U.S. Birth Rate Decline Linked to Recession

FOR RELEASE: APRIL 6, 2010

Paul Taylor, Project Director
Rakesh Kochhar, Senior Economist
Gretchen Livingston, Senior Researcher
D'Vera Cohn, Senior Writer
Wendy Wang, Research Associate
Daniel Dockterman, Research Assistant

MEDIA INQUIRIES CONTACT:
Pew Research Center's
Social & Demographic Trends Project
202.419.4372
http://pewsocialtrends.org

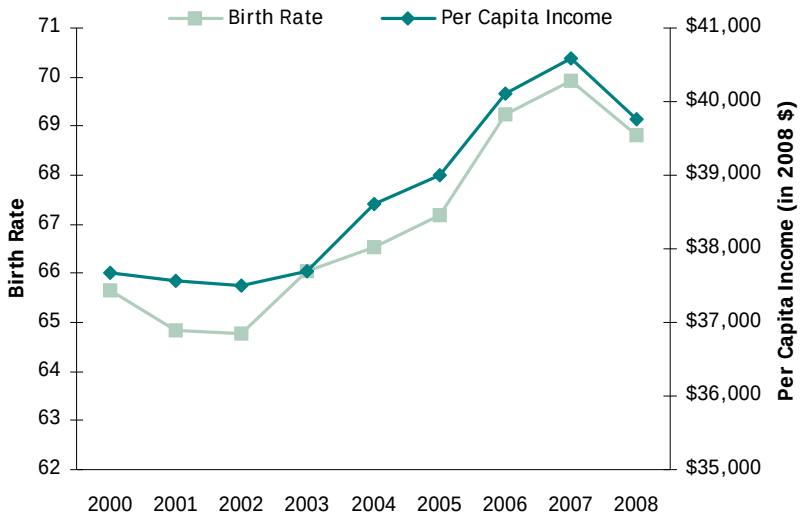
PewResearchCenter
A Social & Demographic Trends Report

U.S. Birth Rate Decline Linked to Recession

By Gretchen Livingston and D'Vera Cohn

Birth rates in the United States began to decline in 2008 after rising to their highest level in two decades, and the decrease appears to be linked to the recession, according to a Pew Research Center analysis of state fertility and economic data.

Birth Rate Tracks Per Capita Income
(25 states)



Note: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44.

Sources: Statistics calculated using data from state government agencies (listed in Appendix B), U.S. Census Bureau, and Bureau of Economic Analysis

PewResearchCenter

This analysis is based on data from the 25 states for which final 2008 birth numbers are available. State-level indicators were used because the magnitude and timing of the recent economic decline varies from state to state, thus allowing a more nuanced analysis of links with fertility than is possible at the national level.

In 22 of these 25 states, the birth rate—the share of women of childbearing age who gave birth—declined or leveled off in 2008, compared with the previous year. In 20 of the 25 states, the number of births declined or leveled off from the previous year.

The analysis suggests that the falloff in fertility coincides with deteriorating economic conditions. There is a strong association between the magnitude of fertility change in 2008 across states and key economic indicators including changes in per capita income, housing prices and share of the working-age population that is employed across states.

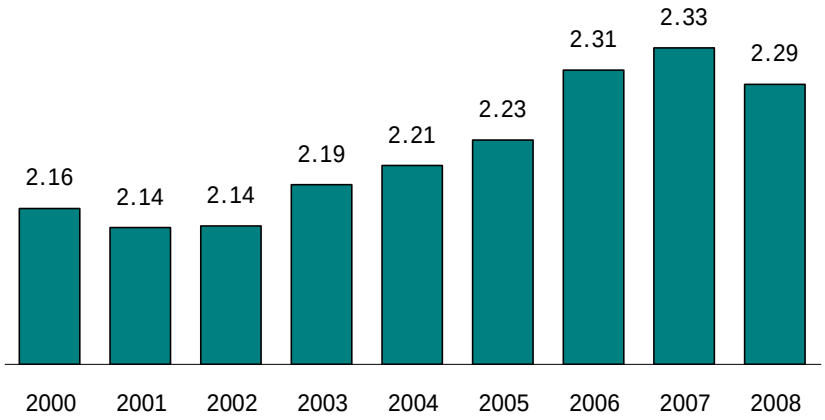
The nation's birth rate grew each year from 2003 to 2007, and has declined since then. As will be shown later in this report, the number of births also peaked in 2007 to a record level, dipped nearly 2% in 2008 and continued to decline in 2009, according to National Center for Health Statistics (NCHS) data. This analysis focuses on birth rate changes in 2008, the year after the national recession began. Research shows that past recessions are linked to fertility declines but that other factors also play a role.

