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The Sufficiency of Retirement Savings: A Comparison of Two Cohorts of Retired Workers at the Time of Retirement

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**The Sufficiency of Retirement Savings:
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Abstract

Data on potential retirement benefits are key to understanding savings sufficiency since individuals may not begin drawing on all retirement resources at retirement. Matched Social Security administrative records and data on future and currently received pensions make the HRS a unique data set for estimating retirement savings of cohorts now entering retirement. The New Beneficiary Survey also linked SSA records and gathered comprehensive data on pensions and wealth for a cohort that first received social security retired-worker benefits approximately one decade earlier, in 1980–81. This paper compares the savings adequacy of these two cohorts. Mimicking the NBS sample selection, we define retirement as the date at which social security benefits were first received, and compare the annuitized net wealth (ANW) and the ANW relative to the (near) poverty threshold of the two cohorts. While the mean level of new retiree wealth and ANW has increased substantially from the earlier to later cohort—about one-third for wealth and 40 percent for ANW wealth—the failure to meet social adequacy targets has also increased. Our results suggest that the failure to meet the (near) poverty threshold is increasingly concentrated among singles and among those with the lowest human capital and low labor force attachment; vulnerability to inadequate resources in working life appears to persist into retirement.

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The Sufficiency of Retirement Savings: A Comparison of Two Cohorts of Retired Workers at the Time of Retirement

A persistent policy concern regarding the elderly is the extent to which available resources at the time of retirement are sufficient to enable the maintenance of economic well-being during the remaining years of life. While Social Security benefits provide nearly all retirees with a base level of support, private accumulations in the form of financial wealth, housing equity, and pensions are necessary to enable postretirement consumption above that base level.¹ Governmental agencies, policy research organizations and the popular press have commented extensively on this issue of resource adequacy at retirement, and researchers have reached quite different conclusions regarding the adequacy of available retirement resources.

In this paper, we explore this sufficiency issue using data on two cohorts of individuals at the time they retired, one in the early-1980s and a second in the mid-1990s. The intertemporal comparison of sufficiency across these two cohorts enables us to both assess changes over time in the overall level of retirement resource sufficiency, and to appraise the impact of the oft-noted changes in the overall level of financial wealth over past decades and especially the concentration of wealth increments among the wealthy.²

Previous Literature

A growing literature analyzes the “adequacy of savings” of people at or near to retirement, using a variety of approaches.³ These studies generally fall into two categories: those that assess savings behavior of individuals prior to retirement and the likely accumulation of adequate retirement resources and those that assess how well individuals fare during retirement, given the retirement resources they have accumulated. Both types of studies must adopt some

measure of standard against which to judge resource adequacy and estimate the number of years (and family members) over which these resources must be allocated.

The first group of studies asks whether individuals approaching retirement but not yet retired are saving “enough” to meet, at an assumed retirement age, some standard of adequacy. The availability of longitudinal data with rich financial data, including the HRS, has enabled the study of individuals’ preretirement savings and asset decumulation patterns as they approach retirement. These studies of prospective savings adequacy at retirement reach quite disparate conclusions. Whereas some conclude that modest pockets of inadequacy mar a generally optimistic overall situation, others find a serious shortfall in savings. The disparate results of prospective saving adequacy studies arise from different methods of estimating future savings and assumptions about adequacy, life expectancy, and asset accumulation. We review selected studies here.

Bernheim (1992) constructs a simulation model that calculates “optimal” savings behavior over the life cycle for families of different sizes, educational levels, ages (and hence, life expectancies), earnings, Social Security, and pension benefits. Bernheim’s “Baby Boomer Retirement Index,” is the ratio of the actual level of older persons’ accumulated financial and housing savings and the simulated target level of savings minus Social Security and pension savings. Low levels of this index support his conclusion that the financial and housing wealth of “baby boomers” is only about one-third of the target level of savings. Moore and Mitchell (1997, 2000) also simulate necessary savings for the initial HRS sample that would be necessary to maintain living conditions after assumed retirement at age 62 (and 65). Seventy percent of the after-tax value of the household’s current earnings is taken to be the amount necessary to maintain preretirement household consumption into retirement years. Assuming continued

earnings up to an early (62) and normal (65) retirement age, and historical returns on financial wealth, they find a median required savings rate of 16% if retirement is at age 62, but only 7% if retirement is delayed to age 65. There is substantial heterogeneity in required savings rates, with required savings rising with earnings. Compared with actual savings rates, these figures imply substantial undersaving as people approach retirement, especially if retirement occurs at the modal retirement age of 62.

Gustman and Steinmeier (1998) also using the HRS, calculate the annuitized value of the wealth of the households of the 51–61-year-olds as of the date of expected retirement. As in Moore and Mitchell, this annuitized value is the sum of Social Security wealth (obtained by projections of covered earnings until the expected age of retirement), pension wealth, financial assets, and housing assets. These 1992 annuitized values are then compared with the 1992 earnings of the household, yielding a replacement rate at each individual's expected age of retirement. The nominal replacement rate in 1991 when the average age was 56 years, for households in the median 10 percent of the distribution of lifetime earnings is 97 percent, and the real replacement rate is 66 percent. The mean nominal rate is 86 percent, and the mean real rate is 60 percent.

Engen, Gale, and Uccello (1999) develop a stochastic life-cycle model, in which married two-child families maximize lifetime utility by optimizing consumption and savings both for retirement (assumed to occur at age 62) and as a precaution against uncertainty.⁴ Optimal wealth accumulation is defined as that which enables smoothing of the marginal utility of consumption over the life cycle. They then compare the distribution of simulated results (for couples differentiated by age-education-pension coverage) with the actual wealth/earnings distribution for working couples [from both the HRS and selected Surveys of Consumer Finance (SCF)].

Assuming a 3% rate of time preference, they find that over 60% of married couples exceed the median target wealth/earnings ratio (relative to an expected 50% in a stochastic model), suggesting that overall savings are more than ‘optimal’ at the median of the distribution. However, comparisons at other points in the distribution suggest that about one-fourth of couple households are undersaving. Based on these results, the authors calculate replacement rates (defined as the ratio of Social Security and pension benefits plus income, but no principal, from wealth to final earnings), and find a median value of 72%. The authors argue that, considering lower consumption needs in retirement, “even without saving a large share of income in terms of financial assets, households can easily achieve replacement rates that are within the range recommended by financial planners and by the simulation model.”

Wolff (2002), using the cross-sectional Surveys of Consumer Finance for 1983, 1985, 1989 and 1998, reaches a quite different conclusion. He calculates “expected retirement income”—a crude estimate of annuitized wealth at the expected age of retirement—for households in each of the annual surveys. For the age group 47–64, the group on the verge of retirement, average expected retirement income grew from 1989 to 1998, but the percentage of households in this age range who would have expected retirement income below the poverty line increased from 17 to 19. Similarly, the unequal distribution of financial equity gains during this period suggests that the percentage with expected retirement income below one-half of current income increased from 30% to 43%. He concludes that there is an increasingly serious shortfall in retirement income.⁵ Finally, Butrica, Iams, and Smith (2003) simulate with Social Security’s MINT model, the economic well-being in retirement of the baby boom cohort, born between 1946 and 1964. They conclude that while this cohort “can expect higher incomes and lower poverty rates at retirement than current retirees have...baby boomers are less likely than current

retirees to have enough postretirement income to maintain their preretirement living standards.” They find serious problems of adequacy for this cohort, primarily due to Social Security replacement rate declines.

The variation in conclusions among these studies that project retirement resource adequacy for current older workers is caused in part by basic differences in data, assumptions, estimation procedures, and the definition of adequacy used. For example, Mitchell, Moore and Phillips (2000) and Engen, Gale, and Uccello (1999) focus on consumption smoothing where potential consumption is implied by preretirement earnings or income net of retirement savings. Wolff (2002) focuses on wealth accumulation at retirement and its ability to maintain income (and implied consumption) above the poverty threshold. All studies document wide heterogeneity in savings adequacy achievement, though the group identified as undersavers is closely tied to the measures of adequacy used and to assumptions made regarding the treatment of resource and family status changes.⁶ In assessing the differences among studies, Engen, Gale, and Uccello (1999) suggest that, when a variety of adjustments are made for differences in assumptions and estimating procedures, there may be less disagreement regarding the overall adequacy of retirement savings than is generally recognized.

While the studies reviewed above ask primarily about the adequacy of savings prior to retirement, the lengthening duration of the HRS enables examination of how well off individuals are at actual ages of retirement and about the observed ability to weather shocks to well-being as they age. In three articles Munnell and Soto (2005 a, b, c) estimate replacement rates first for Social Security, then adding employer-provided pensions and housing respectively to the wealth of new HRS retirees. Using a replacement target of 65–75 percent of preretirement earnings the authors conclude in the most recent paper that:

“regardless of how retirement income and pre-retirement income are defined, households with pensions are in good shape, and this group represents about two-thirds of all households. But one-third of households do not have pensions and do not fare well, even after taking housing into consideration. Moreover, the current situation represents the "golden age" of retirement income. The landscape is changing for the coming wave of baby boom retirees, who will see lower replacement rates from Social Security and less certain income from employer pensions.”

