

## Has There Been a Recovery in the US Fertility Rate?

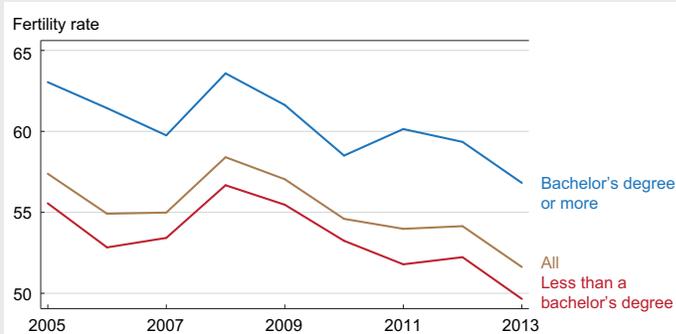
Stephan Whitaker and Daniel Kolliner

The number of births per 1,000 women of childbearing age (15 to 50) within a year is a standard demographic measure known as the general fertility rate. Over the last 35 years, America's fertility rate has reflected, to some extent, the business cycle. Fertility rates have declined during recessions and increased in the later years of expansions.

However, a significant rise in fertility has not yet happened in the current expansion. After rising from 55 births per 1,000 women to 58 between 2006 and 2008, the fertility rate has been falling since, according to estimates based on the American Community Survey (ACS). Despite several years of economic expansion, the most recent ACS data indicates that the rate has fallen to 52 (as of 2013). The decline has been widespread across demographic groups and metro areas. In this analysis, we look at some of these fertility trends.

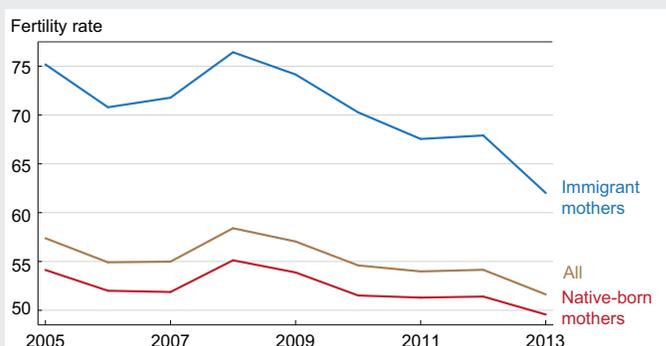
Intuitively, we could attribute a decreased demand for children to couples' uncertainty about their economic situation in the future. We might expect adults with higher levels of education to have maintained higher fertility because they experienced a milder recession and stronger recovery in terms of employment and earnings. However, there has been a decline in the fertility of college-educated women that mirrors the decline for women without a college degree. Between

### Fertility Rates by Mother's Education



Sources: American Community Survey and authors' calculations.

### Fertility Rates of Immigrant and Native-Born Mothers



Sources: American Community Survey and authors' calculations.

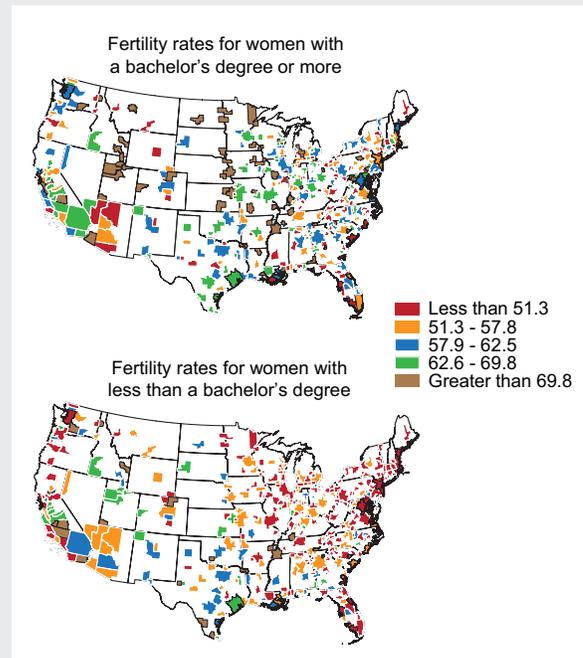
2008 and 2013, the fertility rate of women with college degrees declined from 64 to 57 and the fertility rate of women without college degrees declined from 57 to 50. Women who never earn a college degree average more children over their lifetime compared to women who complete college. However, female college students must be counted with the non-degreed women, and this greatly decreases the calculated fertility rate for non-degreed women within any year.

For a population to replace itself, rather than decline, its general fertility rate must exceed approximately 60 children per 1,000 women per year. The fertility of native-born American women has been below the replacement level since the 1970s. Population growth in the US has continued in part because of immigration and relatively high rates of fertility among immigrants. But the fertility of immigrants also declined steeply following the recession, from 76 in 2008 to 62 in 2013. The gap between the fertility rates for foreign-born and native-born women has narrowed over this time, from 21 to 12.

As with most measures of demographics and economic activity, there is substantial geographic variation in fertility rates. In the maps below, regional fertility rates are averaged from 2009 to 2013. For college-educated women, the fertility rate is in the 51 to 58 range for the large East Coast metros of Boston and New York. West of the Appalachians, we find more metro areas with degreed women having fertility rates above 62. In Los Angeles and the Bay Area the fertility rate of women with at least a bachelor's degree is lower, in the 51 to 58 range. For women without degrees, higher fertility is observed in the Great Plains region, Texas, Utah, Idaho, and inland California.

