How did the Great Recession affect fertility?

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The Great Recession that officially began in December 2007 and ended in June 2009 had differing economic, social, and demographic consequences across the United States. Unemployment rates, mortgage foreclosures, and poverty rates rose while housing values fell, but the extent of these changes varied widely across local areas. For example, between 2006 and 2010, the unemployment rates in Nevada and Florida tripled, and poverty rates in those areas increased by more than 30 percent; in contrast, unemployment rates remained below 5 percent in Nebraska and North Dakota throughout the recession. Fertility rates also changed unevenly during the recession. The fertility rate declined at the national level, dropping from a recent high in 2007 of 69.5 births per 1,000 women aged 15 to 44, to 63.2 for 2012.[1] There was, however, great variation by state, age, and ethnicity, with younger and Hispanic women showing disproportionate decreases.[2] In this article, we look in detail at the effects of the recession on the likelihood of a pregnancy for four groups of women: married adults, cohabiting adults, unpartnered adults, and teenagers.

Evidence on economic conditions and reproductive behavior

How are economic conditions related to fertility? Adverse conditions may lead some individuals to delay childbearing, and others to hasten it. Alternatively, economic conditions may be irrelevant to fertility if other factors such as cultural norms are sufficiently strong.

Prior research suggests that stress may be linked to riskier sexual activity.[3] Research also suggests that financial hardship and poverty can negatively affect cognitive function, and shorten the time horizons over which individuals make cost-benefit determinations.[4] During a recession, stress from events such as losing a job or facing a mortgage foreclosure could impair an individual's ability to make reasoned decisions, or decisions based on a long-term horizon. Because approximately 85 percent of sexually active women of childbearing age will become pregnant within a year in the absence of measures to prevent pregnancy, those who do not want to become pregnant must actively decide to avoid pregnancy, and follow through on their decision with consistent behavior. If stress and financial hardships do impede reasoned decision-making and purposeful behavior, then we might expect higher fertility among those women who were most directly affected by the recession.

Alternatively, fertility may be unaffected by economic conditions if cultural norms related to the context and timing of births are particularly influential. For example, nonmarital births are more socially consequential for some racial and ethnic groups, and in some geographic areas.[5] For some individuals, these social norms may outweigh any economic considerations. For example, one study found that although higher levels of educational achievement for men is a strong predictor of not fathering children outside marriage, men's earnings and employment levels have little effect.[6] Other research has found that among religious groups that place a particularly high value on childbearing, these norms may alter the relationship between economic considerations and fertility, or else simply override other factors. For example, among members of the Mormon Church residing in Utah, higher income is related to having a greater number of children, while the opposite is true among non-Mormons in the state.[7]

Population subgroups and fertility

We group the female population of reproductive age in the United States into four population subgroups based on differences in sexual and reproductive behaviors and social norms: married, cohabiting, and unpartnered adult women; and teenage women.

Married women

Childbearing remains a key feature of most contemporary first marriages. Over 91 percent of ever-married women have had at least one birth, and over two-thirds of ever-married women had a first birth before marriage, or within the first four years after marriage.[8] Fertility among married women is largely planned; married women are much less likely to have a mistimed or unwanted pregnancy than unmarried women.[9] Because most married women can rely on a spouse for economic support, and because motherhood is socially normative for married women, choosing parenthood over career may be a particularly viable option for married women who experience recession-related setbacks such as unemployment or stagnant wages. Thus, we would expect married women's fertility to either be unaffected or increase (because of lower opportunity costs or increased salience of the parenting role) during poor economic conditions.

Cohabiting women

Sexual and reproductive behavior in cohabiting unions is harder to generalize as people cohabit for a variety of rea-

sons, including as an alternative to being single, as a trial marriage, as a precursor to marriage, and as an alternative to marriage.[10] Recent estimates suggest that 74 percent of women have cohabited before age 30, and that nearly 60 percent of new marriages are preceded by cohabitation.[11] Still, because many cohabitations are short-lived, any cross-section of cohabiters will overrepresent long-term cohabiters, who tend to be less educated and are more likely to be Hispanic. While cohabiting and married women have been found to have similar birth control practices, rates of unintended pregnancy are still two to three times higher for cohabiting women.[12] Since cohabiting women tend to have relatively low average incomes and savings, we expect that poor economic conditions will reduce fertility, but that this effect may be somewhat weak given the high rate of unplanned pregnancy among this population.

