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RACIAL WEALTH DISPARITIES

Is the Gap Closing?

EDWARD N. WOLFF

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Contents

Preface
Dimitri B. Papadimitriou 5

Racial Wealth Disparities
Edward N. Wolff 7

About the Author 53

Preface

Numerous studies show that, despite decades of policies aimed at improving it, the economic position of African Americans (measured by relative income and earnings) lags substantially behind that of whites. In this policy brief, Senior Scholar Edward N. Wolff presents research documenting an even more staggering gap in terms of wealth. Wolff notes that wealth is an important, though often ignored measure of economic well-being. Most research examining the economic progress of African Americans during the past 100 years focuses on income and earnings. Such studies can provide a false picture: two families—one white, one African American—may have similar incomes but vastly different holdings of wealth. Wealth matters, because it can allow a family to provide for educational and health needs, live in a safe and convenient neighborhood, impart greater political influence, and serve as a cushion in times of economic hardship.

Recent research focusing on racial differences in wealth has tried almost exclusively to explain gaps in wealth levels. Wolff takes a different approach, by examining families over time in order to understand racial differences in the sources and patterns of wealth accumulation. Based on his research, he suggests that African Americans would have gained significant ground relative to whites in the past 30 years if the groups had inherited similar amounts, had comparable levels of family income, and perhaps had more similar portfolio compositions.

In the following pages, Wolff states that even if we could immediately eliminate the racial income gap, it could take another two generations for the wealth gap to close. He notes that ways exist to speed up the process, including policies (such as the 1998 Assets for Independence Act) to help lower-income families build assets. However, since most current legislation

serves only a small fraction of families with few or no existing assets, these policies may not be enough. In the short term, Wolff states, government-sponsored credit programs could also help, especially in increasing home ownership among African Americans.

The findings of Wolff's work allow us to better recognize an economic division that is too little discussed—the racial wealth gap. I hope that you find his analysis insightful, and, as always, I welcome your comments.

Dimitri B. Papadimitriou, *President*
November 2001

Racial Wealth Disparities

Introduction

A vast literature has examined the economic progress of African Americans during the 20th century. Most of these studies have focused on income—or even narrower measures of economic well-being, such as earnings—and have sought to assess the extent to which any gains that were made relative to other racial groups can be attributed to factors such as affirmative action policies, declining race discrimination, changes in industrial composition, and a narrowing of the gap between the educational levels of African Americans and the rest of the population.[1] Much less is known, however, about how African Americans have fared in terms of wealth, an important measure of economic well-being that is more informative in many respects than those derived from income flows during a particular year.

While studies of earnings and income are important for assessing the extent to which labor market discrimination exists and the ability of African Americans to move closer to whites in terms of acquiring the skills and connections that are currently rewarded by the markets, they provide what is clearly an incomplete picture.[2] The economic positions of two families with the same incomes but widely different wealth levels are not identical. The wealthier family is likely to be better able to provide for its children's educational and health needs, live in a neighborhood characterized by more amenities and lower levels of crime, have greater resources that can be called upon in times of economic hardship, and have more influence in political life.

While the ratios measuring the relative income and earnings positions of African Americans tend to show they remain substantially behind whites, the gaps are small compared to the staggering chasm in wealth levels. For instance, I estimated the ratio of mean net worth for non-Hispanic

African Americans to non-Hispanic whites to be 0.17 in 1995, with this fraction being even lower (0.12) when measured in terms of medians (Wolff 1998). To put these numbers in perspective, the ratio of both the mean and median incomes of African American households to those of whites was 0.64 in 1997 (U.S. Census Bureau 2000).[3] Though the data needed to examine trends in wealth ratios over long periods of time are scarce, there is little evidence to suggest that ratios have risen substantially from even lower levels, at least over the past decade or so. For instance, in 1983 the mean and median ratios stood at 0.19 and 0.07, respectively.[4]

The handful of recent studies on racial differences in wealth have focused almost exclusively on trying to explain gaps in wealth *levels* and have paid much less attention to patterns in wealth *accumulation*.[5] The typical approach followed has been to employ a Blinder-Oaxaca means-coefficient analysis (see Blinder 1973), using regressions estimated separately by race, to calculate how much of the gap can be attributed to differences in characteristics that are associated with wealth accumulation, such as family income and education (Blau and Graham 1990, Oliver and Shapiro 1995, Menchik and Jianakoplos 1997, Avery and Rendall 1997, and Conley 1999). The resulting estimates, however, vary widely depending on whether coefficients are used from the regression equation estimated for whites or that for African Americans. That is, because the wealth of whites rises more steeply than that of African Americans with increases in such characteristics as income and education, the lower mean levels of these characteristics for African Americans "explain" much more when coefficients for whites are used.

The fact that the explanatory power of this exercise depends on the coefficients used is less than satisfying, however, as a more complete understanding of the forces behind the racial wealth gap and the efficacy of various public policies designed to narrow it hinge on what causes the wealth functions to differ so much by race in the first place. That is, do white families have higher levels of wealth than African American families at comparable age levels because they have received greater amounts of inheritances and other intergenerational transfers, because they devote higher percentages of income to saving, or because they earn higher rates of return on assets? Unfortunately, with data on family wealth for only one point in time, it is difficult to do more than speculate as to which of these three categories holds the key to racial wealth inequality.

Making use of the supplements on household wealth carried out by the Panel Study of Income Dynamics (PSID) in 1984, 1989, and 1994, this study follows a different tack. By following families over time, it is possible to reconstruct the path of wealth accumulation and thereby attribute observed increases in wealth to intergenerational transfers, saving out of income, or the appreciation of existing assets. Comparing these patterns between racial groups enables the question of the sources of the differences in wealth levels to be addressed more directly.

As expected, inheritances play a much greater role in the wealth accumulation of whites than that of African Americans. Perhaps surprisingly, however, there is no consistent evidence that the share of wealth accumulation attributable to capital gains is greater for whites than for African Americans, though, of course, the absolute amount from this source is much greater for the former.

Counterfactual experiments suggest that African Americans would have gained significant ground relative to whites during the period under examination if they had inherited similar amounts, had comparable levels of family income, and, more speculatively, had portfolio compositions similar to those of whites. In addition, the wealth gap would have narrowed had the share of income that African Americans devoted to saving been as high as that for whites; however, much of this difference is attributable to the fact that (average) saving rates rise with income and African Americans have lower incomes than whites, rather than whites having a higher saving rate conditional on income level.

Data

The main source of data used in this study is the PSID and its supplements on family wealth.[6] The PSID has followed about 5,000 U.S. families since 1968, interviewing them annually. Data on wealth were collected via special supplements carried out in 1984, 1989, and 1994[7]; a sequence of questions falling under the PSID rubric "active savings," used to collect information on flows of money into and out of different assets, was included in 1989 and 1994. For the purposes of this study, the PSID has several key advantages over other datasets available to track race differences in wealth. First and foremost, given that families are followed over

time and that questions are asked about movements into and out of assets, one can, subject to certain caveats that will be discussed subsequently, attribute changes in net worth over time to components due to intergenerational transfers, saving, and capital gains. Second, in part because the PSID contains an oversample of the low-income population, the number of African American families included is larger than in the Survey of Consumer Finances (SCF) or wealth supplements to the National Longitudinal Surveys (NLS). Third, presumably owing to the rapport that PSID interviewers have developed with respondent families over time, the rate of item non-response in the wealth questions is relatively low, no small consideration given the reluctance of many families to divulge information on their net wealth (Hurst, Luoh, and Stafford,1998).

It would be remiss, however, not to note some important limitations of the PSID data. Given that it was not designed as a wealth survey, the PSID, unlike the SCF, does not take steps to oversample the richest of the rich, which is necessary to obtain precise estimates of wealth for those in the upper tail of the distribution. Thus, with respect to this cohort, estimates from the PSID are unavoidably less accurate and less precise than those from the SCF. Alleviating to some extent concerns in this area, Juster, Smith, and Stafford (1999) find that through the 98th percentile, the PSID wealth data for 1989 stack up well next to those from the 1989 Survey of Consumer Finances.A second key limitation of the PSID is that assets are grouped into only seven broad categories (or eight, counting net equity in the home, information on which is collected annually), just a small fraction of the number of categories in the SCF.

The concept of wealth used here is what Greenwood and Wolff (1992) refer to as "fungible wealth," i.e., that which is saleable and therefore has current market value. The fact that social security and pension wealth, consumer durables, and so-called household inventories are excluded is an important caveat to keep in mind when interpreting the results. A family's net worth is measured by adding up the net values of their main home, other real estate, farm or business, stocks, checking and saving accounts, and other saving, and then subtracting debts. This wealth concept makes use of information on all asset categories collected in the PSID, with the exception of net equity in vehicles. Details on the assets and liabilities included in each category can be found in Appendix A.

