

# **The Economic and Financial Status of Older Americans: Trends and Prospects**

William R. Emmons\* and Bryan J. Noeth\*  
Center for Household Financial Stability  
Federal Reserve Bank of St. Louis

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## **Abstract**

The global financial crisis and ensuing Great Recession reduced the income and wealth of many families, but older families generally fared better than young and middle-aged families. The Federal Reserve's Survey of Consumer Finances reveals that being young was a significant risk factor during the downturn, regardless of a family's race, ethnicity, or education level. Across age groups, income and wealth increased most strongly among older families during the two decades preceding the crisis. Relatively poor older families also fared relatively well compared to poor families at younger ages. Part of the explanation for favorable income and wealth trends among currently living older Americans is a positive birth-year cohort effect. After controlling for a host of factors related to income and wealth, we find that cohorts born in the late 1930s and 1940s have experienced more favorable income and wealth trajectories over their life courses than earlier- or later-born cohorts. Economically vulnerable families, including minorities and those with less education, were especially hard hit by the crisis. While it is too soon to know how cohorts born in recent decades will fare over their lifetimes, it appears that the median Baby Boomer (born in the 1950s and early 1960s) and median member of Generation X (born in the late 1960s and 1970s) are on track for lower income and wealth in older age than those born in the 1930s and 1940s, holding constant many factors other than when a person was born.

\*The views expressed here are those of the authors alone and do not necessarily represent those of the Federal Reserve Bank of St. Louis or the Federal Reserve System.

## **The Economic and Financial Status of Older Americans: Trends and Prospects**

The global financial crisis and ensuing Great Recession reduced the income and wealth of most families. However, older Americans generally fared better than their younger counterparts on both dimensions, continuing a longer-term trend. This article provides an economic and financial profile of older Americans from 1989 through 2010 based on the Federal Reserve’s triennial Survey of Consumer Finances.<sup>1</sup> Using the Federal Reserve’s quarterly Financial Accounts of the United States, we extend one measure of wealth through late 2013; our findings suggest continuing favorable outcomes for older Americans compared to those under 62.

We distinguish between two groups of older families—the “younger old”, headed by someone aged 62-69, and the “older-old”, headed by someone aged 70 or older. We compare these older families to each other and to young families (headed by someone under 40) and middle-aged families (headed by someone between 40 and 61 years old). We highlight the important dimensions of educational attainment and race or ethnicity, both of which are powerful predictors of income and wealth—not just in older age but throughout the life course. We pinpoint some of the factors that may be responsible for the relatively more favorable outcomes enjoyed by many, but not all, older adults, including their sources of income and the structure of their balance sheets—that is, their assets and liabilities. We also track the median income and median wealth of all cohorts born between 1893 and 1992, observing them as many as eight times at three-year intervals, between 1989 and 2010. We find strong evidence that birth year matters for both income and wealth of a cohort, holding constant a host of other important contributing factors.

### **I. *Income and wealth through time and across the life course***

Among all families across all age groups, real (inflation-adjusted) average household income and real average household net worth declined significantly during the financial crisis and ensuing Great Recession of 2007-09.<sup>2</sup> The wealth decline was especially noteworthy, exceeding both in dollar amount and in percentage terms any previous downturn during the last six decades. Real median family income and real median household net worth similarly turned down sharply during the crisis.

A natural question is what exactly comprises income and wealth in the measures being discussed? Krimmel, Moore, Sabelhaus and Smith (2013) describe income and wealth in the Survey of

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<sup>1</sup> See Bricker et al (2012) and Emmons and Noeth (2012) for detailed discussions of the Survey of Consumer Finances and recent income and wealth trends revealed by the survey.

<sup>2</sup> See Emmons and Noeth (2013d) for further discussion.

Consumer Finances, including estimates of the economic magnitudes of items excluded from income, such as fringe benefits and benefits in kind, including Medicare, Medicaid, and food stamps; and from wealth, including the present value of future distributions from defined-benefit pensions and Social Security. Another important category of intangible wealth not included in balance sheets is so-called human capital, representing expected earnings from future work. Important categories of excluded liabilities include reasonably certain future expenditures on housing and living expenses; estimates of medical expenses; necessary replacement of long-lived assets like automobiles; future taxes payable; and a host of other items.

## ***II. Research on wealth accumulation across the life course and through economic cycles***

It is not obvious whether young, middle-aged, or older families are likely to fare better during various economic and financial cycles. A recession that involves significant job and income losses will hurt young and middle-aged families more than older families because a larger part of the former groups' incomes are exposed to job loss. On the other hand, large declines in asset prices, including stocks and housing, would hurt middle-aged and older families more because they have more accumulated assets. A third consideration is that balance-sheet leverage—that is, the amount of debt used to finance the family's assets—typically is greatest among young families, so asset-price declines are multiplied into proportionately larger declines in net worth, hurting young families. Which effect will dominate is an empirical question.

Asset prices tend to be pro-cyclical—that is, they rise and fall in concert with the economy—so a downturn in the economy is likely to be accompanied by stagnant or falling asset prices. Thus, it's not obvious which channel—income, wealth, or leverage—will be most important in a given situation or for any family. Adding to the complexity, the original impacts of recessions and asset-price declines could be muted or entirely reversed by the time we observe families' incomes and wealth.

A recent attempt to sort out the life-cycle wealth effects of a severe downturn such as the Great Recession concludes that older families are likely to fare worse than young families due to the greater proportionate decline in asset prices than in wage income observed during the recent downturn (Glover, Heathcote, Krueger, and Rios-Rull, 2011). Older families suffered wealth and income losses from depressed asset prices and interest rates while young families lost relatively little wealth or interest income because they had little wealth at risk. In principle, the young should have benefited by being able to purchase assets at relatively low prices from older families, who needed to continue selling stocks to finance their retirements and, in some cases, houses in order to move to living arrangements

more appropriate for older adults. To some extent, these life-stage-driven asset sales would continue even though stock and house prices had fallen. In effect, Glover et al conclude that the old can't wait forever to sell their assets after a severe asset-price decline, which harms them and benefits young families.

Yet, as we discuss below, virtually all of the data that has become available since the downturn suggests that older families have fared better than young families both during the recent period of economic and financial weakness and during longer periods of greater economic and financial strength. We suggest that, while the basic intuition of the Glover et al analysis is correct as far as it goes as a description of economic and financial downturns themselves, it misses an equally important point about household economic and financial resilience during the ensuing recoveries. A key differentiating factor between young and old families is the overall strength and resilience of their income sources and balance sheets.<sup>3</sup> Older families indeed were affected more severely when asset prices fell sharply, but many older families had diversified assets, low or no debt, sufficient liquid assets, and adequate net worth before the crisis in order to ride out what turned out to be a temporary downturn. Stock prices began rising sharply even before the overall economy began its recovery, and, although it took longer, housing markets also have bounced back to some extent.

Even before the financial crisis and Great Recession, researchers had noticed that older adults had fared relatively well in economic and financial terms in recent years. William Gale and Karen Pence (2006), for example, found that virtually all of the increase in household wealth between 1989 and 2001 had accrued to older families, which they defined as aged 55 or older.<sup>4</sup> While Gale and Pence attribute most of the wealth accumulation by older families to the changing nature of the families themselves, including a higher likelihood over time of older families being married, being in good health, and being headed by someone with a college education, their explanations do not exclude the possibility that there is something unusual about older families today; that is, there may be “cohort effects” in addition to changing demographic characteristics at work. Indeed, John Sabelhaus (2006, p. 223), commenting on the Gale and Pence paper, conjectured that a cohort effect may be present:

“But in addition to demographic variables that the authors focus on for explaining wealth, some unexplained cohort effects show up in the earnings data. For example, the data show that baby-boomer males have had (holding education constant) lower relative earnings than their fathers.”

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<sup>3</sup> Boshara and Emmons (2013) document important age-related differences in balance-sheet composition.

<sup>4</sup> As described below, we find essentially the same outcome for the 2001-10 period. That is, older families' wealth gains accounted for essentially all of the net increase in overall wealth in the nation.

We describe below new evidence, based on Survey of Consumer Finances data through 2010, confirming a positive birth-year cohort effect on earnings and wealth accumulation among families headed by someone born in the late 1930s and 1940s, who currently are in their 60s and 70s.

Love, Palumbo, and Smith (2009) provide a theoretical explanation for why older families may have experienced relatively favorable wealth outcomes over recent decades. They (along with many others) conjecture that the primary reasons the typical older family spends down its assets more slowly than the rate at which its remaining life expectancy is declining are: 1) uncertain longevity, 2) unknown medical expenses, and 3) a bequest motive. They confirm their model's predictions with data from the Health and Retirement Study, covering 1998 to 2006. The basic mechanism appears to be that many older families simply are more highly motivated to save than are younger families—that is, older families' precautionary-saving and bequest motives are more immediate and salient than more-distant saving goals among younger families. It is possible that, while young and middle-aged families encountered relatively more economic and financial turbulence in recent years, older families' comparatively calmer circumstances allowed their stronger saving motivation to operate unencumbered. In line with the conclusions of Gale and Pence, Love, Palumbo, and Smith find that strong returns on financial assets and housing contributed to, but were not decisive in, the more favorable wealth trajectories for older families. Love, Palumbo, and Smith's results also are consistent with positive cohort effects on both income and wealth accumulation for families headed by someone born in the two decades or so prior to the Baby-Boom generation, as we show below.