Unpartnered adult women

Although the proportion of nonmarital births which are to cohabiting women has been growing, about half of births to unmarried women are to those not living with the child's father.[13] Poverty rates are higher for unpartnered women than for those who are married or cohabiting; if women are making calculations about childbearing based on whether they can afford to support a child, we would expect that unpartnered women would have fewer pregnancies and births during poor economic conditions. However, this group may be more susceptible to stress related to financial hardship, first because they are making decisions as individuals rather than as part of a couple, and second, because they are more likely to be using a non-permanent contraceptive method, and thus must make repeated, consistent decisions in order to avoid a pregnancy.[14] It is also possible that if many men in a particular geographic area are unemployed, then the opportunity costs of a nonmarital birth would be reduced as a result of restricted marriage prospects, so pregnancy and birth rates could increase for unpartnered women.

Teenage women

The context of teen childbearing in the United States is considerably different than that for adult women. Four out of five teenage pregnancies are unintended.[15] The unplanned nature of teen fertility suggests that teenagers may be particularly unlikely to be making reasoned decisions about the ideal timing of childbearing, and thus may be less likely to intentionally change their behavior in response to adverse economic conditions. Teenagers may also be less aware of changes in economic conditions than adult women, unless their own families are directly affected. Despite indications that some teenagers do not make calculated decisions about fertility, there are still reasons to think that a recession might be associated with reduced fertility among that group.

Overall, we expect that economic conditions will most strongly affect the behavior of those groups that engage in the most intentional fertility-related choices. Thus, we expect that married and cohabiting women will be most responsive to the recession.

Prior studies of economic conditions and fertility

Recent studies of the recession's effects on fertility have found a decline in fertility rates at state and national levels, with the degree and direction of change varying by state, age, race and ethnicity, and birth order. For example, Sutton and colleagues found that births between 2007 and 2009 declined by 4 percent among all women ages 15 to 44, with women over age 40 showing an increase in fertility, and all other age groups showing a decline, with the largest declines among women ages 20 to 24.[16] Across racial and ethnic groups, Hispanic women had the steepest decline in fertility rates. Third and later births were more strongly affected than first or second births.

Fertility among teenagers has fallen 25 percent since 2007, an acceleration of the steep decline in teen birth rates that began in 1991, with a brief plateau between 2005 and 2007.[17] The steepest declines have been among those under age 17, and black teenagers.[18] Although an improvement in the economy was at first linked to the decline in teen pregnancy rates during the 1990s, teen fertility rates continued to drop even when economic conditions fluctuated.

Although these new studies of the recession and fertility provide a general picture of fertility decline during the Great Recession, studies based on birth certificate data have considerable limitations. First, these data do not allow identification of women who have cohabiting partners, thus it is not possible to address questions of whether and how the recession affected women differently by partnership context. Second, these data provide no information on what factors, such as increased use of birth control or a decrease in transitions into marriage, may have changed to cause the fall in fertility.

Findings

With National Survey of Family Growth data from 2006 through 2010, we investigate how pregnancy rates changed during the recession. We consider three questions: (1) What is the association between local economic conditions—specifically, unemployment, poverty, mortgage foreclosures, or housing values—and the likelihood that an individual woman becomes pregnant? (2) Did the likelihood of becoming pregnant decline equally across all groups of women in hard-hit communities? If not, which population subgroups had fewer pregnancies during the recession? (3) What changes in behavior explain changes in pregnancies?

