The Effect of the Great Recession on Black-White Wealth and Mobility

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ABSTRACT

Between 2007 and 2009 a combination of the housing market collapse and the Great Recession caused the median net worth of black families to drop 49%, compared with a 29% decline for white families. As a result, the median white-black wealth ratio increased from 12-1 to 22-1. While black families experienced a greater hit in percentage terms, white families lost much more in absolute levels. These changes have profound implications for inequality and mobility in the United States. Utilizing longitudinal income and wealth data from the PSID, this paper examines the differential impact of the recent recession on the wealth holdings of black and white families and the implications for upward and downward intergenerational mobility. I find that parental wealth promotes upward mobility for low income white families, but does not protect against downward mobility from the top half of the income distribution. I conclude that the recession will cause increased inequality in the next generation by dampening the mobility prospects of higher income black families, while somewhat lessening the mobility-gap at the bottom of the income distribution.

INTRODUCTION

The Great Recession has led to the greatest black-white wealth inequality in over 25 years. In 2009, the median white family held 22 times more wealth than the median black family, up from a ratio of 12 to 1 in 2007. While much of this gap can be accounted for by differences in demographics and income, a persistent unexplainable racial wealth gap continues to exist.

Hitting black families harder than white families, the Great Recession has serious implications for the mobility prospects of future generations. Wealth may provide upward mobility opportunities through education, investments in business or simply by providing a more stable childhood. Children who grow up in a low-income household with higher levels of net worth are more likely to experience upward income mobility as adults than an equally positioned child with parents who had less wealth.

BACKGROUND

Wealth is a crucial component of a family's economic well-being. In times of economic distress, wealth can be dipped into for consumption smoothing, or it can be borrowed against as a source of credit. Having several months of savings can mean the difference between losing one's home or not during a period of unemployment or unexpected medical expenditures. Wealth can also be used to invest in education and human capital for future generations as well as to start one's own business.

Previous research has found that the black-white wealth gap is due to both historical and contemporaneous wealth policies, including policies that have impaired the ability of many black Americans to accumulate wealth as well as through the cumulative effects of intergenerational transmission of wealth (Oliver & Shapiro, 2006; Conley, 1999). Investigations of the wealth gap have attributed the bulk of the gap to differences in inheritances and intergenerational transfers

between black and white families, rather than to differences in rates of savings or returns on assets (Gittleman & Wolff 2000). This finding was reinforced by John Karl Scholz and David Levine (2004) who found that wealth differences across race are large and cannot be accounted for by age or educational attainment.

While a small literature exists linking wealth to intergenerational income mobility, such as the 2009 Pew report by Cramer, O'Brien, Cooper and Luengo-Prado which finds that greater parental savings increase the likelihood of upward intergenerational mobility, this research does not disentangle race from the analysis. It is important to note that wealth, in itself, does not necessarily cause earnings persistence or mobility. Wealthier people could have different attitudes towards risk or time discounting and pass those attitudes on to their children. Theory suggests several possible causal connections between wealth and parent-child association in earnings via education, occupation and neighborhood choices (Grawe 2008). This goal of this analysis is not to specify the mechanisms through which wealth impacts economic mobility, but rather it is to examine the potential total impact of wealth changes on rates of upward and downward mobility.

DATA

This analysis utilizes the Panel Study of Income Dynamics (PSID), which is a longitudinal survey that follows individuals and their offspring from 1968 to present. The survey has been conducted annually from 1968-1997 and biannually between 1997 and 2009. The PSID has the advantage of following a nationally representative sample over time, while also having information about the income and wealth of two subsequent generations.[1] The PSID includes rich data on labor earnings, family income, hours worked, employment status and family

[1] However, while the PSID is nationally representative, it was not initially designed to be a wealth survey and therefore does not over-sample the wealthiest households, which is necessary to obtain precise estimates for this group.

relationships and is one of the most widely used datasets for studying intergenerational income and earnings elasticities in the United States. Using this data it is also possible to link wealth data from the following years: 1984, 1989, 1994, 1999, 2001, 2003, 2005, 2007, and 2009. The frequent collection of wealth data in recent years allows researchers to track changes in wealth holdings both longitudinally and cross-sectionally for the current generation of PSID members.

METHODS

Terms

Wealth is primarily defined as *total net worth* (total assets minus total liabilities/debts). Net worth is broken into the following four categories: financial assets, tangible assets, home equity and uncollateralized debt.

Financial assets are defined as the sum of assets from checking/savings accounts (including money market funds, certificates of deposit, government savings bonds, or treasury bills and IRA's[2]), stocks/mutual funds or investment trusts, and any other savings or assets (such as bonds, rights in a trust or estate, cash value in a life insurance policy, or a valuable collection for investment purposes).

Tangible assets are defined as the sum of assets from equity in farm/business ownership, real estate other than main home and vehicles (including motor homes, trailers, and boats).

Home equity is primary home equity—home value net of mortgage debt (could be negative value).

Uncollaterialized debt (elsewhere simply referred to as "debt") includes all other debt—such as credit card debt, student loans, medical or legal bills, personal loans, or loans

[2] Pension and social security are not included in PSID wealth calculations.

from relatives, etc). This does not include mortgage on main home or farm/business debt (which is already factored into net equity values above).

Race: The race measure is based on the head of the household's reported race and Hispanic ethnicity in 1985 (and, if missing, in subsequent years up to 2009). This report only provides information on White, non-Hispanic and Black, non-Hispanic families. To simplify, the terms "black" and "white" are used throughout this paper, although they always refer to non-Hispanic individuals.

Income: Income is defined as the sum of total family income for all family unit members in the previous year. Family income includes labor income from wages and salaries, bonuses, overtime, tips, commissions and other job-related income, as well as transfers and social security income. Income can be zero or positive.

Methods

Previous analyses of the effect of the recession on wealth holdings have been limited as they can only examine cross-sectional trends, while the PSID has the advantage of following a panel of the *same* families over time. By definition, a panel will differ from cross-sectional data in a couple important ways: 1) new families (created by marriage/divorce or children leaving parents' home) will be included in cross-sectional analyses, but not in panel data[3] and 2) families that drop out of the survey will be included in cross-sectional analyses, but not in panel. As such, the average age of families in the second year of the panel is slightly older than the cross-sectional analysis. In the cross-sectional runs there is a sample size of 7,722 in 2007 and 8,183 in 2009 compared with a sample of 6,640 in the panel. Of the difference, 568 families left the PSID between 2007 and 2009 and the rest was due to changes in head of household through

[3] Males are typically considered the head of household in PSID families, so when a couple marries or divorces, the head of household only changes for the woman. Therefore a panel would follow the male across marriage and divorce, but not the female.

marriage, divorce, death of head or new family formation. This analysis examines both cross-sectional and longitudinal aspects of the PSID, although the focus is on the longitudinal panel. This paper will examine four central questions:

Question #1: How has the Great Recession impacted family wealth?

To answer this question both cross-sectional historic wealth supplements as well as longitudinally matched contemporary (2007-2009) panels were used to provide a descriptive analysis of the changes in wealth/debt for various types of families. This sample consists of 6,640 families.

Question #2: How has this recession differed from the previous recession?

To answer this question, a panel of matched families from 1999-2001 is compared with the panel from 2007-2009.[4] The panel in 1999-2001 contained 5,678 families, while the 2007-2009 panel included 6,640 families. 3,860 families remained intact across both panels.

Question #3: How does family wealth impact intergenerational income mobility?

This analysis utilizes the complete PSID to examine how wealth impacts intergenerational income mobility. To be included in the sample, children must be present (and between age 5-21) in parent's household for at least three years when parents report income and wealth data between 1984 and 1989 (the first available years the wealth supplement is collected), and children must report at least three years of income from 1997-2009 when they are either the head or spouse of their own family. In each generation, income for every available year is first adjusted to 2009 dollars, logged, averaged and then age-adjusted.[5] Wealth is transformed using

[4] Based on NBER business cycle definitions, the dates of the two most recent recessions were March-November 2001 and December 2007-June 2009. In both comparisons the first year is a non-recession year and the second year is a recession year. A small number of interviews (0.9% or 103 families) in the 2007 sample occurred during December 2007, which was technically a recessionary month, so they were excluded from this analysis.

[5] Age-adjustment is done by to account for life-cycle variation in earnings. Following previous research, (Bratberg et al 2007) I first subtract the mean value of log earnings in each generation from each observation to suppress the

the inverse hyperbolic sine transformation, which essentially creates a logged transformation for a distribution which includes negative and zero values.[6] For the parent generation, income is collected from 1984-1989 for each year the child is living at home and age 5-21. For the child generation, income is collected from 1997-2009 for each year the child is head of household or spouse. Income is only collected in years when the head of household is below age 65. To be included in the sample, individuals had to report at least three years of income in each generation. The average number of years of income data for the parent generation is 5.4 years and 5.9 years for the child generation. The total sample size is 1,778.

Using new methodology developed by Bhattacharya and Mazumder (2010) to calculate rates of upward and downward intergenerational income mobility by race, I estimate directional rank probabilities conditional on parental wealth while the child was living at home age 5-21. Measuring parental wealth and income at this age provides the best model for an estimation of the effect of capital constraints on intergenerational income mobility. This estimate will give the likelihood of a child exceeding (or falling below) their parent's place in the income distribution by a certain number of percentile points, conditional on their parents beginning at or below a given percentile (i.e. given that a child grew up in the bottom quintile of the income distribution, there is a 20 percent probability of that child moving at least 30 percentage points above their parent's income). Borrowing notation directly from unpublished work by Bhashkar Mazumder,[7] this estimating equation would be:

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constant term and then regress log earnings on age and age-squared. The residual from these equations are then grouped into percentiles to estimate percentile rankings in each generation.

[6] The inverse hyperbolic sine transformation is defined as: $\log(w + \sqrt{w+1})$, which is approximately equal to log(2)+log(w), or roughly log(w), and therefore can be interpreted as a standard logarithmic variable, except that it is defined for nonpositive values (Pence 2006).