In order to understand in some depth how wealth accumulation differs by race, it is essential to have information not only on family wealth at different points in time, but also enough additional details to determine the path the family followed in order to arrive at its net worth.[8] Questions about the market value of the main home and the remaining principal of the mortgage are asked each year. A series of what the PSID refers to as "active savings" questions, used in 1989 and 1994, asked respondents about a number of different types of financial transactions over the previous five years, including the amount invested in other real estate, a business, or stocks; the value of additions to the main home or other real estate; and the value of gifts or inheritances.[9] Details on these questions also appear in Appendix A.

This combination of information on asset levels and flows enables a division of changes in net worth into saving, capital gains, and transfers. Although details of the algorithm used are contained in Appendix A, the basic approach is as follows: for those assets for which the amount of the net inflow is known, it is straightforward to calculate the capital gain,as it is simply the difference between the end-period value and the sum of the beginning-period value and the net inflow. Following the usage of Hurst, Luoh, and Stafford (1998) and Juster, Smith, and Stafford (1999), the amount of the inflow is put into a category called "active savings."[10] For assets for which nothing is known about net inflow, an appropriate market-based rate of return is assigned in order to calculate the amount of the capital gain; in this case, the amount of active savings is calculated as the residual. Summing the group of assets, one arrives at a total for capital gains and one for active savings.

As this description should make clear, active savings differs substantially from the traditional definition of saving as the difference between income and expenditures, as saving can be funded by any source of funds, not just income. As a result, it is necessary to subtract the other flows into the household, the largest of which is inheritances and other gifts, leaving an estimate of the amount of saving that comes directly out of income.

Levels and Trends in Wealth by Race

As shown in Table 1, the gap in wealth levels between African Americans and whites is staggeringly wide, regardless of whether it is measured in terms of mean or median holdings. In 1994, the average African American family had a net worth of $32,426, less than one-fifth of the average net worth of $180,720 for white families.[11] Perhaps even more jolting is the comparison in terms of medians. In 1994, the median African American family had a net worth of $1,100, barely positive and just one-fiftieth of the $57,200 median wealth for whites.

Table 1 Wealth by Characteristics of Head and Family Income,1994

	Mean Values			Median Values		
	Whites	African Americans	Ratio	Whites	African Americans	Ratio
All families	180.7	32.4	0.18	57.2	1.1	0.02
Age of head						
Less than 25	18.4	4.1	0.22	22.0	0.0	0.00
25–34	69.2	13.1	0.19	8.8	0.0	0.00
35–44	131.5	22.0	0.17	42.9	0.0	0.00
45–54	252.4	51.2	0.20	97.9	21.7	0.22
55–64	313.7	45.7	0.15	160.6	22.4	0.14
65+	254.7	76.5	0.30	112.2	33.0	0.29
Education of head						
Less than high school	99.6	21.8	0.22	27.5	0.0	0.00
High school graduate	122.4	28.6	0.23	48.8	0.7	0.01
Some college	164.8	36.3	0.22	59.4	9.2	0.16
College graduate	329.4	75.9	0.23	108.9	13.8	0.12
Marital status of head						
Married	252.8	64.4	0.25	95.9	18.7	0.19
Not married	93.4	22.1	0.24	17.6	0.0	0.00
Income quartile						
First	68.8	17.9	0.26	7.7	0.0	0.00
Second	95.3	33.4	0.35	35.7	3.3	0.09
Third	135.5	38.6	0.28	61.5	14.5	0.24
Fourth	412.2	98.7	0.24	171.6	36.7	0.21

Notes: Wealth is measured in thousands of 1998 dollars. Calculations use the cross-sectional samples (for details, see Appendix A). About 2 percent of families are excluded from the calculations by the education of the head for each year and about 7 percent for those by income quartile because of missing data. Sample sizes: 7,415 (4,804 whites, 2,611 African Americans).

Examining wealth by age, we find that the profile for whites has the traditional hump shape, with wealth increasing through the prime earnings years and then tailing off, while that for African Americans shows a greater tendency to be monotonic with age.[12] The upshot is that the ratio of African American to white wealth is highest for the elderly group, though at about 0.30 it is clearly not high in any absolute sense. It is striking to see how wide these gaps are even at young ages. As the median value of wealth for African Americans does not climb above zero until the age group 45–54, the median ratio stays at zero up to that age group. Even as measured by mean ratios, the ratio for young household heads, those under the age of 25, is only 0.22. This wide gap at an early age, even before a household head has had time to accumulate assets through saving from his or her own income, hints at the importance of intergenerational transfers in causing young white and African American household heads to start off on unequal footing.

The pattern of racial wealth differences changes little when education is controlled for. The mean ratios within the four education groups shown in Table 1 are in the neighborhood of 0.2. As this is little higher than the 0.18 for all families, it is clear that the racial wealth gap is primarily attributable to large differences at the same educational level, rather than to the fact that there is a smaller portion of African Americans relative to whites in the wealthier, higher-education groups. In a broadly similar fashion, neither marital status nor income class has much explanatory power, as the racial wealth gaps are primarily attributable to differences within groups defined by these variables.

The ratios shown in Table 2 indicate that there was little change between 1984 and 1994 in the relative distance between white and African American wealth holdings, with the proportions for means staying in the neighborhood of 0.18–0.19 and those for the medians around 0.02–0.03.[13] Though the amount of wealth is substantially higher in Wolff (1998), the mean ratios shown here are within a few hundredths of a point of those presented in the earlier study for the ratio of non-Hispanic whites to non-Hispanic blacks, calculated for nearly identical years (1983, 1989, and 1995) using the Survey of Consumer Finances. The levels and trends of the median ratios are a bit different using that source, going from 0.07 in 1983 down to 0.03 in 1989 and back up to 0.12 in 1995.

Table 2 Net Worth, 1984, 1989, and 1994

	Mean Values			Median Values		
	Whites	African Americans	Ratio	Whites	African Americans	Ratio
All families						
1984	139.8	25.2	0.18	51.8	0.8	0.02
1989	179.0	34.2	0.19	52.6	1.3	0.03
1994	180.7	32.4	0.18	57.2	1.1	0.02

Notes: Net worth is measured in thousands of 1998 dollars. Calculations use the cross-sectional samples (for details, see Appendix A). Sample sizes: *1984:* 6,911 (4,336 whites, 2,575 African Americans); *1989:* 7,114 (4,505 whites, 2,609 African Americans); and *1994:* 7,415 (4,804 whites, 2,611 African Americans).

As background for the examination of wealth accumulation that will follow, it is useful to note the rate of change in wealth over time. Wealth rose more quickly between 1984 and 1989 than between the latter and 1994, rising 28 percent for whites and 35 percent for African Americans in the first subperiod, while rising 1 percent for whites and falling 5 percent for African Americans in the second. For the period as a whole, average wealth increased by 29 percent for both groups. Though the increase in wealth over the second half-decade may seem small given the rise in stock market prices in the 1990s, there are mitigating factors. First, the increase in the stock market was much greater in the second half of the 1990s than the first, with the Standard & Poor's composite index rising 156 percent in real terms between 1994 and 1999, versus 19 percent between 1989 and 1994. Second, as noted above, the PSID survey does not accurately track the extremely rich, a group that undoubtedly benefited disproportionately from the stock market runup. Third, pension wealth is excluded from the calculations, so the wealth that was accumulated there is excluded from consideration.[14]

Not surprisingly, there are important differences between the two race groups in portfolio allocation, as shown in Table 3. Consistent with recent research showing much lower rates of self-employment for African Americans than for whites (Fairlie 1999; Fairlie and Meyer 1996, 1999), in 1994, only 2.1 percent of African Americans had assets in a business or farm, less than one-sixth the comparable share for whites (13.1 percent). Under two-fifths of African American families owned their own residences (37.8 percent), well below the nearly two-thirds for whites (65.8). Finally,