Coile and Milligan (2005) and Johnson, Mermin, and Uccello (2005) examined changes in wealth portfolios in response to specific shocks experienced by individuals in the expanded HRS cohorts over the period they were interviewed. Johnson et al. (2005) document higher rates of shocks and the more serious financial consequences for the older—longer retired—group in their HRS sample.

Our own prior work looks at a cohort of new retirees that first accepted public retirement benefits in the early-1980s. In Haveman, Holden, Wolfe, and Sherlund (2006) we examine wealth and measures of adequacy using the New Beneficiary Survey, a sample of individuals who first received Social Security benefits in 1980–81. Using survey data and linked administrative records, we estimate a comprehensive measure of annuitized wealth in 1982. We ask what level of potential consumption could be maintained over the remaining lifetime of the individual (and spouse, if married) if assets were annuitized and all sources of retirement income were counted. Results, which are described in the comparative analysis, suggest a modest problem of resource adequacy. Using an income replacement of 70 percent of preretirement earnings we find that approximately 30 percent of new retirees have insufficient resources.

A recent working paper, Haveman, Holden, Wolfe, and Romanov (2005) examines the changes in adequacy over the first ten years of the NBS cohort's retired life. We examine changes in wealth components and predictors of changes in annuitized wealth and in the

adequacy standards. On average, annuitized net wealth is fairly stable over the decade, the result of declining total wealth being offset by shorter remaining lifetimes. However, for virtually all groups the annuitized value of pension wealth falls, a consequence in part of defined benefits being paid over fewer years as individuals grow older, but also because pensions diminish due to inflation and are lost in widowhood and divorce. We examine distributional changes by exploring who is most vulnerable to declines in annuitized wealth and adequacy. An important finding is that those men and women who continue to work also gain through increases in measures of sufficiency, suggesting that work not only increases that year's income but also allows for greater asset growth and therefore postretirement gains in savings sufficiency.

Our previous work contributes to the retirement adequacy literature by estimating accumulated retirement savings of a sample of single individuals and married couples first observed at the time of retirement, and the annuitized net worth (ANW) implied over their remaining lifetimes. These estimates are made for a cohort of new retirees that first accepted public retirement benefits in the early-1980s. This paper extends that work by comparing these results to a second group that retired about a decade later, asking how levels and patterns of retirement savings adequacy have changed over time for cohorts entering retirement defined in as first receipt of Social Security benefits. We then compare our estimates of ANW to two alternative social criteria of minimum-acceptable consumption adequacy, the nation's poverty standard and a near-poverty standard taken to be twice the poverty standard. We distinguish changes in overall sufficiency over time, and also intertemporal changes for particular groups of new retirees focusing on patterns among groups with high and low levels of preretirement earnings and retirement wealth. The availability of two data sets on individuals entering retirement, each linked to Social Security administrative records, provides a unique opportunity

to examine the level and composition of economic vulnerability at retirement at two points in time. With these comparably constructed retirement cohorts we are able to examine whether, as hypothesized by Delorme, Munnell and Webb (2006), later cohorts of retirees are more vulnerable than early cohorts to inadequate retirement resources due to longer life expectancy, changes in the prevalence of defined benefit plans, and uncertainties tied to growth in financial assets of defined contribution plans and own financial portfolios.

Net Wealth and Annuitized Net Wealth of New Retirees

Data for the Early and Late Cohorts. For the early cohort, we use the New Beneficiary Survey (NBS) to assess the adequacy of economic resources available at the time of retirement as defined by the first receipt of Social Security retired-worker benefits. The NBS contains information on a sample of individuals who first received Social Security benefits in 1980–1981 (Ycas, 1992); they were interviewed first in 1982 and again in 1991. Our sample is drawn from the retired-worker sample and includes individuals age 62–72 at time of first benefit receipt and who were interviewed in both years.⁷

We select the later cohort from the Health and Retirement Study (HRS), a nationally representative household sample, originally of the 1931–41 birth cohort (age 51–61 when first interviewed in 1992). This sample was first interviewed in 1992 and every two years after. In 1998, additional cohorts were added to the HRS interview sequence, including the cohort born between 1924 and 1930, labeled the Children of the Depression Age (CODA), which we include in our sample frame.⁸ Our HRS sample is of individuals who report initial Social Security receipt in the two years prior to each interview.⁹ This mimics the NBS data selection upon first Social Security receipt in 1980–81 and the initial interview up to two years later, in 1982.

Individuals in the HRS must be at least 62 years of age at the first benefit receipt, the minimum

age at which retired-worker benefits can be received, and no older than age 72, the maximum age we selected for our NBS analysis sample.¹⁰ Our HRS sample have all reported receiving Social Security benefits by 1998; that is we select the sample through the 1998 interview.¹¹

The two samples are of individuals observed as they first enter Social Security reciprocity status. It is a sample of individuals at an important point in the retirement cycle—the point in time where they choose to begin drawing on an important retirement asset. The NBS is of individuals who first receive Social Security during a specific one-year period. The HRS sample also observes individuals at the point of first Social Security receipt, but this event can occur over a six year period, between 1992 and 1998. The HRS new beneficiaries is a younger sample than is the NBS first, because it is drawn from an age restricted, younger age group rather than from all potential Social Security recipients¹² and second, because we observe this younger cohort over several years of their early “retirement” (Figure 1). We adjust for this unequal age distribution by standardizing our HRS cohort to the NBS age distribution.¹³

[Figure 1 about here]

Comparability of the NBS and HRS Data. The NBS and HRS share several important features for the study of retirement adequacy. Intended to chart the financial and health status of individuals as they approach and age in retirement, both the NBS and the HRS gathered detailed information from individuals on their (and their spouse/partner’s) health, retirement, and economic status. They include demographic information, family structure, work history and current employment, health status, housing, detailed income and asset information, health and life insurance coverage, and Social Security receipt and benefits. Most important is the matching of both data sets to Social Security administrative benefits and earnings records. The NBS was fully matched with Social Security Earnings History and Master Beneficiary records. In our

previous work we have estimated Social Security wealth for couples and unmarried individuals. The HRS is also linked to SSA administrative data, but respondents had to grant permission for the link.. For these individuals we substitute wealth estimates derived from reported Social Security benefit data.

Because each data set provides comparably detailed information for both spouses in married-couple households, we are able to estimate wealth over the retired lifetimes of both spouses, including the period when only one survives. Asset and housing information is provided on the household level in both cases. Our samples are of two (age-standardized) cohorts that retired approximately a decade apart. Defining retirement in this way, we do not have to estimate pre-retirement earnings, savings, and pension and asset accretion of individuals. Because asset data are available for both spouses in a couple, we are able to accurately estimate financial, housing, pension and Social Security wealth for all respondents (including the period during which only one spouse in a married couple survives).

Net Wealth. From information contained in the NBS and the HRS, we calculate the value of net wealth for each single and married couple over their remaining lifetimes. Net wealth is the sum of financial and property resources, the net value of own home (home value less outstanding mortgage), the present discounted value of current and expected pension benefits, and the present discounted value of current and expected Social Security benefits.¹⁴

In both data sets, respondents report directly the value of their financial, property and net home equity wealth. In estimating Social Security wealth for the NBS cohort in 1982, we project the monthly inflation-adjusted benefits to which each individual is entitled (from the linked Master Beneficiary File) over the individual's expected remaining lifetime including, if married, the probable widow(er)hood years for respondent (or, if longer lived, the spouse). We include for

a married couple spouse and survivor benefits, if greater than own retired-worker benefits. Survival probabilities to each year are drawn from 1982 race- and gender-specific life tables (U.S. Department of Health and Human Services, 1985). We discount this expected stream of Social Security benefits to 1982 using a 2.75% rate, taken to be the individual rate of time preference, yielding the wealth value of Social Security benefits.¹⁵

The value of current (or future expected) employer-provided pension benefits is provided by the NBS respondent (and, if married, the spouse) and reflects a nominal value of benefits at the time of interview. While few pension plans are fully price indexed, we incorporate a price adjustment estimated from the NBS data. On average pension benefits for those fully retired and receiving benefits in both years grew by 3.25% between 1982 and 1991, a rate that is .75% less than the actual 4% rate of inflation between those years. We thus use a 3.25% rate to discount pension benefit streams to 1982. In calculating couples' pension wealth we use survey responses that indicate whether a pensioner chose a single-life or some form of survivor benefit that would continue to be paid to a surviving spouse and adjust our pension wealth estimates for that choice.

