

Impact of the Great Recession and Beyond: Disparities in Wealth Building by Generation and Race

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Abstract

This paper uses over two decades of Survey of Consumer Finances data and a pseudo-panel technique to measure the impact of the Great Recession on wealth relative to the counterfactual of what wealth would have been given wealth accumulation trajectories. Our regression-adjusted synthetic cohort-level models find that the Great Recession reduced the wealth of American families by 28.5 percent—nearly double the magnitude of previous pre-post mean descriptive estimates and double the magnitude of any previous recession since the 1980s. The housing market was only part of the story; all major wealth components fell as a result of the Great Recession.

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I. Introduction

With few assets to draw from in case of a financial emergency, many American families were in a vulnerable position at the onset of the Great Recession. The precipitous drop in home values and the sharp rise in unemployment that came about with the Great Recession made matters worse. By 2010, one out of every five U.S. families (20 percent) was asset poor, up from 16 percent in 2007.¹ Many families lost their homes through foreclosure. Family wealth was also lost through the stock market decline, and some families made early withdrawals (or made fewer deposits) from retirement savings to weather unemployment. Each of these events further weakened the economic security of American families.

This paper uses over two decades of Survey of Consumer Finances (SCF) triennial data to examine wealth changes in the context of the life cycle and compare the Great Recession with prior recessions. We use synthetic cohorts to construct pseudo-panel data based on the SCF's repeated cross-sections to measure the impact of the Great Recession on wealth relative to the counterfactual of what wealth would have been given wealth accumulation trajectories. We examine changes in total wealth, as well as its major components to gain a better understanding of which components drove the total wealth changes. Wealth accumulation patterns differ across generations and racial/ethnic groups, so we estimate the effect of the Great Recession on different cohort groups (i.e., generations) and by race/ethnicity.

In a literature dominated by studies using pre-post descriptive methods, this paper contributes to the literature by measuring the impact of the Great Recession on family wealth (1) within the context of life cycle wealth accumulation, (2) relative to prior business cycles, (3) by major wealth component, and (4) while controlling for educational attainment and other socioeconomic characteristics.

The Great Recession lives up to its name. Our regression-adjusted synthetic cohort-level models find that the Great Recession reduced the wealth of American families by 28.5 percent—nearly double the magnitude of previous pre-post mean descriptive estimates and double the magnitude of any previous recession since the 1980s. The housing market was only part of the story; all major wealth components fell as a result of the Great Recession. Home equity (primary

¹ A family is categorized as asset poor if it does not have enough resources, measured as total wealth, to live at the federal poverty level for three months. This translates into \$5,580 for a family of four in 2010 (Ratcliffe and Zhang, 2012).

residence) and business equity fell over one-third and retirement and non-retirement assets fell about one-fifth. Our descriptive results suggest young families and families of color were not on good wealth-building paths before the financial crisis, and our regression results find that they lost the largest fraction of their wealth as a result of the crisis. The large wealth losses of younger cohorts (those born 1967 to 1975) are driven in part by large declines in home equity. Many of these Gen X'ers bought their first home in the years leading up to the housing collapse and were more leveraged than other age groups in housing. When we examine differences by race and ethnicity, we find that African Americans and Hispanic families lost a larger percentage of their wealth than white families (47.6 and 44.3 percent versus 26.2 percent, respectively).

The paper is organized as follows. Section II provides an overview of findings from the literature. Data and measures are described in Section III. Section IV presents descriptive results on life cycle wealth accumulation trajectories by birth cohort and race/ethnicity. Section V and VI present the regression methods and results, and Section VII concludes.

II. Literature

A series of studies in the literature use descriptive methods to examine changes in wealth before and after the Great Recession, finding large wealth losses overall and for Hispanic and non-Hispanic African American families relative to non-Hispanic white families. U.S. family mean wealth fell 15-18 percent and median wealth fell in a broader 18-47 percent range (Boshara and Emmons 2013, Bricker et al. 2011, Bricker et al. 2012, Smeeding 2012, Wolff 2013).² Across these studies there are differences in data and years examined: cross-sectional SCF (2007 and 2010), SCF panel (2007-2009), and Flow of Funds data (2007 and 2010).³

By race and ethnicity, mean wealth losses during the Great Recession range from 44 to 50 percent for Hispanic families, to 31 to 34 percent for African American families, and 10 to 13 percent for white families (Bricker et al. 2012, Choi 2013, McKernan et al. 2013, Shapiro et al. 2013, Taylor et al. 2011, Wolff 2013).⁴ These studies use a variety of data sets (SCF, Survey of

² These studies typically exclude the value of future Social Security and defined benefit pensions from wealth; Wolff (2013) also excludes vehicles.

³ The lower end of the median range (18 percent) comes from the SCF panel, perhaps reflecting the fact that the wealth change is measured a year earlier (2007-2009 versus 2007-2010).

⁴ At the median, the losses range from 61 to 66 percent for Hispanic families, 21 to 53 percent for African American families, and 12 to 26 percent for white families. The lower bound estimate for African Americans (21 percent) and whites (12 percent) come from Shapiro Meschede, and Osoro (2013), which uses the 2007-2009 Panel Study of

Income and Program Participation, Panel Study of Income Dynamics) and measure changes across different time periods (some as short as 2007-2009, others as long as 2005-2011). Even with these differences, the studies generally find that Hispanic and African American families lost more in percentage terms than white families, with Hispanic families experiencing the largest relative losses.

With larger wealth declines among the young and families of color, as well as less-educated families, the already unequal distribution of wealth in the United States grew worse (e.g., Boshara and Emmons 2013, Moore and Palumbo 2010, Steuerle et al. 2013, Wolff 2013, Wolff, Owens, and Burak 2011). Evidence is also emerging that the recovery from the Great Recession is uneven, with the wealthiest seven percent of households benefitting disproportionately relative to the less wealthy 93 percent (Fry and Taylor 2013).