Figure 1 shows the proportion of women with a pregnancy during our one-year observation window by partnership status. Married and cohabiting adult women had similar pregnancy rates, while unpartnered adult women had a rate half that of partnered women, and teenage women had the lowest rate. Differences in pregnancy rates by level of education are shown in Figure 2; teenage women are grouped by their mother's level of education. Differences by educational

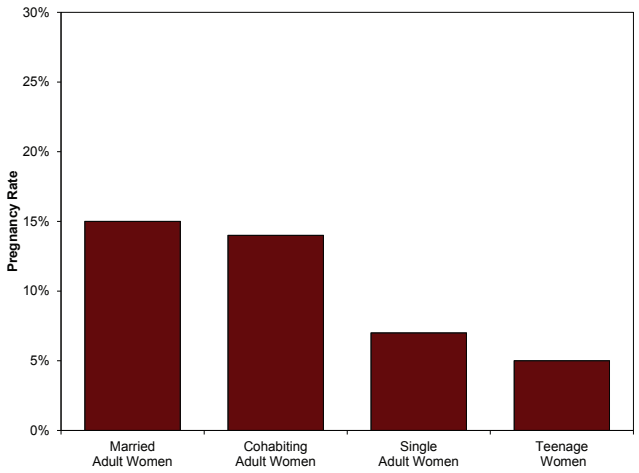

Figure 1. Likelihood of pregnancy by relationship status.

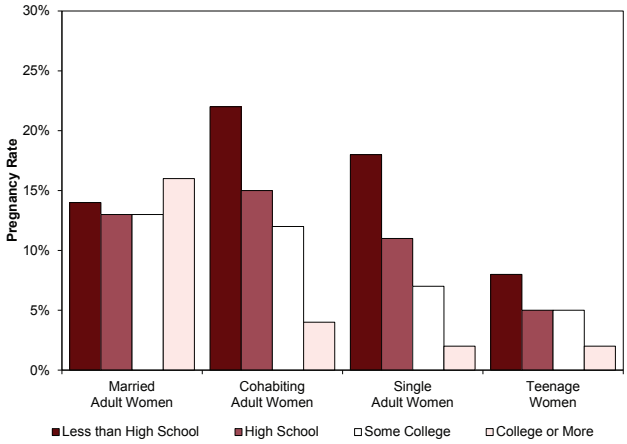

Figure 2. Likelihood of pregnancy by relationship status and level of education.

Note: Teenage women are grouped by their mother's level of education.

attainment are small for married women, moderate for teenage women, and large for cohabiting and unpartnered adult women. Figure 3 shows differences by race and ethnicity; among cohabitating women, those who are black and Hispanic have much higher pregnancy rates than those who are white and non-Hispanic.

Next, we look at how measures of economic conditions are associated with pregnancy rates among each of our four groups of women. For married women, a 50 percent increase in the local unemployment rate (for example, from 6 percent to 9 percent), is associated with a 50 percent reduction in the likelihood of pregnancy, all else equal. For cohabiting women, none of the economic measures are associated with a statistically significant difference in the likelihood of pregnancy. Among unpartnered women, a difference of 1 percentage point in the mortgage foreclosure inventory is associated with a 36 percent drop in the probability of pregnancy. (The median change in state mortgage foreclosure inventories from 2007 to 2009 was 1.4 percentage points). Finally, we find some evidence that teenage women are responsive to economic conditions; a fifty percent higher state unemployment rate (for example, from 6 percent to 9 percent) is associated with an 85 percent increase in the likelihood of pregnancy. We also find, however, that teenagers across the country had far fewer pregnancies during 2009.

Interaction effects

Looking at variations within population subgroups by race and ethnicity, and by level of education, we find evidence that the relationship of economic indicators to pregnancy for Hispanic women is unique, as shown in Figure 4. Although a state's poverty rate has no significant association with the likelihood of pregnancy for white and black women, married Hispanic women have a slightly higher probability of pregnancy in states with higher poverty rates. In contrast, unpartnered Hispanic women have a lower likelihood of pregnancy when state poverty rates are high, compared to other racial and ethnic groups. Additionally, unpartnered Hispanic women have a greater reduction in pregnancy than other racial and ethnic groups when local unemployment rates are high.