[7] See Bhattacharya and Mazumder (2010) for methodology details. As opposed to estimating the intergenerational income elasticity for the two racial groups separately (which would provide rates of regression to the mean within each group), this analysis follows Bhattacharya and Mazumder (2010) to calculate rates of upward and downward intergenerational mobility by race. Usage of these transition probabilities overcomes the sensitivity of transition

$$URM_{\tau,s} = \Pr(Y_1 - Y_0 > \tau \mid Y_0 \leq s) \quad (2)$$

where *URM* stands for upward rank mobility, *s* is a given percentile in the income distribution and τ is the amount that children's income percentile (Y_1) exceeds their parent's income percentile (Y_0). When τ =0, this equation estimates the likelihood that a child's income rank exceeds their parents'. The downward rank mobility (*DRM)* equation is a slight modification:

$$DRM_{\tau,s} = \Pr(Y_0 - Y_1 > \tau \mid Y_0 \geq s) \quad (3)$$

Both the upward and downward rank measures can be estimated to examine rank conditional on parental wealth in 1984-1989 ($W_{0,84-89}$) to examine the role that wealth plays as a mechanism in explaining the black-white mobility gap:

$$\Pr(\widehat{URM_{\tau,s}}) = \beta_0 + \beta_1 W_{0,84-89} + \varepsilon_i \mid (Y_1 - Y_0 > \tau, s_0 \leq Y_0 \leq s_1, W_{0,84-89})) \quad (4)$$

These measures will be calculated separately for black and white families and used to estimate the black-white mobility gap at varying points in the wealth distribution. Finally, in addition to estimating upward and downward rank mobility based on probit models as shown in Model 4, lowess models are also be examined to examine the non-parametric nature of the relationship between wealth and mobility.

Question #4: How will the wealth declines from the Great Recession impact the mobility prospects of the next generation?

Integrating results from the above analyses, this section will evaluate the implications for future intergenerational mobility and inequality for the current generation of children. This section will simulate the predicted likelihood of upward and downward mobility for the current

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matricies to choice of cut-points (i.e. whether to use quartiles or quintiles) and instead allows the emphasis to be on the magnitude of the upward or downward mobility, given a certain starting point.

generation by applying the coefficients from the previous intergenerational analysis to the 2007-2009 panel of families with a child living at home and under age 21 (N=2,801). Probabilities of upward and downward mobility will be estimated for all children based on parent's income ranking from 1997-2007 and parent's wealth in 2007 and 2009. The difference in the estimated mobility using 2007 versus 2009 levels of wealth will approximate the "impact" of the Great Recession on mobility and inequality in the next generation.

Assuming a consistent relationship between wealth and mobility over time as well as assuming that a temporary shock in wealth has the same long-term consequences as a permanent reduction in wealth, this simulation will estimate the predicted difference in rates of mobility by race, parent income rank and parental wealth in 2007 and 2009 using the coefficient estimates from Model 4:

$$\Pr\left(\widehat{URM}\right)_{i,2007} = \hat{\beta}_{0,1984-89} + \hat{\beta}_{1,1984-89} W_{0,2007} \mid (s_0 \leq Y_{0\,(1997-2007)} \leq s_1, W_{0,2007}) \quad (5)$$

$$\Pr\left(\widehat{URM}\right)_{i,2009} = \hat{\beta}_{0,1984-89} + \hat{\beta}_{1,1984-89} W_{0,2009} \mid (s_0 \leq Y_{0\,(1997-2007)} \leq s_1, W_{0,2009}) \quad (6)$$

where $\Pr\left(\widehat{URM}\right)_{i,2007}$ is the probability of upward income mobility in adulthood for a individual child given their race, parents' income ranking in 1997-2007, and parent's wealth in 2007. These models will estimate the average predicted likelihood of upward rank mobility for each quintile of parental income by race using 2007 and 2009 values of wealth. Equivalent models estimating downward rank mobility will also be estimated. The difference in these estimates will approximate the "impact" of the Great Recession on intergenerational mobility and inequality in the next generation.

RESULTS

Question #1: How has the Great Recession impacted family wealth?

Historic Trends

The Great Recession has led to the greatest black-white wealth inequality in over 25 years. In 2009, the median white family held 22 times more wealth than the median black family, up from a ratio of 12 to 1 in 2007. Looking at cross-sectional data (see Figure 1), the median black family net worth declined by over 50 percent (from $10,345 to $4,500) during the recent recession while the median white net worth declined 20 percent ($124,138 to $98,200). Black families have experienced declining median net worth since 2001, suggesting that they never fully recovered from the previous recession. White families, on the other hand, have experienced continuous upward growth in net worth from 1984 (the first year of available data) to 2007. Following the last recession, white wealth did not decline, but remained flat from 2001 to 2003 and increased by 2005 before declining between 2007-2009.

A slightly different picture emerges excluding the dramatic increases and subsequent decline in home equity values (see Figure 2). For the median white family, non-housing wealth has been declining since 1999. Exclusive of home equity, median white wealth peaked in 1999 at $42,481 and black wealth peaked in 2003 at $3,505. In other words, non-housing wealth had been in a pattern of decline long before the current recession. Furthermore, the non-housing wealth disparities between blacks and whites in 2009 were similar to the wealth ratios in 1984-1994.

Distribution of Wealth

Black families not only lost a greater percentage of wealth in the recession, but they entered the recession with substantially less wealth than whites. For both groups the current share without positive net worth is at an all-time high (see Figures 3 & 4). Since 2007, the share of black families with negative or zero net worth increased from 29 to 36 percent and the share of white families increased from 13 to 15 percent. Black families are also much more likely to

have very low net worth and unlikely to have high net worth. The share of black families with wealth of $10,000 or less increased from 50 to 57 percent between 2007 and 2009, while the share of low wealth white families increased from 22 to 26 percent. In contrast, only 14% of black families own over $100,000 in total wealth, compared with 50% of white families in 2009.

Demographics

In fact, one of the largest historical drivers of wealth inequality has combination of race and education. As shown in Figure 5, dramatic differences exist in wealth by race and educational attainment. While median wealth holdings for most other race/education combinations have remained relatively flat from 1984-2007, followed by large declines from 2007-2009, the wealth holdings of white families with at least a bachelor's degree have skyrocketed, increasing nearly 50% in the past 25 years. Much of the black-white wealth gap appears to be stemming from the considerable growth in wealth holdings of highly-educated white families relative to everyone else. The education wealth gap between high and low-educated families likely reflects similar trends in hourly wages for these groups.[8] College-educated blacks have lower net worth than white families with less than a high school degree, even controlling for age, marital status and income. In 2007 these groups were roughly equal, but by 2009 college-educated blacks fared much worse than low-education whites.

While population-level averages are informative about general trends in the country, it is difficult to parse out how much the changes are due to the recession versus differences in the sample composition over time. In fact, during difficult economic times we could expect to see fewer new family formations[9] as children are less likely to leave home (and more likely to return home) which could artificially raise median wealth holdings as new families (i.e. children

[8] See State of Working America 2008/2009.
[9] Linda A. Jacobsen and Mark Mather. "A Post-Recession Update on U.S. Social and Economic Trends. December 2011. http://www.prb.org/pdf11/us-economic-social-trends-update-2011.pdf

moving out of parent's home or families going through a major change such as divorce or marriage) would be likely to have lower levels of wealth than pre-existing ones and these new families would be less likely to emerge during a recessionary period.

Following only those families that did not have a change in head between 2007 and 2009, the typical black family lost about one third of their wealth (from $10,347 to $7,000) during the recent recession while the typical white family experienced a loss of less than 10 percent ($130,372 to $119,000) (see Table 1).

While median net worth declined substantially from 2007-2009, average net worth for both black and white families actually increased (or was flat). This indicates that while the majority of families experienced a decline in wealth following the recession, a few high wealth families were able to actually increase their wealth holdings despite the downturn. In fact, 44 percent of families experienced either a growth in net worth between 2007-2009 or no change (see Figure 11 below). This number includes families with zero net worth in both time periods.

While the housing bubble and resulting decline in home equity played a significant role in the deterioration of net worth, other assets declined as well, with non-housing wealth declining nearly as dramatically as total wealth (see bottom panel of Table 1). In fact as the historic trends showed, non-housing wealth had been declining prior to the beginning of the current recession.

When looking at the individual components of wealth, the decline in total net worth from 2007-2009 was mostly due to declining value of held assets, not declining ownership of certain types of assets. However, blacks lost ownership of savings, IRAs, and stocks at a greater rate than whites during the last recession, widening the disparities in ownership of these assets.

Among families that continued to hold an asset in both 2007 and 2009, both blacks and whites lost equity in their homes, farms and businesses, while black families experienced large declines in the values of their IRAs and white families lost value in their stock holdings.

Simple Demographic Break-Downs

Certain groups felt the impact of the recession harder than others. Young families and single parents experienced some of the largest declines in net worth. This recession was especially hard for single-parent families—both white and black. Married and cohabiting families with kids also experienced large losses in net worth. Families with children at home tend to be younger and therefore more likely to have riskier portfolios.

Question #2: How has this recession differed from the previous recession?

Comparing the Great Recession to the 2001 recession, we can see that the 2001 recession had a much smaller impact on net worth. Black families were hit harder than white families in both recessions, regardless of whether home equity is included into the calculation of net worth. As we can see from Figure 8, median net worth actually continued to increase for white families following the 2001 recession when you include the value of home equity. The next figure displays the composition of wealth trends.

Black families experienced dramatic declines in financial assets in both recessions, but the magnitude of their losses was twice as high in the most recent recession (-43.1% vs -21.1%). However, for other components of family net worth, black families fared similarly between the two recessions. It should be noted that a decline in debt is generally considered a good thing, although it could be as a result of bankruptcy (which is obviously a less desirable means of reducing debt). The typical white family gained value in both financial assets and home equity in the 2001 recession, but had modest losses in the recent recession.

Examining the distribution of wealth changes following the previous two recessions we can see there is a bifurcation of winners and losers, with 58% of families experiencing either a gain or no change in total net worth in 2001, compared with 44% in 2009. Conversely, nearly 40% of families lost over a quarter of the net worth in the Great Recession, compared with 23% of families in 2001. The gap between winners and losers is similar when these trends are divided by race, although a greater share of black families (7.3% vs 0.6%) experience no change in wealth due to having zero net worth both before and after the Great Recession.

Question #3: How does family wealth effect intergenerational income mobility?

To examine the potential impact of wealth on intergenerational mobility, I examined a sample of individuals who were children age 5-21, living at home when their parent's wealth holdings were surveyed in 1984 and 1989 and looked at their intergenerational income mobility conditional on their parent's wealth in when these individuals reached adulthood. Wealth was allowed to have a nonparametric effect on income mobility, meaning that a $1,000 increase in wealth from $0 to $1,000 could have a greater (or smaller) impact on mobility that an increase from $100,000 to $101,000.[10]

Upward Mobility

Over half (59.0%) of white children who grew up in the bottom 20th percentile of the income distribution are estimated to exceed their parent's position by at least 20 percentage points, compared with one-third (38.1%) of similarly situated black children. The difference in these two estimates (59.0-38.1=20.9) is called the black-white mobility gap. Table 3A shows the upward mobility gap at the full range of thresholds and cutpoints. While the rates of upward

[10] For both upward and downward mobility, I examined the unconditional model, a probit model and a lowess nonparametric regression model. Observations at the top and bottom 1% of the sample have been dropped to eliminate extreme outliers.

mobility differ based on choice of these measures, the magnitude of the black-white gap (~20 percentage points) remains relatively constant across model choice.