For our HRS sample, the data on pension wealth is obtained primarily from the HRS 'Pension Estimation Program', which uses plan descriptions provided by employers, along with specific data from respondents to estimate pension entitlements held by respondents. Using assumptions on macroeconomic variables consistent with the NBS study (e.g., nominal discount rate of 3.5%), we estimate the present value of each respondent or couples stock of pension wealth. We used survey responses to questions about pension income to construct pension wealth for the CODA cohort, which was not represented in the 'Pension Estimation Program.'

For the HRS sample, we accept the "Mitchell Social Security Wealth" estimates available in the restricted version of the data. For those observations for which this value is not available (

28% of our sample), we substitute calculated Social Security wealth based on the respondent's own estimate of social security benefits, using the same algorithm as used in the NBS estimate. For the missing (nonmatched) Social Security wealth estimates we follow a procedure similar to NBS and Mitchell's, using survey responses on current or expected retired-worker benefits amounts for both respondent and the spouse, as well as expected date of receipt if relevant. For single respondents, the estimate of social security wealth is the present discounted value of a stream of projected benefits taking into account his/her probability to survive until that age. We use the same assumption of a 2.75% discount rate and survival probabilities based on U.S. Decennial Life Tables for 1989–91.

For married couples in HRS and NBS estimates, Social Security plus pension wealth estimates for a couple are the expected stream of benefits of both spouses over their expected lifetimes, including that of the lone survivor who will claim survivor benefits whenever they exceed own work-based benefits.¹⁶

Annuitized Net Wealth (ANW). Wealth estimates do not account for the length of life, or the two lives of couples, over which resources must be spread. Our primary measure of well-being is the annuitized value of total assets over the remaining expected lifetime of respondents and, if married, of surviving spouses (again using race- and gender-specific life tables). Because our wealth estimates already reflect differences in inflation indexing, we use a uniform interest rate of 2.75%, taken to be the individual rate of time preference. The annuitized value we report is the single-person equivalent annual income that could be consumed if an individual or couple maintained a steady level of consumption potential over their remaining lifetimes, including, for couples, the period when only one is expected to survive. All wealth is annuitized assuming couples require 1.66 of the income of a single individual to maintain equivalent consumption.¹⁷

This single-person equivalent permits easy comparison between singles and couples. It diverges from the income a couple might report if all wealth were annuitized because we force a couple to take an annuity that preserves equivalent consumption over the survival of only one of them.

This, for example, could result in lower annual pension income for a couple in which one selected a single-life pension.¹⁸

Characteristics of the Early (NBS) and Later (HRS) Samples. In Table 1, the characteristics of our two samples of new recipients of Social Security retired benefits are shown. The HRS sample is age-standardized by age of first benefit receipt to match the NBS sample; unadjusted data are in Appendix Table A. The age reported in this table is age at interview which we chose in order to match the financial data. Not surprisingly, the later HRS cohort contains a higher proportion of nonwhite respondents. The percent of nonwhites in the two samples reflects the growth in the share of the American population that is nonwhite and their growing eligibility for Social Security benefits; similarly, the concentration of respondents in higher education categories in the later cohort reflects the inter-temporal increase in schooling among the population. Because of somewhat different definitions of the health status variable in the two data sets, the means in respondent and spouse health conditions are not directly comparable, though the means imply there has been no change in the overall probability of poor health among beneficiaries.¹⁹ Comparing the early-1980s to mid-1990s period, private health insurance coverage has fallen somewhat, consistent with overall national patterns of declining employer-provided health care coverage and its continuation into retirement. Mean levels of number of children, the percent with current or expected pension income, and the percent whose longest job was uncovered by Social Security are comparable between the two data sets.²⁰

The bottom bank of Table 1 presents a summary of ANW estimates for the early and late cohorts. For married couples, mean (inflation adjusted) ANW grew from \$22,910 to \$36,941 between the early and late cohorts, an increase of about 60%. Comparable increases for single men and women are 36% and 44%, respectively.

The increase in the variation of single-person equivalent ANW between the early and later cohorts is striking. For married couples, the standard deviation of ANW increases by over 120% between the two cohorts; for single men by 49% and for single women it almost tripled. This is due in part to the much lower minimum value of ANW for all HRS marital/gender groups, although for single women the maximum also rose substantially.

[Table 1 about here]

This overall pattern of increased dispersion in ANW is shown in Figure 2, a relative frequency distribution of ANW for both the early and later cohorts.

[Figure 2 here]

Estimates of Wealth and ANW. Table 2 presents mean wealth and ANW values at retirement for the early (1982) and later (mid-90s) cohorts (in 1994 dollars) for the samples of new retired-worker beneficiaries.²¹ For all individuals and couples in the sample, the mean level of wealth increased by over one-half, from about \$435,000 for the early (NBS) cohort, to a larger \$702,000 for the later HRS cohort. Much of this increase is accounted for by the large national increase in financial assets from the early-1980s to the mid-1990s.²²

For the NBS sample, average financial wealth was nearly \$100,000; by the mid-1990s, the mean level of financial/property wealth had tripled. The increase in pension wealth between the cohorts is also substantial—from \$62,000 to \$150,000. Social Security wealth decreased from \$207,000 in the early cohort to about \$162,000 for the later cohort.

For both the early and later cohorts, the level of wealth varies substantially by race, marital status, gender, education, and the age of retirement. These patterns are shown in Table 2. For both cohorts, the mean level of wealth for white households is nearly double that for nonwhite households(\$457,000 for whites and \$237,000 for nonwhites in the early cohort and \$755,000 compared to \$345,000 for whites and nonwhites in the later cohort.). White households tend to hold a far larger share of their wealth in financial wealth than do nonwhite household, although both increased the share of financial wealth substantially comparing across these two cohorts of retirees. Mean wealth for retirees in both cohorts is greater for those who first received benefits at age 65 than those who retired at ages 62–64. For those who retired at older ages (older than age 65), those in the early cohort had greater wealth, especially those who retired at ages 70–72 but this pattern does not (yet) hold for those in the 1990's cohort.²³ In both cohorts wealth is greater for married compared to single respondents, and for those with more schooling. Gender differences are not substantial, though male wealth levels generally exceed those for females.

The second bank of Table 2 presents our estimates of the single-person equivalent ANW values for our samples of new retired-workers. The mean ANW for couples is larger in the later compared to the earlier cohorts by almost two-thirds (61%), compared to a 43% for single respondents.²⁴ ANW is positively related to the age at first benefit receipt. The disparity in ANW values between early (< age 65) and late retirees is substantially greater than that in wealth, as the shorter expected lifetimes of the late retirees leads to a shorter period over which retirement resources are annuitized.²⁵

As with the wealth estimates, levels of ANW vary substantially by socioeconomic group; these patterns are shown in Figures A1. Between the early-1980s and the mid-1990s, ANW

increased for all of the age groups, but early recipients (65 or younger) gained relative to older new recipients. ANW increases were recorded for all of the education groups, but the disadvantaged position of those with less education increased as their ANW grew more slowly. The largest increase is recorded for those with a college degree or more. For the early cohort, the ANW gap between the highest and lowest education groups was about \$18,000; by the mid-1990s, the gap had increased to about \$30,000. While ANW for whites increased by about 60 percent between the early-1980s and the mid-1990s, it increased by only 37 percent for nonwhites. Among the marital status gender groups, the smallest increases in ANW are for single men, with married men experiencing larger increases than the three other groups. The pattern seems clear; wealth, and hence, ANW gains between the early-1980s and the mid-1990s were concentrated on those groups with the greatest human capital and the strongest attachment to the labor force, a wealth growth that appears to have changed the relative advantage of whites relative to nonwhites and led to increased racial inequality in retiree wealth.

The Adequacy of Resources in Retirement for NewLY RETIRED WORKERS

Resource adequacy in retirement is a basic value in American society, even though there is no universally accepted definition of adequacy and no consensus on the means of achieving this goal.²⁶ In this study, we ask: Do newly retired workers have sufficient resources (ANW) that enable them to escape poverty or near poverty during retirement? This adequacy criterion reflects a social norm—the meeting of basic needs, regardless of individual preretirement living standards. We also study the relative importance of public and private resources in supporting retirement, and the effects of various choices, individual characteristics, and good or bad fortune in individuals' ability to meet these adequacy criteria.

To address the question of whether a social adequacy standard is met, we relate ANW to two absolute standards of basic needs, the nation's family-size-conditioned poverty threshold and a threshold equal to twice the poverty threshold (commonly referred to as a near-poverty standard).²⁷ A ratio of ANW to the poverty line (or twice the poverty line) of one or more is interpreted as a level of retirement resources sufficient to avoid poverty (or near poverty) throughout the retirement period. Ratios in excess of unity indicate that the living unit has sufficient resources to escape poverty (or near poverty) throughout their retirement years.