State Birth Data Show Link with Economy

This analysis capitalizes on state-level differences in the magnitude and change over time of fertility and economic indicators to examine links between the two. It relies mainly on data from the 25 states that have finalized their own 2008 fertility figures.[1] These states include slightly more than half the nation's 2008 population of women of childbearing age (54%) and annual births (54%). Their total births and combined birth rate followed national trends earlier in the decade. In 2008, according to final data supplied by these states, they had a combined total of 2.29 million births, compared with 2.33 million in 2007. Their combined birth rate was 68.8 births per 1,000 women ages 15-44 in 2008, compared with 69.9 in 2007, a decline of 1.6%.

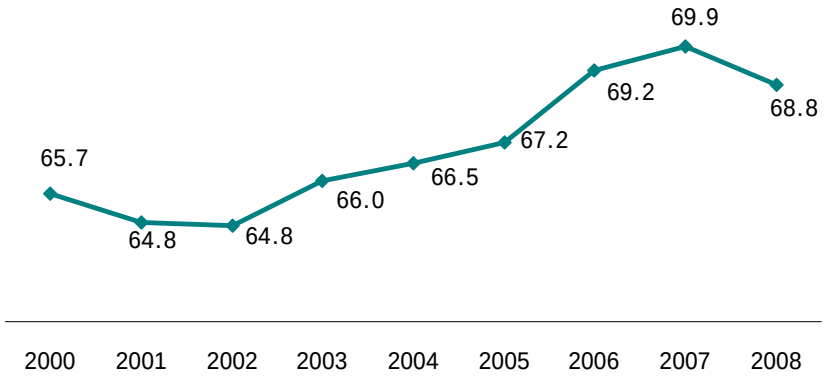
Births Decline in 2008 after Peak in 2007

(25 states, in millions)



Birth Rate Dips in 2008

(25 states)



Note: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44.

Source: Statistics calculated using data from state government agencies (see Appendix B) and U.S. Census Bureau

PewResearchCenter

[1] In the past, provisional and final numbers for the nation have not differed markedly. However, provisional and final numbers for individual states do, which is why this analysis is based on the sample of state-supplied final figures rather than the full universe of state provisional data available from the NCHS. As an example, the 2006 NCHS provisional total of births in New Hampshire was 14,534, but final NCHS figures show there were 14,378 births that year. The provisional total indicated that births in New Hampshire increased in 2006 but the final total indicated that they did not.

One test of the association between economic and fertility indicators is to examine whether states that experienced larger economic changes also experienced similar changes in fertility. By this measure, there is evidence of a link between fertility and some key economic indicators.

Strong associations were found between the magnitude of state-level birth rate change from 2007 to 2008 and

Change in Birth Rate, Per Capita Income and Housing Price

(25 states)