Controlling for the impact of wealth on mobility, the analysis finds that higher wealth is associated with an increased likelihood of upward mobility for white families, but not black families (see Figure 12). As a result, the black-white mobility gap actually increases as wealth increases (see Figure 13). At low levels of wealth, the likelihood of upward mobility for both black and white children is essentially the same.[11]

Downward Mobility

In an analogous model, white children who grew up in the top half of the income distribution are estimated to have a 39.8% chance of falling below their parent's rank by at least 20 percentage points, compared with black children who have a 55.5% likelihood of downward mobility. The difference in these two estimates (39.8-55.5=-15.6) is the downward mobility gap, indicating that black children are more likely to experience downward mobility than white children. The full matrix of results is shown in Table 3B.

Furthermore, I find no conclusive evidence that parental wealth has a protective impact on the likelihood of downward mobility for either black or white families (see Figure 14). Both the probit and lowess models do not predict any differences in mobility probabilities across the wealth distribution. In regards to the mobility gap, both models find the gap to be constant across levels of wealth.[12]

[11] The difference in predicted likelihood of upward mobility for families in the bottom quintile with $0 or less in total net worth by race is not statistically significant, but is based on a very small sample of families.

[12] It is more likely that we would see an impact of wealth on downward mobility if we restricted our analysis to the top 20th percentile versus the top half of the parental income distribution, but the sample of black families gets very small at the top of the distribution, so I follow previous research and only examine downward mobility from the top half.

Question #4: How will the wealth declines from the Great Recession impact the mobility prospects of the next generation?

Assuming that a drop in wealth (or a negative wealth shock) has the same effect on future economic mobility as having a lower level of wealth to begin with, the above analyses can be used to estimate the "impact" of the recession on the mobility prospects of current children. Simulating the effect of wealth on mobility for each quintile of the parental income distribution by race (as shown in Table 4) using reported wealth in 2007 and 2009, I find that reductions in wealth will have mixed effects on the black-white mobility gap for the next generation.

Families in the bottom half of the income distribution are predicted to be relatively unaffected by the Great Recession due to the fact that most have very little to no net worth. However, black families in the top two quintiles will experience much larger increases in rates of downward mobility and dampened upward mobility than white families of similar income. The Great Recession may slightly reduce the black-white mobility gap in the bottom quintile of the income distribution as white families lost greater amounts of wealth (as black families often had no wealth to lose), thus reducing their likelihood of upward mobility at a greater rate than black families. However, the mobility gap at the top of the income distribution is likely to widen, as higher income black families experienced much larger declines in wealth than white families of similar income levels. The magnitude of the reduction in the mobility gap at the bottom is much smaller (0.7 percentage points) than the increase in gap at the top (23.2 percentage points in the fourth quintile and 6.0 percentage points in the top quintile), leading to the conclusion that the Great Recession's impact on family wealth will lead to an overall increase in inequality in the next generation, holding all else constant.

CONCLUSION

The Great Recession has led to the greatest black-white racial wealth gap in 25 years. Racial wealth disparities among low-income families lessened, while differences in wealth holdings among higher income families widened. Simulations estimating the impact of these wealth changes on future mobility prospects predict dampened mobility prospects for higher income black families, with smaller impacts on low income and white families.

While these findings are compelling, much additional research needs to be undertaken to fully understand potential policy implications. Additional exploration of the possible pathways through which wealth might matter (i.e. total net worth may be less important than having financial assets or positive home equity) should be investigated. There is suggestive evidence that financial assets matter for the upward mobility of white families, while tangible assets and home equity matter for black families. However, due to relatively small sample sizes, no definite conclusions can be drawn at this time. Future research should examine these relationships.

Future research needs to examine whether a temporary (or permanent) decline in family wealth operates through the same mechanisms as a lower initial level of wealth. Subsequent research should examine the impact of negative wealth shocks on children's educational attainment, occupational status (i.e. likelihood of being self-employed) and residential mobility.

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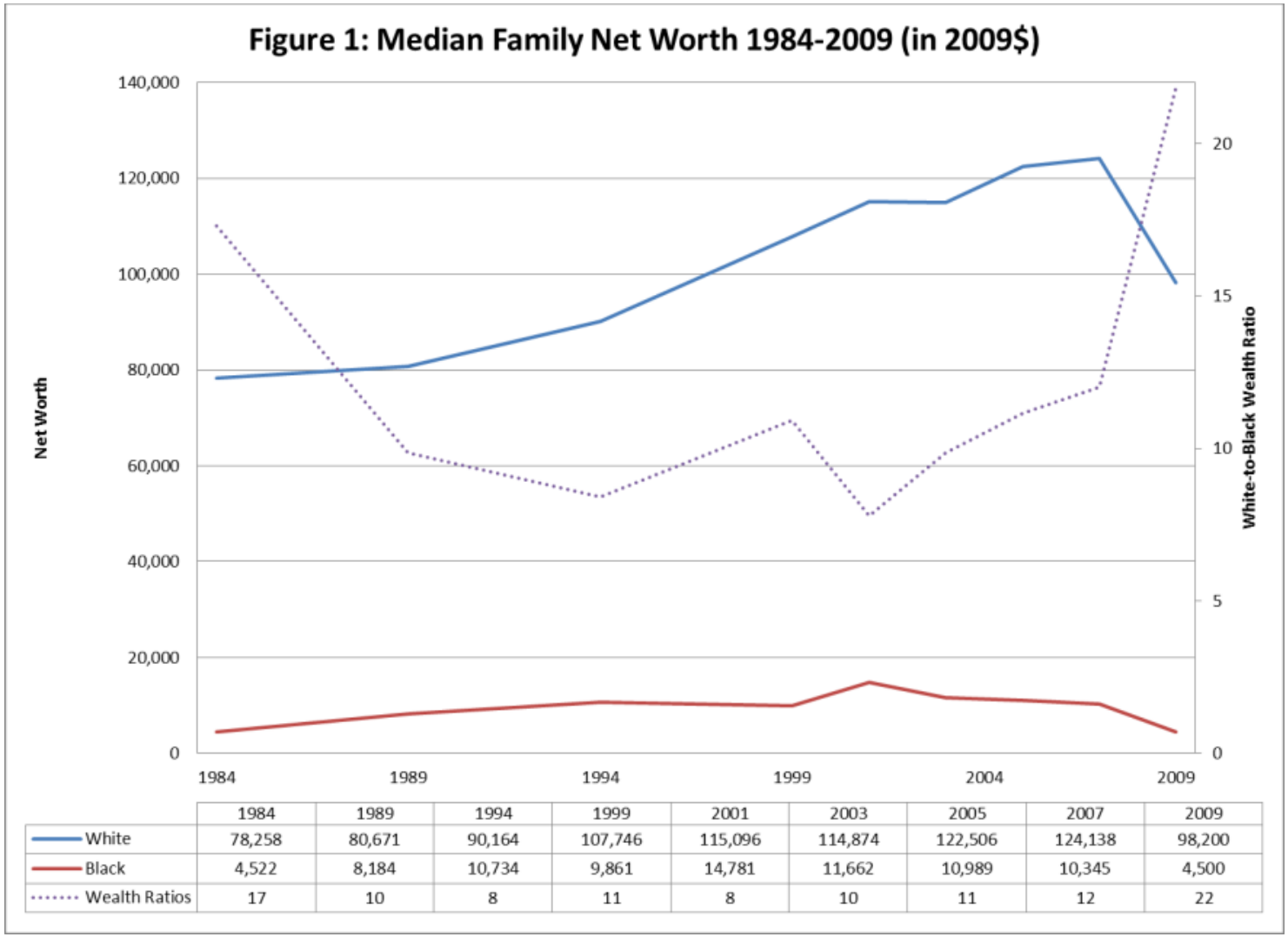
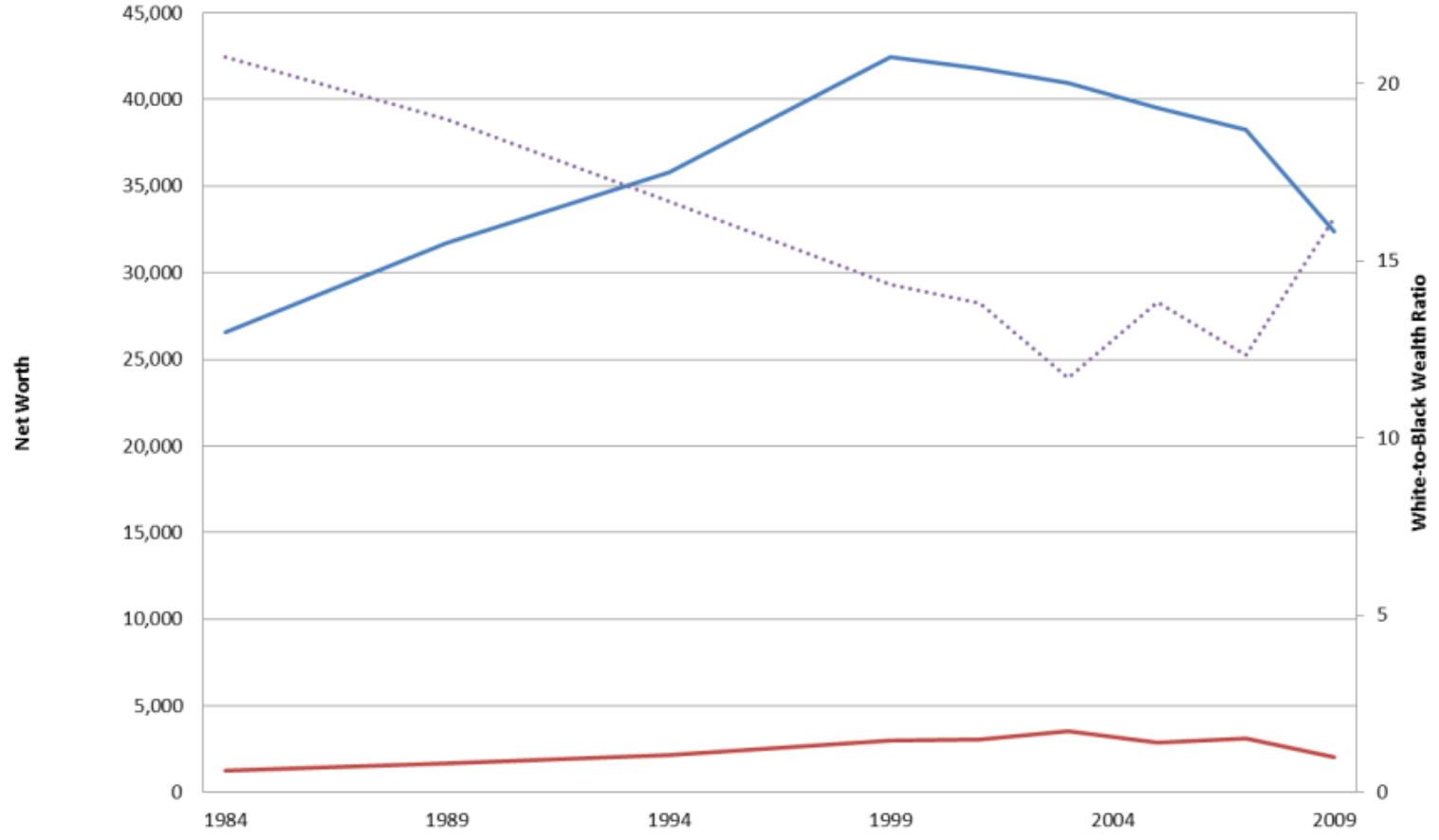
FIGURES AND TABLES



