991: A new lowest low?, *Demographic Research* (2016). DOI: 10.4054/DemRes.2016.35.53

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