These social minimum consumption standard ratios are shown in the bottom bank of Table 2. For the early and late cohorts, respectively, the poverty line ratios are 3.5 and nearly 5.5; for the near-poverty standard the ratios are 1.8 and 2.7, respectively. The increase in the mean ratio reflects the large increase in wealth and ANW between the two cohorts. In general, groups with lower human capital or labor force attachment (those with low education, women, singles, nonwhites, and those retired at an earlier age) have substantially lower poverty and near-poverty ratios than do those with higher levels of human capital and labor force attachment.

Table 2 also shows the percent of respondents in the various groups who fail to meet the poverty and near-poverty standards. Because of the increase in the variation in the distribution of ANW between the two cohorts and the increased prevalence of observations with low levels of ANW, the large increase in average wealth and ANW is not reflected in the percentage of newly retired citizens who fail to meet the poverty and near-poverty standards. In the early-1980s, about 4 percent of new retirees failed to have ANW in excess of the poverty threshold; by the mid-1990s this had increased to 8 percent; the percent failing to meet the near-poverty standard remained stable at 23 percent.

[Table 2 about here]

These patterns persist generally across the more detailed demographic groups. For both the early and the late cohorts, those groups with low levels of human capital or labor force attachment—those with low levels of schooling, nonwhites, singles, and females—have the highest percentages failing to meet the poverty and near-poverty standards. Generally, these same disadvantaged groups experienced the largest increases in the percent that fail to meet the poverty and near-poverty standards.

The Correlates of Retirement Resource Adequacy

To describe the predictors of individual resources and resource adequacy, we estimated a set of regression models of ANW and of predictors of falling below the poverty threshold on a set of individual socioeconomic characteristics; these models were estimated for both the early and later cohorts. Table 3 presents the ANW results for married couples, and for single men and women.

Results for the early (NBS) cohort are shown in the top bank of the table. Respondents who are white, with more than a high school degree (and, if married, those with a more educated spouse), who first received retired-worker benefits at an older age, and whose longest job was uncovered by Social Security tend to have higher ANW than respondents without these characteristics. These characteristics are likely associated with higher savings propensities or more generous pensions in noncovered work. Respondents with a health condition and those who have a spouse with a health condition have lower ANW, though respondent health is statistically significant only for married couples. The two variables that directly capture the presence of components of ANW—having a private pension and owning a home—are positively and significantly related to the ANW. Finally, those with private health insurance coverage have greater ANW than those who lack private health insurance coverage.

The bottom bank of Table 3 presents results for the later (HRS) cohort. With but few exceptions, the patterns observed for the early cohort are also present for the cohort that first receive benefits in the mid-1990s, especially for married couples. In general, the size of the coefficients is larger in the regressions for this cohort, even though levels of statistical significance are lower, probably reflecting the smaller sample sizes available in the HRS and greater wealth variance that may be due in part to inclusion of spouse/survivor only beneficiaries. The coefficient of working in an uncovered job is substantially smaller and statistically insignificant for married couples in this cohort, probably reflecting the difference in the definition of this variable between the NBS and the HRS.²⁸ The large and statistically significant coefficients on widowed and separated or divorced for the HRS cohort suggest a change in the tie between retirement wealth and loss of a spouse that is worthy of further study.

[Table 3 about here]

Table 4 presents probit regression estimates relating the failure to meet the poverty standard (ANW/poverty line $< 1 = 1$) to the same socioeconomic characteristics as in Table 3. The probit estimates indicate that, for the early (NBS) cohort, age of retirement, respondent (and for married couples, spouse) schooling, coverage by private health insurance, and the owning of a pension and a home are, with few exceptions, negatively related to the probability of resource inadequacy. Being nonwhite, longest job uncovered, the number of children, and respondent health conditions are positively related to having ANW less than the poverty line. The pattern of coefficients is similar for the later (HRS) cohort, but the levels of statistical significance are smaller, again related to the smaller sample sizes. An exception to this is the loss of any association between coverage by private health insurance and having ANW less than the poverty line among single men and women.

[Table 4 about here]

Conclusion

Our results contribute to the growing literature on the adequacy of resources of older Americans by exploring how resources have changed for two cohorts that entered retirement—as defined by Social Security benefit receipt—nearly two decades apart. They are based on two data sets, the New Beneficiary Survey and the Health and Retirement Survey, both of which are unique in their matching to Social Security records and detailed pension data for both spouses. As a result, these allow comprehensive estimates of the wealth individuals bring into retirement, avoiding the need to forecast either wealth accumulation or earnings or the retirement age to which savings may be targeted. We use these data to estimate the annuitized net wealth (ANW) of all members of our sample, (including survivor benefits in estimates of ANW for married couples), considering the age and life expectancy of the respondent (and spouse, if married). Our ANW comparisons reflect the effect of increasing life expectancy on retirement security of successive cohorts as suggested by Delorme, Munnell, and Webb (2006). Finally, we measure resource adequacy by comparing ANW to absolute national standards of basic needs adequacy, and compare an indicator of sufficiency relative to this standard for new retirees grouped by race, gender, marital status, and education. While our data are for unique samples which cannot be taken as representative of all current retirees, they provide a picture of the resources individuals deem adequate as they make a key retirement decision.²⁹ Our NBS work on post-retirement maintenance of well-being has shown factors that predict those better able than others to maintain initial levels of adequacy; our intention is to explore post-retirement patterns of maintenance by the HRS cohort.

Using the poverty line measure recommended by the National Academy of Sciences Panel on poverty measurement, Citro and Michael (1995), we find that only about 4% of new retirees in the early cohort have inadequate resources; for the later cohort, about 7% of the respondent living units have ANW below the poverty line. This increase may reflect the growth in the inequality in the distribution of ANW from the early-1980s to the mid-1990s. For both the early and the late cohorts, over 20% of our samples have ANW less than twice the poverty threshold. Respondents failing to meet these standards are concentrated among those groups with lower levels of human capital, and/or labor force attachment (nonwhites, women, single individuals, those with low education levels, and those who retired at an early age.)

Our multivariate results also suggest that the failure to meet the social adequacy targets is increasingly concentrated among those who fared least well during their working years; those with the lowest human capital and more modest levels of employment; thus vulnerability to inadequate resources in working life appears to persist into retirement. Single men and women who were at high risk of inadequate resources in the early cohort seem to face even higher risks of vulnerability in the later cohort. The role of the two-earner family is evident in these patterns.

An overall assessment of our conclusions must reflect a number of considerations. With the NBS data we have a retired-worker only sample; our HRS sample probably includes spouse and survivor only beneficiaries which could account for some of the larger variance in the HRS. As we proceed with this research that noncomparability will be resolved, although we note that our wealth data are for households and the NBS sample also includes survivor and spouse beneficiaries only who are married to retired workers. In addition, we have included HRS retirees only through 1998, a sampling decision shaped by our plans to explore how well-being is maintained during the early years of retirement for the HRS cohort. Expanding this sample to

include individuals first receiving Social Security benefits through 2004 would expand the sample of older individuals and may provide a somewhat different pattern of change; this would however come at the cost of more heterogeneity in the macro economic circumstances facing these later cohort individuals as they retired.

In estimating wealth, we included the equity value of owner-occupied housing in our estimate of ANW; some argue that the full value of this asset should not be included in assessing resource adequacy. And we used current U.S. life tables in assessing life expectancies; to the extent that some individuals expect to live shorter or longer lives we have under- or over-estimated their self-assessed adequacy. Further, we note the difficulty of accurately measuring “adequacy” that plagues all studies of this issue. Our comparisons of ANW with adequacy standards reflecting national norms of minimal acceptable consumption are crude indicators of the adequacy of the level of available resources. Indeed, all estimates of retirement resource adequacy fail to account for income flows from postretirement employment, intrafamily transfers, and public cash and in-kind benefits (such as public health care coverage). Those means of maintaining well-being will be explored in our longitudinal analysis.

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Notes

¹Concern with the ex-post adequacy of individual wealth holdings at the time of retirement complements that regarding the motivation and pattern of consumption-savings choices made prior to retirement. The earliest empirical contributions to this latter literature include Modigliani and Brumberg (1954) and Kotlikoff and Summers (1981). Recent contributions to this debate are Banks, Blundell and Tanner (1998), Bernheim, Skinner and Weinberg (2001), Hurd and Rohwedder (2003), and Venti and Wise (2000); see also Bloom, Canning and Graham (2002).

²See Wolff, 2004.

³The U. S. Congressional Budget Office (2003) provides an extensive review of these studies and a summary of their results.

⁴To incorporate uncertainty of earnings in preretirement years, heterogeneous earnings shocks over the preretirement years are introduced. When this stochastic pattern is recognized, some households who have optimal savings will have wealth-earnings ratios below (above) the median and hence be seen as having inadequate (adequate) savings.

