

Disparities in Wealth Accumulation and Loss from the Great Recession and Beyond

Signe-Mary McKernan, Caroline Ratcliffe, Eugene Steuerle, and Sisi Zhang*

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. Many families lost their homes through foreclosure. Family wealth was also lost through the stock market decline, and some families made early withdrawals from (or made fewer deposits into) retirement savings to weather unemployment. Each of these events further weakened the economic security of American families.

This article uses over two decades of U.S. 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 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

* McKernan: The Urban Institute, 2100 M Street NW, Washington, DC 20037 (email: smckernan@urban.org); Ratcliffe: The Urban Institute, 2100 M Street NW, Washington, DC 20037 (email: cratcliffe@urban.org); Steuerle: The Urban Institute, 20110 M Street NW, Washington, DC 20037 (email: esteuerle@urban.org); Zhang: Shanghai University of Finance and Economics, 777 Guoding Rd, Shanghai, 200433, China (email: sisi.zhang@gmail.com). This research was funded by the Russell Sage Foundation, Ford Foundation, and Low-Income Working Families project, which is supported by the Annie E. Casey Foundation. The findings and conclusions presented are those of the authors alone. The authors are grateful to Doug Wissoker for excellent advice.

different cohort groups (i.e., generations) and by race/ethnicity.

This paper contributes along three dimensions to a literature dominated by studies using pre-post descriptive methods to examine changes in wealth before and after the Great Recession:¹ by measuring the impact of the Great Recession on family wealth within the context of life cycle wealth accumulation, relative to prior business cycles, and while controlling for education and other socioeconomic characteristics.

The Great Recession lives up to its name. Our synthetic cohort-level models find that the Great Recession reduced the average wealth of American families by 28.5 percent—nearly double the magnitude of previous pre-post mean descriptive estimates and double the magnitude of other recessions since the 1980s. All major wealth components fell as a result of the Great Recession. Home equity (primary residence) and business equity fell over one-third and retirement and non-retirement financial assets fell about one-fifth. Further, we find that young families and families of color lost the largest fraction of their wealth as a result of the crisis.

I. Data and Measures

We use SCF data from 1983 through 2010 (1983, 1989, 1992, 1995, 1998, 2001, 2004, 2007, and 2010). The nationally representative SCF includes roughly 4,500 families per survey year and provides a detailed accounting of families' assets and liabilities. Wealth is measured as total assets minus total liabilities/debts. Assets are the sum of all financial assets and nonfinancial assets, and liabilities include both secured and unsecured debt.² Major wealth components, such as home equity and retirement assets, are also provided. All dollar amounts are adjusted to 2010

¹ Pfeffer, Danziger, and Schoeni (2013) are an exception. Using a multivariate framework they find that relative wealth losses between 2007 and 2011 were greater for lower income, less educated, and minority households.

² Expected future Social Security, Medicare benefits, and defined benefit pensions are not included in our wealth measure.

dollars. Beyond wealth, the SCF collects a host of information on families, including age, race/ethnicity, family composition, and educational attainment.

II. Lifetime Wealth Accumulation

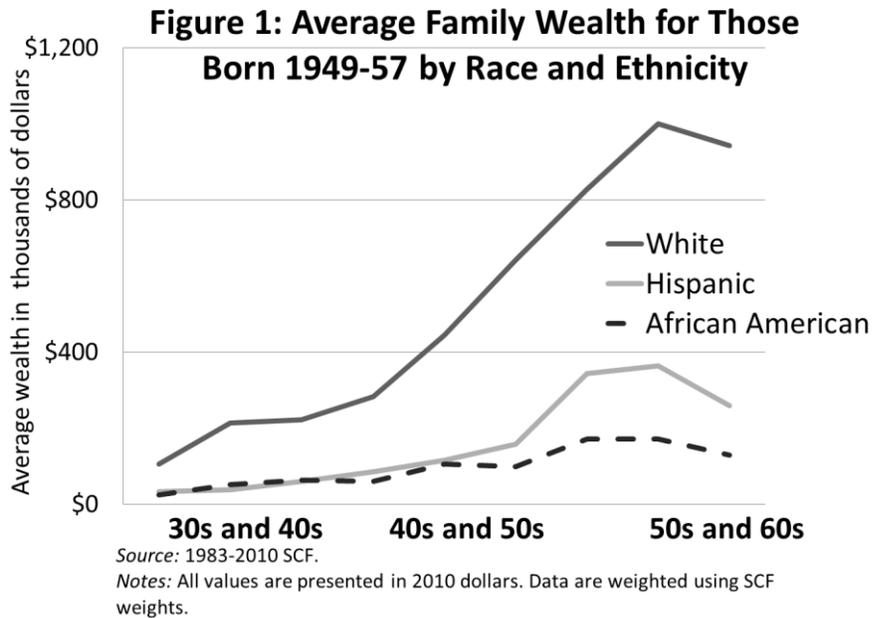
On average, households follow a lifecycle pattern of wealth accumulation: wealth increases until retirement, typically when people reach their 60s and 70s, and then falls as they draw down their wealth in retirement. As a society becomes richer over time, succeeding cohorts typically acquire more wealth than their predecessors, a pattern that typically applies to every age group. This pattern, however, has not held in recent decades. In 2010, people in their late-20s to mid-30s had less wealth than people the same age nearly 25 years earlier (in 1983), while people age 50 and older had nearly twice as much wealth as people the same age in 1983 (Steuerle et al. 2013).³