Behavioral changes associated with lower pregnancy rates

Our findings show that higher unemployment is related to a lower likelihood of pregnancy for married women, while higher state-level mortgage foreclosure inventories are associated with lower likelihoods of pregnancy among unpartnered adult women. To investigate how these lower pregnancy rates during the recession were achieved, we analyzed the relationship between economic conditions and five behavioral factors related to pregnancy. These were whether, during the observation period, the respondent (1) was sexually active (teenagers and unpartnered women only); (2) used contraceptives; (3) had a sterilizing procedure (adult women only); (4) began a cohabiting union (adult unpartnered women only); and (5) got married (cohabiting and unpartnered women only).

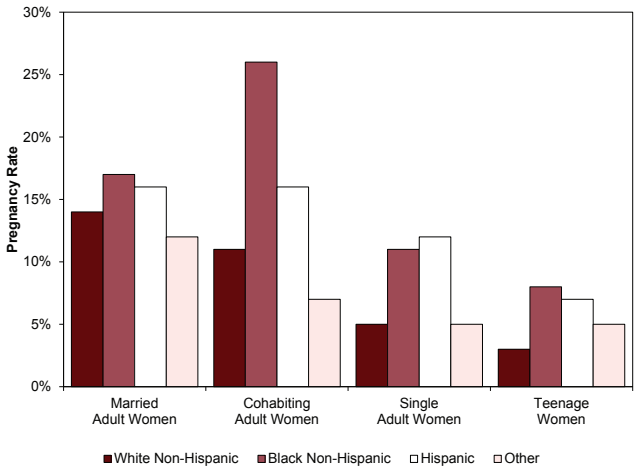

Figure 3. Likelihood of pregnancy by relationship status and race and ethnicity.