Table 3 Portfolio Composition by Race, 1984, 1989, and 1994

	1984				1989				1994			
	Whites		African Americans		Whites		African Americans		Whites		African Americans	
Asset type	% with asset	Share of wealth	% with asset	Share of wealth	% with asset	Share of wealth	% with asset	Share of wealth	% with asset	Share of wealth	% with asset	Share of wealth
Main home	62.9	35.3	37.1	63.8	63.9	33.3	37.9	53.2	65.8	30.5	37.8	53.7
Real estate	21.9	17.3	7.0	11.0	21.0	19.5	8.1	9.1	18.8	17.2	5.4	10.1
Business	12.7	21.2	1.2	5.3	13.2	19.0	1.8	20.8	13.1	15.4	2.1	3.7
Stock	27.3	9.0	6.9	4.5	31.1	11.0	6.4	3.0	37.5	21.0	10.4	9.7
Checking/Saving	86.1	15.3	44.6	11.3	86.4	14.7	48.1	14.5	82.2	13.7	40.8	15.5
Other Saving	24.7	4.1	13.5	10.1	28.0	4.8	13.9	6.0	25.2	5.9	13.3	16.1
Debt	46.6	2.2	44.0	6.0	50.7	2.3	46.6	6.7	49.7	3.8	40.0	8.7

Notes: Calculations use the cross-sectional samples (for details, see Appendix A). Sample sizes: *1984:* 6,911 (4,336 whites, 2,575 African Americans); *1989:* 7,114 (4,505 whites, 2,609 African Americans); and *1994:* 7,415 (4,804 whites, 2,611 African Americans). "Real estate" excludes main home while "business" includes both farm and nonfarm businesses.

only 10.4 percent of African American families had any holdings in stock. While this represents a rise from 6.9 percent in 1984, in terms of percentage points, it is well below the rise for whites during the same span, from 27.1 percent to 37.5 percent.

Despite the much lower rate of home ownership among African Americans than the rest of the population and the fact that African Americans' homes tend to have lower market value (Long and Caudill 1992), home equity carries a much heavier weight in their portfolios, accounting for 53.7 percent of total wealth in 1994, versus 30.5 percent for whites. It is evident that this is due to the fact that the portfolios of whites are much more diverse, as the value of whites' home equity was more than three times that for African Americans in 1994. Stock, as of 1994, was the second most important asset group in whites' portfolios, having more than doubled its share over the decade to reach 21.0 percent of total wealth. The share of wealth in stocks also doubled for African Americans, but because of its lower base figure, it had not reached even 10 percent by 1994. Not surprisingly, the share of white wealth in businesses and real estate (other than the main home) is much greater than that for African Americans.

Regression Decomposition of Racial Wealth Differences

To what extent can differences in wealth by race be "explained" by differences across races in characteristics correlated with levels of wealth? To answer this question, Blau and Graham (1990) and others in the literature that followed (Menchik and Jianakoplos 1997, Oliver and Shapiro 1995, Avery and Rendall 1997) employed an analysis that controlled for variables such as the age, education, and sex of the head of household; income; and location.

Table 4 shows the means, by race and year, for a comparable set of variables that will be used to do a similar analysis for the PSID data. The samples used here differ somewhat from those used in the calculations shown in Tables 1–3 and are described, as are all samples used throughout the paper, in Appendix A. For the regression analysis of this section, observations were excluded if data were missing or if values of wealth were extreme (less than –$100,000 or greater than $1,000,000). Though the

Table 4 Means of Variables Used in Regression Analysis, by Year and Race

	1984		1989		1994	
	Whites	African Americans	Whites	African Americans	Whites	African Americans
Net Worth	106,863	24,721	117,799	25,566	125,757	31,616
Age of head	46.69	42.62	47.66	43.12	48.54	44.58
1=female head	0.28	0.51	0.29	0.54	0.27	0.53
1=unmarried head	0.43	0.66	0.45	0.71	0.44	0.75
Number of children	0.67	1.01	0.63	0.93	0.62	0.87
1=high school graduate	0.36	0.34	0.33	0.32	0.33	0.35
1=some college	0.18	0.13	0.20	0.20	0.20	0.21
1=college graduate	0.20	0.07	0.22	0.08	0.25	0.09
Family income	43,276	24,999	49,285	27,973	51,043	27,700
1=Small city	0.47	0.30	0.47	0.30	0.49	0.31
1=Large city	0.16	0.32	0.15	0.31	0.14	0.32

Notes: Net worth and income are measured in 1998 dollars. Calculations use the regression samples (for details, see Appendix A). Sample sizes: *1984*: 6,844 (4,271 whites, 2,573 African Americans); *1989*: 7,001 (4,396 whites, 2,605 African Americans); and *1994*: 6,582 (4,241 whites, 2,341 African Americans). Family income for 1994 is not available, so that for 1993 is used instead. "Small city" implies that largest city in county of residence has a population of less than 50,000. "Large city" implies that largest city in county of residence has a population of 500,000 or more.

effect of excluding extreme values has the impact of lowering mean values for both groups and affects whites more than African Americans, the mean ratios of wealth by race change by only a few percentage points: 0.23 in 1984, 0.22 in 1989, and 0.25 in 1994. Thus, the basic pattern of a yawning gap with little sign of narrowing remains.

The variables shown in Table 4 present evidence of key differences by race that are likely to be associated with differences in wealth levels. Most notable among these is the gap in family income, with the ratio of mean income by race falling short of 60 percent in all years. The heads of African American families are more likely to be unmarried and less educated than their white counterparts. They make up a much higher proportion of those who have never completed high school and a much smaller one of those who have completed college.

Table 5 provides a sense of the relationship between these differences in characteristics and those for wealth levels in 1984, 1989, and 1994. It is immediately evident that, as in past research, the amount of the wealth difference that can be "explained" hinges on which group's regression coefficients are used to make comparisons. Among whites, the decompositions account for most of the difference in wealth; that the sample of African Americans have substantially lower income levels, tend to be less educated, are more likely to be unmarried, and are younger on average than their white counterparts explains about four-fifths of the gap. On the other hand, if the coefficients are taken from the regressions for African Americans, less than one-third of the gap is explained.[15] This difference in explanatory power based on the choice of wealth function (coefficients) is comparable to that found by Blau and Graham (1990).

In the literature that has probably used these types of decompositions the most—that seeking to divide earnings differentials by race into portions attributable to discrimination and productivity differences—the difficulties of coming up with a single estimate of the impact of discrimination have been long recognized and are still an active area of research.[16] The problem arises from the impossibility of knowing the wage structure that would exist in the absence of discrimination. Though we do not wish to underrate the difficulties of that literature, the problem seems even more serious here, since wealth functions differ more by race than do earnings functions.

Table 5 Decomposition of Racial Wealth Differences, 1984–1994

Wealth function	1984		1989		1994	
	African American	White	African American	White	African American	White
Unadjusted differential	82,142	82,142	92,249	92,249	94,141	94,141
Wealth evaluated at white means	51,261	106,863	56,093	117,815	57,566	125,757
Wealth evaluated at African American means	24,721	39,984	25,566	45,313	31,616	53,228
Explained differential	26,540	66,879	30,526	72,503	25,940	72,529
Explained differential as percentage of unadjusted differential	32.3	81.4	33.1	78.6	27.6	77.0

Notes: Wealth is measured in 1998 dollars. Calculations use the regression samples (for details, see Appendix A). Sample sizes: *1984:* 6,844 (4,271 whites, 2,573 African Americans); *1989:* 7,001 (4,396 whites, 2,605 African Americans); and *1994:* 6,582 (4,241 whites, 2,341 African Americans).

Blau and Graham (1990) argue that, from a policy perspective, the African American wealth function is more relevant since it shows that the vast majority (78 percent in their estimates) of the wealth gap would remain even if society were successful in evening incomes between races and eliminating adverse differences in locational and demographic characteristics. While this argument carries some force, it seems more important for policy purposes to understand why the wealth functions are so different in the first place. Blau and Graham use their decomposition results to speculate whether the large differences in the wealth functions are related to differences in saving behavior, capital appreciation, or intergenerational transfers. Because of the methodological difficulties with this approach, this study uses a different procedure, described below, to assess the importance of saving, capital gains, and transfers in accounting for the racial wealth gap.

Patterns of Wealth Accumulation by Race

Background

In recent years, a number of policy proposals have been offered to narrow the racial wealth gap or, more generally, to close the gap between the asset-rich and asset-poor, which, if successful, would be expected to raise the wealth of African Americans disproportionately more than that of whites.[17] These measures represent several sometimes-overlapping approaches to increasing wealth accumulation among African Americans through some combination of raising the rate of capital gains, encouraging additional saving, or diminishing the inequality-increasing impacts of intergenerational transfers of wealth. Some proposals seek to shift African Americans' portfolios toward assets that have historically had high rates of return or are considered to have particular advantages, such as homes and businesses. In these proposals, African Americans are viewed as facing barriers to the acquisition of these assets owing to discrimination in mortgage and small business credit markets, limited access to information about investment opportunities,and other factors (Munnell, et al. 1996; Blanchflower, Levine, and Zimmerman 1998).