⁵For several reasons, Wolff's conclusion seems overstated. First, he assumes people aged 47–64 will accrue no additional savings between their current age and the age of their retirement. Second, he assumes that the financial and housing assets that they currently hold will not grow in real value over the years from their current age to the age of retirement. Third, his replacement rate uses "current" earnings as the denominator

⁶In yet another line of the existing literature Scholz, Sheshadri, and Khitatrakun (2004) focus on optimal savings or defining adequacy from an individual perspective. They adopt a life-cycle model that reflects uncertainty regarding life expectancy, the uninsurability of certain

future income and expense flows, and the characteristics of tax, transfer, social and private pension arrangements, and assume each household solves the problem of the decision between optimal consumption and savings over the remaining years of life. Solving this model, together with earnings histories, enables a prediction of optimum wealth holdings for a representative sample of HRS observations

⁷Our sample consists of respondents who were interviewed in both years; we do not require that their spouses survive. We require a 1991 interview since data on earnings and on Social Security and pension benefits are available for many spouses of retired-workers only in the later survey. We exclude from our sample individuals who have fewer than 10 years of recorded Social Security earnings data after the age of 50. For details on those who attrited see Antonovics et al. (2000). The characteristics of our sample are shown in Appendix Table IA.

⁸With the CODA sample added to our sample, the older HRS spouses in the original HRS cohort, approximately age 68–74 when first interview in 1998, now become part of the individual sample. Only CODA households which first received benefits in the two years prior to the 1998 are included in the sample.

⁹For a married couple, the first person to be identified determines the timing of “retirement” for the couple.

¹⁰Both data sets have age of benefit receipt. The first interview occurs up to two years after initial benefit receipt in both data sets. Wealth is evaluated as of that age. The NBS sample was truncated at age 72 since at the time of the NBS that was the age at which the earnings test was lifted.

¹¹The 1998 cut off is because the primary purpose of this project is to track well being over the years after this retirement point. We have done this in the NBS for the 1982–1991 period. Our HRS sample is intended as one that can be followed for a minimum of six years, up to the latest 2004 interview.

¹²This is the case even though we include members of the CODA sample in our analysis. For the CODA sample, we only include those who retired in the two years prior to 1998, the period of observation that is both available and consistent with our selection for the HRS more generally.

¹³Descriptive data are weighted by the HRS weights and by the age-standardizing “weight.” The standardization adjusts for the differential “population sampling” of new beneficiaries from the younger HRS sample. Differential patterns of retirement over time by racial groups or by gender are reflected in the data, but these represent “true” changes over time in population composition and retirement timing.

¹⁴For the HRS sample, we also subtract the value of indebtedness other than mortgage debt. The 1982 NBS survey does not contain information on indebtedness other than the mortgage on own home, resulting in modest relative overstatement of net wealth for the early cohort. [In 1989, the nonhousing debt of households headed by a person aged 50 or more was very small. Median debt (in 1998 dollars) for those in the lowest quarter of the income distribution was about \$850, rising to about \$2900 for those in the middle two quartiles and to about \$12,000 for those in the top quartile. See Gist and Figueiredo (2002).]

¹⁵We selected this rate for comparability with Smith (1995). The rate used in other studies, including those discussed above, typically ranges between 2.5 and 3.0%.

¹⁶Social Security and pension wealth for married couples is the sum of spousal wealth values. The value of Social Security benefits are estimated conditional upon remaining married or being a sole survivor, using Social Security survivorship rules. If a pensioner indicated continuation of benefits to his/her surviving spouse, a joint and two-thirds (67%) survivor benefit is assumed.

¹⁷This equivalence scale, based on the National Academy of Sciences study of poverty measurement (Citro and Michael, 1995), is used to allocate wealth—and achieve equivalent consumption—over the married and widow(er)ed lifetimes of couples.

¹⁸It is interesting that our basic annuitized values are remarkably close to the inflation-indexed annuity estimated by the Social Security Office of the Actuary (NASI, 2006). The Office estimated a single unisex life annuity of approximately \$741 paid to a 65 year old for a \$10,000 payment. Our estimates imply on average (across our race and sex groups) a \$737 annual annuity for the same payment.

¹⁹In the NBS, we use a self-reported health status variable, and assign a 1 to those reporting fair/poor health status. For HRS, those with the 4 or more limitations on daily living are assigned a 1. Note that both samples exclude disabled workers who had received benefits prior to age 62: the NBS does so explicitly and our HRS sample by our selection criteria.

²⁰We have not yet incorporated a total years worked variable into the HRS analysis. We report it here for the NBS for informational purposes and evidence of one of our next intended steps in the analysis.

²¹Our estimates of asset values for the NBS and HRS samples tend to be greater than those based on the Survey of Income and Program Participation, but smaller than estimates of

asset holdings for households headed by persons aged 62–70 years in the SCF. This latter difference is likely to be due to the higher proportion of older persons in this age range in the SCF, as well as the substantial efforts of the SCF in collecting wealth data, especially among high-wealth individuals. This comparison is available from the authors upon request.

²²Using the SCF, we estimate that average net wealth in 1998 was about 20% greater than in the early 1980s. (Estimates are available from the authors.) These estimates are consistent with Wolff (2002). Our estimate of a 34% increase in new retiree wealth between the early-1980s and the mid-1990s suggests that the overall increase in wealth over this period was concentrated on the older population.

²³Given the age of the initial HRS and the shorter period we observe the CODA sample we have only a small number (32) who retired in the 70–72 age group by 1998.

²⁴This difference is much smaller than the marital status difference in total wealth, a result of both allocating wealth over the remaining lifetime of the longer surviving spouse and accounting for the greater consumption needs of married couples when both spouses are alive.

²⁵Because our samples include only new beneficiaries, this age effect is not a measure of the effect of delaying retirement on the economic well-being of early retirees. It only indicates that those who delay retirement have both higher wealth and greater ANW.

²⁶The 1965 Older Americans Act stipulates the following objective. “An adequate income in retirement in accordance with the American standard of living.”

²⁷We use the revised poverty lines suggested by the National Research Council study of poverty (Citro and Michael, 1995). In 2000, the absolute poverty line for single individuals was \$7255, and for couples, \$11,786.

²⁸The NBS asks directly about longest job coverage. The HRS asks if the respondent ever worked in an uncovered job. The importance of this variable in the NBS compels additional refinement of this variable in our future HRS analysis

²⁹Virtually all U.S. citizens become new Social Security beneficiaries at some age. For some, that age may reflect retirement-age adjustments in response to the adequacy of savings; for others unexpected events may lead to unexpectedly early retirement.

Table 1
New Recipients of Social Security Benefits

Variable Means	Characteristics of NBS Sample			Age Standardized HRS Characteristics		
	Married Couples	Single Men	Single Women	Married Couples	Single Men	Single Women
Number of observations	5,783	702	1,381	1,447	197	311
Age	65.6	65.9	66.5	64.6	66.2	65.1
Male	66%			56%		
Nonwhite	0.08	0.19	0.15	0.10	0.15	0.23
Widowed		0.33	0.50		0.29	0.42
Separated or divorced		0.40	0.29		0.51	0.43
Respondent high school only	0.32	0.22	0.30	0.34	0.29	0.25
Respondent some college	0.14	0.10	0.19	0.19	0.22	0.24
Respondent college or higher	0.12	0.10	0.12	0.24	0.18	0.17
Spouse high school only	0.35			0.37		
Spouse some college	0.13			0.19		
Spouse college or higher	0.09			0.20		
Number of children	2.7	1.9	1.9	3.1	3.1	2.8
Respondent health condition	0.2	0.3	0.2	0.2	0.2	0.2
Spouse health condition	0.4			0.2		
Private health insurance (Resp)	0.8	0.7	0.8	0.7	0.6	0.6
Has a pension	0.6	0.4	0.5	0.6	0.4	0.4
Home ownership	0.9	0.5	0.6	0.9	0.7	0.7
Years worked	32.2	34.7	28.4			
Longest job uncovered	0.2	0.2	0.1	0.2	0.2	0.2
Annuitized net wealth (ANW)	\$22,910	\$21,747	\$18,399	\$36,941	\$29,618	\$26,415
Standard deviation	\$20,859	\$21,104	\$14,402	\$46,718	\$31,442	\$38,860
Minimum	\$2,014	\$3,075	\$2,687	\$672	\$2,039	\$230
Maximum	\$691,721	\$279,759	\$158,081	\$427,933	\$278,302	\$351,504
Replacement rate (PovLine)	3.7	3.5	2.9	5.9	4.7	4.2
Standard deviation	3.3	3.4	2.3	7.5	5.0	6.2
Minimum	0.3	0.5	0.4	0.1	0.3	0.0
Maximum	110.7	44.8	25.3	68.5	44.6	56.3

Notes: NBS age is in 1982; HRS age is at first interview as recipient.

Health Condition: indicating poor or fair health, estimated from number of health conditions in NBS, from specific question in HRS.

Pension: current or future expected pension receipt.