It's not just today's young who are not on a firm wealth building path. African Americans and Hispanics are not on the same wealth building trajectory as whites. A look at the lifecycle wealth trajectory of people born 1949 through 1957 shows that the wealth trajectory for white families increases steadily as families move from their 30s to their 60s (figure 1). The trajectory for African Americans and Hispanics, on the other hand, is much flatter, and shows a sharp increase in the racial wealth gap with age.

III. 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 (primary residence), business equity, retirement (financial) assets, non-retirement financial assets, and other assets and debts (e.g., investment property equity, credit card debt).

³ Gale and Pence (2006) also find the young did not gain wealth relative to older households from 1989 to 2001 and that demographic characteristics explain much of the difference.



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:

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

The dependent variable is specified as the natural log of wealth to make it less sensitive to outlying values and to mitigate its skewed distribution.⁴ 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.⁵ 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.⁶ $\bar{X}_{c,t}$ is a vector of control variables (average in cohort c in year t) and includes age, age-squared, race/ethnicity

⁴ A benefit of the cohort-level versus 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 the cohort-level model with the dependent variables in levels: we continue to find a large wealth loss from the Great Recession (\$122,500) and 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 cohorts. A benefit of examining means over medians is that means are additive and thus fit together nicely across total wealth and wealth component models.

⁵ The Great Recession spanned December 2007 through June 2009.

⁶ The sample design ensures at least three data points for each cohort group prior to the Great Recession. People in the 1973-75 birth cohort, for example, are in our sample age range (26-79) starting in 2001.

(non-Hispanic white, non-Hispanic African-American, Hispanic, other),⁷ family composition (married no children, married with children, single no children, single with children), and educational attainment (no high school degree, high school degree, some college, college degree or more).

The second model includes an interaction between the recession indicator variable and nine-year birth cohort indicator variables. This 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 provide estimates of the impact of the recession on different generations. The youngest 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 from 1949-57 (age 53-61 in 2010)—are part of the baby boom generation.⁸ We include the interaction of the recession with each cohort group and omit the recession dummy variable for ease of interpretation.

The third model includes an interaction between the recession dummy variable and three race/ethnicity dummy variables (white, African American, Hispanic). For this model, we aggregate the data to the cohort level (three year cohorts) by race (whites, African Americans, and Hispanics). We interact the recession dummy variable with each of the three race dummy variables and omit the recession variable for ease of interpretation.

IV. Regression Results

⁷ For ease, we refer to the groups as white, African American, and Hispanic.

⁸ 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.

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, 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 descriptive studies (Bricker et al. 2012; Wolf 2013).