	1984	1989	1994	1999	2001	2003	2005	2007	2009
White	78,258	80,671	90,164	107,746	115,096	114,874	122,506	124,138	98,200
Black	4,522	8,184	10,734	9,861	14,781	11,662	10,989	10,345	4,500
Wealth Ratios	17	10	8	11	8	10	11	12	22

Figure 2: Median Family Net Worth Excluding Home Equity 1984-2009 (in 2009$)



	1984	1989	1994	1999	2001	2003	2005	2007	2009
White	26,545	31,734	35,779	42,481	41,798	40,935	39,510	38,276	32,400
Black	1,278	1,670	2,147	2,961	3,029	3,505	2,857	3,103	2,000
Wealth Ratios	21	19	17	14	14	12	14	12	16

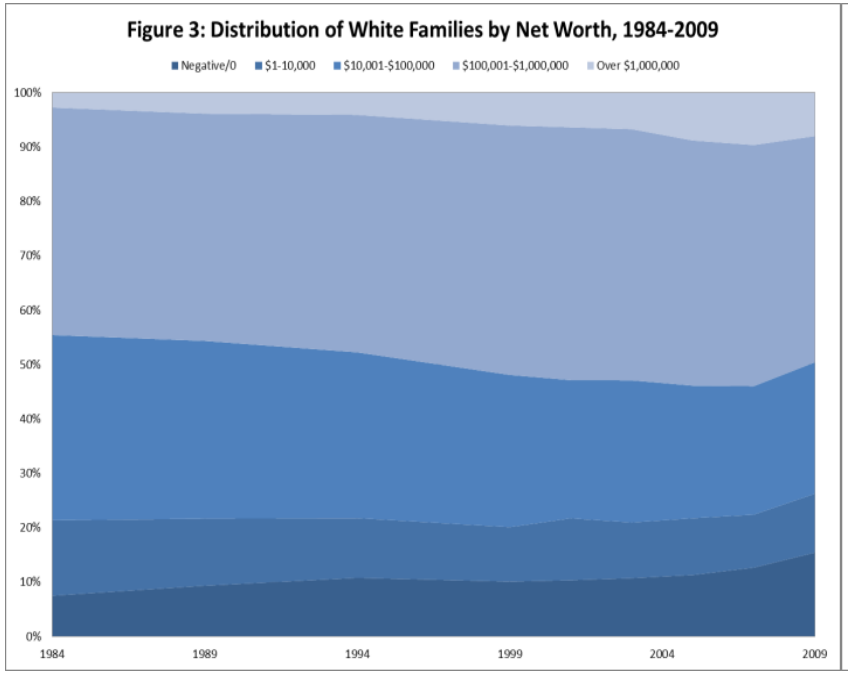


Figure 3: Distribution of White Families by Net Worth, 1984-2009
Negative/0
$1-10,000
$10,001-$100,000
$100,001-$1,000,000
Over $1,000,000
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1984
1989
1994
1999
2004
2009

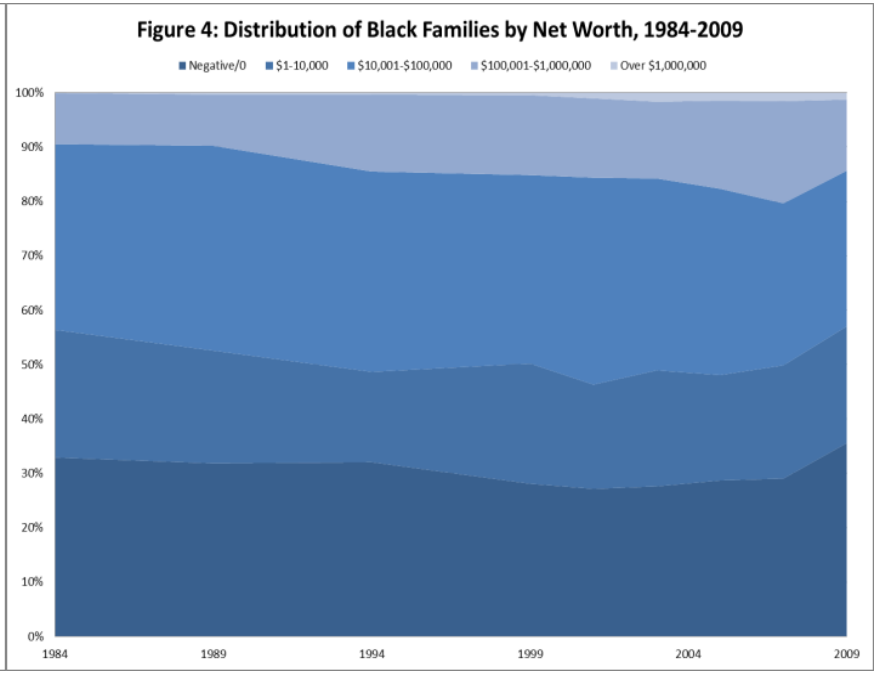


Figure 4: Distribution of Black Families by Net Worth, 1984-2009
Negative/0
$1-10,000
$10,001-$100,000
$100,001-$1,000,000
Over $1,000,000
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1984
1989
1994
1999
2004
2009

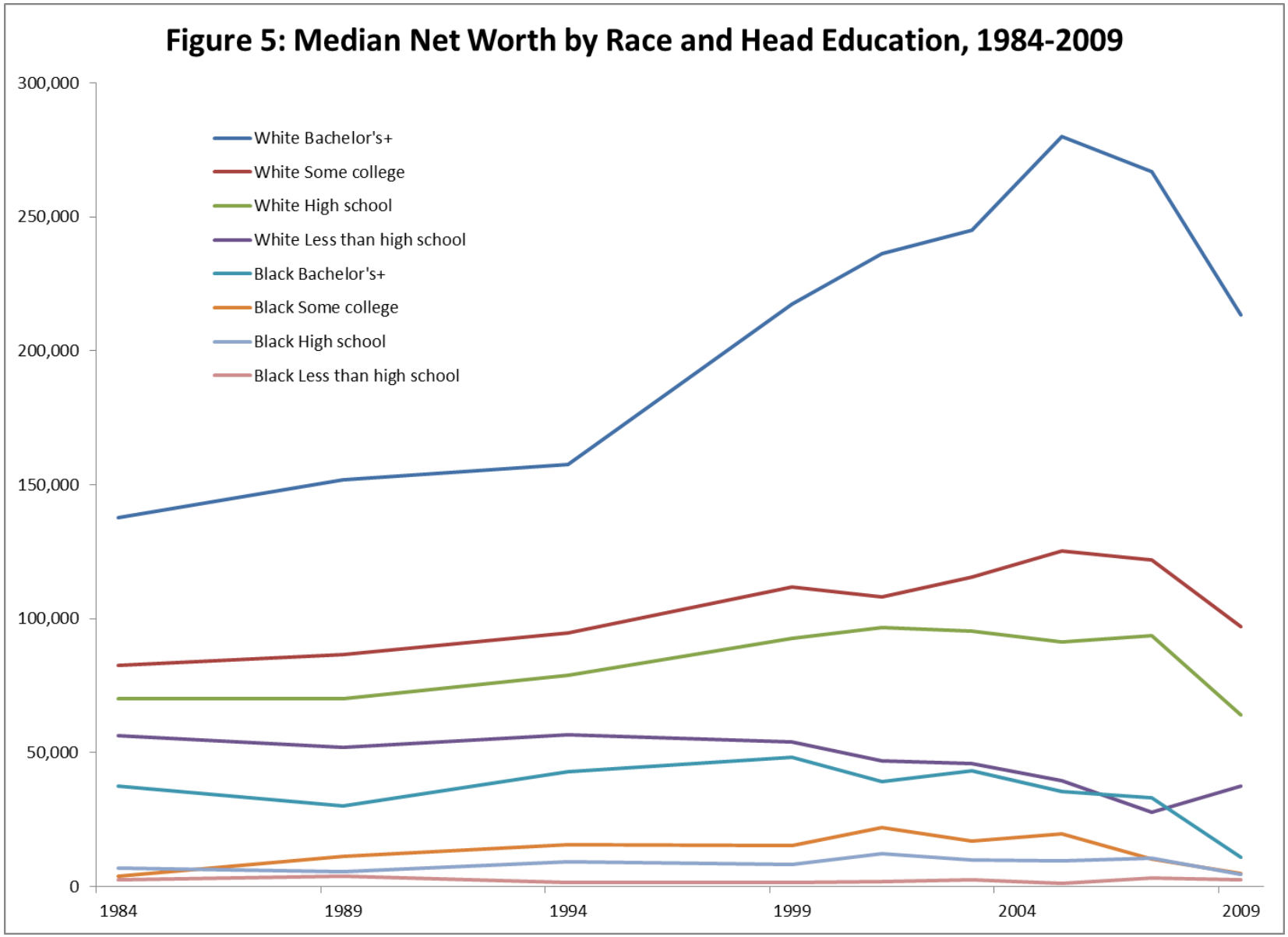


Figure 5: Median Net Worth by Race and Head Education, 1984-2009
300,000
250,000
200,000
150,000
100,000
50,000
0
1984
1989
1994
1999
2004
2009
White Bachelor's+
White Some college
White High school
White Less than high school
Black Bachelor's+
Black Some college
Black High school
Black Less than high school

Table 1. Net Worth by Race, 2007-2009 (2009$)

	Median Net Worth				Mean Net Worth			
	2007	2009	Change 2007-09	Percent Change 2007-09	2007	2009	Change 2007-09	Percent Change 2007-09
Including Home Equity								
White, non-Hispanic	130,345	117,000	-13,345	-10.2%	475,732	488,270	12,538	2.6%
Black, non-Hispanic	10,345	6,100	-4,245	-41.0%	91,640	107,724	16,083	17.6%
Excluding Home Equity								
White, non-Hispanic	41,379	38,100	-3,279	-7.9%	339,275	373,572	34,297	10.1%
Black, non-Hispanic	3,103	2,500	-603	-19.4%	56,416	80,034	23,618	41.9%