Homeownership experiences in recent years highlight the important interaction between life-cycle financial decision-making and the historical period in which a family lives. Emmons and Noeth (2013a, 2014) show that young homeowners were hit particularly hard by the recent housing-centered financial and economic crisis. That is, simply by virtue of being at a stage in life that made them particularly vulnerable to a severe crash in the housing market, many young families suffered very large wealth losses. Older families, by way of contrast, were at a stage in their lives in which housing more often played a secondary role on the asset side of their balance sheets. Older families typically also owed much less debt than young and middle-aged families, making the leverage-induced loss of wealth much less severe for them.

Bricker, Kennickell, Sabelhaus, and Moore (2012) examine the latest wave of the Survey of Consumer Finances, conducted in 2010 and released in mid-2013, to show that, among six mutually exclusive and exhaustive age groups, only the two oldest groups—including families headed by someone aged 65 to 74, and someone aged 75 or older—had higher median inflation-adjusted incomes in 2010

than in 2007. Although every age group in the population had lower inflation-adjusted net worth (or wealth) in 2010 than in 2007, the declines in the two oldest age-group medians were, by a clear margin, the smallest. The next section provides details on these trends.

### ***III. Distributions of family income and wealth across the life course***

Because we need to know the entire distribution of a particular statistic to calculate a median (50<sup>th</sup> percentile) or any other percentile, we cannot go beyond 2010 for those measures. The next wave of the Survey of Consumer Finances was collected during 2013, with results available in 2015. However, we can estimate the mean net worth of disaggregated groups by tracking aggregate financial asset and liability categories and demographic developments, such as household growth and population change by age group, and estimating how those overall changes affected subgroups by constructing group-specific estimated balance sheets.<sup>5</sup>

#### **A. Mean wealth by age group**

Due to our limited sample size and our desire to gauge broad trends accurately, our estimates of mean net worth consider only one older age group, consisting of all families headed by someone 62 years old or more. Figure 1 shows the mean net worth of three age groups at three-year intervals between 1989 and 2013, using our balance-sheet estimates for the last year. The mean net worth of older families exceeds that of middle-aged and young families in every year. The strong upward trajectories of average net worth for middle-aged and especially older families over time stand in stark contrast to the long-term stagnation of average wealth among young families. Between 1989 and 2013, the ratio of middle-aged and older families' average wealth to the average wealth of a young family grew from about four times to between six and nine times, respectively.

The average percent decline in wealth between 2007 and 2010 was much greater for young families—down about 44 percent, compared to average losses of about 17 and 10 percent, respectively for middle-aged and older families—while the estimated 2010-13 recovery has been comparable across age groups—an average gain of almost 10 percent for young families and gains of about 9 percent for both middle-aged and older families.

The severe recent downturn in mean wealth amplified a longer-term trend toward dispersion of wealth according to age seen for at least two decades. While we estimate the average wealth of a young family is about 19 percent lower in 2013 than it was in 1989, after adjusting for inflation, the

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<sup>5</sup> See Emmons and Noeth (2014) and Krimmel et al, who perform a similar exercise using a somewhat different approach.

comparable figures for middle-aged and older families are 51 percent and 82 percent higher, respectively. Said differently, the ratio of average wealth of middle-aged families to that of younger families increased from 3.5 to 6.6 between 1989 and 2013, while the ratio of the average wealth of an older family to that of a young family increased from 4.1 to 9.2 during the same time period.

#### **B. Income and wealth trends at the median (50<sup>th</sup> percentile) of their distributions**

Trends in median family income and wealth have been similar to those evident in mean measures. The median pre-tax income among all families surveyed by the Federal Reserve in 2010 (\$45,743) was about 7.7 percent lower than the corresponding 2007 median (\$49,561), both expressed in terms of 2010 purchasing power. But as Table 1 shows, the median family income among “younger-old” families (family head aged 62-69) was about 12.3 percent *higher* in 2010 than it was in 2007, while the median income among “older-old” families (family head 70 years or older) was about 15.6 percent higher in 2010 than three years earlier. Young (under 40) and middle-aged (ages 40-61) median family incomes, by way of contrast, were each about 12 percent lower in the later year.

The contrast is even starker over a longer, 21-year period (chosen to reflect the maximum span of survey data available). While the median family incomes among both young and middle-aged families were slightly lower in 2010 in inflation-adjusted terms than they had been in 1989, the median incomes among both the younger old and the older old were substantially higher—60.5 percent and 27.9 percent, respectively.

Table 2 shows that the same basic age-related patterns were evident for inflation-adjusted net worth, as well. The median wealth of all families considered together was about 39.2 percent lower in 2010 (\$77,000) than in 2007 (\$126,539). The wealth of a family headed by someone in both the younger-old and the older-old category was a bit lower in 2010 than in 2007 (about 13.8 percent and 5.8 percent, respectively). These declines were significantly less than those suffered by the median young and middle-aged families, however, which were about 37.6 percent and 42.9 percent, respectively.

Comparing median net worth in 2010 to its level in 1989 for each age group, the younger-old and older-old wealth levels were 74.0 and 47.7 percent *higher* in the latter year, respectively. Among young and middle-aged families, the median levels of net worth were 30.5 percent and 24.1 percent *lower* in 2010 than in 1989, respectively. In terms of the absolute levels of wealth, the median younger-old and the median older-old family each had slightly less wealth in 1989 than that of the median middle-aged family. By 2010, the medians of both older age groups were more than twice as large as the median wealth of a middle-aged family and close to 20 times as large as the median wealth of a young family.

The striking divergence between the economic and financial fortunes of the median family in different age groups probably is due to several factors. Perhaps most important during the recent financial crisis and recession, older families generally had lower exposure to job loss, as well as more stable sources of income and uninterrupted access to health insurance. The median share of income derived from wages or business or farm income in 2007 was 55 percent among younger-old families, headed by someone aged 62-69, and only 24 percent among older-old families, headed by someone 70 or more. Among young families, headed by someone under 40, the share was 94 percent and among middle-aged families, headed by someone between 40 and 61, the share was 86 percent.

Older families' balance sheets also were less concentrated in housing and they had lower levels of debt.<sup>6</sup> Among all older homeowners<sup>7</sup> (62 or more years old), housing accounted for 35 percent of their total assets. Middle-aged homeowners (representing 75 percent of all middle-aged families) held 40 percent of their assets in housing, while younger homeowner families (accounting for 48 percent of younger families) had 59 percent of their assets in housing. Meanwhile, older families owed very little debt, so the loss-amplifying effect of leverage was much smaller than among middle-aged and younger families. For example, 91 percent of younger homeowner families had mortgage debt in 2007, 82 percent of middle-aged homeowner families had mortgage debt, but only 57 percent of younger-old homeowner families and 26 percent of older-old homeowner families owed any mortgage debt. Moreover, the rebound in financial markets from their low point in 2009 has bolstered the wealth of many older families, who, on average, hold higher levels of stocks and bonds in their portfolios than do younger families.<sup>8</sup>

In sum, the typical older family fared much better in terms of both income and wealth than the typical young or middle-aged family over both a short-term and a long-term horizon. The recent experience therefore has accentuated long-term trends of stronger income and wealth growth among older families than among young and middle-aged families.

### **C. Income and wealth trends at the 20<sup>th</sup> percentile of their distributions**

To better understand the changing distributions of income and wealth across families in various age groups, we investigate trends in family income and family wealth measured at the 20<sup>th</sup> percentile of

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<sup>6</sup> Emmons and Noeth (2013a, 2013b) and Boshara and Emmons (2013) document significant age-related differences in typical family balance sheets.

<sup>7</sup> About 85 percent of "younger-old" families (ages 62-69) and 80 percent of "older-old" families (70 years or more) in the survey were homeowners in 2007.

<sup>8</sup> Emmons and Noeth (2014) estimate that middle-aged and older families had, by late 2013, on average recovered essentially all of the wealth they lost during the financial crisis. Young families had recovered only about a third.



each distribution over time.<sup>9</sup> We break the sample into two groups according to the race or ethnicity of the family head to provide more clarity.

We caution the reader to remember throughout this discussion that comparisons at the 20<sup>th</sup>, 50<sup>th</sup> (median), or any other percentile refer to changes over time in particular points in statistical distributions, not to individual families. A better way to characterize changes over time, in our view, is to construct quasi-panels of households (see Sections III and IV). This means we follow groups of families identified by demographic characteristics— including age, educational attainment, and race or ethnicity—and describe the statistical characteristics of those groups over time with medians and means. Another approach is to track birth-year cohorts over time (see Section V). Nonetheless, changes in points on the income and wealth distributions themselves are of some interest given widespread discussion of issues related to growing income and wealth inequality within the entire population.

Table 3 displays family income measured at the 20<sup>th</sup> percentile of the distribution of all families and for families grouped by race or ethnicity in each of the four age ranges we have been considering. Among white or Asian families that rank at the 20<sup>th</sup> percentile in a given year, the strongest increases in family income over both short and long horizons accrued to older families, although the older old family at the 20<sup>th</sup> percentile of its distribution remained the poorest among the four age groups considered here. Among African-American or Hispanic families that rank at the 20<sup>th</sup> percentile in a given year, the two older age groups again experienced relatively strong increases over both short and long horizons.

Table 4 shows net worth at the 20<sup>th</sup> percentile of its distribution in an analogous way based on the demographic dimensions of race or ethnicity and age. Although virtually all low-wealth groups lost wealth between 2007 and 2010, the smallest percentage losses among whites and Asians were among older families. Over the 1989-2010 horizon, the two older white or Asian groups experienced significant increases, while the young and middle-aged groups suffered enormous losses. Among all ages of black and Latino families at their respective 20<sup>th</sup> percentiles, wealth was extremely low in all years. The only encouraging development was an increase between 2007 and 2010 in the wealth of poor black and Latino families headed by someone aged 62-69, with an increase of 20 percent.