In light of the much lower home ownership rate of African Americans, housing is considered to be of paramount importance, not only for any

direct financial benefits, but also because a home often serves as collateral for borrowing to finance investment in business opportunities, or other purposes. Given this group's low rate of self-employment, moreover, particular emphasis has been placed on the need to increase minority ownership of businesses. In addition to making it easier for African Americans to access credit,other proposals for raising ownership of homes and small businesses have involved providing greater incentives for saving.

Prominent in this debate have been the proposals of Sherraden (1991), who argues that anti-poverty policy should focus on the accumulation of wealth rather than on raising levels of income and consumption and, as a result, recommends the establishment of asset accounts that can be used to finance not only home ownership, but education, business startups, and retirement. Incentives to open such accounts could include tax exemption for the money deposited and matching by the federal government. Related concerns have been raised that asset limits on the receipt of income from Aid to Families with Dependent Children (AFDC), its successor, Temporary Assistance for Needy Families (TANF), and other means-tested programs discourage saving by the poor.[18] Finally, there has been discussion of measures to reduce the inequality of wealth via taxes. Wealth passed along to beneficiaries may be targeted by an estate tax or, more generally, a tax may be placed on a family's current holdings.[19]

Despite the existence of these and other proposals, there is actually little evidence to support either the extent to which they address the underlying causes of the racial wealth differential or their potential to reduce it, gaps we hope to begin to fill with the analysis of this section. While Table 3 and evidence elsewhere clearly display the racial differences in portfolio composition, it is less obvious how returns to capital for specific assets may differ and to what extent any differences have contributed to the racial wealth gap. Evidence on rates of return is rather scanty, except for the housing market, where homes in African American neighborhoods have appreciated at a lower rate (Blau and Graham 1990, Denton 1998).[20]

Interestingly, economic theory does not offer unambiguous predictions about the effect of racial discrimination in the small business credit market with respect to the rate of return to business ownership for African Americans relative to whites. If such discrimination occurs in the form of higher credit costs, it can lower the relative rate of return. If,however, a lack

of access to credit causes African Americans to be unable to start businesses that could be started by similarly qualified whites,then, on average, African American entrepreneurs able to start businesses would be expected to be better qualified than their white counterparts, and thus have a higher rate of return.

Similarly, despite the proposals to raise saving among African Americans, it is not clear whether any deficit in their saving rate has played a role in the racial wealth gap. In fact, Blau and Graham (1990) conclude that a lower propensity to save is not a likely explanation, in light of the fact that the few studies on saving by race uncovered no evidence that African Americans have a lower saving rate than whites. Finally, though recent research by Menchik and Jianakoplos (1997) and Avery and Rendall (1997) clearly demonstrates that inheritances play an important role in explaining differences in wealth levels across races, the magnitude of the effect is open to debate.

Results of Research Using a Wealth Accounting Framework

To examine differences in wealth accumulation by race, it is useful to lay out a simple wealth accounting framework. The explanation of this framework can be found in Appendix A. Table 6 provides an overview of patterns of wealth accumulation by race for the periods 1984–1989, 1989–1994, and 1984–1994.[21] The increase in wealth in a given period is broken down into flows related to capital gains, saving out of income, intergenerational transfers, changes in household composition,and annuities. At this point, it may be worth noting again that the measure of wealth excludes pension and social security wealth; considerations related to these excluded assets will, in general, influence the patterns of wealth accumulation for the assets that are observed. Though the fact that the extensive literature on the relationship between pensions and saving has not reached a consensus suggests substantial uncertainty about whether the inclusion of retirement wealth would materially affect the results here, this question is clearly an important one, but one that must be answered in future research.[22]

Given the vast gap between the races in mean wealth levels, it is not surprising that the overall increase in wealth is greater for whites than for African Americans, and virtually always in each of the five categories as

Table 6 Sources of Growth of Mean Wealth

	Wealth at Start of Period	Capital Gains	Saving	Flows related to: Inheritances and Gifts	Flows related to: Change in Household Composition	Flows related to: Annuities	Wealth at End of Period
1984–1989							
Levels							
Whites	102,419	26,131	18,340	3,759	3,616	330	154,595
African Americans	23,484	6,463	3,970	323	–119	111	34,234
Share of Wealth Increase (%)							
Whites		50.0	35.2	7.2	6.9	0.6	
African Americans		60.1	36.9	3.0	–1.1	1.0	
1989–1994							
Levels							
Whites	112,968	19,142	26,297	4,425	374	–1,235	161,971
African Americans	24,631	6,361	10,400	328	–269	32	41,484
Share of Wealth Increase (%)							
Whites		39.1	53.6	9.0	0.8	–2.5	
African Americans		37.7	61.7	1.9	–1.6	0.2	
1984–1994							
Levels							
Whites	83,106	30,485	43,031	8,247	3,677	–2,364	166,185
African Americans	22,771	9,973	12,432	640	57	229	46,102
Share of Wealth Increase (%)							
Whites		36.7	51.8	9.9	4.4	–2.8	
African Americans		42.7	53.3	2.7	0.2	1.0	

Notes: Wealth is measured in 1998 dollars. Calculations use the longitudinal samples (for details, see Appendix A). Sample sizes: *1984–1989:* 4,899 (3,089 whites, 1,810 African Americans); *1989–1994:* 4,838 (3,091 whites, 1,747 African Americans); and *1984–1994:* 3,498 (2,222 whites, 1,276 African Americans).

well. Of greater interest is the relative contribution of each category. Though each period has its particularities, several interesting findings come to the surface. First, inheritances played almost no role in the gains of African Americans over the period, whereas for whites they constituted as much as 10 percent of the increase in wealth.[23] It may be worth stressing that the question of how much inheritances contribute to differences across races in wealth *accumulation* is a very different one from that of the extent to which such transfers are responsible for racial differences in wealth *levels*, as addressed in Menchik and Jianakoplos (1997) and Avery and Rendall (1997). Since only inheritances received during the period are considered here, the appreciation of gifts received before the start of the period is not taken into account.

Over the period examined,there is no evidence that capital gains played a more important *relative* role for whites than for African Americans: the share was in the neighborhood of 40 percent for both groups. The contribution of active savings to wealth accumulation was also similar for both groups, at roughly half over the period 1984–1994. Among whites, changes in household compositions were responsible for a non-negligible portion of wealth accumulation, whereas they made virtually no contribution to wealth gains among African Americans.[24] The possibility of assortative mating as a factor in the racial wealth gap as well as overall wealth inequality is an area that has received little attention in this literature and may deserve further exploration.[25]

Table 7 offers another method of assessing racial differences in wealth accumulation over the 1984–1994 period. Despite the speculation that African Americans experience lower rates of return on assets because of barriers to acquiring assets that have historically had high returns and factors that lower returns to specific assets, there is no evidence that this was the case. In fact, the results in Table 7 suggest that, if anything, African Americans had a higher rate of capital return than did whites between 1984 and 1994—41 percent versus 32 percent. Though calculations of asset-specific rates of return are less reliable than overall rates, as discussed in greater detail in Appendix A, it seems that home values actually increased faster for African Americans than for whites, as did business equity, stocks, and real estate.

Table 7 Rates of Capital Appreciation, Saving, and Other Inflows

				Flows as a Proportion of Total Wealth at Start of Period		
	Rate of Return on Capital	Saving Rate	Average Family Income over Period	Inheritances and Gifts	Change in Household Composition	Annuities
1984–1989						
Whites	25.5	7.0	261,923	3.7	3.5	0.3
African Americans	27.5	2.8	143,058	1.4	–0.5	0.5
1989–1994						
Whites	16.9	10.0	263,190	3.9	0.3	–1.0
African Americans	25.8	7.1	145,382	1.3	–1.1	0.1
1984–1994						
Whites	32.3	8.0	535,256	9.9	4.4	–2.8
African Americans	41.2	4.1	302,769	2.8	0.2	1.0

Notes: Income is measured in 1998 dollars. Calculations use the longitudinal samples (for details, see Appendix A). Sample sizes: *1984–1989:* 4,899 (3,089 whites, 1,810 African Americans); *1989–1994:* 4,838 (3,091 whites, 1,747 African Americans); and *1984–1994:* 3,498 (2,222 whites, 1,276 African Americans). Saving rate is measured as saving out of income as a proportion of income.