Some literature takes the descriptive analyses further by measuring the counterfactual and putting current wealth loss in the context of life-cycle wealth accumulation. For example, if families in their mid-40s experienced a 20 percent wealth loss between 2007 and 2010, their actual loss is larger because their wealth would have increased during this period in the absence of the Great Recession. Using the Health and Retirement Study 2006-2010, Gustman, Steinmeier and Tabatabai (2011) compare wealth changes for the early baby boomer cohort (those who were 53-58 years old in 2006) with two earlier cohorts at the same life cycle wealth accumulation ages.⁵ The early baby boomers experienced only a 2.8 percentage point loss in wealth between 2006 and 2010. Yet during the same life cycle stage, earlier cohorts experienced wealth gains of 5.4 percentage points on average. The authors conclude that if the early baby boomers had the same wealth growth rate, the actual impact from the Great Recession is 8.2 percentage points.

Wealth declines in the aftermath of the Great Recession are starting to be compared with declines in prior recessions. Moore and Palumbo (2010) compare wealth changes in the Great Recession with the previous two recessions using the 1989, 1992, 2001, and 2007 SCF. The authors do not have post-recession data, so rely on projections forward for 2009. They also use projections going back (prior to 2007) to time the peaks and troughs of prior recessions. They

Income Dynamics (PSID). The authors do not separately analyze Hispanic wealth, so do not provide a comparable estimate from the PSID for Hispanics.

⁵ Unlike other studies in the literature, Gustman, Steinmeier, and Tabatabai's (2011) measure of wealth includes Social Security and both defined benefit and defined contribution pensions.

find that overall mean wealth dropped 28 percent in the Great Recession, compared with a 5 percent drop in the 1990-91 recession, and a 6 percent drop in the 2001 recession.⁶

Only one study (known to the authors) uses a multivariate framework to measure the impact of the Great Recession on total wealth.⁷ Using the Panel Study of Income Dynamics, Pfeffer, Danziger, and Schoeni (2013) examine the likelihood of wealth loss and percentage wealth loss between 2007 and 2011. Holding constant pre-recession (2003-2007) wealth, income quintiles, and other socioeconomic characteristics, they find that white/Asian families lost less wealth (13.8 percentage points less) than families headed by African Americans or other races. They also find smaller losses for older versus young families, although the differences are smaller than the racial differences. Those ages 55-64 lost 4 percentage points less wealth than those under age 35.⁸

The literature is informative, but leaves significant gaps in our understanding of the impact of the Great Recession on family wealth. Building on prior descriptive research, we use over two decades of data and a regression framework to measure the impact of the Great Recession in the context of the life cycle and as compared with prior recessions, while controlling for educational attainment and other factors.

III. Data and Measures

We use SCF data from 1983 through 2010 (1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010) to answer the research question “How did the Great Recession affect wealth by age and race/ethnicity, and what wealth components drove the changes?” The nationally representative SCF includes roughly 4,500 families per survey year and provides a detailed accounting of families’ assets and liabilities.⁹ It is considered the gold standard for wealth data. The 1983

⁶ Moore and Palumbo (2009) measure wealth change during the 1990-91 recession using the projected value of assets in July 1990 and reported value in 1992 SCF. They measure wealth change during the 2001 recession using projected values between March 2001 and November 2002.

⁷ Some literature has used a multivariate framework to study the impact of the Great Recession on other economic outcomes such as income or employment (e.g., Hoynes, Miller, and Schaller 2012).

⁸ Shapiro, Meschede, and Osoro (2013) do not measure the impact of the Great Recession, but do use a multivariate framework to examine wealth changes over the 25-year period from 1984 to 2009. Following roughly 1,700 working-age adults over time, they find that the racial wealth gap nearly tripled between 1984 and 2009. A Oaxaca decomposition shows that the number of years of homeownership accounts for 27 percent of the increasing white/black wealth gap, average family income accounts for 20 percent, and unemployment accounts for 9 percent.

⁹ The SCF data consist of two samples: a standard geographically-based random sample and a special oversample of wealthy families. Missing data are imputed five times using multiple imputation techniques and we use all five

through 2010 timeframe allows us to examine wealth changes over time, over the life cycle, and both before and after the Great Recession.

Wealth is measured as total assets minus total liabilities. Assets are the sum of all financial assets (such as bank accounts, stocks, bonds, and 401ks/IRAs) and nonfinancial assets (such as homes and real estate, businesses, and vehicles), and liabilities include both secured (such as mortgages and vehicle loans) and unsecured debt (such as credit card balances).¹⁰ Beyond total wealth, we examine major wealth components: (1) home equity (primary residence), (2) business equity, (3) retirement (financial) assets, (4) non-retirement financial assets, and (5) other assets and debts (e.g., other real estate equity, vehicle equity, student loans). All dollar amounts are adjusted to 2010 dollars. Beyond wealth, the SCF collects a host of information on families, including age, race/ethnicity, family composition, and educational attainment.¹¹

IV. Lifetime Wealth Accumulation

Within each cohort, households on average follow a life cycle pattern of saving. Wealth generally increases until the time of retirement, when retirees start drawing down their wealth. Thus, most generations accumulate a fair amount of wealth during their lifetimes (figure 1). Additionally, as society becomes richer over time, succeeding cohorts acquire more wealth than their predecessors, a pattern that typically applies at every age group. For example, at the time of near peak wealth accumulation in their mid-50s to mid-60s, the cohort born in 1943–51 were wealthier than those born in 1934–42 (at the same age), who were wealthier than those born in 1925–33. This pattern, however, has not held in recent decades for younger Americans. By 2010, people born starting in 1952 no longer find their wealth above the prior cohort, nor is the most recent 1970–78 cohort's average wealth above prior cohorts at the same age.¹²