Qualitatively, the patterns in Tables 3 and 4 reflecting relatively low-income and low-wealth families are very similar to those identified at the medians of overall income and wealth distributions.<sup>10</sup> In particular, income peaks in middle age; net worth peaks in the younger-old age group; income growth and net-worth changes between 2007 and 2010 generally were more favorable among the older groups

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<sup>9</sup> Emmons and Noeth (2013d) also investigate income and wealth at the 80<sup>th</sup> percentiles of their distributions.

<sup>10</sup> A notable exception is the wealth of poor African-American and Hispanic families, which was extremely low in virtually every year and in most age groups.

than among the middle-aged and young groups; and long-run changes in family income and net worth (1989-2010) were strongest among older age groups, especially the younger-old group. Furthermore, cumulative changes between 1989 and 2010 in both income and wealth measures were positive and significant in almost all older groups, while cumulative changes were essentially zero or negative more often than not among the young and middle-aged groups. In sum, the income and wealth trends during both the recent downturn and over a longer horizon generally favored older age groups, even when considering the 20<sup>th</sup> percentiles of their respective distributions.

#### ***IV. Trends in median family income and wealth grouped by age, race or ethnicity, and educational attainment***

Age of the family head is a powerful predictor of income and wealth, as is race or ethnicity. Educational attainment is another important and relatively stable determinant of income and wealth—stable both in the sense that, once it is determined early in life, a person’s educational attainment rarely changes subsequently; and in the sense that higher levels of educational attainment are consistently associated over time with higher levels of income and wealth.

Emmons and Noeth (2013d) use age, educational attainment, and race or ethnicity of the family head to create a set of mutually exclusive groups of families in a quasi-panel framework to explore the economic and financial diversity of the population over time. They classify each family in each survey year according to its age (young; middle-aged; younger old; or older old), educational attainment (less than high school; high-school grad; or 2- or 4-year college grad), and race or ethnicity (either white or Asian; vs. either African-American or Hispanic of any race), resulting in 24 unique groups. Unsurprisingly, they find vast differences in the levels of income and wealth across disaggregated groups of families as well as in how the financial crisis and recession affected them.

##### **A. Income and wealth trends among historically disadvantaged minority families**

The decline in real median family income between 2007 and 2010 across the entire population was a substantial 7.7 percent (Table 1). Yet, almost half of the demographically defined groups defined by Emmons and Noeth (2013d)—11 out of 24—experienced an increase in median incomes between 2007 and 2010, despite the overall decline. Over the longer 1989-2010 span, the median family income increased by 4.0 percent. Nonetheless, almost half of the groups—10 of 24 groups—experienced a decline during this period. Thus, it is important to isolate key demographic determinants of income trends.

As it turns out, median incomes were just about equally likely to decline over both short-term (2007-10) and long-term (1989-2010) horizons among different education groups and across race or ethnicity groups. What stands out is that the older groups of any education level or race or ethnicity were much less likely to experience declines in median incomes than were young and middle-aged groups. In particular, 10 of the 12 young or middle-aged groups had lower median incomes in 2010 than in 2007, while only three of 12 older groups had declines.<sup>11</sup> Over the longer period, seven of 12 young or middle-aged but only three of 12 older groups experienced declines.

Table 5 documents striking correlations between age and median wealth among historically disadvantaged minority families. Throughout the last two decades, median wealth exceeded a trivial amount (say, \$20,000) only among minority families aged 40 or more, while the median wealth of minority families headed by someone under 40 generally was far less than \$20,000. Severely damaged by the financial crisis and recession, even college-graduate minority families under 40 had median wealth of only \$9,100 in 2010. This represented a 41.5-percent decline from the level observed, on average, between 1989 and 1998. Among young minority families with less than college education, the high-school median wealth in 2010 was \$6,020, while the less-than-high-school median was just \$3,830. Recall that the median wealth among all families was \$77,000 in 2010, while the median among all young families was \$12,900 (Table 1).

Table 5 also reveals a strong correlation between educational attainment and the median wealth of minority families. Median wealth exceeded \$50,000 in 2010 only among older minority families with high-school or college degrees and among middle-aged minority college graduates. Median wealth among minority families headed by someone with less than a high-school degree was \$47,750 for those 62 and older, \$11,300 for those 40-61 years old, and \$3,830 for those under 40.

Age-related differences in long-term wealth accumulation appear much stronger than education-based differences. Older minority families generally have increased their wealth holdings much more than young and middle-aged families over a long period of time, as shown in the next to last column in Table 5.<sup>12</sup> The median wealth among older minority families had increased by 123.8, 83.5, and 36.5 percent, respectively, from the earlier period to 2010, ranked by educational attainment. Young and middle-aged family wealth medians generally declined over that long period, with exceptions only among groups of young families with very low wealth both at the beginning and the end of the comparison period.

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<sup>11</sup> The 12 older groups include six younger-old and six older-old groups.

<sup>12</sup> Due to small cell sizes, we combine the four earliest survey years (1989, 1992, 1995, 1998) to create a baseline median wealth level.

The relationship between educational attainment and long-term wealth accumulation among minority families, on the other hand, is not clear-cut. Young minority college graduates as well as older minority college grads actually did worse than less-educated groups over the long period when measured at their respective wealth medians. On the other hand, middle-aged minority college grads appeared to have fared better over time than families headed by someone with less education.

In sum, both short-term and long-term trends in minority families' income and wealth are subject to a variety of influences. Sorting them out is difficult using only tabular comparisons. Section V below uses regression analysis to assess the relative importance of a host of demographic and behavioral factors in determining a family's income and wealth. Tables 6 and 7 (and the accompanying text) provide details of the regressions, but it is worth noting in this section that age of the family head, educational attainment, and race or ethnicity are very significant in predicting both income and wealth. In general, older, better-educated, and non-minority families have higher incomes and higher wealth, holding constant a large number of other determinants.

#### **B. Assets and liabilities of minority families**

Balance-sheet composition is an important determinant of differential wealth outcomes. Collins, Scholz, and Seshadri (2013) document that black and Hispanic families are much less likely to have diversified asset portfolios than are white families. In particular, minority families had few financial assets, instead investing in housing. Given the severe downturn in housing markets after 2007, this helps explain why minority families' wealth losses were so large. While older minority families had accumulated some financial assets, increasing their financial resilience relative to younger families, most reported far lower levels of financial wealth than their white and Asian counterparts.

Emmons and Noeth (2013b) show that minority families had significantly higher debt ratios (higher balance-sheet leverage) than non-minority families before the financial crisis (see their Figures 8 and 9). Regression evidence confirms that younger and minority families had relatively high levels of debt, controlling for many other factors (see their Table 5). Thus, balance-sheet structure—low asset diversification and high debt, in particular—appeared to contribute to the large loss of wealth experienced by minority families during the crisis.

#### **V. Cohort analysis**

To this point, we have focused on the economic and financial conditions of families in fixed age groups—the young, middle-aged, younger old, and older old—observed across eight waves of the Survey of Consumer Finances. The fixed age-group, or life-cycle, framework highlights effects that

operate on all or most families in a certain age range, whenever they reach it. The underlying assumption is that the stage of life itself is more important than what has come before in a family's experience before it reached that age.

Cohort analysis is an alternative analytical framework that considers the possibility that certain groups of families born at one point in time may experience a life-cycle stage differently than other groups born in different years. By following through time various cohorts of families defined by their year of birth, we may be able to identify unique aspects of their life courses that are not strictly life-cycle regularities.

Regression analysis helps us sort out and quantify cohort and other factors. We first look for birth-year cohort effects in family income, which, if they exist, could help explain patterns in wealth accumulation. Table 6 contains estimation results from a regression of family income on demographic, idiosyncratic, birth-year cohort, and time variables. We have over 35,000 observations across the eight survey waves and the fit of the pooled regression model is good, with an R-squared of 46 percent and many co-efficients estimated with high levels of statistical significance.

#### **A. Family income**

We regress the logarithm of family income in a given year on a cubic function of age to control for life-cycle effects; on standardized (i.e., de-measured by demographic profile) measures of marital status, family size, saving behavior, and health status to isolate potentially important idiosyncratic factors important for wealth accumulation; on education and race or ethnicity indicator variables to capture the effects of human capital and potential legacies of discrimination, respectively; on year dummies to capture time effects during the year of observation; and, of primary interest, on a large set of birth-year cohort indicator variables.

We construct five-year cohorts beginning with families born between 1893 and 1897, referring to this as the 1895 cohort. Each successive five-year cohort (through 1990) is compared to the 1940 cohort, which is an omitted indicator variable. We omit the 1940 cohort both because it is near the middle of the sample of birth years and because it turns out to be a good example of families born at a particular time enjoying an unusually favorable cohort effect.

Estimates of the co-efficients on demographic and idiosyncratic variables reported in Table 6 generally are highly significant with the expected signs. Family income rises with the age of the family head, but at a decreasing rate. Idiosyncratic factors that are reliably associated with higher family income include being married (compared to the likelihood of someone in the person's own demographic group being married), having more children than average, regularly saving money, and enjoying above-

average health.<sup>13</sup> Higher levels of educational attainment are very strongly predictive of higher income as is being white. Being African-American predicts lower income, holding all other factors constant. There is no reliably estimated distinction between the family incomes of Hispanics of any race and Asians (the excluded category) merely due to their ethnicity, holding all else constant.

Time dummies for the 1989-2010 sample dates generally were not significant, although income was statistically significantly higher in 2007 than it was in 1989. Inflation-adjusted family income in 2010 was significantly lower than it was in 1989, holding all else constant. This reflects the very severe recent recession.