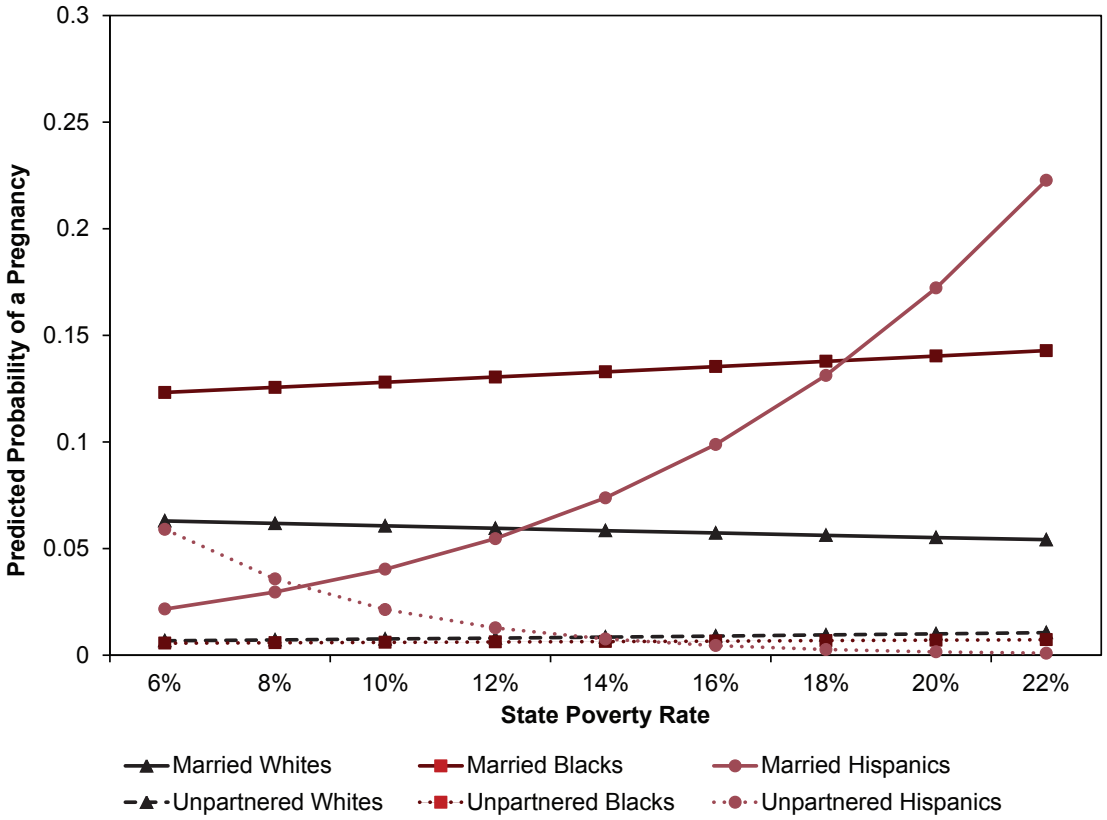

Figure 4. Likelihood of pregnancy for married and unpartnered women by poverty rate and race and ethnicity.

The results suggest that, among unpartnered women, a higher state employment-to-population ratio (which is a sign of favorable economic conditions) is associated with lower odds of being sexually active, suggesting that poor economic conditions are associated with more, not less, sexual activity. For teenagers, we find no statistically significant relationship between economic conditions and sexual activity.

The measure used to assess contraceptive use was whether a woman had used contraceptives at any point during the observation period. We find no statistically significant association between economic conditions and contraceptive use among unpartnered women, cohabiting women, or married women. For teenagers, we find weak evidence suggesting that birth control use may be higher when economic conditions are poor.

As an alternative to birth control, some women chose to have a sterilizing procedure. We find that some measures of poor economic conditions are associated with a higher likelihood of having such a procedure for both married and cohabiting women, but for unpartnered women find no significant relationship between economic conditions and sterilization.

Changes in relationship transitions may also help explain changes in pregnancy rates. Many people still hold marriage as the ideal setting for childbearing, and a decrease in the rate at which women marry could thus lower the pregnancy rate for the population. We find a complicated relationship between marriage rates and economic conditions for cohabiting women; they are more likely to marry when local unemployment rates are higher, but cohabiting women as a group had lower marriage rates during the recessionary years. We find no association between relationship transitions and economic conditions for unpartnered women.

Conclusions

The Great Recession reduced fertility in industrialized countries around the world, including the United States. Because of the recentness of the recession, the potential for lagged effects, and delays in data availability, much is still unknown about the specific ways in which fertility was affected by the recession. Using data from 2006 through 2010, we counted pregnancies during a one-year observation period. We found that although poor economic conditions are generally associated with a lower likelihood of pregnancy, the effects differed by population subgroup and the measure of economic conditions used. Unpartnered and married women showed the largest decrease in pregnancies in response to the recession. Married women had lower likelihoods of pregnancy when unemployment rates were higher, while unpartnered women were less likely to become pregnant when mortgage foreclosure inventories were higher. None of the economic conditions that we examined were related to pregnancy for cohabiting women. For teenage women, we found a lower likelihood of pregnancy during recessionary years, but

higher local unemployment was actually associated with an increase in pregnancy.

Our analysis of variation within population subgroups revealed some interesting patterns. We found that across several economic indicators, Hispanic women differed significantly from their counterparts of other racial and ethnic groups. For example, as state poverty rates rose, unmarried Hispanic women decreased their fertility, while married Hispanic women increased their fertility.

In general, our analyses suggest that women responded to income constraints and generalized uncertainty by not getting pregnant during recessionary years. We found increases in partnered women's likelihood of having a sterilization procedure and in teen's likelihood of using birth control when economic conditions were poor, which may have contributed to lower pregnancy rates. We conclude that, for adult women, there is little evidence that lower opportunity costs, increased salience of the parental role, or increased stress-induced decision-making operated to increase fertility during the recession. For teenage women, we find some evidence that likelihood of pregnancy increases when local unemployment is high, a result consistent with lower opportunity costs or stress-induced impairments to decision-making. Our study highlights the importance of considering differences among women's response to the recession by their partnership status, and not just their marital status.■

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