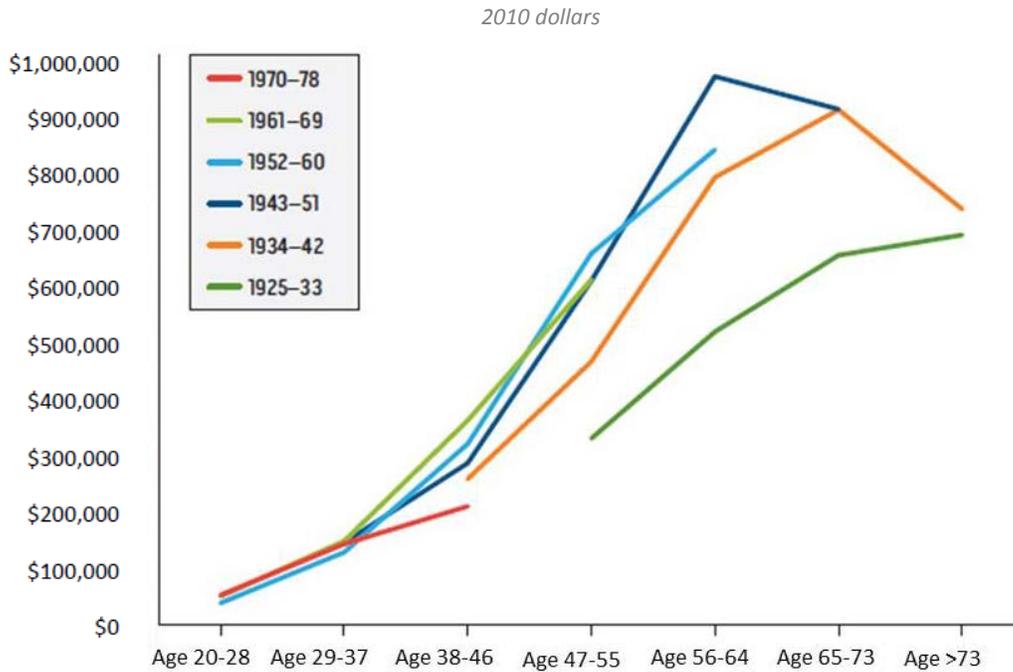
imputation replicates for all families in each survey year. Weights are used to compensate for unequal probabilities of selection in the sample design, unit nonresponse, and imputation for missing data.

¹⁰ Expected future Social Security, Medicare benefits, and defined benefit pensions are not included in our wealth measure. Given that earlier birth cohorts are more likely to hold defined benefit pensions than later birth cohorts, our descriptive results likely understate the wealth of the old relative to the young. Cohort-level fixed effects and age controls in the regression models measure the impact of the Great Recession within three-year birth cohorts controlling for age, so partially control for differences in retirement wealth measures for earlier and later birth cohorts.

¹¹ Our family-level measures of age, race, ethnicity, and educational attainment are based on the head of the household's values.

¹² Gale and Pence (2006) also find the young are not gaining wealth relative to older households from 1989 to 2001 and that demographic characteristics explain much of the difference.

Figure 1: Younger Generations Are No Longer Successively Wealthier
Average Family Wealth by Birth Cohort

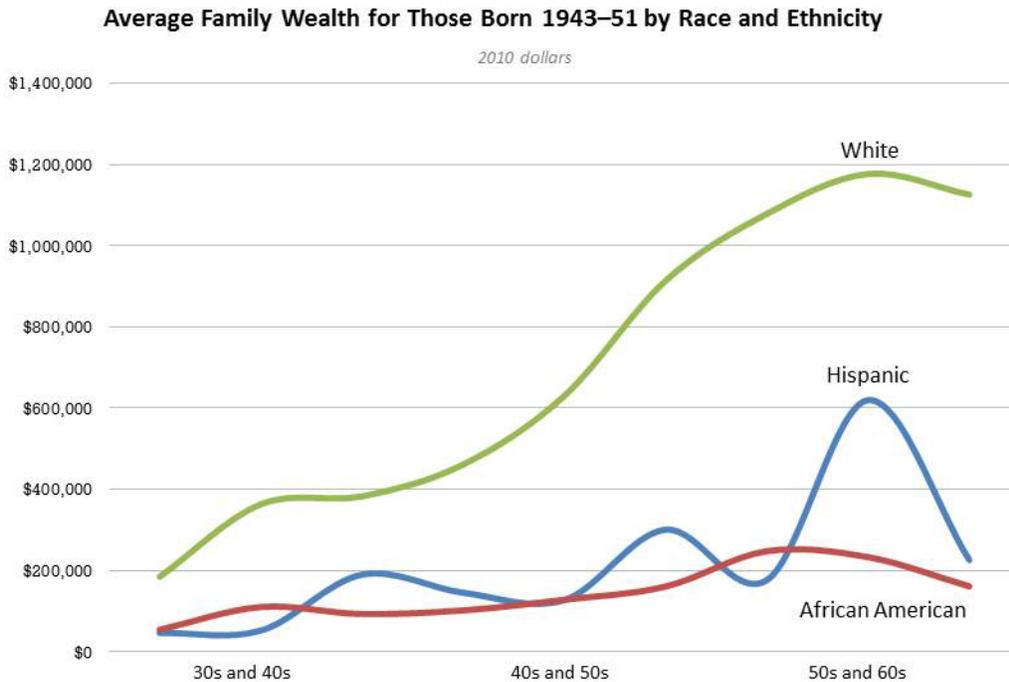


Source: 1983-2010 SCF.