Figure 4 shows the marginal effect of birth cohort on a family's inflation-adjusted income, holding constant all the variables described above.<sup>14</sup> If there were no birth-year cohort effects determining family income after controlling for a host of other factors, all of the parameter estimates would be statistically indistinguishable from zero. Co-efficient estimates that are statistically significantly different from zero at the 10-percent level are shown as solid bars in Figure 4; those that are not statistically significant are hollow.

The birth-year cohort variables showed no statistically significant income differences between families born in the five years centered in 1940 (the reference group) and those born during either the 1895, 1900, or 1905 cohorts, once other factors were taken into account. It may be that there are cohort effects but the small number of people in the sample who were born before 1908 leads to imprecise estimates; or there may be no such effects. Survivorship bias also may be important, because those born before 1908 and still alive when the surveys were conducted may be unrepresentative of the entire original cohorts to which they belong—in particular, they may be relatively better off in terms of health, education, lifetime earnings, and wealth.

Families headed by someone born in all cohorts between 1910 and 1930, however, did have statistically significantly lower incomes than families born in the 1940 cohort even after controlling for a number of demographic, idiosyncratic, and time effects. The estimated magnitudes of difference—increasing monotonically from a 33-percent lower level among the 1910 cohort to a 10-percent lower level among the 1930 cohort—are consistent with a generally rising level of family income across successive birth-year cohorts as overall standards of living increase. This alone might help explain higher wealth among later-born generations, which we investigate below.

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<sup>13</sup> Each of the standardized variables is expressed as the deviation from the own-demographic-group mean value so that none of the behavioral variables proxies for a demographic group, which enters the regression separately.

<sup>14</sup> The figure plots co-efficients reported in Table 6.

In terms of family income, the results in Table 6 and Figure 4 show that families headed by someone born in the 1935, 1940, or 1945 cohorts—i.e., between 1933 and 1947—were statistically indistinguishable from each other. However, beginning with the 1950 cohort—including families headed by someone born between 1948 and 1952—, successive cohorts through 1970 (born 1968-72) had statistically significantly *lower* incomes than those of the 1940 cohort, controlling for many important factors. The estimated magnitudes are economically significant, too—between 16 and 27 percent lower than the 1940 cohort. Moreover, all remaining five-year cohorts beginning in 1975 had estimated income shortfalls of about 20 percent; however, these effects were not measured precisely. The fading of a negative cohort effect after 1970 may be due to a true diminution of the effect or it may be due to relatively small sample sizes and high variability among younger families' incomes.

The cohort effects in family income are striking. Incomes rise strongly and consistently beginning with the 1910 cohort through about the 1935 cohort, even after holding constant a number of key determinants of income like age, education, race or ethnicity, and idiosyncratic factors like family structure, saving behavior, and health status. Incomes are similar among the 1935, 1940, and 1945 cohorts, controlling for other factors; then (adjusted) incomes drop abruptly beginning with the 1950 cohort. Compared to the 1940 cohort, there is strong evidence of a 16- to 27-percent income shortfall in all cohorts between 1950 and 1970 (born between 1948 and 1972)—approximately the Baby-Boom era. There is suggestive evidence that the shortfall has continued through at least the 1990 cohort, but more data and the passing of time will be required to know for sure.

## **B. Family wealth**

Given the evidence in Table 6 and Figure 4 that there are important cohort effects in family income—strongly increasing for successive cohorts between 1910 and 1930, little changed between the 1935 and 1945 cohorts, then significantly lower for the 1950 cohort through at least 1970—it would not be surprising to find similar effects in family wealth. After all, unusually high incomes for the 1935, 1940, and 1945 cohorts might have supported higher saving rates than among earlier- and later-born cohorts.

Emmons and Noeth (2013d) report the results of two model specifications that do, indeed, show strong evidence of cohort effects that lifted the wealth of families born in the 1930s and 1940s above that of families born before or after, holding constant many factors that determine wealth. A logarithmic specification corresponds closely to the model of income reported in Table 6, but it requires us to drop all observations that include zero or negative values of net worth. About 8½ percent of all family-year observations must be dropped. These families are more likely to be young or middle-aged,

so eliminating them may reduce our ability to measure wealth accumulation accurately among Baby Boomers and Gen-Xers.

An alternative transformation of net worth—the inverse hyperbolic sine (IHS) function—allows us to include zero or negative wealth observations while retaining a similar interpretation of results to the log model.<sup>15</sup> The model estimated with the IHS transformation of net worth includes 3,013 more observations than the log model and captures information contained in the observations of families with zero or negative reported net worth.

After applying the Halversen-Palmqvist transformation to co-efficient estimates of indicator variables, Table 7 reports results for an identical set of independent variables used in the log of income specification reported in Table 6. Figure 5 illustrates our estimates of the marginal effects of birth-year cohort on a family's wealth, holding constant demographic, idiosyncratic, and time effects. The solid bars in the figure are statistically significant at the 10-percent level while the hollow bars are not.

The IHS model in Table 7 improves the model's overall fit compared to the log specification, raising the R-squared slightly (Emmons and Noeth, 2013d). More importantly, it provides much stronger evidence for significant birth-year cohort effects in wealth accumulation than the log specification did.

If anything, we find even stronger birth-year cohort effects on family wealth than on income during the first third of the 20<sup>th</sup> century. The wealth of families in the 1905, 1910, and 1915 cohorts is estimated to be 43 to 46 percent lower than the wealth of families in the 1940 cohort, holding all else constant. The largest cohort effect on income—in the 1910 cohort—was only negative 33 percent (see Table 6). We find that cohorts from 1910 through 1935 enjoy successively lower shortfalls in wealth, although even the 1935 cohort has about 10 percent lower wealth than the 1940 cohort. Recall that we found no statistical difference between the 1935 and 1940 cohorts in the income regression.

We cannot distinguish between the wealth of the 1940 and 1945 cohorts, as was true of income. Moreover, the IHS wealth specification also fails to distinguish between the 1940 cohort and the 1950, 1955, and 1960 cohorts. The latter three cohorts all were found to have statistically significantly lower income than the 1940 cohort. Nonetheless, the 1950, 1955, and 1960 cohorts all are estimated to have between 10 and 18 percent lower wealth, holding all constant (albeit estimated imprecisely).

The IHS specification for wealth also is qualitatively similar to the income results for Baby Boomers and Gen-Xers. The estimated wealth shortfall for families in the 1970, 1975, and 1980 cohorts

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<sup>15</sup> See Pence (2006) and Gale and Pence (2006) for extensive discussion and application of the inverse hyperbolic sine transformation to balance-sheet data.



is about 40 percent, roughly twice the estimated income shortfall. The very large and significant positive wealth effect for the 1990 cohort is striking, but must be taken with a grain of salt since these individuals and families are few in number and observed only in the most recent surveys at very young ages.

### **C. What's behind cohort effects in income and wealth?**

Our regression results strongly support the hypothesis that rising levels of income and wealth during the first several decades of the 20<sup>th</sup> century came to an end at some time around mid-century, holding constant demographic characteristics like health status and educational attainment.<sup>16</sup> One possible explanation is that the arrival of the Baby Boomers somehow disrupted the process of rising standards of living for given demographic characteristics. Another possibility is that the ends of the Great Depression and World War II were associated with social, political, and economic changes that favored generations born before the Baby Boomers. We only speculate on underlying causes here and leave deeper investigations for future research.

An obvious place to start is with relative cohort sizes. The idea is that relatively small cohorts may have attracted “scarcity premiums” in labor, housing, and financial markets while relatively large cohorts paid “crowding penalties” in those markets.<sup>17</sup> Figure 6 displays the number of babies (under one year old) in the United States between 1896 and 2015 (the latter years derived from Census projections). The striking 20-percent decline in the number of infants between 1925 and 1937 likely reflects the massive disruption of the Great Depression as well as the slowdown in the population’s natural growth rate after earlier high immigration rates declined. Even after the infant population began to rise again in the late 1930s, it was not until 1945 that the size of this population reached the level of 20 years earlier. Thus, these very small birth-year cohorts well may have been favored later in life in the form of relatively higher earnings, lower house prices, stronger growth in financial-asset prices, etc. Sociologist Elwood Carlson (1988) called the generation born between 1929 and 1945 “the lucky few,” precisely because it was the first American generation to be smaller in number than those that came before. Carlson argued that African-Americans and women born in those years also enjoyed historically unprecedented opportunities throughout their adult lives that members of previous generations missed, and which had less impact on later-born cohorts.

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<sup>16</sup> Collins et. al. (2013) do not find evidence of lower wealth among families headed by someone born in the second half of the 20<sup>th</sup> century, but they do not hold important demographic factors constant as we do.

<sup>17</sup> Easterlin (1987) documents the influence of cohort size on economic and social outcomes with particular emphasis on the Baby Boom generation.

As the recovery of the infant population proceeded in the 1940s, it was transformed into the Baby Boom. Peaking in the early 1960s, the infant population doubled in little more than two decades. Given trends in births both before and after, it appears now that the Baby Boom was an historical aberration, rather than a return to an old trend or transition to a new trend. Indeed, the “baby bust” that commenced in the early 1960s appears to have taken the infant population back toward its new longer-term trend. Hence, it is plausible that Baby Boomers may have suffered from crowding in labor, housing, and financial markets (Easterlin, 1987). This may have resulted in unfavorable developments in income and wealth accumulation.

Another possible set of explanations of the apparent end of rising levels of income and wealth for a given set of demographic factors relates to changes in economic growth and social policies. Post-World War II economic growth was very rapid and the value of housing and financial assets increased strongly. People born in the first half of the 20<sup>th</sup> century simply may have been in the right place at the right time, rather than attracting any special advantages related to their absolute numbers. A related channel of causation is the post-war expansion of the social safety net, especially for retired people. The steadily increasing generosity of Social Security as well as the creation of Medicare in the 1960s and, 40 years later, a significant expansion in the form of the Medicare drug benefit, greatly increased the resources being directed to adults reaching retirement age in the 1990s and 2000s.