TABLE 2
Net Wealth and Annuitized New Wealth of NBS and HRS Sample by Sample Characteristics

	All Households	Distribution of Wealth	Race		Marital Status		Age at Retirement				Marital Status/Sex				Education			
			White	Nonwhite	Single	Married	62-64	65	66-69	70-72	Single Women	Single Men	Married Women	Married Men	No High School	High School	Some College	College+
NEW BENEFICIARY SURVEY																		
Number of households	7,866		7,059	807	2,083	5,783	2,544	771	4,206	345	1,381	702	1,952	3,831	3,406	2,420	1,130	910
<u>Net Wealth, Means</u>																		
Total net wealth	\$434,610	100.0%	\$457,220	\$236,832	\$252,814	\$500,092	\$409,891	\$435,855	\$445,045	\$486,893	\$252,847	\$252,748	\$489,500	\$505,489	\$332,451	\$457,231	\$494,246	\$682,766
Financial/property	\$97,500	22.4%	106,326	20,296	50,684	114,363	73,899	97,987	106,201	164,361	\$45,950	\$59,997	\$98,747	\$122,319	\$55,085	\$102,667	\$121,654	\$212,521
Housing	\$68,032	15.7%	72,217	31,419	39,326	78,371	63,654	68,361	69,592	80,558	\$42,750	\$32,591	\$72,995	\$81,110	\$50,827	\$71,156	\$81,609	\$107,260
Pensions	\$62,329	14.3%	65,503	34,571	38,682	70,847	70,957	62,319	58,107	50,210	\$37,970	\$40,083	\$67,435	\$72,586	\$37,062	\$64,217	\$74,331	\$136,979
Social Security	\$206,749	47.6%	213,174	150,546	124,121	236,511	201,380	207,187	211,145	191,763	\$126,177	\$120,077	\$250,323	\$229,473	\$189,478	\$219,191	\$216,652	\$226,005
<u>ANW, Means</u>																		
Total ANW	\$22,014	100.0%	\$22,970	\$13,654	\$19,527	\$22,910	\$18,920	\$21,280	\$23,427	\$29,251	\$18,399	\$21,747	\$21,829	\$23,461	\$16,933	\$22,711	\$25,434	\$34,934
Financial/property	\$4,760	21.6%	5,185	1,038	3,870	5,080	3,277	4,692	5,297	9,299	\$3,270	\$5,050	\$4,582	\$5,334	\$2,682	\$4,950	\$6,127	\$10,333
Housing	\$3,318	15.1%	3,507	1,665	2,920	3,461	2,859	3,169	3,513	4,662	\$3,021	\$2,723	\$3,350	\$3,518	\$2,466	\$3,441	\$4,043	\$5,278
Pensions	\$3,288	14.9%	3,425	2,089	3,030	3,381	3,412	3,171	3,246	3,159	\$2,802	\$3,480	\$2,997	\$3,577	\$1,975	\$3,298	\$3,960	\$7,344
Social Security	\$10,649	48.4%	10,853	8,862	9,706	10,988	9,373	10,248	11,372	12,130	\$9,307	\$10,493	\$10,900	\$11,033	\$9,810	\$11,023	\$11,304	\$11,978
<u>Social Poverty Indicators, Means</u>																		
ANW/Poverty standard	3.52		3.68	2.19	3.13	3.67	3.03	3.41	3.75	4.68	2.95	3.48	3.49	3.76	2.71	3.64	4.07	5.59
ANW/ Twice Poverty standard	1.76		1.84	1.09	1.56	1.83	1.51	1.70	1.88	2.34	1.47	1.74	1.75	1.88	1.36	1.82	2.04	2.80
ANW < Poverty Standard	0.04		0.03	0.16	0.10	0.02	0.06	0.04	0.03	0.05	0.10	0.09	0.02	0.02	0.07	0.02	0.01	0.02
ANW < 2 X Poverty Standard	0.23		0.19	0.54	0.37	0.18	0.31	0.25	0.18	0.14	0.37	0.36	0.20	0.16	0.36	0.14	0.12	0.07

(table continues)

TABLE 2, continued

	All Households	Distribution of Wealth	Race		Marital Status		Age at Retirement				Marital Status/Sex				Education			
			White	Nonwhite	Single	Married	62-64	65	66-69	70-72	Single Women	Single Men	Married Women	Married Men	No High School	High School	Some College	College+
HEALTH AND RETIREMENT SURVEY																		
Number of households	1955		1545	410	508	1447	1591	180	152	32	311	197	671	776	551	705	365	334
<u>Net Wealth, Means</u>																		
Total net wealth	\$702,346	100.0%	\$754,726	\$345,368	\$370,181	\$860,084	\$683,161	\$783,038	\$673,474	\$647,897	\$381,915	\$356,912	\$762,422	\$936,896	\$391,707	\$665,095	\$731,109	\$1,093,956
Financial/property	\$300,580	42.8%	\$332,849	\$80,659	\$141,440	\$376,152	\$271,636	\$393,547	\$267,248	\$309,245	\$141,866	\$140,958	\$294,082	\$440,701	\$134,652	\$308,622	\$276,735	\$505,476
Housing	\$90,207	12.8%	\$96,570	\$46,843	\$60,015	\$104,544	\$84,939	\$90,255	\$93,342	\$122,722	\$68,581	\$50,330	\$98,584	\$109,232	\$60,621	\$88,998	\$88,400	\$128,321
Pensions	\$149,276	21.3%	\$157,336	\$94,344	\$65,374	\$189,119	\$159,911	\$142,254	\$153,364	\$50,087	\$64,947	\$65,856	\$167,092	\$206,444	\$54,910	\$104,731	\$196,777	\$280,647
Social Security	\$162,284	23.1%	\$167,971	\$123,522	\$103,352	\$190,269	\$166,675	\$156,983	\$159,520	\$165,842	\$106,522	\$99,769	\$202,665	\$180,520	\$141,524	\$162,745	\$169,196	\$179,512
<u>ANW, Means</u>																		
Total ANW	\$34,036	4.8%	\$36,276	\$18,770	\$27,918	\$36,941	\$30,772	\$36,033	\$35,593	\$45,793	\$26,415	\$29,618	\$33,977	\$39,272	\$21,087	\$30,987	\$36,268	\$51,582
Financial/property	\$14,409	2.1%	\$15,896	\$4,272	\$10,598	\$16,219	\$12,189	\$18,030	\$13,929	\$20,380	\$9,908	\$11,379	\$13,252	\$18,552	\$7,842	\$14,142	\$13,593	\$23,253
Housing	\$4,526	0.6%	\$4,807	\$2,611	\$4,511	\$4,534	\$3,899	\$4,230	\$4,983	\$9,515	\$4,723	\$4,271	\$4,430	\$4,615	\$3,202	\$4,213	\$4,648	\$6,421
Pensions	\$6,914	1.0%	\$7,196	\$4,994	\$4,829	\$7,905	\$7,041	\$6,258	\$7,699	\$3,825	\$4,352	\$5,369	\$7,394	\$8,306	\$2,530	\$4,699	\$9,261	\$13,101
Social Security	\$8,186	1.2%	\$8,376	\$6,892	\$7,981	\$8,284	\$7,643	\$7,515	\$8,981	\$12,072	\$7,434	\$8,599	\$8,901	\$7,799	\$7,512	\$7,933	\$8,767	\$8,807
<u>Social Poverty Indicators, Means</u>																		
ANW/Poverty standard	5.45		5.81	3.01	4.47	5.91	4.93	5.77	5.70	7.33	4.23	4.74	5.44	6.29	3.38	4.96	5.81	8.26
ANW/ Twice Poverty standard	2.72		2.90	1.50	2.23	2.96	2.46	2.88	2.85	3.67	2.11	2.37	2.72	3.14	1.69	2.48	2.90	4.13
ANW < Poverty Standard	0.08		0.05	0.23	0.15	0.04	0.07	0.09	0.09	0.00	0.17	0.13	0.03	0.05	0.19	0.06	0.03	0.01
ANW < 2 X Poverty Standard	0.23		0.19	0.50	0.34	0.18	0.26	0.24	0.21	0.07	0.38	0.29	0.18	0.19	0.46	0.24	0.12	0.06

Note: HRS data are age standardized (see text).