In contrast to the existing literature, however, this study finds that whites have a higher (active) saving rate than African Americans—8.0 percent of family income over the 1984–1994 period versus 4.1 percent.[26] The higher saving rate for white families, combined with their much higher family income over the period, leads to substantially greater saving in absolute terms, though, as shown in Table 6, not in relative terms. Inheritances and gifts, as Table 6 demonstrates, were more important for whites both in absolute terms and as a share of the change in wealth over the period. The results from Table 7 indicate that they were also more important for this group as a proportion of initial wealth.

Using a series of counterfactual experiments, a measure was calculated of the racial wealth gap in 1994 had the behavior of African Americans been identical to that of whites with respect to portfolio allocation, rate of return on capital, saving as a share of income, family income, inheritances, and inflows from changes in household composition. For example, the third simulation substitutes the average rate of saving for white families with that for African Americans. However, because average saving rates tend to rise with income (Huggett and Ventura 2000), it is also of interest to specify them as a function of income, and then to replace the saving rate for African Americans with the rate that would be predicted for whites with the same average income. Similarly, it is desirable to allow portfolio composition to depend on income as well.

Each simulation recalculates changes in wealth for African Americans after substituting a white parameter (such as the saving rate) for the corresponding African American parameter and for whites after substituting the African American parameter for the white parameter. The two calculations tend to give similar results, though in some cases the difference between the counterfactual and the actual is smaller when the white wealth accumulation process is recalculated. Part of this difference owes to the fact that a ratio of less than one will be affected more by an additive change to the numerator than by a change to the denominator of the same magnitude but opposite sign.

A number of interesting findings emerge in Table 8. First, the results for the entire period make clear that decades would be required for the wealth gap to close or even for the wealth ratio to approach the income ratio. Indeed, even with the dramatic changes in behavior implied by

Table 8 Mean Wealth Ratios Recalculated under Counterfactual Assumptions (Accounting Framework Method)

	1984–1989		1989–1994		1984–1994	
Race whose wealth is recalculated:	**African American**	**White**	**African American**	**White**	**African American**	**White**
Actual, start period	0.23		0.22		0.27	
Actual, end period	0.22		0.26		0.28	
Characteristic from other race assumed to hold for both:						
Portfolio allocation	0.23	0.23	0.31	0.29	0.36	0.31
Portfolio allocation (I)	0.24	0.22	0.31	0.27	0.34	0.32
Rate of return	0.22	0.22	0.24	0.24	0.26	0.26
Saving rate	0.26	0.24	0.28	0.27	0.36	0.32
Saving rate (I)	0.21	0.24	0.24	0.27	0.29	0.31
Family income	0.24	0.23	0.31	0.28	0.34	0.32
Family income (I)	0.26	0.24	0.36	0.29	0.38	0.32
Inheritance	0.24	0.23	0.28	0.26	0.33	0.29
Inflows from changes in household composition	0.25	0.23	0.26	0.26	0.30	0.28

Notes: Calculations use the longitudinal samples. Rows marked with "I" indicate that portfolio allocation and/or the saving rate are, as appropriate, allowed to vary by income (for details, see Appendix A). Sample sizes: *1984–1989:* 4,899 (3,089 whites, 1,810 African Americans); *1989–1994:* 4,838 (3,091 whites, 1,747 African Americans); and *1984–1994:* 3,498 (2,222 whites, 1,276 African Americans).

these experiments (changes that no policy could easily accomplish),simulated African American wealth levels remain at just a fraction of those of whites. Second, keeping in mind the caveat that calculations making use of asset-specific returns should be interpreted with caution, one finds that if African American families in 1994 had had the same portfolio composition as white families, the wealth gap would have been narrower by six to eight percentage points. This simulated closure results mainly from the higher share of stocks in white portfolios in comparison to those of African Americans.[27]

Third, given the relatively small racial difference in the overall rate of return on capital shown in Table 7, substituting the white rate of return for the African American had very little effect on the racial wealth gap. This result, however, may be peculiar to the period under study. In particular, the increase in the stock market since 1994 has probably pushed up the overall rate of return on capital for whites relative to African Americans because of the greater weight of stocks in the former group's portfolios.

Fourth, substituting the (unconditional) white saving rate for the African American saving rate narrowed the 1994 racial wealth gap by about eight percentage points. By contrast, substituting the white saving *function* for the African American saving function narrowed the racial wealth gap by only one point. The difference in results is due to the fact that white saving rates conditional on income are only slightly higher than those of African Americans. However, raising African American incomes to the level of those of white families (and making saving a function of income) would cause the racial wealth ratio to jump by as much as 10 percentage points.

Fifth,increasing African American inheritances and transfers to the amount received by white families would result in a five-percentage-point increase in the racial wealth ratio. Finally, standardizing for wealth inflows related to household composition shifts would have little effect on the racial wealth gap.

Sensitivity Tests

Though the data have been treated with as much care as possible in the preceding exercises, a certain amount of skepticism may be warranted, given that the division of wealth accumulation into its component parts relies on the ability of respondents to reconstruct accurately their financial

transactions of the preceding five years. Even those who have played pivotal roles in the development of the data have acknowledged that the separation of wealth accumulation into active and passive savings components on the basis of PSID data is "quite crude" (Juster, Smith, and Stafford 1999, 32). Kennickell and Starr-McCluer (1997b) raise concerns as well about the quality of retrospective reporting of household wealth.

The calculations in this study are based in part on recall over a five-year period. To check these against the more reliable information reported at the time of each wave, the experiments summarized in Table 8 were reconstructed through a regression-based method that used only the more reliable cross-sectional data.[28] The changes in wealth for family f over period t (ΔW_{ft}) are represented by the following equation:

$$\Delta W_{ft} = \alpha_t + \Sigma_{a=1\ to\ A}\, \beta_{at} w_{aft} + \chi_t I_{ft} + \delta_t T_{ft} + \phi t \mathbf{X}_{ft} + \varepsilon_{ft}$$

where w_{aft} represents a family's holdings in each asset at a particular time, I_{ft} and T_{ft} the income and amount of inheritances or gifts received by the family over the period, and $\mathbf{X}$ a vector of covariates for age, education, and sex of the head of household; number of children; and location. The other symbols are the coefficients to be estimated. This reduced-form equation describing wealth accumulation captures many, though not all of the elements in the wealth-accounting framework above. In the absence of portfolio changes, capital gains on each asset can be written as $\beta_{at} W_{aft}$, where β_{at} represents the rate of return on a given asset. Saving cannot be measured directly, but it can be represented as a function of family income or other demographic characteristics. Inheritances are entered into the equation, but, in contrast to the situation in the wealth-accounting framework, are not assumed to change wealth dollar for dollar. In other words, δ_t could be less than one if an inheritance is not completely saved, or greater than one if receipt of an inheritance is correlated with factors leading to faster wealth accumulation—for example, access to better business opportunities or superior financial advice—for which the controls are not adequate.

Given certain assumptions, this framework and the coefficients that result from estimating the equations separately by race can be used to conduct many of the same counterfactual exercises as in Table 8.[29] For instance, by substituting one race's β_t vector for the other's, it is possible to estimate

what the increase in wealth would have been if each group had had the same rates of return. Or, the impact of portfolio composition can be calculated by maintaining the same level of wealth but reallocating the holdings on the basis of portfolio shares in the other race's holdings.

As before,the simulations were performed in two ways:first, the wealth of African Americans was recalculated after substituting white parameters for the corresponding African American parameters, and second, the wealth of white families was recalculated given African American parameters. The results, shown in Table 9, are very similar to those from the first set of simulations.

Substituting the white wealth portfolio for the African American portfolio raised the racial wealth ratio by five percentage points; substituting the rate of return on assets owned by white families for those owned by African Americans lowered the wealth ratio by three percentage points; providing African American families with the same level of income as whites raised the wealth ratio by 10 percentage points, and furnishing them with the same amount of inheritances and gifts as whites increased the wealth ratio by eight percentage points. The regression-based method also allows counterfactuals based on demographic and locational characteristics. The results suggest that interchanging African American for white demographic and locational characteristics, and vice versa, would have had very little effect on the racial wealth gap for the period under study.[30]

Overall, the accounting and regression frameworks yield similar pictures, strengthening confidence in the findings from the first method. Perhaps this should not be surprising. While the accounting framework does rely on recall, it also requires that the decomposition of wealth accumulation be consistent with the wealth portfolios in each cross-section.