So-called “generational accounts” summarize all of the benefits received and taxes paid by members of a specific birth year in present-value terms (Gokhale, 2012). As Figure 6 shows, Americans born before 1970, and especially before 1960, generally will receive substantially more benefits from social policies than the taxes they pay. The situation is reversed among people born later. For many, the net benefit or net cost of social transfers and taxes is of the same magnitude as their wealth. Thus, differential impacts of transfers and taxes could be a significant contributor to the cohort effects we identify.

#### **D. The outlook for future generations of older adults**

Will the favorable income and wealth trends observed among today’s older adults continue? We cannot know for sure, but it appears unlikely to us that Baby Boomers—who are just now entering retirement in large numbers—will enjoy incomes and wealth for given demographic characteristics as favorable as those enjoyed by pre-boomers.

First, the Baby Boomers already have significantly lower demographically-adjusted incomes and wealth for their stage in the life cycle, as we documented above. There is little time to make up these shortfalls, and even less reason to believe that social policies will be changed to assist them. Second, it

appears more likely that redistribution toward older adults will be reduced, rather than increased, to make up any putative shortfall. This would reduce the net social gains received by individual families shown in Table 6.

As for cohorts born after the Baby Boomers, our evidence points to very little change from the trends experienced by the Baby Boomers at least in the short term. That is, we would not expect a significant increase in the level of income or wealth for a given set of demographic characteristics. Emmons and Noeth (2014) show that members of Generation X (born 1965-80) and Generation Y, or Millennials, (born 1981-2000) were hard-hit by the recession and housing crash. Young adults born in the late 1970s and early 1980s appear to have felt the most severe effects in the housing market. Although these individuals and families still have many years to recover, they face a slow-growing economy and the looming possibility of fiscal reforms to reduce the long-term structural budget imbalances of governments at all levels.

Any future increases in educational attainment or improved health, nonetheless, would be expected to translate into higher income and wealth. Only the passage of time and the accumulation of more data will allow us to be more confident about how the demographic drivers of economic and financial well-being will evolve and how the “returns” to those characteristics might change.

## **VI. Conclusions**

The income and wealth of the typical older adult generally has held up better than those of young and middle-aged families, both during the recent financial crisis and recession and over a two-decade span reaching back to 1989. The same is true of families at the respective 20<sup>th</sup> percentiles of the distributions of income and wealth when grouped by age, educational attainment, and race or ethnicity. Economically vulnerable families of all ages, including minorities and those with less education, generally suffered large wealth losses during the crisis.

One important factor contributing to the lower susceptibility of older families to economic and financial turbulence, both recently and in previous downturns, is their greater reliance on relatively stable sources of income, such as Social Security and pension wealth. Their balance sheets are less risky due to greater asset diversification, less leverage, and more liquid-asset holdings compared to young and middle-aged families.

Another important factor underlying the favorable income and wealth trends observed in currently living older adults appears to be significantly increasing birth-year cohort effects for people

born in the first half of the 20<sup>th</sup> century, culminating in the early 1940s. This means that, for a given set of demographic characteristics such as educational attainment and health status, a family enjoyed higher income and wealth, the later the family head was born in the first half of the century. After about 1950, however, families actually received lower incomes and accumulated less wealth for a given set of demographic characteristics. For reasons we do not fully understand, there is little evidence that this deterioration for people born in the second half of the 20<sup>th</sup> century has ended, let alone reversed itself.

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Table 1

**Median Inflation-Adjusted Family Income by Age Group**

Age of family head	Median family income (2010 dollars, deflated by CPI-U-RS)			Difference in respective medians (percent)	
	1989	2007	2010	1989-2010	2007-10
All ages	\$43,985	\$49,561	\$45,743	4.0%	-7.7%
Young (under 40)	42,226	45,251	39,644	-6.1	-12.4
Middle-aged (40-61)	58,061	64,644	56,924	-2.0	-11.9
Younger old (62-69)	31,669	45,251	50,825	60.5	12.3
Older old (70 and older)	24,632	27,258	31,512	27.9	15.6

Source: Federal Reserve Board, Survey of Consumer Finances



Table 2

**Median Inflation-Adjusted Net Worth by Age Group**

<b>Age of family head</b>	<b>Median family net worth (2010 dollars, deflated by CPI-U-RS)</b>			<b>Difference in respective medians (percent)</b>	
	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$79,374	\$126,539	\$77,000	-3.0%	-39.2%
<b>Young (under 40)</b>	18,553	20,671	12,900	-30.5	-37.6
<b>Middle-aged (40-61)</b>	142,353	189,148	108,00	-24.1	-42.9
<b>Younger old (62-69)</b>	134,493	271,507	234,000	74.0	-13.8
<b>Older old (70 and older)</b>	141,678	222,108	209,290	47.7	-5.8

Source: Federal Reserve Board, Survey of Consumer Finances

Table 3

Inflation-Adjusted Family Income by Age Group at the 20<sup>th</sup> Percentile of the Distribution

	Family income at 20 <sup>th</sup> percentile of distribution (2010 dollars, deflated by CPI-U-RS)			Difference in values at 20 <sup>th</sup> percentile (percent)	
<b>All families</b>					
	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$17,594	\$21,548	\$20,330	15.6%	-5.7%
<b>Whites and Asians</b>					
<b>Age of family head</b>	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$21,113	\$23,703	\$23,380	10.7%	-1.4%
<b>Young (under 40)</b>	21,113	26,935	21,143	0.1	-21.5
<b>Middle-aged (40-61)</b>	36,596	32,322	29,275	-20.0	-9.4
<b>Younger old (62-69)</b>	17,594	23,487	24,599	39.8	4.7
<b>Older old (70 and older)</b>	14,075	15,084	17,281	22.8	14.6
<b>African-Americans and Hispanics of any race</b>					
<b>Age of family head</b>	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$8,797	\$15,084	\$15,248	73.3%	1.1%
<b>Young (under 40)</b>	10,556	15,084	15,248	44.4	1.1
<b>Middle-aged (40-61)</b>	9,149	19,178	18,297	100.0	-4.6
<b>Younger old (62-69)</b>	7,038	15,946	16,264	131.1	2.0
<b>Older old (70 and older)</b>	7,038	8,425	11,995	70.4	42.4

Source: Federal Reserve Board, Survey of Consumer Finances

Table 4

Inflation-Adjusted Net Worth by Age Group at the 20<sup>th</sup> Percentile of the Distribution

	Family net worth at 20 <sup>th</sup> percentile of distribution (2010 dollars, deflated by CPI-U-RS)			Difference in values at 20 <sup>th</sup> percentile (percent)	
<b>All families</b>					
	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$3,711	\$7,680	\$4,300	15.9%	-44.0%
<b>Whites and Asians</b>					
<b>Age of family head</b>	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	\$13,325	\$16,491	\$8,800	-34.0%	-46.6%
<b>Young (under 40)</b>	1,741	2,079	-570	-132.7	-127.4
<b>Middle-aged (40-61)</b>	47,459	40,711	18,376	-61.3	-54.9
<b>Younger old (62-69)</b>	43,516	71,684	54,004	24.1	-24.7
<b>Older old (70 and older)</b>	43,381	69,673	60,848	40.3	-12.7
<b>African-Americans and Hispanics of any race</b>					
<b>Age of family head</b>	<b>1989</b>	<b>2007</b>	<b>2010</b>	<b>1989-2010</b>	<b>2007-10</b>
<b>All ages</b>	-	\$221	-	Not meaningful	-100.0%
<b>Young (under 40)</b>	-128	-	-236	Not meaningful	Not meaningful
<b>Middle-aged (40-61)</b>	-	1,619	890	Not meaningful	-45.0
<b>Younger old (62-69)</b>	-	5,810	6,972	Not meaningful	20.0
<b>Older old (70 and older)</b>	877	3,357	830	-5.4	-75.3

Source: Federal Reserve Board, Survey of Consumer Finances

Table 5

**Median Inflation-Adjusted Net Worth of African-American or Hispanic Families**

Age of family head	Median family net worth (2010 dollars, deflated by CPI-U-RS)			Difference in respective medians (percent)	
	Average of 1989, 1992, 1995, and 1998 medians	2007	2010	[Average of (1989-1998 medians)] to 2010	2007-10
<b>Less than high-school degree</b>					
Young (under 40)	\$1,111	\$5,448	\$3,830	244.8%	-29.7%
Middle-aged (40-61)	13,406	17,915	11,300	-15.7	-36.9
All old (62 and older)	21,337	32,478	47,750	123.8	47.0
<b>High-school grad or GED</b>					
Young (under 40)	\$4,553	\$6,642	\$6,020	32.2%	-9.4%
Middle-aged (40-61)	40,992	55,967	22,350	-45.5	-60.1
All old (62 and older)	60,378	91,284	110,800	83.5	21.4
<b>2- or 4-year college degree</b>					
Young (under 40)	\$15,567	\$13,620	\$9,100	-41.5%	-33.2%
Middle-aged (40-61)	110,362	223,051	109,700	-0.6	-50.8
All old (62 and older)	141,878	352,440	193,650	36.5	-45.1