Source: Author's calculations using PSID supplemental wealth data for families with same head in 2007 and 2009. N=6,640

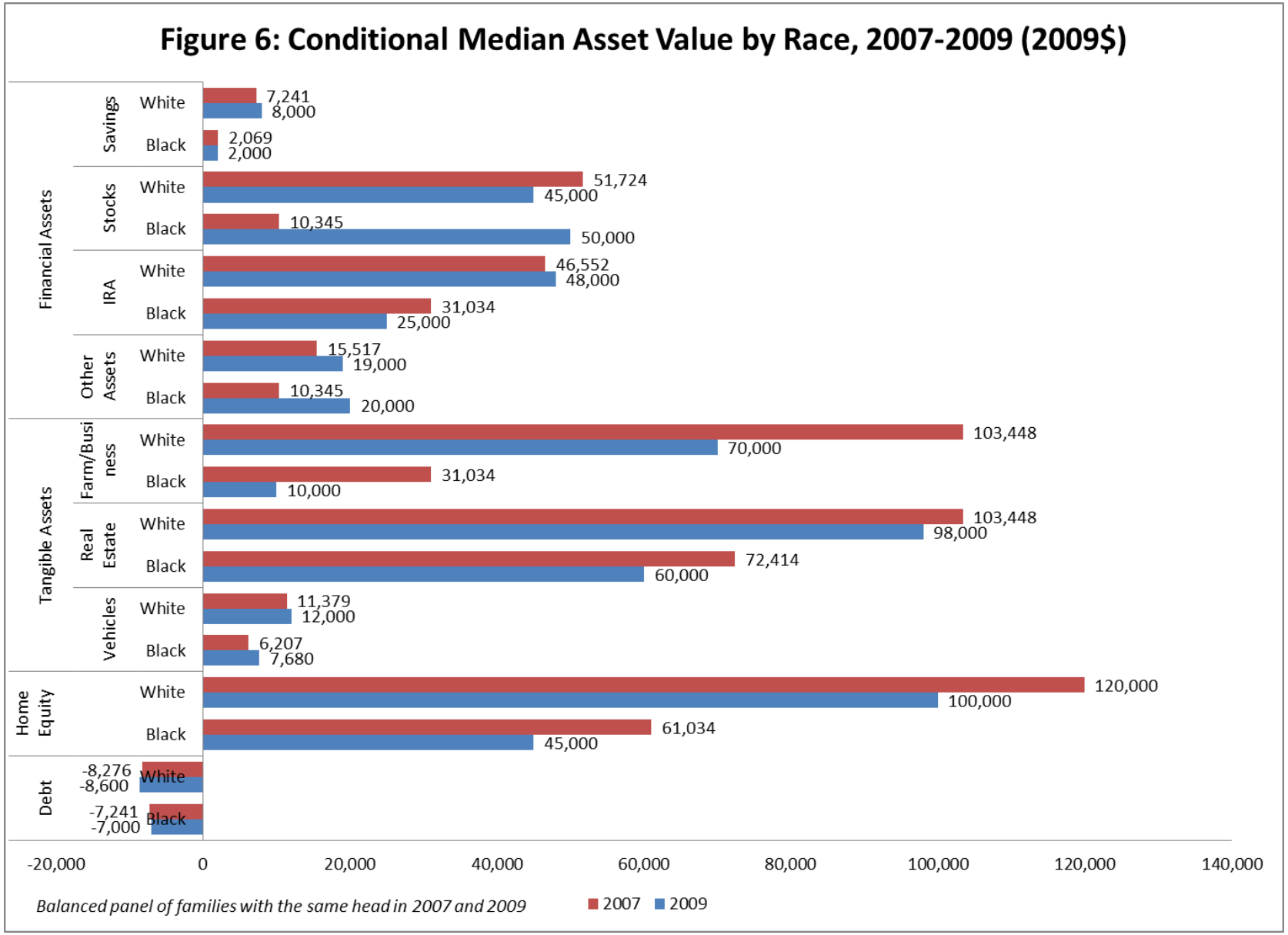


Figure 6: Conditional Median Asset Value by Race, 2007-2009 (2009$)
Financial Assets
Savings
White
7,241
8,000
Black
2,069
2,000
Stocks
White
51,724
45,000
Black
10,345
50,000
IRA
White
46,552
48,000
Black
31,034
25,000
Other Assets
White
15,517
19,000
Black
10,345
20,000
Tangible Assets
Farm/Business
White
103,448
70,000
Black
31,034
10,000
Real Estate
White
103,448
98,000
Black
72,414
60,000
Vehicles
White
11,379
12,000
Black
6,207
7,680
Home Equity
White
120,000
100,000
Black
61,034
45,000
Debt
White
-8,276
-8,600
Black
-7,241
-7,000
-20,000
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
Balanced panel of families with the same head in 2007 and 2009
2007
2009

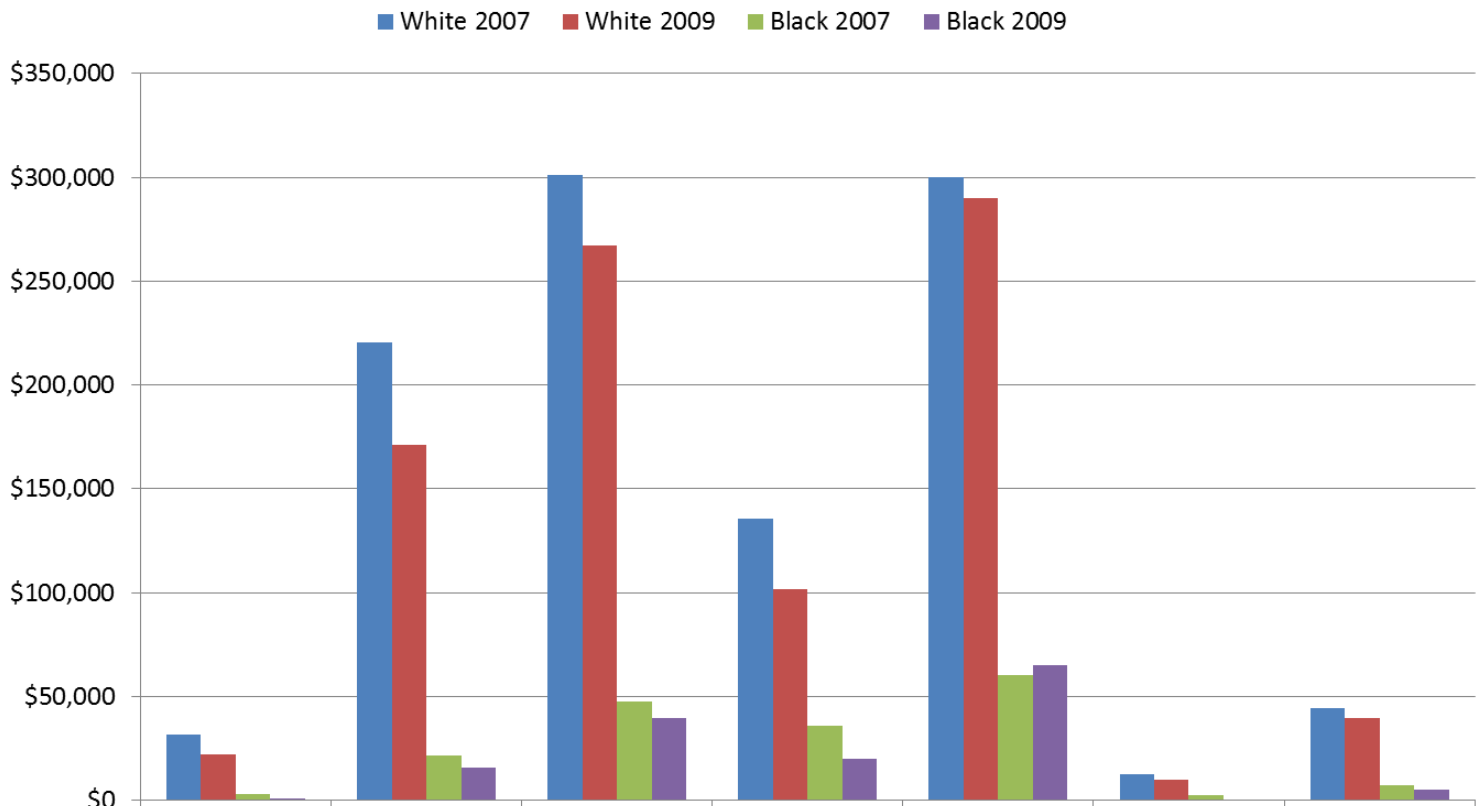
Table 2. Wealth Holdings by Asset Type and Race, 2007-2009 (2009$)

	White, non-Hispanic Families									
	2007					2009				
	Percent holding asset type	Mean	Median	Mean conditional on holding	Median conditional on holding	Percent holding asset type	Mean	Median	Mean conditional on holding	Median conditional on holding
Real Estate	18.2%	67,788	0	372,396	103,448	18.5%	133,908	0	723,081	98,000
Vehicles	86.9%	16,506	10,345	18,988	11,379	87.7%	15,711	10,000	17,911	12,000
Farm/Business	13.2%	89,349	0	676,000	103,448	14.6%	75,765	0	518,115	70,000
Stocks	29.4%	73,460	0	250,061	51,724	28.3%	54,207	0	191,329	45,000
Savings	89.2%	34,130	5,172	38,261	7,241	88.9%	39,975	5,000	44,964	8,000
Main Home	74.5%	136,457	62,069	192,344	120,000	74.9%	114,699	50,000	162,042	100,000
Other Assets	20.2%	12,162	0	60,120	15,517	20.8%	18,879	0	90,601	19,000
IRA	39.8%	58,720	0	147,595	46,552	38.7%	46,891	0	121,179	48,000
Debt	52.5%	12,842	414	24,459	8,276	51.6%	11,765	391	22,792	8,600

	Black, non-Hispanic Families									
	2007					2009				
	Percent holding asset type	Mean	Median	Mean conditional on holding	Median conditional on holding	Percent holding asset type	Mean	Median	Mean conditional on holding	Median conditional on holding
Real Estate	7.6%	14,477	0	191,560	72,414	7.0%	31,594	0	448,662	60,000
Vehicles	68.0%	8,810	3,103	12,956	6,207	67.7%	8,188	3,000	12,100	7,680
Farm/Business	4.0%	14,374	0	355,030	31,034	3.8%	12,989	0	338,481	10,000
Stocks	5.8%	3,771	0	65,077	10,345	3.7%	9,625	0	257,089	50,000
Savings	57.4%	7,804	207	13,594	2,069	55.1%	7,617	100	13,831	2,000
Main Home	42.7%	35,224	0	87,574	61,034	42.8%	27,690	0	69,870	45,000
Other Assets	10.6%	5,295	0	49,847	10,345	10.5%	9,766	0	92,693	20,000
IRA	9.1%	9,361	0	102,842	31,034	7.2%	8,969	0	124,306	25,000
Debt	49.1%	7,477	0	15,218	7,241	48.8%	8,714	0	17,841	7,000