Public Policy Implications

Based on this analysis, it may take another two generations for the racial wealth gap to close, even if the income gap between African American and white households is eliminated immediately. How can we accelerate this process? Asset building for low-income families is a new and powerful idea. I believe that assets (or the lack of them) matter greatly in providing

Table 9 Mean Wealth Ratios Recalculated under Counterfactual Assumptions (Regression-Based Method)

	1984–1989		1989–1994		1984–1994	
Race whose wealth is recalculated:	**African American**	**White**	**African American**	**White**	**African American**	**White**
Actual, start period	0.23		0.22		0.27	
Actual, end period	0.22		0.26		0.28	
Characteristic from other race assumed to hold for both:						
Portfolio allocation	0.21	0.21	0.28	0.25	0.33	0.28
Rate of return	0.20	0.20	0.26	0.24	0.25	0.22
Family income	0.26	0.26	0.32	0.30	0.38	0.40
Inheritance	0.23	0.22	0.33	0.26	0.36	0.29
Demographic	0.20	0.22	0.26	0.26	0.25	0.28
Location	0.22	0.22	0.26	0.26	0.29	0.28

Notes: Calculations use the longitudinal samples (for details, see Appendix A). Sample sizes: *1984–1989:* 4,899 (3,089 whites, 1,810 African Americans); *1989–1994:* 4,838 (3,091 whites, 1,747 African Americans); and *1984–1994:* 3,498 (2,222 whites, 1,276 African Americans).

an economic cushion, enabling people to make investments in their futures and psychological orientations and enter the financial mainstream. Current public policy offers substantial, highly regressive subsidies for wealth and property accumulation, such as mortgage deductibility for homes and other real estate and tax sheltering of IRAs, 401(k) plans, and other forms of retirement assets, but this applies only to relatively well-off individuals. Tax sheltering makes sense only if a family has enough income to pay income taxes. By contrast, poverty policy has ignored asset building for resource-poor families. The challenge is to design policies to reach low-asset families who are willing to work and save.

The question of whether the poor can save is the root of much concern and confronts traditional economics. Sherraden (2001), for example, provides new data analysis that demonstrates that the poor do, in fact, save when provided the opportunity and reasonable subsidies. Edin (2001) and Stern (2001) argue in favor of loosening credit so that the poor can borrow more easily and at lower costs. Should public policy encourage asset accumulation or make credit and borrowing easier? In the end, such approaches might be necessary.

In exploring how the American Dream of homeownership applies to the poor, Denton (2001) found that homes lead to other social assets, such as better schools and public services and more effective social networks. She notes that housing is not only a form of investment, offering the possibility of appreciation of values, but is also a component of lifestyle, providing direct amenities to the owner, and a vehicle for intergenerational transfers.She points out,however, that the rise in housing values from the 1950s to the 1970s that produced spectacular equity is not likely to occur again for the current generation of young homeowners. Homeownership in African American communities typically results in lower equity than it does in white communities, and does not provide the homeowner with access to richer educational environments or better public services.

The most heated debates around these policy initiatives contrast promoting new asset-building policies with protecting and strengthening existing safety net programs for the poor. This brings the discussion back to connecting income and labor market policies to asset-building strategies and finding the appropriate policy mix. For example, raiding individual asset-building accounts to pay medical bills because of Medicaid cuts

does not promote a brighter future; it only shifts the financial burden. Asset-building accounts must be targeted at asset accumulation, not paying for ongoing expenses.

Beneficial outcomes of asset building have already been documented at neighborhood, household, and individual levels (see Shapiro and Wolff 2001). Homeownership, for example, is positively correlated to rising property values, educational attainment and achievement, decreased dropout rates, increased civic involvement, and residential stability. Research in other areas (marital stability, family health, children's well-being, domestic violence) is very encouraging.

There may be differences in how particular assets, such as social security wealth, private pension funds, 401(k)s, vehicles, and even homes affect well-being. Some are fungible and others are not. Some can help a person build a better life and future, while others are more important as safety cushions later in life. Indeed, an automobile purchase may be a "legitimate" use for subsidized asset accounts, since for many poor people a car is an absolute necessity for going to work and shopping (see, for example, Edin 2001).

In the public policy arena, events are already occurring very rapidly. The Assets for Independence Act of 1998 authorized $125 million for Individual Development Accounts (IDAs). IDAs, which are not taxed, allow amounts set aside by eligible low-income families to be partially matched by public funds, rather like the Universal Savings Accounts (USAs) proposed by President Clinton in his 1999 State of the Union address. The accounts earn interest, and can be drawn upon to support schooling or training, purchase a home, or start a business. In other legislation, states can now use IDAs as a part of welfare reform plans and welfare-to-work programs. The Savings for Working Families Act, introduced in early 2000, proposed about $5 billion in tax credits to financial institutions and private sector investors to set up, match, and support asset building for low-income persons. A Children's Savings Account Initiative is about to be launched. In at least 34 states, IDAs have either been authorized or the legislation is pending.

The number of pieces of legislation is potentially misleading because they serve only a small fraction of families with few or no assets. Many of these

programs are intended to test conceptual, design, practical, and political issues. Even if they are deemed effective and find public support, taking them to scale will engage another host of issues.

So what can be done now to promote asset development among poor people in general and poor African Americans in particular? Development of IDAs and related programs will stimulate saving by the poor and help to draw them into the financial mainstream. At present, private credit card companies are very reluctant to advance credit to the poor. By expanding credit opportunities in this sector—perhaps through a government-backed credit card system—low-income families will find it easier to purchase cars and pay educational expenses. The homeownership rate among African American families (and white families as well) has been virtually stagnant over the last two decades. A new government-subsidized mortgage loan, perhaps modeled on the postwar G.I. Bill, may be required to further expand homeownership in the coming decade.

As Melvin Oliver argued in the preface to Shapiro and Wolff (2001),asset-building strategies may provide longer-lasting remedies to deep-seated poverty than mere income replacement policies, which have been the hallmark of U.S. poverty policy over the last 65 years. Building up not only financial capital but human and social capital as well may provide a firmer foundation than monthly income transfers to overcome the deleterious effects of poverty.

Appendix A

In the wealth accounting framework, the wealth of a household at any point in time can be represented by the following formula:

(1) $W_{ft} = \Sigma_{a=1\ to\ A} \Pi_{aft} W_{aft}$

where W = net worth in constant dollars, Π represents the share of each asset in the portfolio, f is the index for family, t for time, and a for asset. Assuming that there are no changes in portfolio allocation, the change in wealth between periods t and $t + 1$ can be expressed as follows:

(2) $\Delta W_f = \Sigma_{a=1\ to\ A} r_{aft} \Pi_{aft} W_{aft} + s_{ft} I_{ft} + T_{ft}$

where r represents the asset-specific rate of return, s the rate of saving out of income, I the income, and T the amount of inheritances or gifts received by the family.[31] It may be worth emphasizing that the rates of return are family- and period-specific, given what may be substantial differences across families in the path of asset prices within the broad groups of assets noted above. Finally, the rate of change in wealth is the ratio of equation (2) to equation (1):

$$(3)\quad \Delta W_f / W_{ft} = (\Sigma_{a=1\ to\ A} r_a \Pi_{aft} W_{aft} + s_{ft} I_{ft} + T_{ft}) / W_{ft}$$

This formula makes clear that the rate of wealth accumulation for a family depends on five factors: rates of return on assets, portfolio allocation, saving rate, income level, and amount of transfers. All of these factors may differ by race and thus are potential causes of disparate patterns of wealth accumulation by race. Data on income by race are easily available and past studies of race differences of wealth have provided information on the extent to which lifetime transfers (Menchik and Jianakoplos 1997, Avery and Rendall 1997) and portfolio allocation (Blau and Graham 1990) differ by race. As noted above, much less is known about racial differences in saving rates and rates of return on assets, gaps that can be filled with the PSID data.

Up to now, though we have assumed implicitly that the composition of families stays the same, this static view of households is clearly not accurate. There is much flux among families, owing to marriage and divorce, births and deaths, children leaving the parental home, and elderly parents joining the households of their adult children. In order to prevent such changes from wreaking havoc with the data—in most cases a child leaving the household would suffer a large loss in household wealth—we follow the approach of Hurst, Luoh, and Stafford (1998) and Juster, Smith, and Stafford (1999) and include only those families where the head of household stays the same in the longitudinal samples used to examine wealth accumulation. As this rule does allow for some household composition changes that have an important influence on wealth—e.g., marriage, divorce, death of spouse—it is necessary to take account of these effects on wealth.[32] In addition, as noted above, flows of funds related to pension annuities are not included in net worth and need to be tracked as well. Augmenting equation (3) to take into account these two categories, we have:

(3) $\Delta W_f / W_{ft} = (\Sigma_{a=1 \text{ to } A} r_a \Pi_{aft} W_{aft} + s_{ft} I_{ft} + T_{ft} + H_{ft} + P_{ft}) / W_{ft}$

where *H* is the net change in wealth resulting from assets being brought into or removed from family holdings as a result of changes in household composition and *P* is the net flow of funds out of pension annuities. Additional details on the rule for following households can be found in Appendix B.