Source: Federal Reserve Board, Survey of Consumer Finances

Table 6

**Pooled Regression of Logarithm of Family Income on Demographic, Idiosyncratic, Birth-Year Cohort, and Time Variables**

Variable	Beta	T-Stat
Intercept	7.432	25.12
Age in years	0.170	13.17
Age squared	-0.002	-8.61
Age cubed	0.000	4.64
Standardized marital status	0.458	67.16
Standardized number of children	0.060	8.97
Standardized saving indicator	0.198	28.64
Standardized health status	0.491	30.19
High-school drop-out indicator	-1.419	-60.71
High-school grad or GED indicator	-1.037	-62.65
Some college indicator	-0.697	-35.96
College graduate (omitted)		
White indicator	0.282	8.27
African-American or Black indicator	-0.165	-4.18
Hispanic of any race indicator	-0.043	-1.02
Asian or other (omitted)		
Birth year 1893-97 indicator	-0.131	-0.20
Birth year 1898-1902 indicator	0.022	0.08
Birth year 1903-07 indicator	-0.080	-0.41
Birth year 1908-12 indicator	-0.329	-2.13
Birth year 1913-17 indicator	-0.219	-1.72
Birth year 1918-22 indicator	-0.189	-1.85
Birth year 1923-27 indicator	-0.136	-1.73
Birth year 1928-32 indicator	-0.098	-1.66
Birth year 1933-37 indicator	-0.016	-0.39
Birth year 1938-42 (omitted)		
Birth year 1943-47 indicator	-0.027	-0.70
Birth year 1948-52 indicator	-0.185	-3.39
Birth year 1953-57 indicator	-0.162	-2.18
Birth year 1958-62 indicator	-0.195	-2.04
Birth year 1963-67 indicator	-0.226	-1.92
Birth year 1968-72 indicator	-0.271	-1.94

Birth year 1973-77 indicator	-0.192	-1.18
Birth year 1978-82 indicator	-0.179	-0.97
Birth year 1983-87 indicator	-0.214	-1.02
Birth year 1988-92 indicator	-0.224	-0.91
Year 1989 (omitted)		
Year 1992 indicator	-0.034	-1.05
Year 1995 indicator	-0.027	-0.67
Year 1998 indicator	0.019	0.39
Year 2001 indicator	0.148	2.42
Year 2004 indicator	0.177	2.42
Year 2007 indicator	0.266	3.10
Year 2010 indicator	-0.091	-0.92
R Squared of first regression	0.46	
Observations	35,245	

Table 7

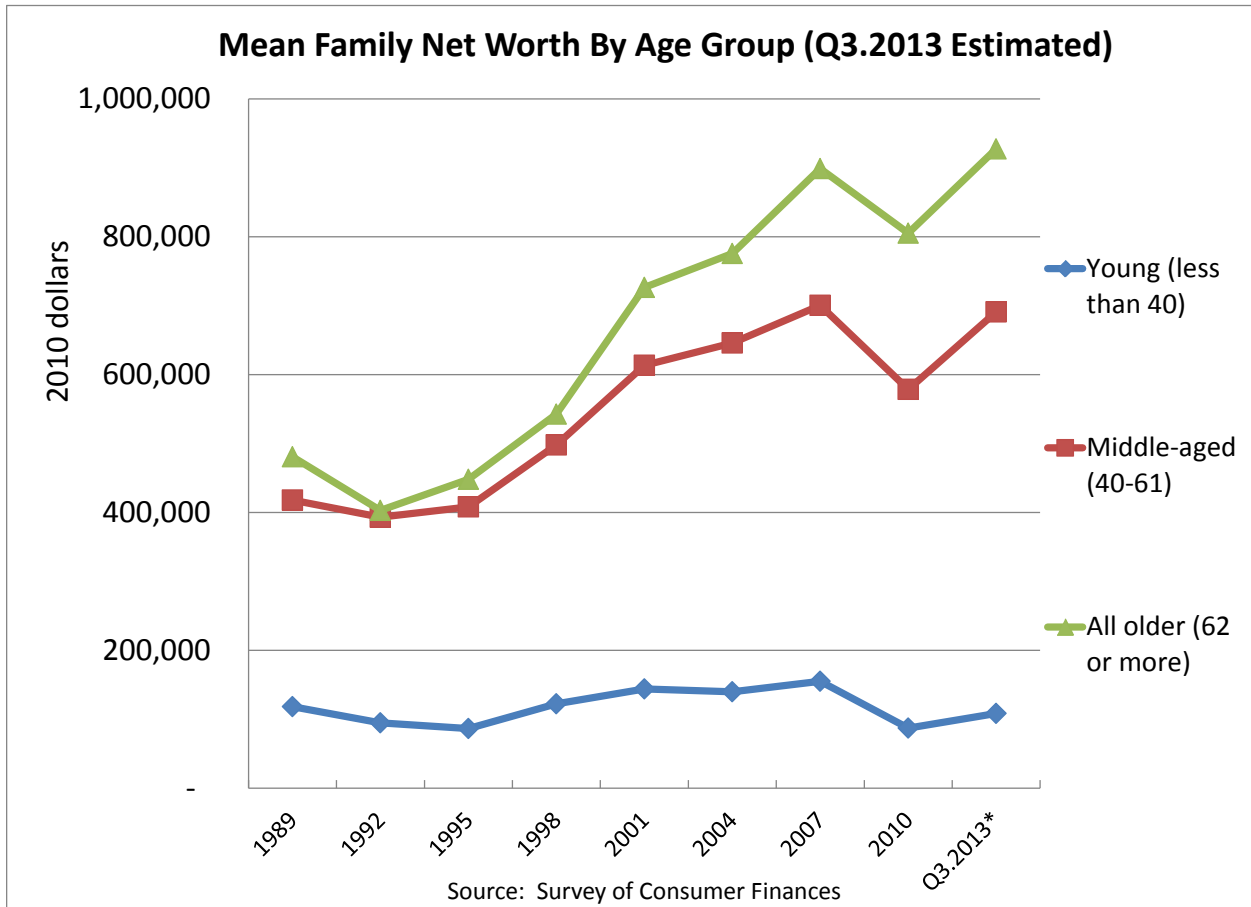
**Pooled Regression of Transformed Net Worth on Demographic, Idiosyncratic, Birth-Year Cohort, and Time Variables**

Variable	Beta	T-Stat
Intercept	9,211.16	2.17
Standardized Square Root Income (By Demographic)	10,302.76	96.52
Age in years	209.93	1.13
Age squared	19.55	5.78
Age cubed	(0.18)	-8.69
Standardized marital status	3,835.15	38.84
Standardized number of children	828.88	8.75
Standardized saving indicator	2,937.74	29.02
Standardized health status	5,972.67	26.39
High-school drop-out indicator	-0.901	-70.02
High-school grad or GED indicator	-0.791	-65.22
Some college indicator	-0.736	-49.23
College graduate (omitted)		
White indicator	0.313	5.72
African-American or Black indicator	-0.585	-15.83
Hispanic of any race indicator	-0.494	-11.38
Asian or other (omitted)		
Birth year 1893-97 indicator	0.032	0.03
Birth year 1898-1902 indicator	-0.097	-0.25
Birth year 1903-07 indicator	-0.451	-2.15
Birth year 1908-12 indicator	-0.463	-2.86
Birth year 1913-17 indicator	-0.428	-3.14
Birth year 1918-22 indicator	-0.327	-2.75
Birth year 1923-27 indicator	-0.295	-3.15
Birth year 1928-32 indicator	-0.198	-2.66
Birth year 1933-37 indicator	-0.098	-1.77
Birth year 1938-42 (omitted)		
Birth year 1943-47 indicator	0.004	0.07
Birth year 1948-52 indicator	-0.103	-1.41

Birth year 1953-57 indicator	-0.123	-1.25
Birth year 1958-62 indicator	-0.175	-1.43
Birth year 1963-67 indicator	-0.282	-2.01
Birth year 1968-72 indicator	-0.428	-2.83
Birth year 1973-77 indicator	-0.408	-2.29
Birth year 1978-82 indicator	-0.395	-1.92
Birth year 1983-87 indicator	-0.263	-1.02
Birth year 1988-92 indicator	0.953	1.93
Year 1989 (omitted)		
Year 1992 indicator	-0.017	-0.38
Year 1995 indicator	0.024	0.41
Year 1998 indicator	0.009	0.13
Year 2001 indicator	0.176	1.86
Year 2004 indicator	0.140	1.25
Year 2007 indicator	0.282	2.03
Year 2010 indicator	-0.392	-3.56
R Squared of first regression	0.642	
Observations	35,514	
Scaling Parameter, theta	0.0001	



Figure 1



Sources: Federal Reserve Board, Bureau of Labor Statistics

\*Estimates for Q3.2013 are based on the following sources and our own assumptions:

Federal Reserve Board, Survey of Consumer Finances

Federal Reserve Board, Financial Accounts of the United States (formerly the Flow of Funds Accounts)