Source: Author's calculations using PSID supplemental wealth data for families with same head in 2007 and 2009. N=6,640

Figure 7: Median Net Worth by Demographic, 2007-2009 (2009$)



	<45	45-64	65+	Married/Coha b with kids	Married/Coha b no kids	Single with kids	Single no kids
White 2007	$31,552	$220,345	$301,035	$135,517	$300,207	$12,850	$44,483
White 2009	$22,400	$171,000	$267,000	$102,000	$290,000	$9,800	$39,500
Black 2007	$2,897	$21,517	$47,586	$36,207	$60,186	$2,586	$7,241
Black 2009	$1,000	$16,000	$39,500	$20,000	$65,000	$500	$5,000

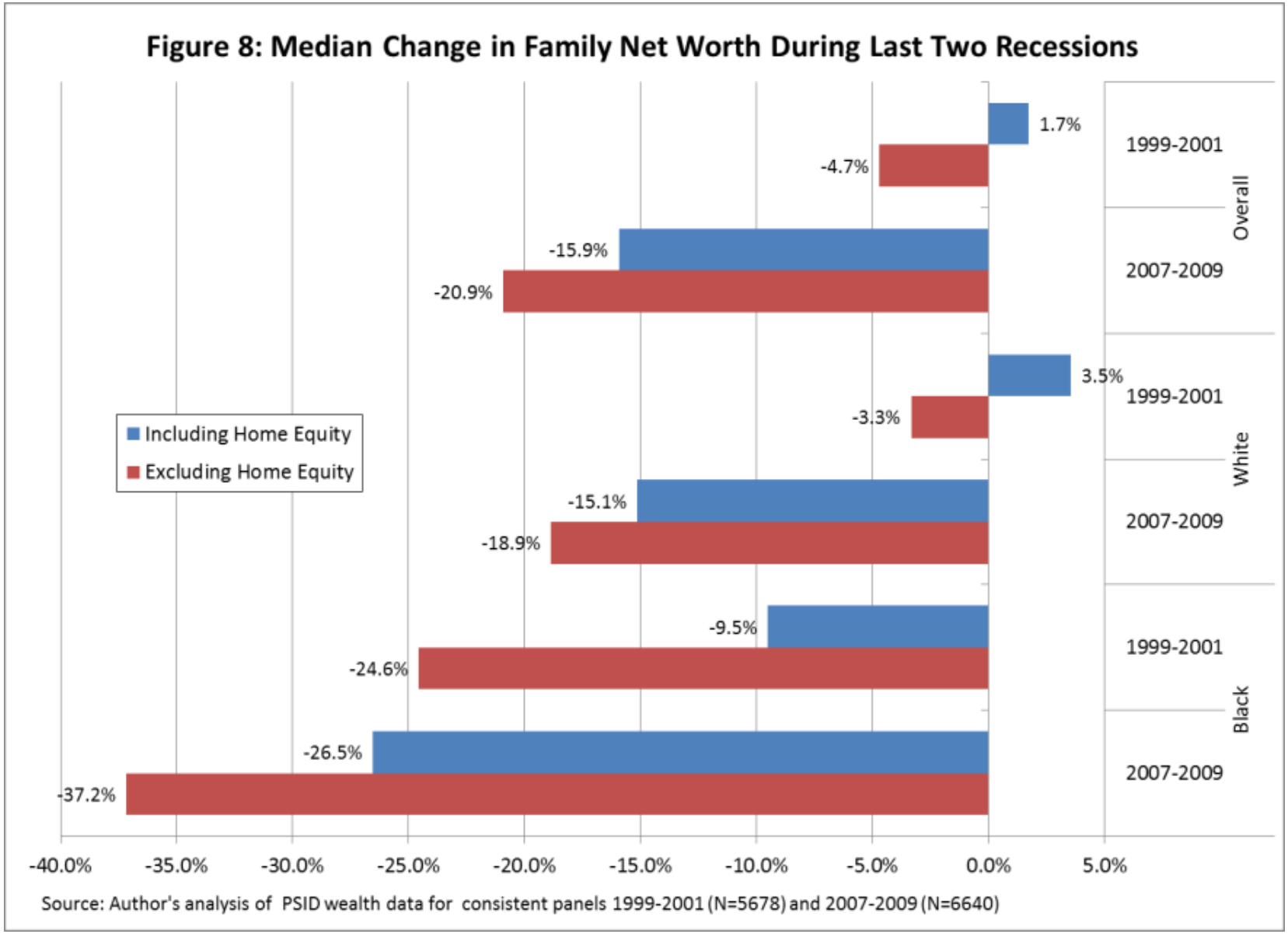
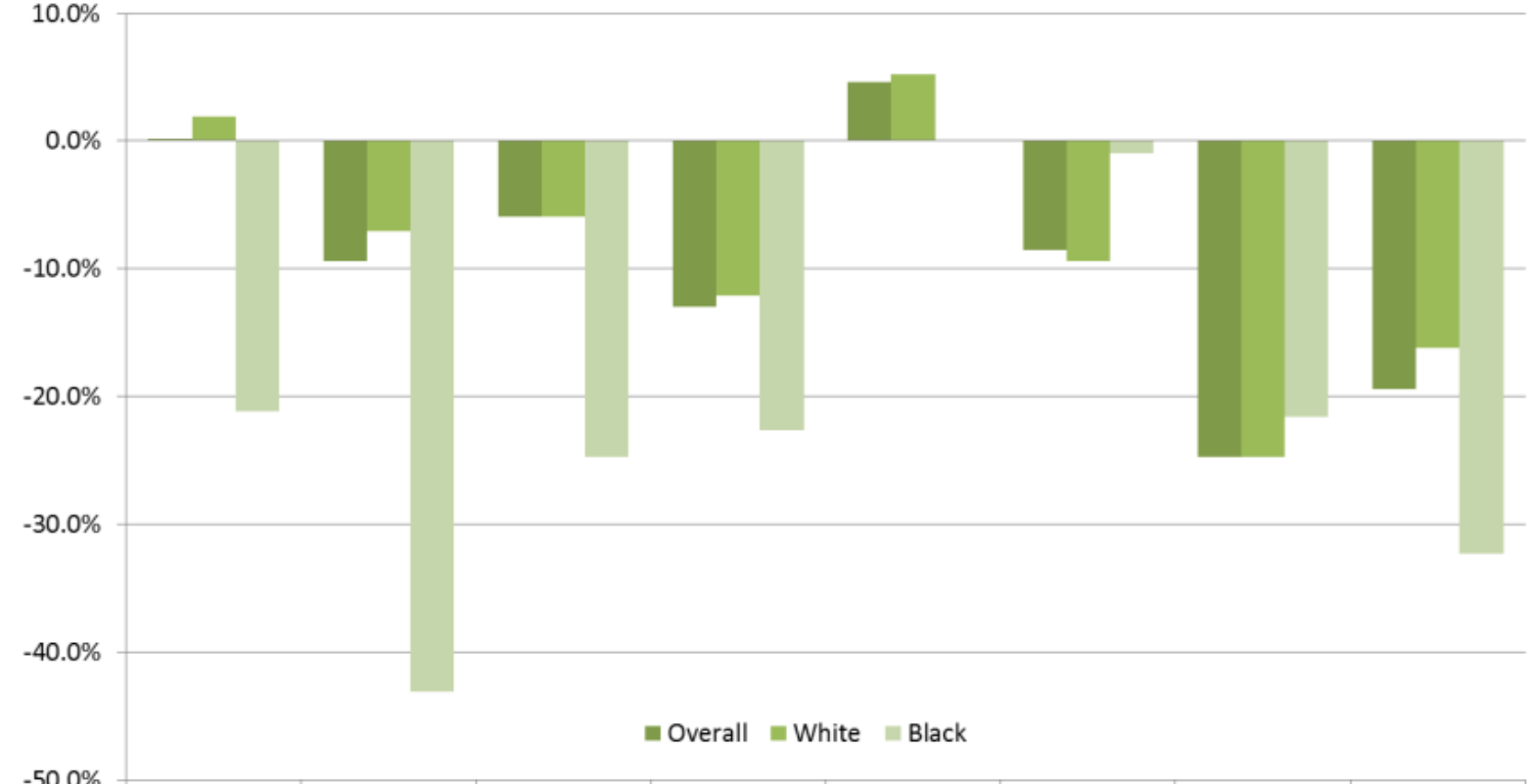


Figure 8: Median Change in Family Net Worth During Last Two Recessions
Including Home Equity
Excluding Home Equity
1.7%
-4.7%
-15.9%
-20.9%
3.5%
-3.3%
-15.1%
-18.9%
-9.5%
-24.6%
-26.5%
-37.2%
1999-2001
2007-2009
Overall
1999-2001
2007-2009
White
1999-2001
2007-2009
Black
-40.0%
-35.0%
-30.0%
-25.0%
-20.0%
-15.0%
-10.0%
-5.0%
0.0%
5.0%
Source: Author's analysis of PSID wealth data for consistent panels 1999-2001 (N=5678) and 2007-2009 (N=6640)

Figure 9: Median Change in Components of Family Net Worth



	1999-2001	2007-2009	1999-2001	2007-2009	1999-2001	2007-2009	1999-2001	2007-2009
	Financial Assets		Tangible Assets		Home Equity		Debt	
Overall	0.1%	-9.4%	-5.9%	-13.0%	4.6%	-8.6%	-24.7%	-19.4%
White	2.0%	-7.1%	-5.9%	-12.1%	5.3%	-9.4%	-24.7%	-16.2%
Black	-21.1%	-43.1%	-24.7%	-22.7%	0.0%	-0.9%	-21.6%	-32.3%

Source: Author's analysis of PSID wealth data for consistent panels 1999-2001 (N=5678) and 2007-2009 (N=6640)