Following only those households where the head does not change has the impact of selecting an older and more stable population. Comparisons with the full sample, shown in Appendix B, indicate that this tends to make the longitudinal sample wealthier than the cross-sectional one. In addition to the requirement that household head not change, representation in the longitudinal sample was predicated on the household's not undergoing extreme changes in wealth over a five-year period (i.e., a decline of more than $100,000 or a gain of more than $1 million). Such outliers can distort the results for the rest of the sample and are also liable to be the source of greater measurement error, given that complicated portfolios are likely to be involved. As any such sample criteria are to some extent arbitrary, the results were redone both with more and less restrictive criteria.

The restrictions tend to exclude both race groups about equally, with the (weighted) proportion of African American families at about 11–13 percent regardless of the sample.[33] In part because of greater representation of whites in the upper tail, the restrictions raise the ratio of the means somewhat closer to one-quarter than one-fifth and the ratio shows a slight upward trend.[34]

Appendix B

A. PSID Wealth Supplements

Assets and Liabilities

1. Main home: house value minus remaining mortgage principal
2. Other real estate: net value of second home, land, rental real estate, money owed in land contract
3. Net equity in farm or business

4. Stock: stock in publicly-held corporations, mutual funds, or investment trusts, including stocks in IRAs
5. Checking and savings: checking or savings accounts, money market funds, certificates of deposit, government savings bonds, or Treasury bills, including IRAs
6. Other savings: bonds, rights in a trust or estate, cash value in a life insurance policy, or a valuable collection for investment purposes
7. Other debts: credit card, student loans, loans from relatives, medical or legal bills

Items Asked about in Active Savings Questions (over past five years)

1. Amount of money put aside in private annuities
2. Value of pensions or annuities cashed in
3. Amount of money invested in real estate other than main home
4. Value of additions or improvements worth $10,000 or more to main home or other real estate
5. Amount of money invested in farm or business
6. Amount of money realized from sale of farm or business assets
7. Net value of any stocks in publicly-held corporations, mutual funds, or investment trusts bought or sold
8. Net value of debt and assets removed from family holdings by someone with more than $5,000 of either leaving the family
9. Net value of debt and assets added to family holdings by someone with more than $5,000 of either joining the family
10. Value of any gifts or inheritances of money or property worth $10,000 or more

B. Calculations

Division of Change in Asset Value into Capital Gains and Active Savings

1. Main home: Division is done by calculating capital gains and active savings in each year and then summing them. If family did not move, the capital gains in each year equal the rise in the value of the home and the active savings equals the reduction in mortgage principal. In years in which the family moved, the change in the net value of the house is considered active savings. The value of additions or improvements is added to active savings as well.
2. Other real estate: Active savings is the amount of money invested in real estate other than main home. Capital gains is the change in the net value of the asset minus active savings in this asset.

3. Net equity in farm or business: Active savings is the difference between the amount of money invested in farm or business and the amount realized from the sale of such assets. Capital gains is the change in the net value of the asset minus active savings in this asset.
4. Stock: Active savings is the net value of stock bought or sold. Capital gains is the change in the net value of the asset minus active savings in this asset.
5. Checking and savings: A 0 percent annual real rate of return is assumed, so active savings equals the change in the net value of the asset.
6. Other savings: Capital gains are calculated by assuming a 1 percent annual real rate of return. Active savings is the change in the net value of the asset minus the capital gains for this asset.
7. Other debts: Capital gains are calculated by assuming an annual real rate of return equal to the inflation rate (CPI-U). Active savings is the change in the net value of the asset minus the capital gains for this asset.

Saving out of Family Income

The calculations just described divide changes in wealth during a period into capital gains and active savings. Information from the series of questions on active savings is used to calculate the 1) total amount of inheritance and transfers, 2) net change in assets as a result of changes in household composition, and 3) net change in annuities. Summing these three components and then subtracting them from active savings yields a measure of saving out of family income.

Rates of Return on Assets

Two different types of rate return were calculated: asset-specific and overall. For the former, the amount of capital gain over the period was summed up over all families, separately by asset type, and then divided by the sum over all families of the value of that asset at the beginning of the period. The same calculation was made for the overall rate, except that the sums were of all assets together. As the calculations of asset-specific rates require more assumptions about the flows into each asset,they are presumably less reliable than the overall rate. As a result, in any case where the overall rates could be used, they were (though it turns out that the results are not very sensitive to this choice). In the counterfactual experiments associated with portfolio composition, it is necessary to use asset-specific rates.

The questions about active savings are phrased in terms of flows over the previous five years; it is not known when during the period these flows occurred. Rates of return were calculated under two assumptions: that the flow occurred at the end of the period (i.e., the time of the survey) and that it occurred at the beginning of the period. As the results were not sensitive to these assumptions, it was assumed throughout that the flow occurred at the end of the period. Assuming that it occurred at the beginning of the period would have the effect of raising slightly the amount of capital gains and lowering slightly the amount of saving.

Rate of Saving

The saving rate was calculated by dividing the sum of estimated saving out of income (as described above) by the sum of total family income over the period. Because family income was not available for 1993, it was assumed that income in that period equaled the average of income over the preceding four years.

Sample Selection

1. Cross-sectional samples: There are no sample selection criteria for inclusion in these samples. However, Juster, Smith, and Stafford (1999) say, "The PSID other savings number in 1984 is unusually high. This is due to a few large outlier values that appear to be miscodes" (p. 17, footnote 12). In seven cases, the other savings value is given as $9 million, which is an extreme outlier. These observations are excluded from the 1984 cross-sectional sample.
2. Regression samples: Starting from the cross-sectional samples, all observations where net worth was less than –$100,000 or greater than $1,000,000 were eliminated. In addition, there was a problem of missing data for the family income variable in 1994. As the 1994 data from the main PSID files are preliminary, a family income amount is not available for that year and so had to be taken from the 1993 data. In a small fraction of the cases, a head in 1994 was not a head in 1993, so there was no meaningful family income amount that could be used. In addition, for a small number of cases for all years, but particularly for 1994, data are also missing for education and size of city. In order to maintain the sample sizes as much as possible, a dummy variable for missing education data and one for missing city size data were included for these two concepts.

3. Longitudinal samples: Three separate longitudinal samples were formed, for the 1984–1989, 1989–1994, and 1984–1994 periods. To be included in the sample, in addition to the requirements of the regression samples, it was required that the household not have undergone extreme changes in wealth over the relevant five-year period(s) (i.e., a decline of more than $100,000 or a gain of more than $1 million) and, following the approach of Hurst, Luoh, and Stafford (1998) and Juster, Smith, and Stafford (1999), that the household head did not change over the period. The main rationale for these restrictions was to avoid drawing erroneous conclusions about the changes in the level of wealth and their composition: for an individual living with his or her parents in the year of one wealth supplement and as a head of household in the next, it would not be sensible to compare the wealth of the parents at the beginning of the period to that of the child at the end.

About 90 percent of the sample had, after excluding those families where the household head had changed, either undergone no change in family composition or made a change that involved a member other than the head or wife. In the remaining cases, a wife had either left or died, or the head had a new wife; husbands in these cases who had done the same were not counted, because of the PSID's rule of treating a male as the head of household if one is present. It is possible that this asymmetric treatment of the sexes introduces some peculiarities into the data: if a male respondent marries, divorces, or is widowed, the wealth of his family is tracked both before and after the change in marital status. The wealth of women facing similar changes in circumstances would not, however, be tracked. While there is a large literature on the divergent economic fortunes of men and women after a divorce (e.g., Burkhauser and Duncan 1989) these results are based on incomes, not wealth. The possibility exists that changes in wealth are more symmetric than those in income,particularly in respect to the PSID concept of wealth, which does not include assets associated with earnings, such as pension and social security wealth.

Sample Statistics

	1984			1989			1994		
	Whites	African Americans	Ratio	Whites	African Americans	Ratio	Whites	African Americans	Ratio
Cross-sectional samples									
Mean net worth	139.8	25.2	0.18	179.0	34.2	0.19	180.7	32.4	0.18
Sample size	4,336	2,575		4,505	2,609		4,804	2,611	
Regression samples									
Mean net worth	106.9	24.7	0.23	117.8	25.6	0.22	125.8	31.6	0.25
Sample size	4,271	2,573		4,396	2,605		4,241	2,341	
Longitudinal samples									
1984–1989									
Mean net worth	102.4	23.5	0.23	154.6	34.2	0.22			
Sample size	3,089	1,810		3,089	1,810				
1989–1994									
Mean net worth				113.0	24.6	0.22	162.0	41.5	0.26
Sample size				3,091	1,747		3,091	1,747	
1984–1994									
Mean net worth	83.1	22.8	0.27	118.4	29.5	0.25	166.2	46.1	0.28
Sample size	2,222	1,276		2,222	1,276		2,222	1,276	

Note: Net worth is measured in thousands of 1998 dollars.