This overall wealth loss is also roughly double the wealth losses of any previous recession since 1980 (table 1, columns 2 and 3). Models that include indicator variables for prior recessions—

2001 for the 2001 recession, 1992 for the 1990-91 recession, and 1983 for the 1981-82 recession (column 3 only)—show that the impact of the Great Recession is substantially larger than the other recessions. Wealth fell by 11-12 percent in 1992 and increased by 13 percent in 2001, relative to non-recessionary years.⁹ Wealth in 1983 was not statistically significantly different than wealth in the non-recession years. Because the timing of the triennial SCF data does not consistently coincide with the U.S. recessions and the Great Recession results are virtually

Table 1: Estimated Effect of the Great Recession on Ln(wealth)
(Robust standard errors in parentheses, percent change in brackets)

<i>Recession indicators</i>			
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]

Source: 1989-2010 SCF (columns 1 and 2); 1983-2010 SCF (column 3).
Notes: Models in columns 1 and 2 have 128 cohort-year observations; model in column 3 has 140 cohort-year observations. Percent change is calculated as $(\exp(\beta)-1)$, where β is the estimated coefficient. Models also control for age, age-squared, race/ethnicity, family composition, educational attainment, and three-year birth cohorts (see appendix table A1).

*** significant at the 1 percent level
**significant at the 5 percent level
*significant at the 10 percent level

⁹ The 2001 recession indicator does not capture the large stock market declines that occurred in 2002, after the 2001 recession officially ended.

unchanged whether we include or exclude these additional recession indicators (29 versus 26 percent decline), we exclude the additional recession indicators from the rest of our models. Subsequent analyses are also restricted to 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). 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 residual group (investment property equity, vehicle equity, credit card debt, education loans), it should be interpreted with caution.

Table 2: Estimated Effect of the Great Recession on Wealth Components

(Robust standard errors in parentheses)

	coefficient	percent change
Ln(wealth)	-0.335 *** (0.057)	-28.5
Ln(home equity)	-0.477 *** (0.067)	-37.9
Ln(business equity)	-0.418 *** (0.119)	-34.2
Ln(retirement)	-0.209 *** (0.058)	-18.9
Ln(non-retirement)	-0.231 *** (0.074)	-20.6
Ln(other assets/debts)	-0.887 * (0.459)	-58.8

Source: 1989-2010 SCF.

Notes: Each model has 128 cohort-year observations. Percent change is calculated as $(\exp(\beta)-1)$, where β is the estimated coefficient. Models also control for age, age-squared, race/ethnicity, family composition, educational attainment, and three-year birth cohorts.

*** significant at the 1 percent level

**significant at the 5 percent level

*significant at the 10 percent level

Our results suggest that the young experienced the largest percent decline in wealth as a result of the Great Recession (table 3, panel A), driven in large part by declines in housing

(appendix table A2). 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.

Table 3: Estimated Effect of the Great Recession on Ln(wealth) by Birth Cohort and Race/Ethnicity
(Robust standard errors in parentheses)

	coefficient	percent change
<i>Panel A: Great Recession * Cohort</i>		
Born 1967-75, age 35-43 in 2010	-0.635 *** (0.121)	-47.0
Born 1958-66, age 44-52 in 2010	-0.232 *** (0.069)	-20.7
Born 1949-1957 age 53-61 in 2010	-0.225 *** (0.055)	-20.1
Born 1940-1948 age 62-70 in 2010	-0.275 *** (0.065)	-24.0
Born 1931-1939 age 71-79 in 2010	-0.33 *** (0.088)	-28.1
<i>Panel B: Great Recession * Race/Ethnicity</i>		
White	-0.304 *** (0.060)	-26.2
African American	-0.646 *** (0.126)	-47.6
Hispanic	-0.585 *** (0.168)	-44.3

Source : 1989-2010 SCF.

Notes: Cohort interaction model has 128 cohort-year observations; race/ethnicity interaction model has 383 cohort-year-race observations. Percent change is calculated as $(\exp(\beta)-1)$, where β is the estimated coefficient. Models also control for age, age-squared, race/ethnicity, family composition, educational attainment, and three-year birth cohorts.

*** significant at the 1 percent level

**significant at the 5 percent level

*significant at the 10 percent level

The Great Recession's effect on wealth differs across racial and ethnic groups, with larger declines experienced by families of color (table 3, panel B). White families' wealth fell 26.2 percent, while the wealth of African American families fell by a statistically significantly higher 47.6 percent. 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 ($p=0.115$).

V. Summary and Discussion

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

percent declines in wealth as a result of the Great Recession, driven in large part from declines in housing.

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, calling into question how effective a range of policies (from tax to safety net) have been in helping families get ahead. More fundamentally, it raises the question of whether social welfare and tax policies pay too little attention to wealth building and mobility relative to consumption and income. Access to credit has tightened substantially since the Great Recession and has the potential to reduce asset ownership and exacerbate wealth inequality.

VI. References

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