

Appendix A. Methodology of Demographic Analysis

Data Sets

Data regarding births are obtained from two main sources: vital statistics from the National Center for Health Statistics (NCHS) and information regarding recent births from the Current Population Survey (CPS).

Vital statistics data from the National Center for Health Statistics reflect information extracted from completed birth certificates, which include the mother's characteristics at the time of the birth. These tabulations are based upon births to all residents of the United States in a given calendar year, regardless of where the birth occurred. Since final data for 2007 and 2008 have not yet been released, the statistics for these years were obtained from published reports of preliminary data. For more information on the preliminary data, see [Births: Preliminary Data for 2007](#) and [Births: Preliminary Data for 2008](#).

The 2007 and 2008 NCHS publications show data for all Asian and Pacific Islanders but do not include details regarding non-Hispanic Asian and Pacific Islanders. As such, statistics for this population were estimated by applying the proportion of non-Hispanic Asian and Pacific Islanders from the 2006 data to the 2007 and 2008 statistics for all Asian and Pacific Islanders.

The 2007 and 2008 NCHS publications aggregate births among women ages 45 to 54 into one category. The age distribution from the 2006 NCHS data was applied to this aggregate number for 2007 and 2008 data, in order to approximate the number of births occurring at ages 45 to 49 and 50 to 54 in each year.

Data from the June supplement of the CPS includes information from female respondents ages 15 to 44 regarding their fertility history, including the timing of any births. Any woman who gave birth from the prior June through the month of May preceding the survey is included, and the mother's characteristics are based upon the information provided at the time of the survey. Whereas the NCHS data include a record for each baby born, the CPS data account for each mother giving birth. Given that approximately three percent of live births include multiples (twins, triplets, etc.), the CPS slightly undercounts the number of babies born.

All CPS analyses are based upon aggregated three-year samples. Since the June supplement is administered every other year, 1988, 1990, and 1992 data are combined in one file (referred to in the text and charts as "1990"), and 2004, 2006, and 2008 data are combined in another file (referred to in the text and charts as "2006.") . Analyses are based upon combined data sets to increase sample size, which for some subgroups is quite small in the single-year files. Even with the data aggregation, sample sizes for some of the Asian cells for 1988-92 are still too small to allow for analysis.

Variables

All variables, including race and ethnicity, are based upon the characteristics of the mother, not of the father or the baby.

Statistics for whites, blacks, and Asians are for non-Hispanics only. The Asian population is defined as including both Asians and Pacific Islanders.

Any person born in the U.S. or a U.S. territory is defined as native born in this analysis. All others are defined as foreign born. NCHS data regarding mother's nativity is not publicly available after 2004, so statistics are shown only through 2004.

A mother is described as married if she is either married or separated. Otherwise she is considered unmarried.

Educational attainment is divided into three categories representing the mother's highest level of education completed—less than a high school diploma; high school diploma; and some college or more. During the period of analysis, several government agencies adjusted the way they collected education data. Through 2002, NCHS defined education based upon years of schooling as opposed to degree obtained. In 2003, some NCHS records continued to use this system, while others adopted a new approach based upon degree obtained (the method of education definition varied by state). Through 1990, the CPS defined education using the years-of-education approach; by 1992, all CPS data were coded based upon educational degree obtained. To create comparable data across time, for both the NCHS and the CPS data where education was based upon years of schooling, respondents with 12 years of education were classified as having a high school diploma, while those with more years of education were defined as having at least some college experience, and those with fewer years of education were defined as having less than a high school diploma.

Counts and Shares

Statistics regarding birth counts and proportions are derived from NCHS data for all variables except education and children ever born. Since the NCHS did not publish the educational characteristics of recent mothers in its 2007 and 2008 publications, education data are obtained from the 2004-08 and the 1988-92 CPS June supplement data. The NCHS does not collect information on cumulative fertility for all women, so the CPS June supplement files were also used to calculate children ever born statistics. Information regarding the composition of the female population of childbearing age is derived from the decennial Census (for 1990 and 2000) and from the American Community Survey (for 2008).

Birth Rates

The primary measure of birth rate used is the General Fertility Rate (GFR), which is the number of births divided by the number of women of childbearing age in a given year.

For analyses of birth rates by marital status or education, CPS data are used to define both the numerator (births) and the denominator (population). All women ages 15 to 44 are considered of childbearing age in the CPS analyses.

For all other analyses, NCHS birth data are used in the numerator, while the population totals in the denominator are derived from decennial Census Bureau data (for 1990) and from American Community Survey data (for 2008). For 1990, the denominator consists of the number of women ages 10 to 49, because this is the age range for which births are recorded. For 2008, the denominator is the number of women ages 10 to 54.¹

¹ Some 99.7% of births occurred to females ages 15 to 44 in 2008.

Birth rates differ from those published by NCHS primarily for two reasons: NCHS calculates birth rates using Census Bureau population estimates to measure the number of women of childbearing age; and NCHS typically calculates birth rates with the number of women ages 15 to 44 in the denominator.