TABLE 3
Predictors of Annuitized New Wealth: New Social Security Beneficiaries

	Married Couples		Single Men		Single Women	
	Coefficient	t-Value	Coefficient	t-Value	Coefficient	t-Value
NEW BENEFICIARY SURVEY						
Intercept	-58.45	-7.77	-57.25	-3.11	-69.06	-6.82
Age at retirement	1.02	9.04	0.96	3.47	1.15	7.54
Nonwhite	-3.70	-4.5	-3.65	-2.41	-3.17	-3.74
Widowed			4.25	2.53	0.07	0.09
Separated or divorced			0.12	0.08	-0.38	-0.43
Respondent high school	2.23	4.12	1.80	1.23	3.01	4.25
Respondent some college	3.47	4.8	6.49	3.25	4.76	5.82
Respondent college or higher	9.41	11.35	12.50	6.27	9.15	9.27
Spouse high school	1.77	3.31				
Spouse some college	3.22	4.39				
Spouse college or higher	7.94	8.79				
Number of children	-0.15	-1.38	-0.14	-0.48	-0.39	-2.45
Longest job uncovered	2.98	5.19	3.41	2.21	3.02	3.13
Respondent health condition	-1.38	-2.71	-0.59	-0.45	-0.88	-1.29
Spouse health condition	-1.35	-3.02				
Private health insurance	3.20	5.26	3.82	2.89	1.64	2.25
Pension	4.95	10.83	8.79	7.08	7.11	11.99
Home ownership	4.69	7.23	9.16	7.57	6.58	11.08
Number of observations	5783		702		1381	
F-value (p-value)	71.7	<.0001	26.28	<.0001	55.33	<.0001
Adjusted R-squared	0.1550		0.3192		0.3385	
Mean annuitized net wealth	\$22.91		\$21.75		\$18.40	
HEALTH AND RETIREMENT SURVEY						
Intercept	-125.03	-3.68	82.33	1.17	-235.47	-4
Age at retirement	2.04	3.82	-1.04	-0.95	4.02	4.37
Nonwhite	-3.97	-1.73	-6.26	-1.04	-6.53	-1.89
Widowed			-19.85	-2.77	-8.18	-1.73
Separated or divorced			-15.51	-2.62	-6.05	-1.32
Respondent high school	4.40	2	0.95	0.15	-2.91	-0.7
Respondent some college	5.50	2.05	4.06	0.54	2.11	0.45
Respondent college or higher	16.42	5.56	16.49	2.12	22.87	3.94
Spouse high school	3.44	1.59				
Spouse some college	5.36	2				
Spouse college or higher	19.62	6.68				
Number of children	-0.17	-0.39	0.03	0.03	-1.15	-1.52
Longest job uncovered	0.43	0.21	4.59	0.82	-3.99	-0.92
Respondent health condition	-3.13	-1.47	1.23	0.2	-1.68	-0.44
Spouse health condition	-3.09	-1.53				
Private health insurance	6.46	3.75	9.49	1.91	3.34	0.98
Pension	3.23	1.9	12.23	2.43	5.44	1.51
Home ownership	12.81	4.24	21.28	3.99	10.52	2.89
Number of observations	1447		197		311	
F-value (p-value)	20.45	<.0001	5.58	<.0001	7.97	<.0001
Adjusted R-squared	0.1679		0.2331		0.2261	
Mean annuitized net wealth	\$32.15		\$32.88		\$24.64	

Note: HRS data are age standardized (see text).

TABLE 4
Probability of ANW Falling Below Poverty Line Standard

	Married Couples				Single Women				Single Men			
	Coefficient	S.E	Chi-square	Prob	Coefficient	S.E	Chi-square	Prob	Coefficient	S.E	Chi-square	Prob
NEW BENEFICIARY SURVEY												
Intercept	4.36	1.85	5.56	0.02	8.85	3.12	8.07	0.00	9.47	2.20	18.44	0.00
Age at retirement	-0.09	0.03	9.15	0.00	-0.14	0.05	8.57	0.00	-0.14	0.03	19.08	0.00
Nonwhite	0.72	0.12	33.25	0.00	0.33	0.20	2.79	0.09	0.63	0.15	18.02	0.00
Widowed					-0.75	0.28	7.09	0.01	-0.06	0.19	0.11	0.74
Separated or divorced					-0.49	0.22	4.88	0.03	-0.21	0.20	1.18	0.28
Respondent high school	-0.28	0.15	3.4	0.07	-0.43	0.27	2.52	0.11	-0.56	0.16	12.52	0.00
Respondent some college	-0.30	0.24	1.55	0.21	-0.27	0.41	0.42	0.52	-0.76	0.23	11.16	0.00
Respondent college or higher	-0.71	0.44	2.57	0.11	-0.24	0.38	0.40	0.52	0.17	0.24	0.48	0.49
Spouse high school	-0.49	0.15	10.48	0.00								
Spouse some college	-0.70	0.31	4.95	0.03								
Spouse college or higher	-0.54	0.45	1.44	0.23								
Number of children	0.05	0.02	8.15	0.00	0.01	0.05	0.07	0.79	0.07	0.03	5.49	0.02
Longest job uncovered	0.40	0.11	11.91	0.00	0.34	0.21	2.61	0.11	0.42	0.19	4.87	0.03
Respondent health condition	0.38	0.11	11.72	0.00	0.28	0.19	2.18	0.14	0.21	0.14	2.30	0.13
Spouse health condition	0.09	0.11	0.6	0.44								
Private health insurance	-0.45	0.11	15.89	0.00	-0.57	0.18	9.46	0.00	-0.60	0.13	19.67	0.00
Pension	-1.87	0.38	24.27	0.00	-6.54		0.00	1.00	-1.91	0.26	55.76	0.00
Home ownership	-0.80	0.11	51.63	0.00	-1.28	0.26	25.05	0.00	-1.26	0.15	73.07	0.00
Number of observations		5,783				702				1,381		
Log-likelihood		-327.10				-136.25				-256.35		

(table continues)

TABLE 4, continued

	Married Couples				Single Women				Single Men			
	Coefficient	S.E	Chi-square	Prob	Coefficient	S.E	Chi-square	Prob	Coefficient	S.E	Chi-square	Prob
NEW BENEFICIARY SURVEY												
Intercept	1.87	3.47	0.29	0.59	2.95	5.37	0.30	0.58	2.71	3.98	0.46	0.50
Age at retirement	-0.03	0.06	0.38	0.54	-0.05	0.08	0.36	0.55	-0.05	0.06	0.58	0.45
Nonwhite	0.31	0.17	3.14	0.08	0.89	0.35	6.64	0.01	0.28	0.22	1.56	0.21
Widowed					-0.64	0.50	1.63	0.20	0.00	0.33	0.00	0.99
Separated or divorced					-0.56	0.38	2.13	0.14	0.42	0.31	1.76	0.18
Respondent high school	-0.40	0.19	4.31	0.04	-0.26	0.35	0.55	0.46	-0.52	0.25	4.26	0.04
Respondent some college	-0.20	0.26	0.61	0.44	-0.57	0.55	1.08	0.30	-0.62	0.30	4.21	0.04
Respondent college or higher	-0.44	0.36	1.46	0.23	-6.91		0.00	1.00	-6.65		0.00	1.00
Spouse high school	-0.32	0.19	2.81	0.09								
Spouse some college	-0.24	0.28	0.74	0.39								
Spouse college or higher	-0.76	0.41	3.54	0.06								
Number of children	0.09	0.03	9.55	0.00	0.00	0.06	0.00	0.99	0.01	0.05	0.04	0.84
Longest job uncovered	0.39	0.19	4.27	0.04	0.25	0.37	0.47	0.49	0.32	0.30	1.12	0.29
Respondent health condition	-0.05	0.18	0.07	0.78	0.49	0.33	2.21	0.14	0.76	0.22	11.73	0.00
Spouse health condition	0.45	0.16	7.75	0.01								
Private health insurance	-0.44	0.16	7.73	0.01	0.05	0.31	0.02	0.88	0.03	0.23	0.02	0.90
Pension	-1.37	0.24	31.36	0.00	-1.10	0.43	6.61	0.01	-1.49	0.37	16.04	0.00
Home ownership	-1.27	0.18	52.24	0.00	-1.03	0.34	9.37	0.00	-1.13	0.22	26.41	0.00
Number of observations		1,447				197				311		
Log-likelihood		-166.32				-46.33				-91.18		

Note: HRS data are age standardized (see text)

Table A1
HRS New Recipients of Social Security Benefits: Adjusted and Unadjusted Data

Variable Means	Characteristics of HRS sample			Age Standardized HRS Characteristics		
	Married Couples	Single Men	Single Women	Married Couples	Single Men	Single Women
Number of observations	1,447	197	311	1,447	197	311
Age	63.3	64.3	63.8	64.6	66.2	65.1
Male	53%			56%		
Nonwhite	0.10	0.17	0.24	0.10	0.15	0.23
Widowed		0.24	0.36		0.29	0.42
Separated or divorced		0.50	0.47		0.51	0.43
Respondent high school only	0.38	0.34	0.31	0.34	0.29	0.25
Respondent some college	0.18	0.26	0.21	0.19	0.22	0.24
Respondent college or higher	0.20	0.17	0.15	0.24	0.18	0.17
Spouse high school only	0.38			0.37		
Spouse some college	0.20			0.19		
Spouse college or higher	0.18			0.20		
Number of children	3.0	2.7	2.7	3.1	3.1	2.8
Respondent health condition	0.2	0.2	0.3	0.2	0.2	0.2
Spouse health condition	0.2			0.2		
Private health insurance (Resp)	0.7	0.6	0.6	0.7	0.6	0.6
Has a pension	0.6	0.4	0.4	0.6	0.4	0.4
Home ownership	0.9	0.7	0.7	0.9	0.7	0.7
Years worked						
Longest job uncovered	0.2	0.2	0.2	0.2	0.2	0.2
Annuitized net wealth (ANW)	\$32,154	\$32,878	\$24,636	\$36,941	\$29,618	\$26,415
Standard deviation	\$36,510	\$37,723	\$37,791	\$46,718	\$31,442	\$38,860
Minimum	\$672	\$2,039	\$230	\$672	\$2,039	\$230
Maximum	\$427,933	\$278,302	\$351,504	\$427,933	\$278,302	\$351,504
Replacement rate (PovLine)	5.1	5.3	3.9	5.9	4.7	4.2
Standard deviation	5.8	6.0	6.1	7.5	5.0	6.2
Minimum	0.1	0.3	0.0	0.1	0.3	0.0
Maximum	68.5	44.6	56.3	68.5	44.6	56.3

Note: NBS age is in 1982; HRS age is at first interview as recipient. Health Condition: indicating poor or fair health, estimated from number of health conditions in NBS, from specific question in HRS. Pension: current or future expected pension receipt.