Birth Rate Change (%)		Per Capita Income Change (%)		House Price Change (%)	
State	2007-2008	State	2006-2007	State	2006-2007
Arizona	-4.6	**Florida**	-0.5	**California**	-2.1
Mississippi	-3.1	**Arizona**	-0.1	**Michigan**	-1.8
California	-2.8	**Michigan**	0.1	**New Hampshire**	0.5
Florida	-2.8	Missouri	0.8	**Florida**	0.9
New Hampshire	-2.2	**Colorado**	0.9	Minnesota	1.5
Colorado	-2.0	Wisconsin	0.9	**Arizona**	1.7
Michigan	-1.6	North Carolina	1.0	Nebraska	2.4
Virginia	-1.5	Idaho	1.0	**Colorado**	2.9
Tennessee	-1.4	**Tennessee**	1.1	Wisconsin	3.0
South Dakota	-1.2	Maryland	1.4	**Virginia**	3.5
Minnesota	-1.2	Minnesota	1.5	Missouri	3.7
Iowa	-1.2	**California**	1.5	Iowa	3.8
North Carolina	-0.9	Alabama	1.6	Hawaii	4.2
Missouri	-0.6	**New Hampshire**	1.6	Maryland	4.3
Utah	-0.6	Kansas	1.7	Kansas	4.7
Idaho	-0.4	**Virginia**	1.7	Pennsylvania	4.7
Wisconsin	-0.4	Pennsylvania	1.7	**South Dakota**	5.4
Pennsylvania	-0.3	Utah	1.8	North Dakota	6.3
Maryland	-0.3	Iowa	2.5	**Mississippi**	6.5
Kansas	-0.1	**Mississippi**	2.6	Alabama	6.5
Alabama	0.3	Washington	3.1	**Tennessee**	6.6
Nebraska	0.5	Nebraska	3.2	North Carolina	7.1
Washington	1.0	Hawaii	3.3	Idaho	7.7
North Dakota	1.7	**South Dakota**	5.1	Washington	9.1
Hawaii	2.0	North Dakota	6.2	Utah	15.3

Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Boldfaced states are in top 10 for decline in birth rate.

Sources: Statistics calculated using data from state government agencies (see Appendix B), U.S. Census Bureau, Bureau of Economic Analysis, and Federal Housing Finance Agency

PewResearchCenter

the magnitude the previous year of per capita income change and housing price change. Strong associations also were found between the magnitude of state-level birth rate change from 2007 to 2008, and the previous year's change in gross domestic product by state, as well as in first claims for unemployment benefits. Analysis also found a strong association between the magnitude of birth rate change from 2007-2008 and a state's housing foreclosure rate in 2007.[2] No correlation was found with change in state-level employment or unemployment rates.

Among the 25 states, Arizona's birth rate declined more than 4% in 2008 compared with the previous year, the largest change of the 25. Its decline in per capita income in 2007 ranked second among those 25 states and its housing price change ranked sixth. Florida, which had the fourth-largest decline in birth rates among the 25 states in 2008, had a 0.5% decline in per capita income the previous year and a 2% foreclosure rate, both of which ranked worst among the this group of states.

At the other end of the scale, North Dakota was one of only five of the 25 states that had a gain in its fertility rate in 2008; its growth in per capita income growth was the largest among these states, and its 2007 foreclosure rate was the second lowest among the 25 states.

Economy and Fertility Chronology

Another test of whether economic indicators could be linked to fertility indicators is to examine how they relate to each other across time within each state. In all 22 states where the fertility rate leveled off or declined in 2008, economic conditions had begun to deteriorate within the two previous years, when many potential parents were deciding whether to have a child.

Economic conditions are described using per capita income growth and growth in the percent employed. In most states, both indicators leveled off or declined just prior to the decline in fertility, but in each state, at least one measure did. Specifically, the growth in per capita income leveled off or declined in 21 states (the exception being Michigan), and growth in the percent employed came to a halt in 21 states (the exception being Mississippi).

In California, for example, the birth rate declined in 2008 after having grown each year since 2003. In New Hampshire, the birth rate slipped in 2008 to its lowest level in the decade. In both states, the growth in per capita income and percent employed slowed by 2007.

Further support for a link between birth rates and the economy is an October 2009 Pew Research Center survey, which found that 14% of Americans ages 18-34 and 8% of those ages 35-44 say they postponed having a child because of the recession. Blacks (13%) were more likely than whites (5%) to say so. So were respondents with incomes of less than $25,000 (9%), compared with those with incomes of $75,000 or more (2%).