Appendix C

Regression Coefficients Used in Decomposition of Racial Wealth Differences, 1984–1994, by Year and Race

	1984		1989		1994	
	Whites	African Americans	Whites	African Americans	Whites	African Americans
Intercept	–186,780	–26,344	–197,230	–28,100	–208,537	–6,191
Age of head	5,018	114	5,791	–562	6,429	–400
Age of head squared	–18	8	–23	18	–29	18
1=female head	1,669	4,354	–7,672	–377	–13,155	–5,012
1=unmarried head	–17,753	8,197	–28,303	1,552	–21,695	–14,419
Number of children	2,409	–190	–8,585	1,095	7,544	1,469
1=high school graduate	25,786	8,727	32,761	12,483	27,423	19,499
1=some college	41,744	1,211	43,562	1,864	34,989	24,569
1=college graduate	54,248	29,875	54,741	12,450	53,696	36,371
Family income	1.977	0.984	1.735	1.080	1.607	0.438
1=Small city	8,355	5,195	4,588	3,580	7,656	–1,385
1=Large city	7,816	3,950	902	1,172	1,814	–867

Notes: Family income is measured in 1998 dollars. Calculations use the regression samples (for details, see Appendix A). Sample sizes: *1984:* 6,844 (4,271 whites, 2,573 African Americans); *1989:* 7,001 (4,396 whites, 2,605 African Americans); and *1994:* 6,582 (4,241 whites, 2,341 African Americans). Family income for 1994 is not available, so that for 1993 is used instead. "Small city" implies that largest city in county of residence has a population of less than 50,000. "Large city" implies that largest city in county of residence has a population of 500,000 or more.

Notes

1. For long-term perspectives on racial economic progress, see, for example, Smith and Welch (1989) and Reardon (1997). Of course, racial economic differentials need not always be moving in the direction of relative economic progress for African Americans, as experience since the 1980s has demonstrated. For example, see Bound and Freeman (1992) for an analysis of the decline in the relative position of young black men in the 1980s.

2. For ease of exposition, the term "whites" will be used throughout to include all those who are not African American.

3. Though the Census Bureau also reports data for families, a comparison is made using data for households, since the definition of "family"in the Panel Study of Income Dynamics (PSID), the main dataset used in the analysis of this paper, includes "unrelated individuals" as separate families, and thus is closer to the Census Bureau definition of "household."

4. See Wolff (1994) for longer-term comparisons using both net worth and homeownership rates. Though entry into self-employment may be facilitated by the presence of wealth and the ownership of businesses may serve to increase wealth, the fact that the rate of self-employment of African American men relative to white men has remained constant at about one-third for this century (Fairlie and Meyer 1996) is consistent with little change in the wealth ratio.

5. The analysis of racial differences in wealth accumulation in Hurst, Luoh, and Stafford (1998) is an exception, though it is not the main focus of their paper.

6. See Hill (1992) for additional general description of the PSID and Hurst, Luoh, and Stafford (1998), Juster, Smith, and Stafford (1999), and documentation on the PSID website (www.isr.umich.edu/src/psid) for discussion of the wealth supplements.

7. As of this writing, an "early" release of the 1999 PSID wealth data is available, but it was not used here because much of the data needed

to study wealth accumulation between 1994 and 1999 have not yet been released and because of concerns about comparability owing to changes in questionnaire and sample. See Lupton and Stafford (2000) for additional details.

8. Kennickell and Starr-McCluer (1997a) use the 1983–1989 panel of the Survey of Consumer Finances to study household wealth accumulation, but they define saving as being equal to changes in net worth, in order to arrive at a level of household saving.

9. As detailed in Appendix A, the questions for several of these items ask about amounts that exceed thresholds of $5,000 in some cases and $10,000 in others. While the truncation points tend to be well below the means of reported values, it is not possible to know whether the existence of thresholds affects one racial group more than another.

10. Though we use the same term, our definition is somewhat different from that used in these analyses.

11. All dollar amounts are converted into 1998 dollars using the Bureau of Labor Statistics's Consumer Price Index–All Urban Consumers (CPI-U).

12. Though the hump shape in a cross section can be consistent with the life-cycle model of wealth accumulation, it is evident that it cannot be taken as confirmation of it, given that period and cohort effects are also playing a role. See Wolff (1988) and Jianakoplos, Menchik, and Irvine (1989) for additional discussion.

13. When the value of vehicles is included in wealth, the results look somewhat different. Whites have a median wealth of 60.4 thousand dollars in 1984, 61.7 thousand in 1989, and 67.7 thousand in 1994. For African Americans, the corresponding values are 3.8 thousand, 6.6 thousand, and 8.2 thousand, resulting in the ratio of medians rising from 0.06 in 1984 to 0.11 in 1989 and then to 0.12 in 1994.

14. See Hurst, Luoh, and Stafford (1998) for additional discussion.

15. The coefficients themselves are shown in the table for Appendix B.

16. See, for example, the contributions in Neuman and Silber (1994).

17. See Sherraden (1991) and Oliver and Shapiro (1995) for detailed discussions of policies to reduce the racial wealth gap.

18. See Powers (1998) for a recent analysis of the impact on savings of the asset-testing policy under AFDC.

19. See Wolff (1996) for a discussion of estate and wealth taxes.

20. Blau and Graham (1990) conclude on the basis of a simulation that differences in rate of return do not account for much of the difference in wealth levels in their sample. Though it is not based on actual returns, Menchik and Jianakoplos (1997) calculated a household-specific return where the variation seems to be largely attributable to differences in portfolio composition. Differences between races in rate of return turn out not to be important in explaining differences in wealth levels.

21. As an additional check on the impact of attrition, we also recalculated the results for the two five-year periods, using the sample for the 10-year period. The basic patterns remained the same.

22. See Kennickell and Sundén (1997) for a recent assessment of the relationship between pensions and savings.

23. As noted in Appendix A, the PSID only asks about inheritances that are in excess of $10,000. However, results reported here are similar to those reported in Wolff (1998) on the basis of the 1995 Survey of Consumer Finances. According to these data, 24 percent of white households had reported an inheritance in or before 1995, compared to 11 percent of African American households; the average bequest was $115,000 for the former and $32,000 for the latter.

24. Most of the impact occurs in the first five-year period and is attributable more to the departure from the household of indebted individuals than to the entrance of those with high levels of net worth.

25. Juster, Smith, and Stafford (1999) also note the importance of net inflows of assets as a result of family composition changes on changes in wealth between 1984 and 1994, but do not delve into the causes. Because the effect of family composition changes is included only for this relatively short period, this measure is by no means comprehensive in terms of capturing the influence of such changes. For instance, among couples who were married before 1984 and remained married over the whole period, the contribution of the union of the husband's and wife's assets is completely missed.

26. The finding that whites have a higher saving rate than African Americans is not sensitive to the choice of sample, though the gap narrows somewhat as extreme outliers in terms of changes in wealth are excluded from the sample.

27. Another contributing factor is that African American families had a higher rate of return on stocks than did white families. Obviously, it is not evident that with falling barriers to stock ownership among African Americans,their rate of return would remain so much higher than whites'.

28. The one exception is the continued use of information on reports of inheritances. Because these are rare events, it is easier to recall them than to be able to reconstruct, for example,the net amount put into stocks.

29. Except for the 1984–1989 period, the hypothesis that the coefficients are equal across the races can be easily rejected.

30. Given that calculations of saving rates require reliance on retrospective reporting, it is not possible to do simulations with this concept.

31. These gifts can come from those who are not family members, though for ease of exposition we will refer to them as family transfers.

32. Because the PSID considers the male to be the head of household if one is present,a male respondent going through these changes can be tracked, but not a female one. This is discussed in greater detail in Appendix B.

33. In terms of unweighted counts, the proportion of African Americans lost to attrition and sample restrictions tends to be greater than that for whites, but only by a percentage point or two.

34. More precisely, instead of staying at 0.18–0.19 as in Table 2, the ratio moves from 0.23 in 1984 to 0.22 in 1989 to 0.26 in 1994 using the five-year samples and 0.27 to 0.25 to 0.28 using the 10-year sample.

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