Federal Reserve Bank of New York, Equifax Consumer-Credit Panel

Bureau of the Census, Current Housing Reports

Bureau of the Census, Current Population Survey

Bureau of Labor Statistics, Consumer Price Index, Research Series

Figure 2

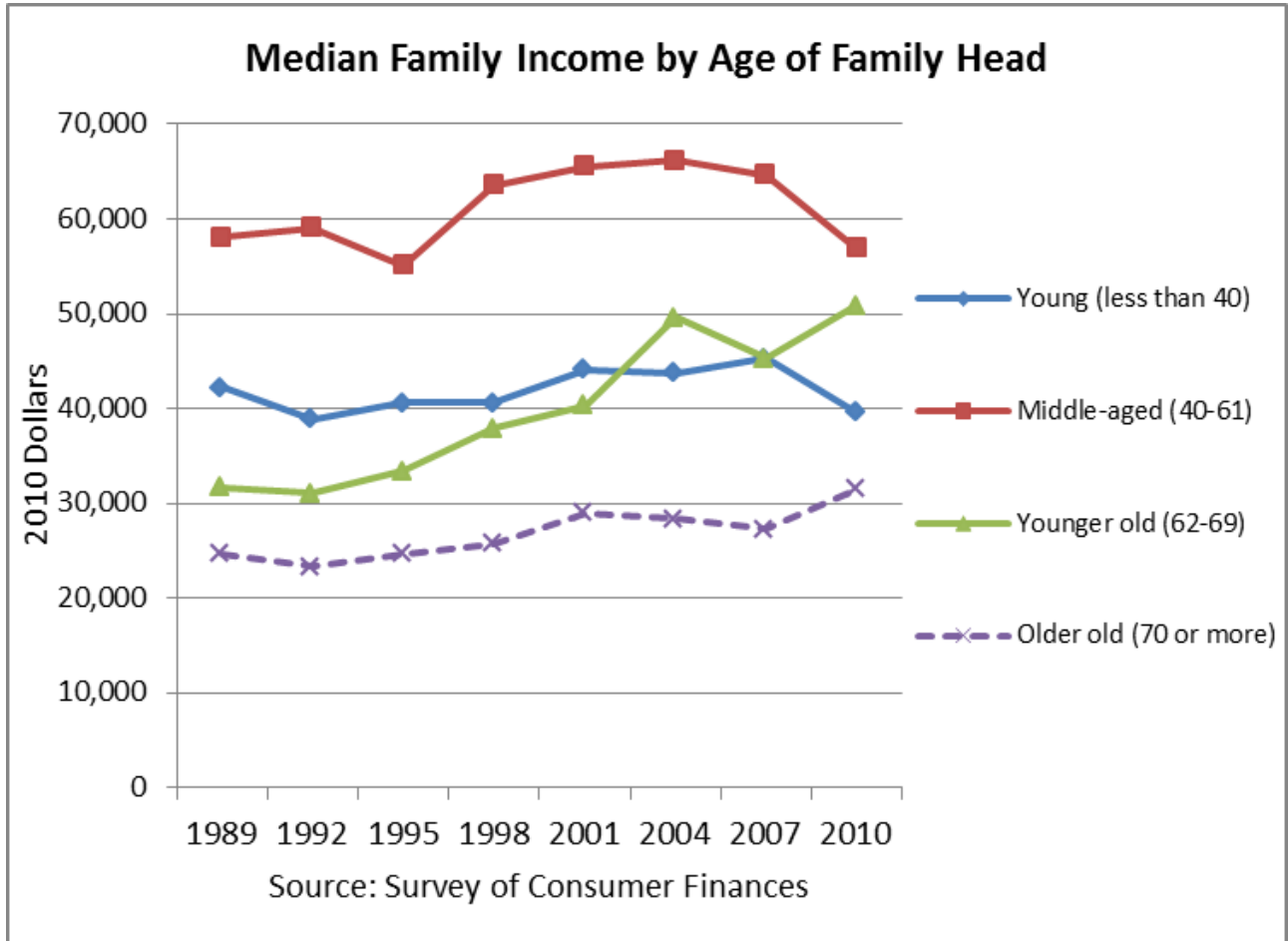


Figure 3

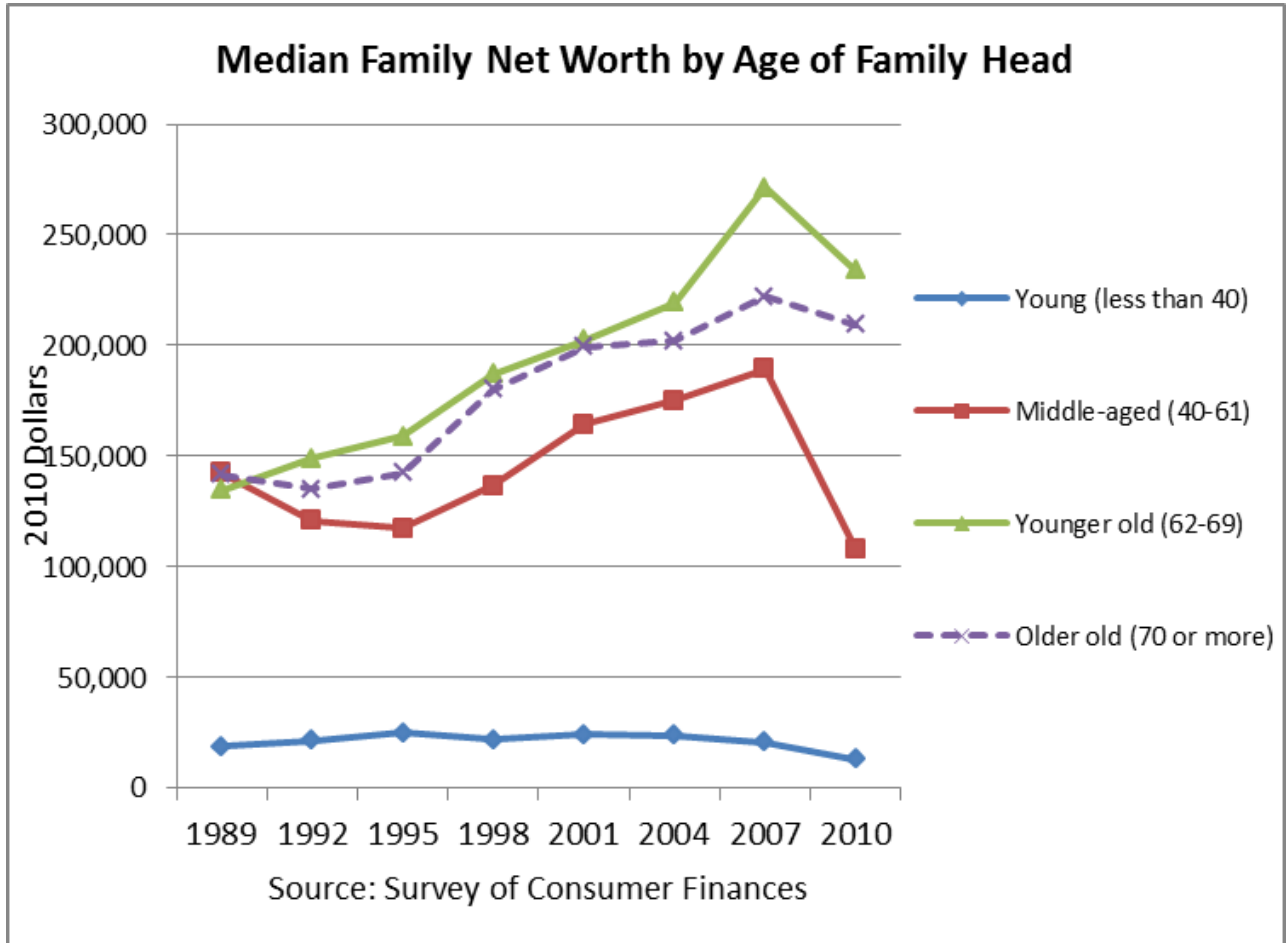
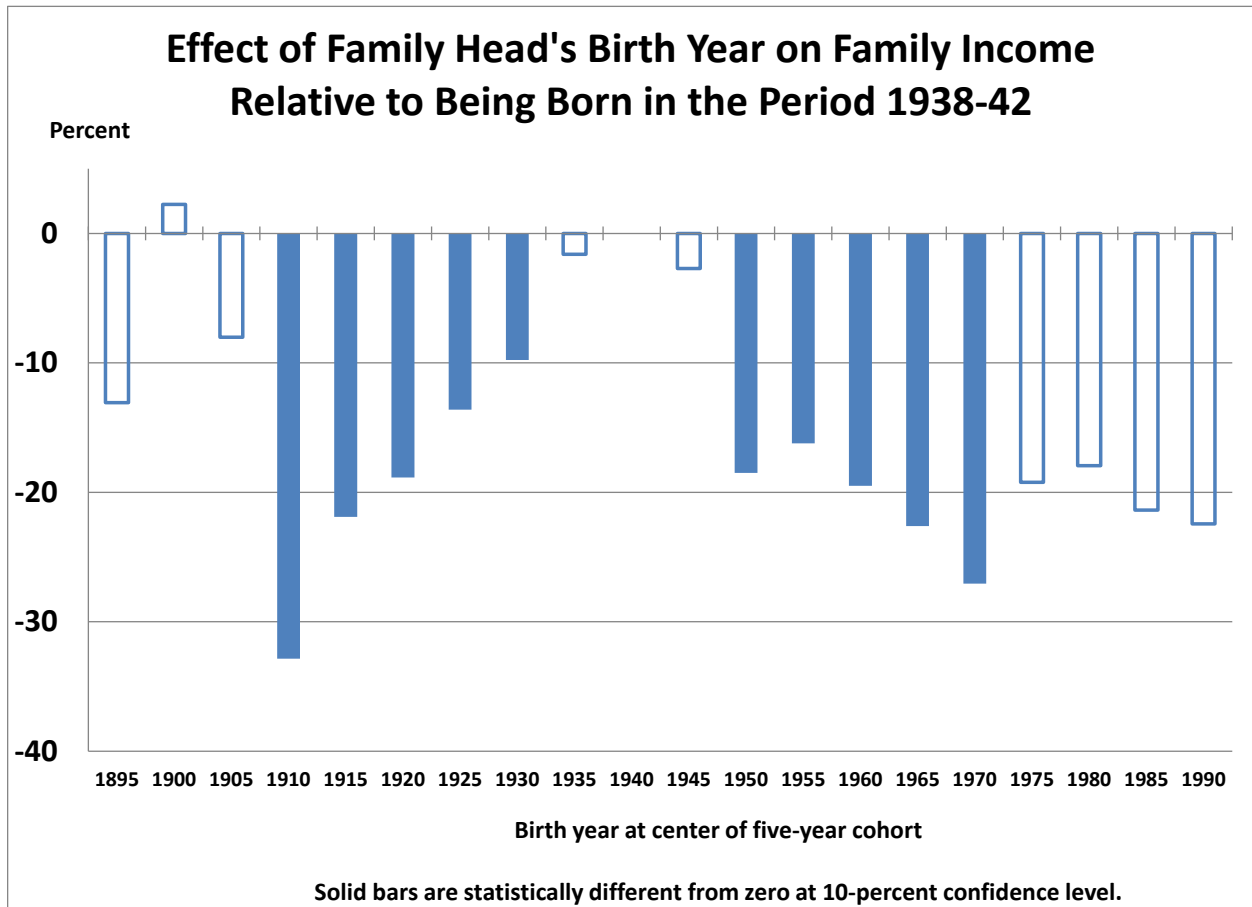