Figure 10: Distribution of Wealth Changes, 1999-2001

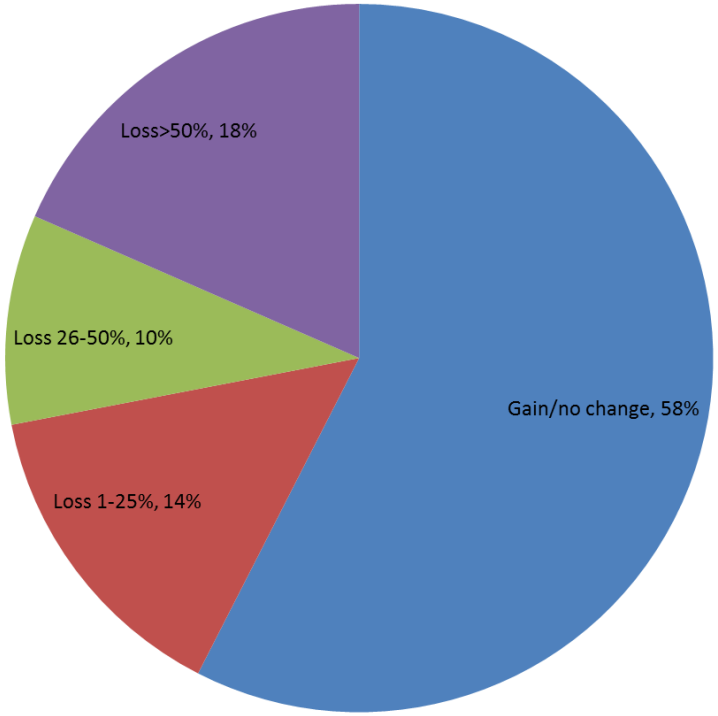


Figure 11: Distribution of Wealth Changes, 2007-2009

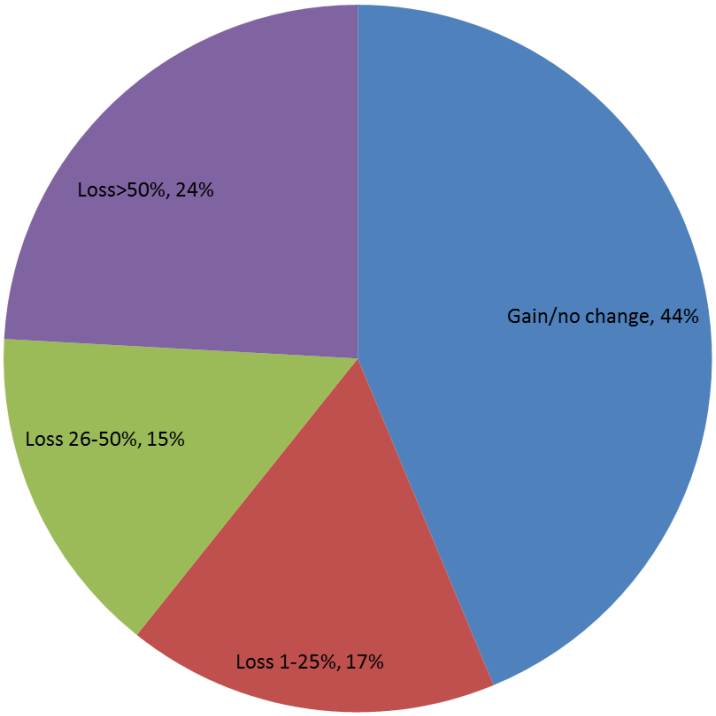


Table 3a: Likelihood of Upward Mobility by Race

Parent Percentile Rank	N: White, Black	Likelihood of exceeding parents by at least 1 percentage point				Likelihood of exceeding parents by at least 10 percentage points				Likelihood of exceeding parents by at least 20 percentage points				Likelihood of exceeding parents by at least 30 percentage points			
		White	Black	W-B Gap		White	Black	W-B Gap		White	Black	W-B Gap		White	Black	W-B Gap	
1 to 10	N_w=72	0.848712	0.708552	0.140	***	0.716664	0.449122	0.268	***	0.59563	0.283153	0.312	***	0.407162	0.210041	0.197	***
	N_b=188	0.042526	0.033231			0.053479	0.036374			0.058244	0.032946			0.058307	0.029787		
1 to 20	148	0.836687	0.724093	0.113	***	0.678076	0.522374	0.156	***	0.590116	0.380968	0.209	***	0.403503	0.268605	0.135	***
	326	0.030488	0.024793			0.038535	0.027707			0.040564	0.026938			0.040464	0.024586		
1 to 30	251	0.776231	0.675406	0.101	***	0.650669	0.49681	0.154	***	0.546808	0.359814	0.187	***	0.406642	0.264936	0.142	***
	408	0.026359	0.023209			0.030153	0.024784			0.031484	0.02379			0.031067	0.021874		
1 to 40	381	0.714368	0.659599	0.055	***	0.603438	0.491745	0.112	***	0.510254	0.357225	0.153	***	0.389135	0.266644	0.122	***
	456	0.023173	0.022214			0.025095	0.023437			0.025644	0.022464			0.025011	0.020731		
1 to 50	518	0.665667	0.650259	0.015	**	0.557221	0.478505	0.079	***	0.469034	0.34899	0.120	***	0.343516	0.257453	0.086	***
	491	0.020748	0.021544			0.021846	0.022567			0.021948	0.021533			0.020885	0.019752		

***p<0.01, **p<0.05, *p<0.10

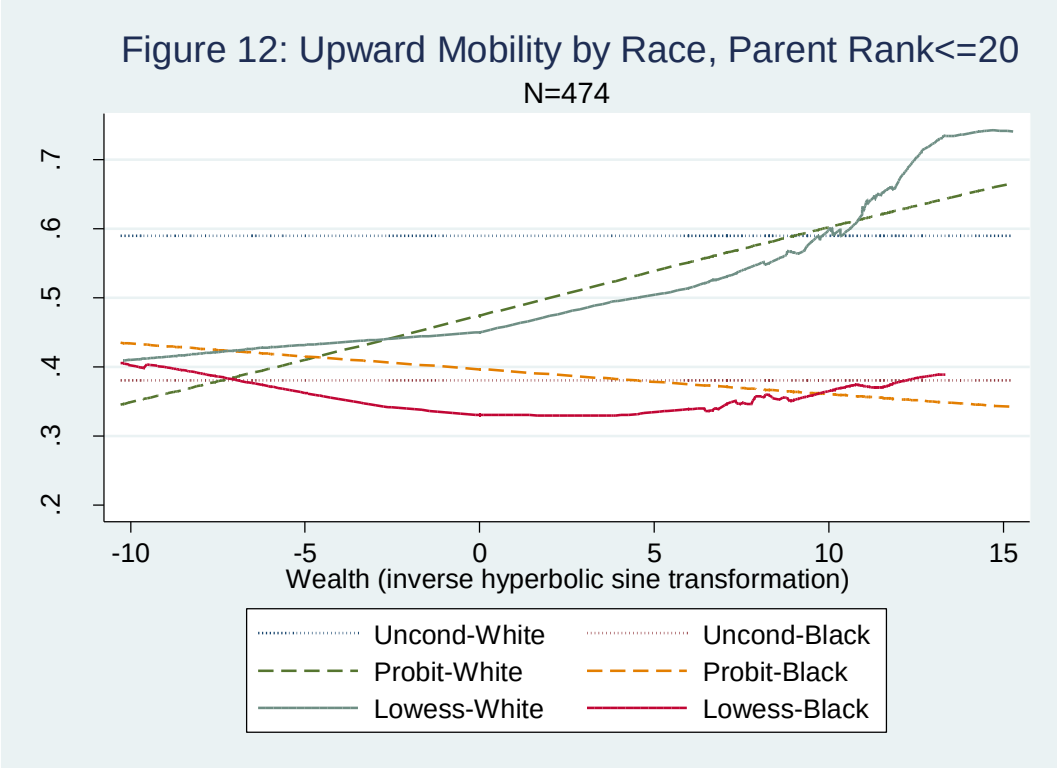


Figure 12: Upward Mobility by Race, Parent Rank<=20
N=474
.2
.3
.4
.5
.6
.7
-10
-5
0
5
10
15
Wealth (inverse hyperbolic sine transformation)
Uncond-White
Uncond-Black
Probit-White
Probit-Black
Lowess-White
Lowess-Black

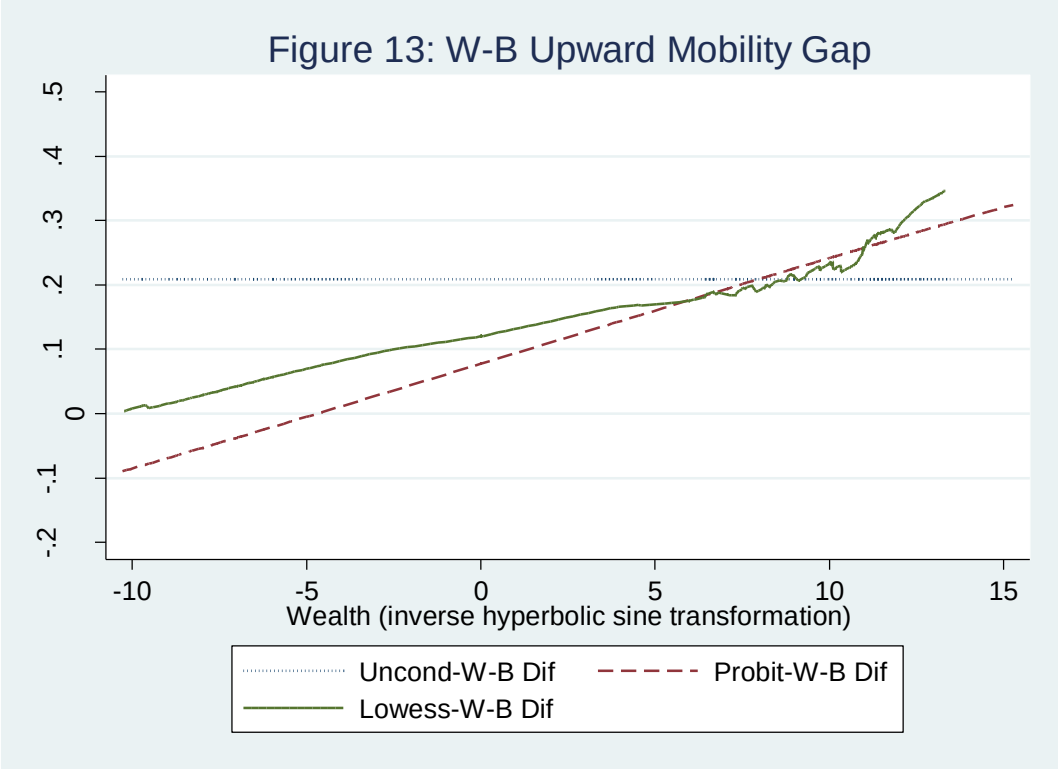


Figure 13: W-B Upward Mobility Gap
-.2
-.1
0
.1
.2
.3
.4
.5
-10
-5
0
5
10
15
Wealth (inverse hyperbolic sine transformation)
Uncond-W-B Dif
Probit-W-B Dif
Lowess-W-B Dif