Notes: Data are weighted using SCF weights. The much lower wealth of the 1970-78 cohort at age 38-46 is partially explained by the fact that this cohort was at the younger end of this age range in 2010. The same is true for the 1952-60 cohort at age 56-64.

It's not just the young who are not on a firm wealth building path. A look at the wealth trajectory of the 1943-51 cohort by race and ethnicity reveals that African Americans and Hispanics are not on the same wealth building trajectory as whites (figure 2). The life cycle wealth trajectory for white families increases steadily as families move from their 30s to their 60s. The African Americans' trajectory, on the other hand, is relatively flat. The path for Hispanics fluctuates, likely reflecting a changing Hispanic population and smaller sample sizes. The racial wealth gap grows sharply with age. In their 30s and 40s, whites have about 3.5 times more wealth than African Americans and Hispanics. By the time people reach their early to mid-60s, whites have about seven times the wealth of African Americans and Hispanics.

Figure 2: Some Not on Wealth Building Path



Source: 1983-2010 SCF.

Notes: Data are weighted using SCF weights.

V. Methods

Synthetic cohort-level models are used to estimate the effect of the Great Recession on total wealth and the major components of wealth—home equity, business equity, retirement (financial) assets, non-retirement financial assets, and other assets and debts.

Our analysis sample includes all families with respondents born 1922-1975 and age 26-79 in each survey year, capturing families in the wealth accumulation and decumulation stages of the lifecycle. We trim outliers by excluding the top and bottom 0.25 percent of wealth families. Our resulting sample has 29,473 family-year observations. We aggregate these family-year observations into 18 three-year birth cohorts, with the oldest cohort born between 1922 and 1924 and the youngest born between 1973 and 1975. We take the weighted mean of each dependent and explanatory variable for each birth cohort in each year they fall within the 26 to 79 age range. Our primary regression analyses start with the 1989 data, the year the SCF started measuring wealth components (e.g., retirement wealth) using a consistent methodology.

We estimate separate weighted least squares regression (WLS) models for total wealth and each of the five wealth components. Using total wealth as an example, the model for average wealth ($\bar{Y}_{c,t}$) for cohort c in year t is as follows:

$$\ln(\bar{Y}_{c,t}) = \alpha + \beta_1 R + \beta_2 C_3 + \beta_3 \bar{X}_{c,t} + \varepsilon_{c,t} \quad [\text{Model 1}]$$

We specify the dependent variable as the natural log of wealth to make it less sensitive to outlying values and to mitigate its skewed distribution.¹³ The variable “ R ” represents the dummy variable for the Great Recession, which is measured in 2010—the year following the official end of the Great Recession.¹⁴ The stock market was recovering by 2010 and the national housing market was just beginning to turn upwards (although there were large differences across the country). For ease of exposition, we refer to the coefficient on “ R ” (β_1) as the effect of the Great Recession on wealth. In variants of this model, we expand “ R ” to be a vector of variables that measure other recessions since the 1980s (details in the results section).

C_3 represents the vector of three-year birth cohort dummy variables, with the oldest group born between 1922-24 and the youngest born between 1973-75 (18 cohort groups). Our sample design ensures that there are at least three data points for each cohort group prior to the Great Recession.¹⁵ $\bar{X}_{c,t}$ is a vector of control variables (average in cohort c in year t) and includes age, age-squared, race/ethnicity (white, African-American, Hispanic, and other),¹⁶ family composition (married no children, married with children, single no children, single with children), educational attainment (no high school degree, high school degree only, some college, college degree or more). Within this framework, the coefficient β_1 measures post-recession 2010

¹³ A benefit of the cohort-level model over an individual-level model is that the cohort-level model eliminates zeros and negatives in the dependent variables, making it easier to use a log model to adjust for the skewed wealth distribution. As a sensitivity test, we estimate our cohort-level model with the dependent variables in levels rather than logs: we continue to find a large wealth loss for the Great Recession (\$122,500) and that families of color lost more than white families (\$144,478, \$187,217, and \$110,381 for African Americans, Hispanics, and whites respectively). The oldest cohort lost most (\$239,275) followed by the youngest (\$143,104), compared with losses of \$73,000-\$136,000 for the middle cohort groups. A benefit of examining means over medians is that means are additive and thus fit together nicely across total wealth and wealth component models.

¹⁴ The Great Recession spanned from December 2007 through June 2009.

¹⁵ Those in the 1973-75 birth cohort are in our sample age range (26-79) starting in 2001, so have three data points prior to the Great Recession (2001, 2004, and 2007).

¹⁶ The race ethnicity variables are non-Hispanic white, non-Hispanic African American, and Hispanic. For ease, we refer to the groups as white, African American, and Hispanic.

wealth relative to pre-recession 1989-2007 wealth within cohort, controlling for age, race/ethnicity, family composition, and educational attainment.

In a second set of models, we include an interaction between the recession dummy variable and nine-year birth cohort indicator variables (C_9).

$$\ln(\bar{Y}_{c,t}) = \alpha + \beta_1 R * C_9 + \beta_2 C_3 + \beta_3 \bar{X}_{c,t} + \varepsilon_{c,t} \quad [\text{Model 2}]$$

This model specification allows differing effects of the Great Recession on wealth by cohort to highlight groups hardest hit. Looking at nine-year (versus three-year) birth cohort interactions provides estimates of the impact of the recession on different generations. The youngest nine-year cohort, which includes people born from 1967-75 (age 35-43 in 2010), captures people in (the later part of) generation X. Those born from 1931-39 (age 71-79 in 2010) are part of the silent generation, while those in the middle cohort—born between 1949-57 (age 53-61 in 2010)—are part of the baby boom generation.¹⁷ We include the interaction of the recession with each cohort group and omit the recession dummy variable for ease of interpretation.