[2] In the group of 25 states, there were significant correlations between the 2007-2008 percent change in general fertility rate and five other variables: 2006-2007 percent change in per capita income (.56); 2006-2007 percent change in first unemployment claims (-.51); 2006-2007 percent change in gross domestic product (.49); 2006-2007 percent change in housing prices as expressed by the Housing Price Index (.41); and 2007 foreclosure rate (-.54).

Patterns in the 25 States

In some states, the decline in births began earlier than 2008. Of the 20 states where the number of births declined or leveled off in 2008,[3] four also had declines or leveling off in 2006 or 2007. In most of the states—13—the number of births had been growing for three years or more.

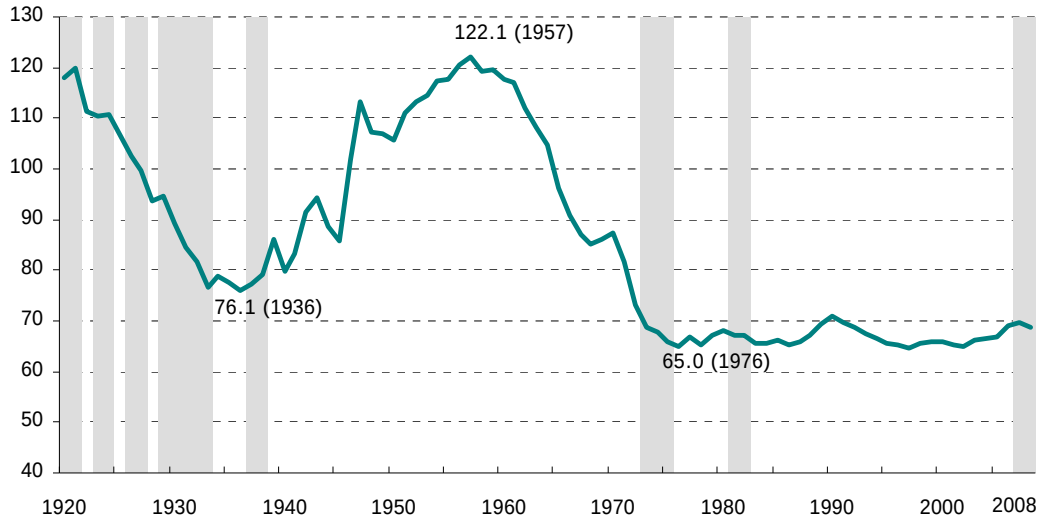
As noted above, birth rates declined or leveled off in all but three[4] of the 25 states in 2008, compared with the previous year. In two of those three states (North Dakota and Washington), birth rates grew at a slower pace than they had in 2006.

National Birth Trends

Nationally, birth rates have fluctuated within a modest range—about 65 to 70 births per 1,000 women of child-bearing age—since the mid-1970s. As the accompanying chart shows, that is far below the peak years of the post World War II baby boom, when rates rose to more than 100 births per 1,000 women ages 15-44.

Trends in U.S. Birth Rates,1920-2008

(Shaded areas indicate recessions)



Notes: Birth rate (general fertility rate) is the number of births per thousand women ages 15-44. Boldfaced states are in top 10 for decline in birth rate. All rates final except 2007 and 2008 (see Methodology); shaded areas indicate economic recessions, as defined by the National Bureau of Economic Research, in 1920-1921, 1923-1924, 1926-1927,1929-1933, 1937-1938,1973-1975,1981-1982, and 2007-current. Only recessions lasting 12 months or longer are shown.

Sources: Statistics calculated using data obtained from U.S. Census Bureau, National Center for Health Statistics, and Heuser (1976)

PewResearchCenter

[3] These states are Alabama, Arizona, California, Colorado, Florida, Iowa, Kansas, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, North Carolina, Pennsylvania, South Dakota, Tennessee, Virginia and Wisconsin. States with increases in births are Hawaii, Idaho, North Dakota, Utah and Washington.