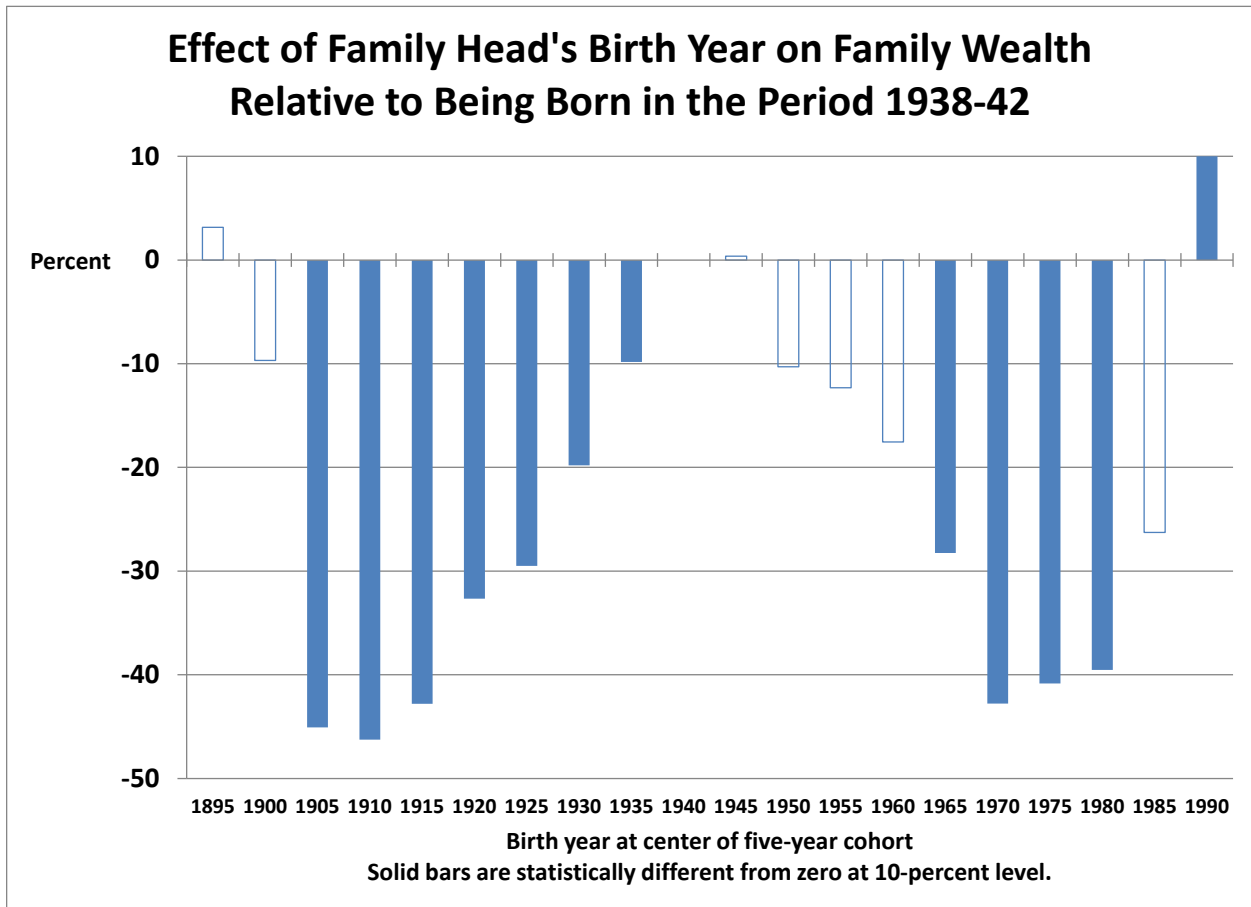
Figure 4



Co-efficients represent the estimated percent difference in income of a family in a five-year birth-year cohort centered around the given year compared to the cohort of families with heads born in the five-year cohort centered around 1940.

Sources: Federal Reserve Board

Figure 5

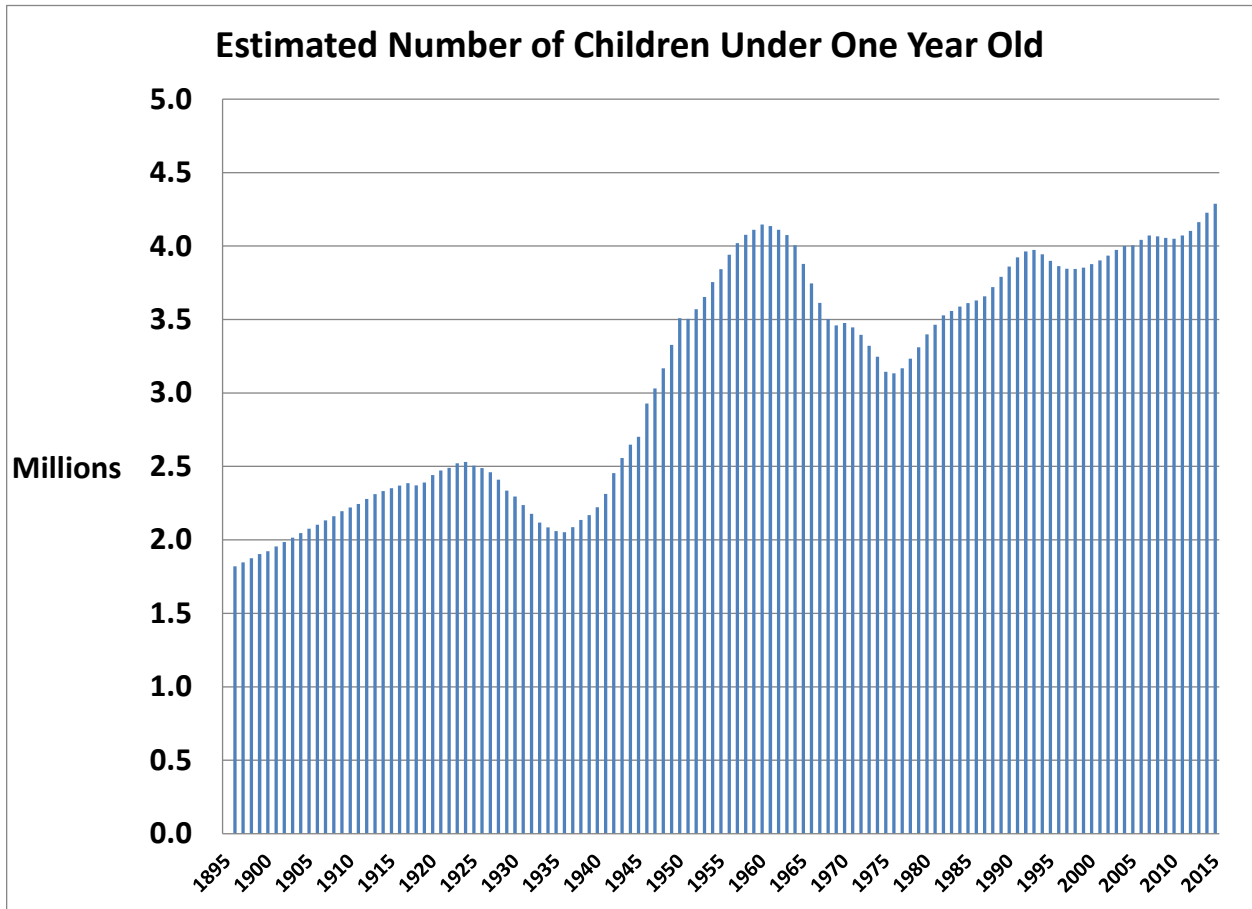


Co-efficients represent the estimated percent difference in wealth of a family in a five-year birth-year cohort centered around the given year compared to the cohort of families with heads born in the five-year cohort centered around 1940.

The co-efficients are transformed as suggested by Halvorsen and Palmquist (1980).

Sources: Federal Reserve Board

Figure 6



Source: Census Bureau and own estimates.

Figure 7

**Generational Accounts As Of 2012**

<b>Year of birth</b>	<b>Generation</b>	<b>Average per-capita lifetime net benefit from federal benefits received minus taxes paid</b>
1923	Greatest	\$105,900
1933	Silent	\$191,100
1943	Silent	\$279,300
1953	Baby Boom	\$222,700
1963	Baby Boom	\$54,200
1973	Gen X	-\$75,250
1983	Gen Y	-\$160,150
1993	Gen Y	-\$183,400
2003	Post-Millennial	-\$135,100
2013	Post-Millennial	-\$86,900

Source: Gokhale (2012) and own assignment of birth years to generations