In a third set of models, we include an interaction between the recession dummy variable and three race/ethnicity dummy variables (white, African American, Hispanic).

$$\ln(\bar{Y}_{r,c,t}) = \alpha + \beta_1 R * Race + \beta_2 C_3 + \beta_3 \bar{X}_{r,c,t} + \varepsilon_{r,c,t} \quad [\text{Model 3}]$$

For these models, we aggregate the data to the cohort level (three year cohorts) by race (whites, African Americans, and Hispanics). $\bar{Y}_{r,c,t}$ is the average wealth for people of race/ethnicity r , in cohort c , and in year t . As in model [2], we interact the recession dummy variable with each of the three race dummy variables and omit the recession variable for ease of interpretation.

VI. Regression Results

Our regression-adjusted results find that the Great Recession resulted in large declines in wealth, both overall and relative to previous recessions, even after controlling for age, birth cohort,

¹⁷ There is not a Great Recession interaction for those born between 1922 and 1930, since these people are outside the sample age range of 26-79 in 2010.

race/ethnicity, family composition, and educational attainment. Specifically, total wealth fell by 28.5 percent as a result of the Great Recession (table 1, column 1). This is nearly double the 15-18 percent drop found in the descriptive studies (Boshara and Emmons 2013, Bricker et al. 2012, Smeeding 2012, Wolff 2013), and consistent with the notion that the regression is measuring the independent impact over and above the normal wealth accumulation that would have occurred in the absence of the recession.

To look at the impact of the Great Recession on wealth relative to prior recessions, we estimate two additional models—one that continues to use data from 1989-2010 (table 1, column 2) and another that uses data from 1983-2010 (table 1, column 3). We find that the wealth loss from the Great Recession is roughly double the wealth losses of any previous recession since 1980. The model that includes indicator variables for three prior recessions—1983 for the 1981-82 recession, 1992 for the 1990-91 recession, and 2001 for the 2001 recession—show that the impact of the Great Recession is substantially larger than the other recessions (table 1, column 3). Wealth fell by 11.7 percent in 1992 and increased by 12.7 percent in 2001, relative to non-recessionary years. Wealth in 1983 was not statistically significantly lower than wealth in the non-recession years. Because the timing of the triennial SCF data do not consistently coincide with the U.S. recessions (e.g., the 2001 recession indicator does not capture the large stock market declines that occurred in 2002, after the 2001 recession officially ended) and the Great Recession results are virtually unchanged whether we include or exclude these additional recession indicators (28.5 versus 25.7 versus 25.8 percent decline, table 1 columns 1-3), we exclude them from the rest of our results. We focus our subsequent analyses on data from the 1989-2010 SCF, so that we can examine more detailed components of wealth during the years the SCF uses a consistent methodology.

Based on our regression-adjusted estimates, all major wealth components fell as a result of the Great Recession (table 2, model 1). Home equity (primary residence) and business equity fell further on average than financial assets. Home equity fell 37.9 percent and business equity fell 34.2 percent as a result of the Great Recession. Declines in financial assets were closer to 20 percent: Retirement assets fell by 18.9 percent, while non-retirement financial assets fell by 20.6 percent. Other assets and debts fell by 58.8 percent; because of the heterogeneous nature of this

Table 1: Estimated Effect of the Great Recession on Total Wealth

| Explanatory Variables | Ln(wealth) | | Ln(wealth) | | Ln(wealth) | |
|--|-----------------------|-------|-----------------------|-------|------------------------|-------|
| | coeff/se | % chg | coeff/se | % chg | coeff/se | % chg |
| Recession indicators | | | | | | |
| 2010 | -0.335 *** [0.057] | -28.5 | -0.297 *** [0.058] | -25.7 | -0.298 *** [0.056] | -25.8 |
| 2001 | | | 0.125 *** [0.036] | 13.3 | 0.119 *** [0.036] | 12.7 |
| 1992 | | | -0.12 ** [0.052] | -11.3 | -0.124 ** [0.053] | -11.7 |
| 1983 | | | | | 0.099 [0.083] | 10.5 |
| Age | | | | | | |
| Age | 0.236 *** [0.014] | 26.6 | 0.232 *** [0.013] | 26.1 | 0.230 *** [0.012] | 25.9 |
| Age squared | -0.002 *** [0.000] | -0.2 | -0.001 *** [0.000] | -0.1 | -0.001 *** [0.0001] | -0.1 |
| Race/Ethnicity (omit: white) | | | | | | |
| African American | -1.029 [0.641] | -64.3 | -1.066 * [0.589] | -65.6 | -0.781 [0.568] | -54.2 |
| Hispanic | -0.793 [0.805] | -54.8 | -0.700 [0.724] | -50.3 | -0.503 [0.688] | -39.5 |
| Other | -1.744 * [0.989] | -82.5 | -0.492 [0.966] | -38.9 | -0.634 [0.901] | -47.0 |
| Family Composition (omit: married, no children) | | | | | | |
| Married, children | 0.728 ** [0.339] | 107.1 | 0.794 ** [0.302] | 121.2 | 0.691 ** [0.283] | 99.6 |
| Single, no children | 0.330 [0.413] | 39.1 | 0.572 [0.403] | 77.2 | 0.453 [0.353] | 57.3 |
| Single, children | -1.280 * [0.723] | -72.2 | -0.958 [0.695] | -61.6 | -1.07 * [0.646] | -65.7 |
| Education (omit: college plus) | | | | | | |
| No high school degree | -0.113 [0.520] | -10.7 | -0.141 [0.459] | -13.2 | -0.481 [0.440] | -38.2 |
| High school only | 0.225 [0.467] | 25.2 | 0.0216 [0.436] | 2.2 | -0.066 [0.417] | -6.4 |
| Some college | -0.558 [0.628] | -42.8 | -0.587 [0.578] | -44.4 | -0.534 [0.548] | -41.4 |
| Constant | 5.32 *** [0.657] | | 5.385 [0.600] | | 5.553 *** [0.578] | |
| Observations (cohort-year) | 128 | | 128 | | 140 | |

Source: 1989-2010 SCF (columns 1 and 2); 1983-2010 SCF (column 3).