[4] These states are Hawaii, North Dakota and Washington.

Over the past decade, birth rate trends roughly mirrored the nation's economic ups and downs. Birth rates dipped slightly in 2001 and 2002, then began growing again in 2003 before peaking in 2007. The birth rate in 2007 was the highest in nearly two decades. The rate declined modestly in 2008 and continued its decline during the first six months of 2009, according to preliminary and provisional data from the National Center for Health Statistics (NCHS).

The number of births in 2007—4,317,119—was the highest ever recorded in the United States, according to preliminary data from the NCHS. The number of births declined to 4,251,095 in 2008, according to preliminary NCHS figures. Provisional figures indicate births have continued to decline during the first six months of 2009, when they totaled 2,032,000, a dip of 63,000 from provisional data for the same period in 2008.

Research indicates that economic downturns are associated with fertility declines in developed nations, although the decrease usually is temporary. One prominent example is the Great Depression and series of recessions that preceded it, which intensified an existing trend toward declining birth rates. Birth rates dropped 26% between 1926 and 1936, diminishing to levels not seen again until the "baby bust" years of the 1970s.

However, the business cycle generally is thought to be only one of a number of forces influencing the fertility rate. Other factors that have been cited include attitudes toward working women, the relative rise in women's wages compared with men's wages and the availability of contraception, especially the growing use of the birth control pill in the 1960s.

Nationally, the most recent recession began in December 2007, but the housing and construction sectors weakened a year earlier. After rising by a record amount in 2004-2005, the median price of an existing home dropped by a record amount in 2005-2006. According to the National Association of Realtors, the median price of an existing home sold in October 2006 was $221,000, down a record 3.5% from October 2005.

Appendix A. Tables

Table 1. Births 2000-2008, 25 States and U.S.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	63,166	60,295	58,867	59,356	59,170	60,262	62,915	64,180	64,345
Arizona	84,985	85,213	87,379	90,783	93,396	95,798	102,042	102,687	99,215
California	531,285	527,371	529,245	540,827	544,685	548,700	562,157	566,137	551,567
Colorado	65,429	67,006	68,420	69,304	68,475	68,922	70,737	70,804	70,028
Florida	204,030	205,800	205,580	212,243	218,045	226,219	237,166	239,120	231,417
Hawaii	17,515	17,043	17,446	18,066	18,238	17,882	18,927	19,086	19,417
Idaho	20,305	20,686	20,973	21,794	22,529	23,064	24,185	25,023	25,156
Iowa	38,250	37,610	37,555	38,139	38,368	39,275	40,592	40,835	40,221
Kansas	39,654	38,832	39,338	39,353	39,553	39,701	40,896	41,951	41,815
Maryland	74,226	73,152	73,250	74,865	74,500	74,880	77,430	78,057	77,268
Michigan	136,048	133,247	129,518	130,850	129,710	127,518	127,537	125,172	121,231
Minnesota	67,451	66,617	68,037	70,053	70,614	70,920	73,515	73,675	72,382
Mississippi	44,075	42,277	41,511	42,321	42,809	42,327	46,046	46,455	44,904
Missouri	76,329	75,290	75,167	76,960	77,709	78,547	81,353	81,883	80,994
Nebraska	24,643	24,818	25,381	25,900	26,324	26,142	26,723	26,935	26,992
New Hampshire	14,591	14,647	14,427	14,382	14,565	14,419	14,375	14,170	13,684
North Carolina	120,247	118,112	117,307	118,292	119,773	123,040	127,646	130,886	130,758
North Dakota	7,676	7,664	7,755	7,976	8,179	8,381	8,616	8,818	8,931
Pennsylvania	145,874	143,404	142,380	145,485	144,194	145,033	148,706	150,322	148,934
South Dakota	10,346	10,475	10,698	11,022	11,339	11,466	11,914	12,253	12,074
Tennessee	79,539	78,318	77,433	78,841	79,572	81,720	84,308	86,661	85,480
Utah	47,331	47,915	49,140	49,834	50,653	51,517	53,475	55,063	55,605
Virginia	98,864	98,531	99,235	100,561	103,830	104,488	106,474	108,417	106,578
Washington	81,004	79,542	79,003	80,482	81,715	82,625	86,845	88,921	90,270
Wisconsin	69,289	69,012	68,510	69,999	70,130	70,934	72,302	72,757	72,002
25 States	2,162,152	2,142,877	2,143,555	2,187,688	2,208,075	2,233,780	2,306,882	2,330,268	2,291,268
U.S.	4,058,814	4,025,933	4,021,726	4,089,950	4,112,052	4,138,349	4,265,555	4,317,119	4,251,095