Table 3b: Likelihood of Downward Mobility by Race

Parent Percentile Rank	N: White, Black	Likelihood of falling behind parents by at least 1 percentage point				Likelihood of falling behind parents by at least 10 percentage points				Likelihood of falling behind parents by at least 20 percentage points				Likelihood of falling behind parents by at least 30 percentage points			
		White	Black	W-B Gap		White	Black	W-B Gap		White	Black	W-B Gap		White	Black	W-B Gap	
91 to 100	N_w=125	0.794252	0.723192	0.071		0.603711	0.575922	0.028		0.461339	0.575922	-0.115		0.337029	0.575922	-0.239	
	N_b=3	0.036303	0.316374			0.043925	0.349454			0.044767	0.349454			0.042449	0.349454		
81 to 100	245	0.763226	0.892355	-0.129		0.61211	0.788089	-0.176		0.486441	0.737435	-0.251	*	0.360386	0.609704	-0.249	*
	23	0.027214	0.066078			0.031194	0.087127			0.031997	0.093814			0.030736	0.104003		
71 to 100	378	0.708715	0.839596	-0.131	**	0.585703	0.729456	-0.144	**	0.465929	0.661085	-0.195	***	0.358846	0.563193	-0.204	***
	68	0.0234	0.044834			0.02537	0.054273			0.025692	0.057828			0.024704	0.060595		
61 to 100	517	0.653167	0.798925	-0.146	***	0.54149	0.696621	-0.155	***	0.426829	0.624537	-0.198	***	0.335065	0.528156	-0.193	***
	86	0.020953	0.043473			0.021935	0.049863			0.021774	0.052523			0.020779	0.054147		
51 to 100	654	0.623069	0.771342	-0.148	***	0.511689	0.659953	-0.148	***	0.398127	0.554592	-0.156	***	0.302474	0.471384	-0.169	***
	115	0.018965	0.039334			0.019561	0.044368			0.019156	0.046549			0.017975	0.046753		
41 to 100	791	0.597418	0.739957	-0.143	***	0.490536	0.645884	-0.155	***	0.372397	0.525272	-0.153	***	0.272752	0.438873	-0.166	***
	150	0.017448	0.035936			0.017786	0.039179			0.0172	0.040909			0.015846	0.040654		

***p<0.01, **p<0.05, *p<0.10

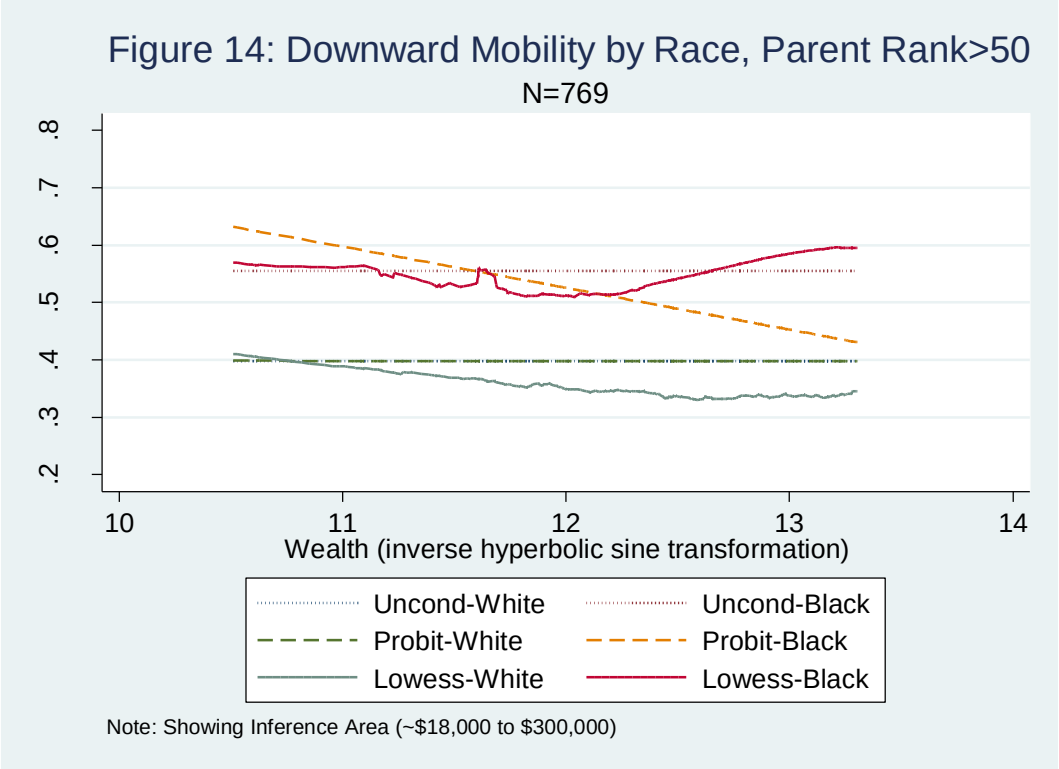


Figure 14: Downward Mobility by Race, Parent Rank>50
N=769
.2
.3
.4
.5
.6
.7
.8
10
11
12
13
14
Wealth (inverse hyperbolic sine transformation)
Uncond-White
Uncond-Black
Probit-White
Probit-Black
Lowess-White
Lowess-Black
Note: Showing Inference Area (~$18,000 to $300,000)

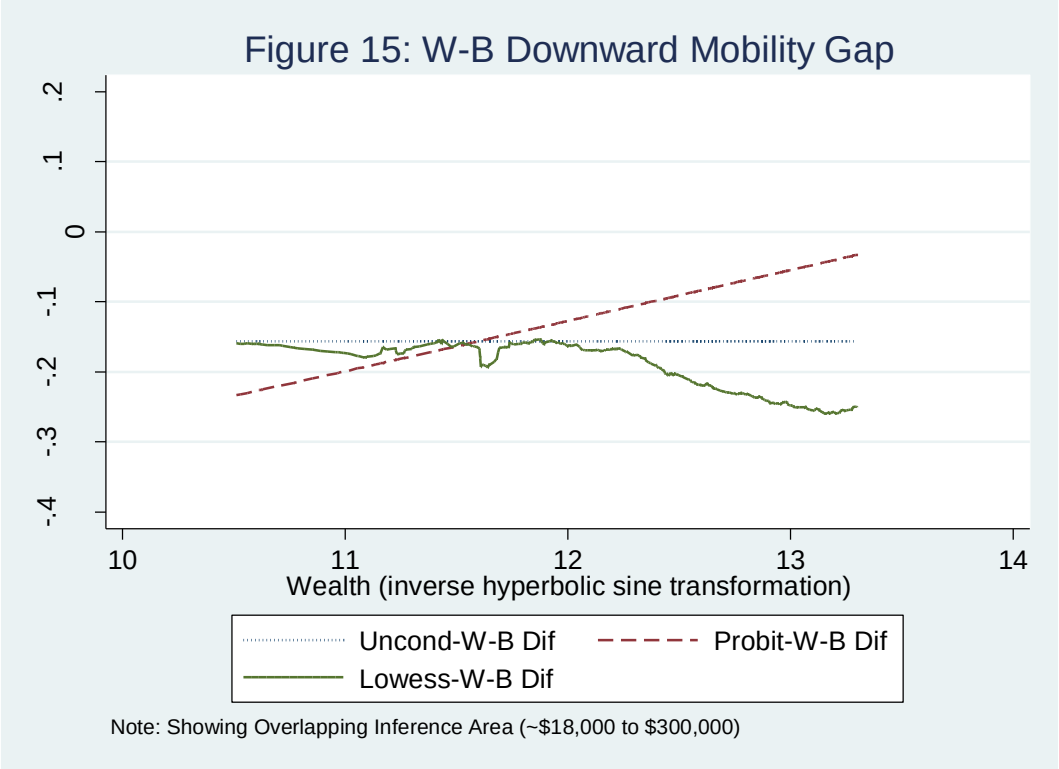


Figure 15: W-B Downward Mobility Gap
.2
.1
0
-.1
-.2
-.3
-.4
10
11
12
13
14
Wealth (inverse hyperbolic sine transformation)
Uncond-W-B Dif
Probit-W-B Dif
Lowess-W-B Dif
Note: Showing Overlapping Inference Area (~$18,000 to $300,000)

Table 4: Predicted Average Likelihood of Intergenerational Income Mobility												
		Parent's Income Quintile										
		1-20		21-40		41-60		61-80		81-100		
White, non-Hispanic Families												
Using 2007 Parental Wealth												
	Likelihood of URM (>=20PP)	54.6%		45.0%		36.5%		31.1%		--		
	Likelihood of DRM (>=20PP)	--		13.3%		25.2%		55.3%		12.8%		
Using 2009 Parental Wealth												
	Likelihood of URM (>=20PP)	53.8%		45.6%		33.4%		27.2%		--		
	Likelihood of DRM (>=20PP)	--		13.6%		27.2%		49.9%		18.9%		
Difference "due" to Great Recession												
	Likelihood of URM (>=20PP)	-0.8%		0.6%	**	-3.1%	***	-3.9%	***	--		
	Likelihood of DRM (>=20PP)	--		0.3%	***	1.9%	***	-5.4%	***	6.1%	***	
Black, non-Hispanic Families												
Using 2007 Parental Wealth												
	Likelihood of URM (>=20PP)	39.0%		29.3%		23.4%		18.8%		--		
	Likelihood of DRM (>=20PP)	--		14.1%		33.1%		56.3%		30.1%		
Using 2009 Parental Wealth												
	Likelihood of URM (>=20PP)	38.9%		30.0%		18.5%		11.7%		--		
	Likelihood of DRM (>=20PP)	--		15.0%		28.3%		74.2%		42.2%		
Difference "due" to Great Recession												
	Likelihood of URM (>=20PP)	-0.2%		0.6%	***	-4.9%		-7.1%	***	--		
	Likelihood of DRM (>=20PP)	--		0.9%	**	-4.8%		17.9%	***	12.2%	***	
White-Black Mobility Gap												
Using 2007 Parental Wealth												
	Likelihood of URM (>=20PP)	15.6%		15.7%		13.1%		12.3%		--		
	Likelihood of DRM (>=20PP)	--		-0.8%		-7.9%		-1.0%		-17.3%		
Using 2009 Parental Wealth												
	Likelihood of URM (>=20PP)	14.9%		15.6%		14.9%		15.5%		--		
	Likelihood of DRM (>=20PP)	--		-1.4%		-1.1%		-24.3%		-23.3%		
Difference-in-Differences (change in white-black mobility gap)												
	Likelihood of URM (>=20PP)	-0.7%		-0.1%		1.8%		3.2%		--		
	Likelihood of DRM (>=20PP)	--		-0.6%		6.7%		-23.2%		-6.0%		
***p<0.01, **p<0.05, *p<0.10												