Notes: WLS coefficients with robust standard errors in brackets. Percent change is calculated as $(\exp(\beta)-1)$, where β is the estimated coefficient. Models also control for three-year birth cohorts.

***p<0.01, **p<.05, *p<0.1

residual group (investment property equity, vehicle equity, credit card debt, education loans), this drop should be interpreted with caution.

Wealth Declines by Age

Our results suggest that the young experienced the largest percent decline in wealth as a result of the Great Recession (table 2, model 2), driven in large part by declines in housing. The wealth of Gen X'ers age 35 to 43 in 2010 (born 1967-75) fell by 47.0 percent. Wealth declines of 20-28 percent for the older age groups (people 44-79 in 2010, born 1931-1966) are substantively and statistically significantly smaller.

The young were hit hardest in part because of a life cycle-market interaction. They tend to hold most of their total assets in housing (Wolff 2013). Even more importantly, those who bought their first home in the years leading up to the housing collapse were likely to be more leveraged. For instance, a 20 percent drop in housing values will reduce net housing wealth of someone with only 20 percent equity by 100 percent. People who purchased their homes before prices began to rise in the late 1990s, on the other hand, were less leveraged. They also were more likely to be able to avoid bankruptcy or going “underwater” on their houses and having to sell them prior to any rebound. As a result of these factors, the Great Recession reduced home equity 57.9 percent among those ages 35-43 in 2010. For those in the next oldest cohort group—ages 44-52 in 2010 (born 1958-1966)—home equity fell by a still substantial 37.6 percent.

Gen X'ers also took the largest hit on business equity (61 percent versus 5 to 37 percent for older cohorts) and other assets and debts (94 percent versus 16 to 43 percent for older cohorts). In addition to the likelihood of higher debt, new businesses tend to be more risky and often hard hit by a recession.

While the large percent decline in wealth among Gen X'ers is fueled by their relatively low initial wealth and highly leveraged position, they also experienced large dollar declines. For example, analyses of home equity show that home equity among 35-43 year olds in 2010 fell by \$55,000, while home equity fell by \$33,000-\$46,000 for those ages 44-70 and \$65,000 for those in their 70s in 2010 (not shown). To the extent that the young disproportionately had underwater mortgages and could not refinance their homes at lower interest rates, their ability to build wealth over time was further impeded.

**Table 2: Estimated Effect of the Great Recession on Wealth Components,
by Birth Cohort and Race**

| | Total Wealth | | Non-Financial Assets | | | | Financial Assets | | | | Ln(other assets and debts) | |
|---|------------------|-------|----------------------|-------|---------------------|-------|------------------|-------|--------------------|-------|----------------------------|-------|
| | Ln(wealth) | | Ln(home equity) | | Ln(business equity) | | Ln(retirement) | | Ln(non-retirement) | | | |
| | coeff/se | % chg | coeff/se | % chg | coeff/se | % chg | coeff/se | % chg | coeff/se | % chg | coeff/se | % chg |
| Model 1: | -0.335 *** | -28.5 | -0.477 *** | -37.9 | -0.418 *** | -34.2 | -0.209 *** | -18.9 | -0.231 *** | -20.6 | -0.887 * | -58.8 |
| Great Recession | [0.057] | | [0.067] | | [0.119] | | [0.058] | | [0.074] | | [0.459] | |
| Model 2: | | | | | | | | | | | | |
| Great Recession * Cohort | | | | | | | | | | | | |
| Born 1967-75, age 35-43 in 2010 | -0.635 *** | -47.0 | -0.866 *** | -57.9 | -0.936 *** | -60.8 | -0.284 *** | -24.7 | -0.250 | -22.1 | -2.816 * | -94.0 |
| | [0.121] | | [0.129] | | [0.227] | | [0.100] | | [0.229] | | [1.585] | |
| Born 1958-66, age 44-52 in 2010 | -0.232 *** | -20.7 | -0.472 *** | -37.6 | -0.0482 | -4.7 | -0.306 *** | -26.4 | -0.152 | -14.1 | -0.554 ** | -42.5 |
| | [0.069] | | [0.093] | | [0.137] | | [0.083] | | [0.101] | | [0.278] | |
| Born 1949-1957 age 53-61 in 2010 | -0.225 *** | -20.1 | -0.276 *** | -24.1 | -0.46 *** | -36.9 | -0.144 * | -13.4 | -0.205 ** | -18.5 | -0.170 | -15.6 |
| | [0.055] | | [0.069] | | [0.117] | | [0.084] | | [0.093] | | [0.233] | |
| Born 1940-1948 age 62-70 in 2010 | -0.275 *** | -24.0 | -0.321 *** | -27.5 | -0.345 *** | -29.2 | -0.027 | -2.7 | -0.329 *** | -28.0 | -0.267 | -23.4 |
| | [0.065] | | [0.085] | | [0.122] | | [0.076] | | [0.080] | | [0.197] | |
| Born 1931-1939 age 71-79 in 2010 | -0.33 *** | -28.1 | -0.413 *** | -33.8 | -0.277 | -24.2 | -0.276 * | -24.1 | -0.296 * | -25.6 | -0.391 * | -32.4 |
| | [0.088] | | [0.091] | | [0.275] | | [0.156] | | [0.153] | | [0.223] | |
| Model 3: | | | | | | | | | | | | |
| Great Recession * Race/Ethnicity | | | | | | | | | | | | |
| White | -0.304 *** | -26.2 | -0.423 *** | -34.5 | -0.404 * | -33.2 | -0.198 ** | -18.0 | -0.245 *** | -21.7 | -0.888 * | -58.9 |
| | [0.060] | | [0.062] | | [0.216] | | [0.0932] | | [0.063] | | [0.483] | |
| African American | -0.646 *** ++ | -47.6 | -0.482 *** | -38.2 | 0.568 | 76.5 | -0.381 * | -31.7 | -0.634 *** ++ | -47.0 | -1.094 * | -66.5 |
| | [0.126] | | [0.162] | | [0.535] | | [0.218] | | [0.180] | | [0.567] | |
| Hispanic | -0.585 *** | -44.3 | -0.530 *** | -41.1 | -0.032 | -3.1 | -0.375 | -31.3 | -0.653 *** + | -48.0 | 0.201 | 22.3 |
| | [0.168] | | [0.167] | | [0.701] | | [0.434] | | [0.232] | | [0.560] | |