Note: 2007 and 2008 U.S. data are preliminary.
Sources: U.S. data obtained from National Center for Health Statistics; individual state data obtained from state government agencies (see Appendix B)

Table 2. Birth Rates 2000-2008, 25 States and U.S.

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	65.1	62.6	61.8	62.8	62.8	64.1	66.7	68.1	68.3
Arizona	77.9	76.6	77.0	78.7	79.3	79.0	81.9	81.0	77.2
California	70.1	69.0	68.9	70.1	70.4	70.9	72.6	73.1	71.0
Colorado	67.1	67.7	68.8	69.8	69.1	69.3	70.7	70.2	68.8
Florida	63.1	62.9	62.0	63.4	64.2	65.5	68.0	68.6	66.7
Hawaii	69.2	67.8	69.6	71.9	72.4	71.1	75.2	76.5	78.0
Idaho	72.9	73.9	74.5	77.0	78.8	79.4	82.0	83.7	83.4
Iowa	62.6	62.1	62.7	64.3	65.0	67.0	69.5	70.3	69.5
Kansas	69.1	68.0	69.1	69.6	70.3	71.0	73.6	75.6	75.5
Maryland	62.3	61.1	61.0	62.2	62.0	62.3	64.6	65.6	65.4
Michigan	63.1	62.1	60.8	61.9	61.8	61.3	61.9	61.5	60.5
Minnesota	62.2	61.4	62.9	65.1	66.0	66.7	69.4	69.9	69.0
Mississippi	69.4	67.2	66.6	68.4	69.5	69.0	76.0	76.7	74.3
Missouri	63.3	62.5	62.5	64.2	64.9	65.7	68.2	68.8	68.4
Nebraska	67.5	68.4	70.3	72.1	73.8	73.6	75.6	76.6	76.9
New Hampshire	54.1	54.0	53.2	53.2	54.1	53.9	54.2	54.0	52.8
North Carolina	67.4	65.9	65.2	65.5	66.1	67.3	69.1	69.8	69.1
North Dakota	56.9	57.7	59.3	61.7	63.4	65.7	67.9	70.1	71.3
Pennsylvania	57.0	56.5	56.6	58.3	58.2	59.0	60.8	61.8	61.6
South Dakota	65.6	66.9	68.8	71.1	73.3	74.5	77.8	80.1	79.2
Tennessee	63.6	62.6	62.1	63.3	63.9	65.4	67.1	68.8	67.9
Utah	89.6	89.4	90.7	91.1	91.3	91.4	92.9	93.6	93.1
Virginia	62.1	61.7	61.9	62.5	64.3	64.5	65.7	67.0	66.0
Washington	62.6	61.2	60.7	61.8	62.6	63.2	66.0	67.3	67.9
Wisconsin	59.8	59.7	59.4	61.0	61.4	62.5	64.1	64.9	64.7
25 States	65.7	64.8	64.8	66.0	66.5	67.2	69.2	69.9	68.8
U.S.	65.8	65.2	65.1	66.2	66.5	66.9	68.9	69.7	68.7

Notes: 2007 and 2008 U.S. data are preliminary; birth rate (general fertility rate) is the number of births per thousand women ages 15-44.
Sources: U.S. rates calculated using data from National Center for Health Statistics and U.S. Census Bureau; individual state rates calculated using data obtained from state government agencies(see Appendix B) and U.S. Census Bureau