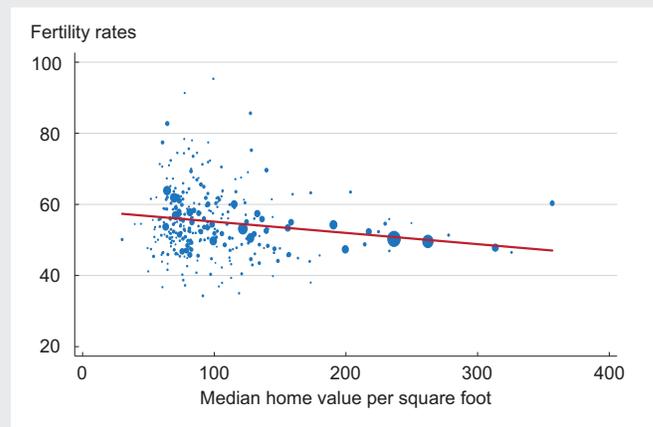
One popular explanation for lower fertility in coastal metro areas is that people in high-cost housing markets limit their family size because they cannot afford homes with additional bedrooms and square footage. The same informal theory suggests families with a higher demand for children migrate to places such as Texas and Georgia, where unconstrained construction makes larger homes less expensive. The chart below shows that the correlation between housing costs and fertility is in fact negative, which supports such an interpretation. The correlation is driven by a contrast between the majority of metro areas where costs per square foot are below \$100, and a few large metro areas with median prices per square foot of \$150 to \$350.

## Regional Fertility Rates, 2009-2013



Sources: American Community Survey and authors' calculations.

## Fertility Rates and Median Home Values in Metro Areas



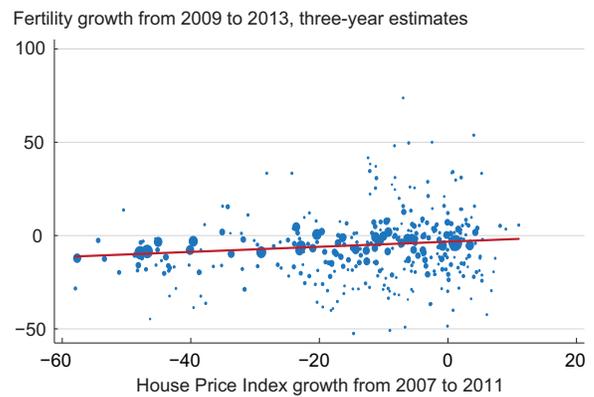
Sources: American Community Survey, Zillow/Haver Analytics, and authors' calculations.

Is this relationship strong enough to suggest that metro areas that saw larger housing price declines saw increased fertility? The answer appears to be no, as illustrated in the two charts below. Metro areas on the left of the first chart had the steepest house price declines from peak to trough. Couples in these regions did not respond by moving into newly-discounted homes and increasing their fertility. Regions with steep house price declines also had large economic contractions and losses of employment.

Meanwhile, there is a mild positive relationship between employment growth and changes in fertility. Assuming families defer having children during times of hardship and uncertainty, the economic challenges related to weak labor demand appear to have overwhelmed the advantage of more affordable housing.

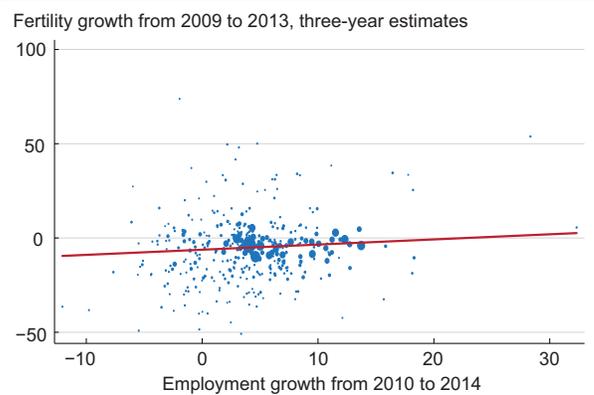
The declines in fertility rates since 2008 have been remarkable in their extent and persistence. We have observed declines for women notwithstanding their education, their national origin, or local house price trends. Even regions with above-average employment growth experienced fertility declines in most cases. This analysis of ACS data through 2013 reveals no trend that could be called a recovery. We should note, however, that there is a second source of data on births in the National Vital Statistics System (NVSS). The NVSS releases a preliminary aggregate count of births sooner than the ACS, and for 2014, it indicated a 0.64 percent year-over-year increase in the fertility rate (for women 15 to 44). Although the fertility rate would need a further 11 percent increase to return to pre-recession levels, it may be beginning to rise from its recent low.

### Fertility Rate and Housing Price Growth in Metro Areas



Sources: American Community Survey, Federal Housing Finance Agency/Haver Analytics, and authors' calculations.

### Fertility Rate and Employment Growth in Metro Areas



Sources: American Community Survey, Bureau of Labor Statistics/Haver Analytics, and authors' calculations.



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