Source : 1989-2010 SCF.

Notes: Models one and two have 128 cohort-year observations; model three has 383 cohort-year-race observations. WLS coefficients with robust standard errors in brackets. Percent change is calculated as $(\exp(\beta)-1)$, where β is the estimated coefficient. Models also control for age, age-squared, race and ethnicity, family composition, educational attainment, and three-year birth cohorts.

***p<0.01, **p<.05, *p<0.1

Declines in financial assets are not concentrated among the young. Rather, declines in non-retirement financial assets occur across our cohort groups. They fell by a low of 14.1 percent for people ages 44-52 in 2010 to a high of 28.0 percent for people ages 62-70 in 2010. For retirement assets, people in the two youngest cohort groups (ages 35-52 in 2010) and those in the oldest cohort group (ages 71-79 in 2010) had the largest percentage declines of roughly 24 to 26 percent. People ages 53 to 61 in 2010 saw their retirement wealth fall by 13.4 percent, while those age 62-70 experienced no statistically significant decline in retirement wealth. Retirees who withdrew retirement savings from the stock market because of concerns about short-term market volatility or out of necessity did not benefit from the uptick in the market that began in 2009.

Wealth Declines by Race and Ethnicity

The Great Recession's effect on wealth differs across racial and ethnic groups, with larger declines experienced by families of color (table 2, model 3). White families' wealth fell 26.2 percent, while the wealth of African American families fell by a statistically significantly higher 47.6 percent (table 2, model 3). Hispanic families' wealth fell by 44.3 percent. While the Hispanic coefficient is substantially larger in magnitude than the white coefficient, the two coefficients are not statistically significantly different from one another ($p=0.115$).

Home equity declines are large—over 34 percent—for all three racial/ethnic groups. Business equity declines, on the other hand, are concentrated among white families. Their business equity fell 33.2 percent as a result of the Great Recession, while African American and Hispanic families experienced no statistically significant decline in business equity. White families are more likely to own business assets than African American and Hispanic families (16 percent versus 6 and 10 percent, respectively in 2007), so had more to lose. They may also have been more likely to have business equity in a business with significant real or financial assets, such as real estate development, as opposed to one mainly providing services through human skills capital (whose depreciation or appreciation is not estimated).

Financial assets fell for white, African American, and Hispanic families, although there are some differences in the declines across retirement and non-retirement financial assets. Retirement wealth fell by 18.0 percent among white families and 31.7 percent among African

American families.¹⁸ The Hispanic coefficient is similar in magnitude to that for African Americans, but the Hispanic coefficient is not statistically significantly different from zero.¹⁹ The declines in non-retirement financial assets as a result of the Great Recession are larger in magnitude for each group, with larger declines experienced by African American and Hispanic families as compared with white families. Non-retirement financial assets fell 47.0 percent and 48.0 percent for African American and Hispanic families respectively, while these assets fell by 21.7 percent for white families. Higher unemployment rates among families of color likely led to a greater drawdown of savings and other assets as a result of the Great Recession.

Finally, both white and African American families experienced large declines—roughly 59 to 67 percent—in net “other assets and debts,” which includes equity in investment property, vehicle equity, credit card debt, and education loans, among others.

VII. Conclusion

Families of color and young families were disproportionately affected by the Great Recession. After accounting for life cycle wealth accumulation, race/ethnicity, family composition, and educational attainment, we find that the Great Recession reduced average family wealth by over one-quarter, at least double the loss of any previous recession since the 1980s. The young and families of color experienced the largest percentage declines in wealth as a result of the Great Recession, driven in large part from declines in housing.

Yet this is not merely a Great Recession story. The young and families of color were not on good wealth-building paths relative to earlier cohorts or to whites prior to the Great Recession, and they have not benefitted as much from the recovery of some markets (mainly stock) since then.

This calls into question the effectiveness and adequacy of a range of policies, ranging from safety net to tax to regulation, whose purpose, in part or whole, is to help families get ahead. For instance, if higher levels of resources over time are devoted to support these types of policies, might that growth be oriented more toward wealth building and mobility than is currently the

¹⁸ These declines are not statistically significantly different from one another.

¹⁹ The coefficient for Hispanic families is -0.375 versus -0.381 for African American families, but the standard error on the Hispanic coefficient is substantially larger.

case? The data presented here do not answer that question but they certainly underscore its relevance.

Because the young, Hispanics, and African Americans are disproportionately lower income, their wealth building is strongly affected by policies aimed at low-income families. Safety net policies currently emphasize consumption: the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF), for example, try to ensure that families have enough food to eat and other basic necessities. Many of these programs even discourage saving: families can become ineligible if they have a few thousand dollars in savings (Sprague and Black, 2012). For example, the TANF program has asset limits of about \$2,000-\$3,000 in most states.