Table 3. Per Capita Income 2000-2008, 25 States and U.S. (in 2008 $)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	30,094	30,510	30,896	31,304	32,375	32,950	33,624	34,145	33,768
Arizona	32,834	32,747	32,543	32,598	33,700	34,795	35,774	35,734	34,335
California	41,752	41,175	40,697	40,862	41,977	42,630	44,217	44,880	43,641
Colorado	42,484	42,920	41,925	41,141	41,771	42,486	43,692	44,074	42,985
Florida	36,358	36,269	36,537	36,699	38,363	39,432	40,911	40,709	39,267
Hawaii	36,350	35,870	36,541	36,882	38,509	39,522	41,138	42,478	42,055
Idaho	30,862	31,190	31,151	30,976	32,430	32,678	33,820	34,168	33,074
Iowa	34,126	33,918	34,506	34,453	36,101	35,614	36,153	37,070	37,402
Kansas	35,607	36,069	35,614	36,066	36,379	36,523	38,186	38,825	38,820
Maryland	43,362	44,096	44,477	44,712	46,303	46,963	48,188	48,856	48,378
Michigan	36,749	36,443	36,129	36,523	36,073	35,570	35,455	35,501	34,949
Minnesota	40,757	40,537	40,782	41,292	42,260	41,881	42,734	43,367	43,037
Mississippi	26,951	27,741	27,703	28,081	28,687	29,584	29,913	30,684	30,399
Missouri	34,873	34,798	35,025	35,383	35,828	35,583	36,377	36,663	36,631
Nebraska	35,759	36,357	36,297	37,608	37,930	37,847	38,154	39,364	39,150
New Hampshire	42,621	42,205	42,038	41,771	42,868	42,346	43,785	44,475	43,623
North Carolina	34,903	34,519	34,083	33,908	34,861	35,350	35,926	36,294	35,344
North Dakota	32,039	32,458	32,754	34,824	34,579	35,666	35,885	38,104	39,870
Pennsylvania	37,648	37,327	37,706	37,943	38,583	38,560	39,863	40,558	40,140
South Dakota	33,043	33,881	33,597	35,632	36,671	36,545	36,062	37,890	38,661
Tennessee	33,372	33,474	33,681	33,964	34,531	34,571	35,228	35,604	34,976
Utah	30,655	31,044	30,695	30,224	30,576	31,528	32,381	32,958	31,944
Virginia	39,560	40,438	40,422	40,987	42,071	42,972	44,179	44,937	44,224
Washington	40,518	40,057	39,621	39,630	41,015	40,539	42,316	43,633	42,857
Wisconsin	36,434	36,595	36,871	37,041	37,312	37,139	38,088	38,428	37,767
25 States	37,670	37,575	37,490	37,691	38,613	38,996	40,101	40,586	39,765
U.S.	37,906	37,868	37,663	37,775	38,637	39,077	40,291	40,944	40,208

Sources: Statistics calculated using data from Bureau of Economic Analysis and U.S. Census Bureau

Appendix B. Sources for State Fertility Data

State	Website
Alabama	http://www.adph.org/healthstats/assets/vs08.pdf
Arizona	http://www.azdhs.gov/plan/
California	http://www.cdph.ca.gov/data/dataresources/requests/Pages/VitalStatisticsBirthDeathFetalDeathMarriageData.aspx
Colorado	http://www.cdphe.state.co.us/hs/mchdata/mchdata.html
Florida	http://www.doh.state.fl.us/planning_eval/vital_statistics/index.html
Hawaii	http://www.hhdw.org/
Idaho	http://www.healthandwelfare.idaho.gov/
Iowa	http://www.idph.state.ia.us/apl/health_statistics.asp#statistics
Kansas	http://www.kdheks.gov/hci/annsumm.html
Maryland	http://vsa.maryland.gov/html/reports.cfm
Michigan	http://www.mdch.state.mi.us/pha/osr/index.asp?Id=2
Minnesota	http://www.health.state.mn.us/divs/chs/countytables/index.htm
Mississippi	http://mstahrs.msdh.ms.gov/
Missouri	http://www.dhss.mo.gov/VitalStatistics/
Nebraska	http://www.hhs.state.ne.us/ced/vs.htm
New Hampshire	http://nhvrinweb.sos.nh.gov/default.aspx
North Carolina	http://www.epi.state.nc.us/SCHS/
North Dakota	http://ndhealth.gov/vital/pubs.htm
Pennsylvania	http://www.portal.health.state.pa.us/portal/server.pt/community/health_statistics_and_research/11599
South Dakota	http://doh.sd.gov/Statistics/healthstats.aspx
Tennessee	http://health.state.tn.us/statistics/index.htm
Utah	http://health.utah.gov/vitalrecords/vitalstatistics/vitalstatistics.htm
Virginia	http://www.vdh.state.va.us/healthstats/
Washington	http://www.doh.wa.gov/ehsphl/CHS/CHS-Data/main.htm
Wisconsin	http://dhs.wisconsin.gov/births/index.htm

Appendix C. Methodology

Fertility Data

The state data consists of all 25 states whose final 2008 birth data were available at the time of analysis. All state-level birth data were obtained directly from each individual state. Resident births—the total number of births to residents of a state, regardless of where the birth occurred—are shown for all states except Hawaii. For Hawaii, the number of births represents those births that occurred in Hawaii to residents of that state.

For national-level analyses, the majority of birth data were obtained from the National Center for Health Statistics. NCHS birth statistics for 2007 and birth statistics for 2008 are preliminary; they include 98.7% of all births in 2007 and 99.9% of all births in 2008. NCHS birth statistics for 2009 are provisional. Some information for the historical fertility series extending to 1920 was obtained from data developed by Robert L. Heuser and available from the Princeton University Office of Population Research.

Population estimates provided by the U.S. Census Bureau were used in calculating all birth rates. For rates from 2000 forward, vintage 2008 population estimates were used. For earlier years, archived population estimates were used.

Birth rates are measured using the general fertility rate (GFR), which is the number of births divided by the number of women of childbearing age (15-44)[5].

When the annual change in number of births is within the range of +/- 0.5%, this change is considered "leveling off." Similarly, a fertility rate is defined as "leveling off" if its annual change is within the range of +/- 0.5%.

Economic Data

In choosing economic indicators to use in this report, we were most interested in finding those variables that are good indicators of an individual's experiences with the economic downturn; that are available at the state level; and that use standardized metrics, which allow for cross-state comparisons. Ultimately, seven indicators relating to income, employment and the housing market were tested to see whether their variations were associated with variations in fertility:

- Annual Per Capita Income, calculated using data from the Bureau of Economic Analysis, and the U.S. Census Bureau, and adjusted to year 2008 dollars using the National Consumer Price Index-U. The other major estimate of income is household income as estimated by the U.S. Census Bureau from its Annual Social and Economic Supplement to the Current Population Survey. Both measures of income are comprehensive, including wages and salaries, and also interest, rental and other sources of income. They also trend similarly across the business cycle. We chose to use the per capita income measure because it is readily available at the state level. Per capita income is also a more comprehensive measure because it includes employer contributions to pension funds and health and other insurance plans.

[5] In 2007, women ages 15-44 accounted for 99.7% of all births in the U.S.

- Real Per Capita Gross Domestic Product, by state, using 2000 dollars, available from the Bureau of Economic Analysis
- Annual Employment Rate for the civilian noninstitutionalized workforce (persons ages 16 and older), calculated using data available from the Bureau of Labor Statistics
- Annual Unemployment Rate, available from the Bureau of Labor Statistics
- Initial Unemployment Claims for the second quarter, available from the Department of Labor
- Foreclosure Rate, the percent of all housing stock in foreclosure in 2007, as determined by RealtyTrac
- House Price Index (HPI) for the second quarter, which measures single-family house prices, available through the Federal Housing Finance Agency