Through the tax system, in turn, the federal government spends hundreds of billions of dollars each year to support long-term asset development, such as homeownership via the mortgage interest deduction and retirement savings via preferential tax treatment of money saved in 401(k) and other retirement accounts. These subsidies primarily go to high-income families and do not seem well geared to dealing with particular economic conditions and cycles, nor the low wealth of the young and low-income. A common misconception is that poor or even low-income families cannot save, but, in fact, many can and do—especially in homes and saving accounts (McKernan, Ratcliffe, and Shanks 2012).

More than level of subsidy is involved. African American and Hispanic families are less likely to own homes and have retirement accounts than white families, so they miss out on the compounding rate of return and automatic behavioral component—a monthly mortgage payment, regular deposits from earnings to savings—of these traditionally powerful wealth-building vehicles. In 2010, fewer than half of African American and Hispanic families owned homes, while three-quarters of white families did. And even when they do own homes, African American families buy them at least eight years later, delaying wealth accumulation (Shapiro, Meschede, and Osoro 2013).

When homeownership became cheaper on net than renting in many communities, mortgage credit tightened—and might be further tightened with higher down payment requirements. The net result—disastrous not only in the bust market examined in this paper, but

then in a period of growing values post-Recession—may well be a “buy-high, sell low” type of approach to asset owning for those with limited means.

While this study does not lead to specific policy prescriptions, it does make clear that public policies aimed at improving the well-being of various groups, particularly the young and those with fewer means, play out over both the long-term and through economic downturn and recovery.

VIII. References

- Boshara, Ray and William Emmons 2013. "After the Fall." Federal Reserve Bank of St. Louis, 2012 Annual Report. St Louis, MO.
- Bricker, Jesse, Brian K. Bucks, Arthur Kennickell, Traci L. Mach, and Kevin Moore. 2011. "Drowning or Weathering the Storm? Changes in Family Finances from 2007 to 2009" NBER Working Paper 16985. Cambridge, MA, National Bureau of Economic Research.
- Bricker, Jesse, Arthur B. Kennickell, Kevin B. Moore, and John Sabelhaus. 2012. "Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances" *Federal Reserve Bulletin* 98(2)
- Choi, Laura. 2013. "Household Net Worth and Asset Ownership among the Economically Vulnerable." The Federal Reserve Bank of San Francisco. Community Development Research Brief. San Francisco, CA.
- Fry, Richard and Paul Taylor. 2013. "An Uneven Recovery, 2009-2011." Pew Research Center. Washington, DC.
- Gale, William G. and Karen M. Pence. 2006. "Are Successive Generations Getting Wealthier, and If so, Why? Evidence from the 1990s" *Brookings Papers on Economic Activity* 2006(1):155-213.
- Gustman, Alan L., Thomas L. Steinmeier and Nahid Tabatabai. 2011. "How Did the Recession of 2007-2009 Affect the Wealth and Retirement of the Near Retirement Age Population in the Health and Retirement Study" NBER Working Paper 17547. Cambridge, MA, National Bureau of Economic Research.
- Hoynes, Hilary, Douglas L. Miller, and Jessamyn Schaller. 2012. "Who Suffers During Recessions?" *Journal of Economic Perspectives* 26(3), 27-48.
- McKernan, Signe-Mary, Caroline Ratcliffe, and Trina Williams Shanks. 2012 "Is Poverty Incompatible with Asset Accumulation?" Chapter 14 *Oxford Handbook of the Economics of Poverty*, edited by Philip N. Jefferson.
- McKernan, Signe-Mary, Caroline Ratcliffe, Eugene Steuerle, and Sisi Zhang. 2013. "Less Than Equal: Racial Disparities in Wealth Accumulation." Washington DC.: The Urban Institute.
- Moore, Kevin B., and Michael G. Palumbo. 2010. "The Finances of American Households in the Past Three Recessions: Evidence from the Survey of Consumer Finances." Federal Reserve, Division of Research & Statistics and Monetary Affairs, Washington DC.
- Pfeffer, Fabian T., Sheldon Danziger, and Robert F. Schoeni. 2013. "Wealth Disparities Before and After the Great Recession" National Poverty Center Working Paper Series #13-05. Ann Arbor, MI, National Poverty Center.
- Ratcliffe, Caroline, and Sisi Zhang. 2012. "U.S. Asset Poverty and the Great Recession" Washington, D.C.: The Urban Institute. *Opportunity and Ownership* Policy Fact Sheet No. 27.

- Shapiro, Thomas, Tatjana Meschede and Sam Osoro. 2013. "The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide." Institute on Assets and Social Policy, Brandeis University. Waltham, MA.
- Smeeding, Timothy. 2012. "Income, Wealth, and Debt and the Great Recession." Stanford Center on Poverty and Inequality. Stanford, CA.
- Sprague, Aleta and Rachel Black. 2012. "State Asset Limit Reforms and Implications for Federal Policy." Washington DC: The New America Foundation.
- Steuerle, Eugene, Signe-Mary McKernan, Caroline Ratcliffe and Sisi Zhang. 2013. "Lost Generations? Wealth Building Among Young Americans." Washington DC.: The Urban Institute.
- Taylor, Paul, Rakesh Kochhar, Richard Fry, Gabriel Velasco and Seth Motel. 2011. "Wealth Gaps Rise to Record Highs Between Whites, Blacks and Hispanics. Pew Research Center. Washington DC.
- Wolff, Edward N., 2013. "The Asset Price Meltdown and the Wealth of the Middle Class." US2010 Project, Brown University. Providence, RI.
- Wolff, Edward N., Lindsay A. Owens, and Esra Burak 2011, "How Much Wealth Was Destroyed in the Great Recession?" in *The Great Recession*, edited by David B. Grusky, Bruce Western, and Christopher Wimer (127-158). New York, NY.: Russell Sage Foundation.