FIGURE 1
NBS & HRS Sample Age Distribution

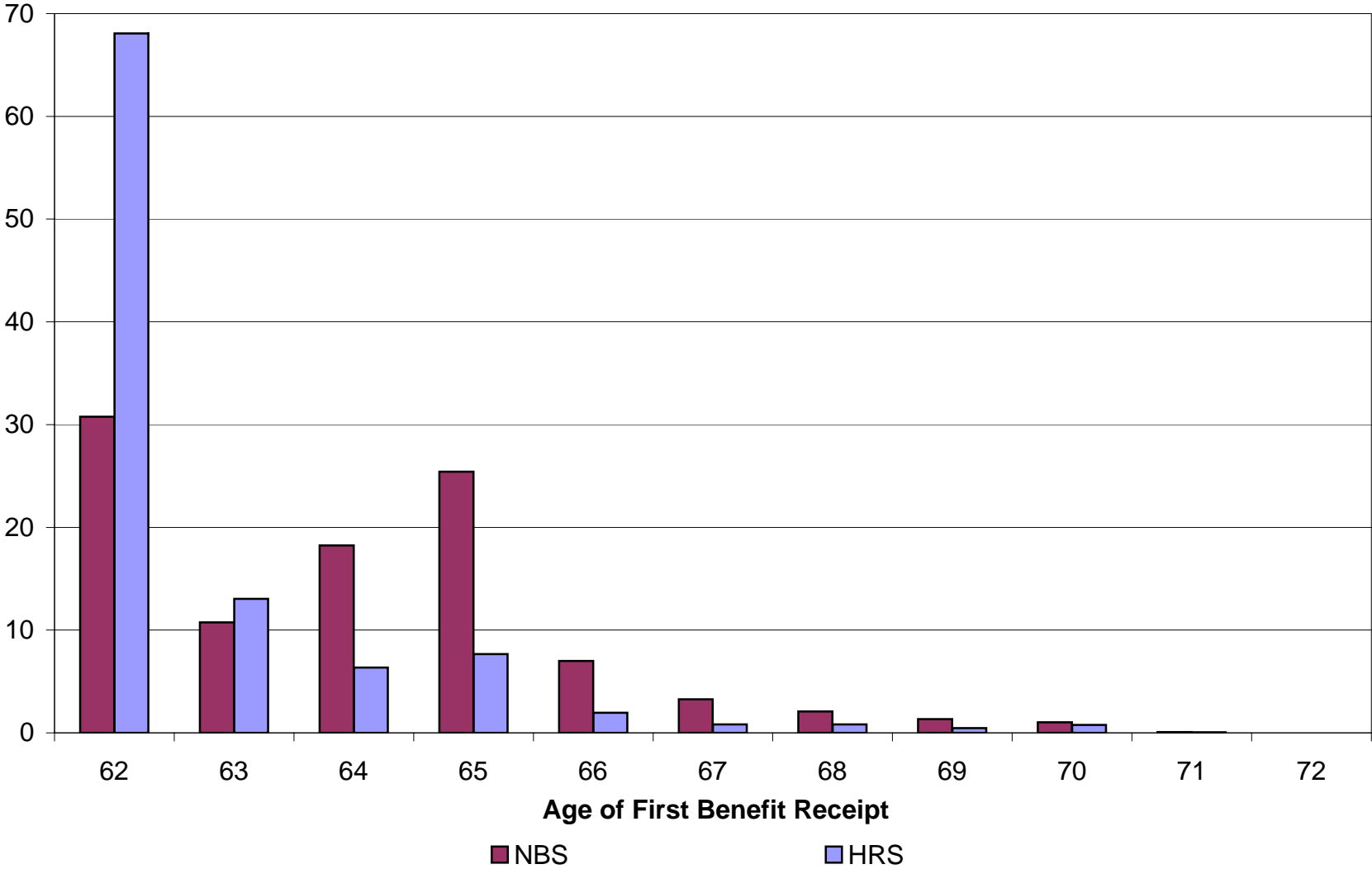
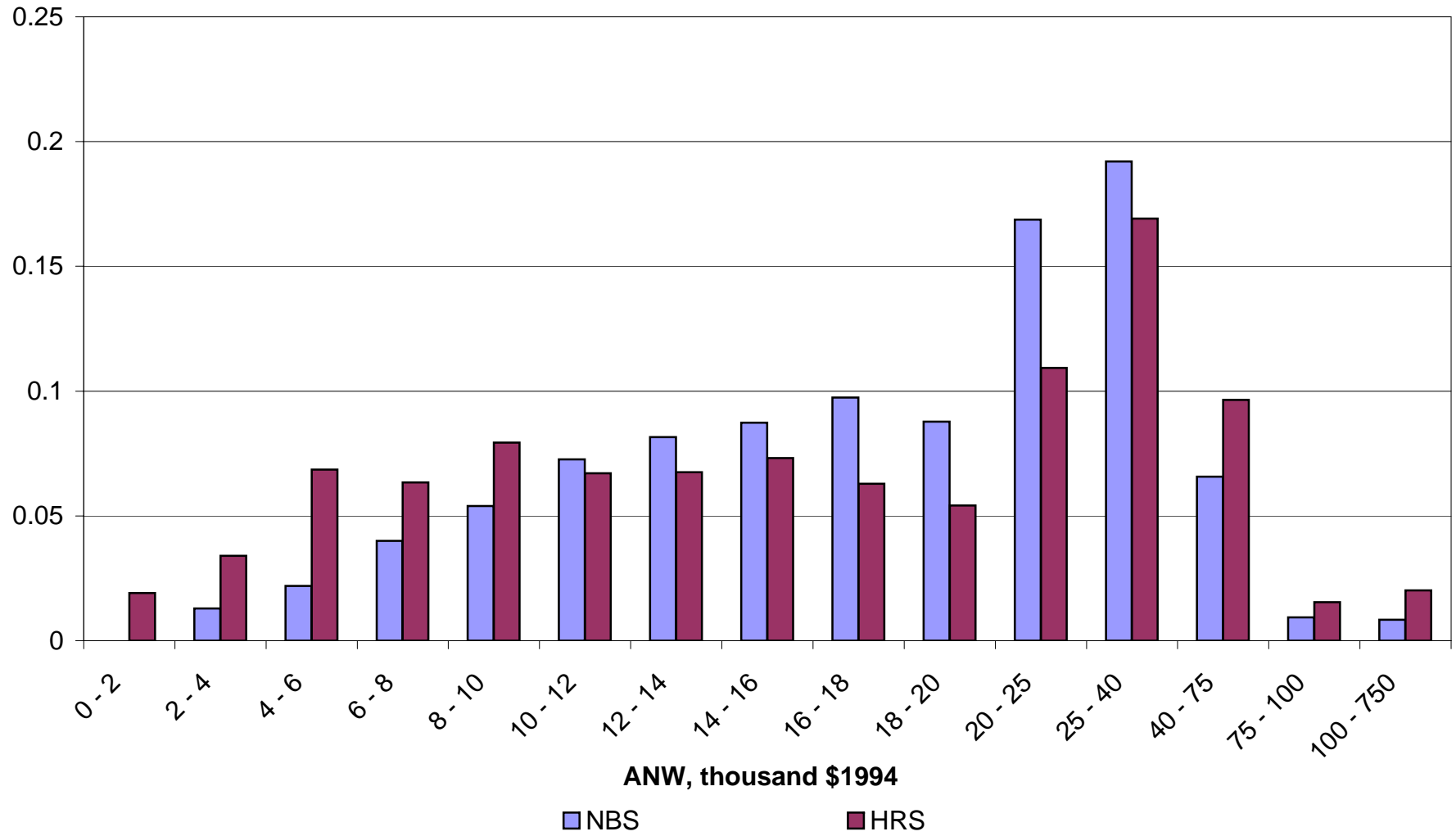
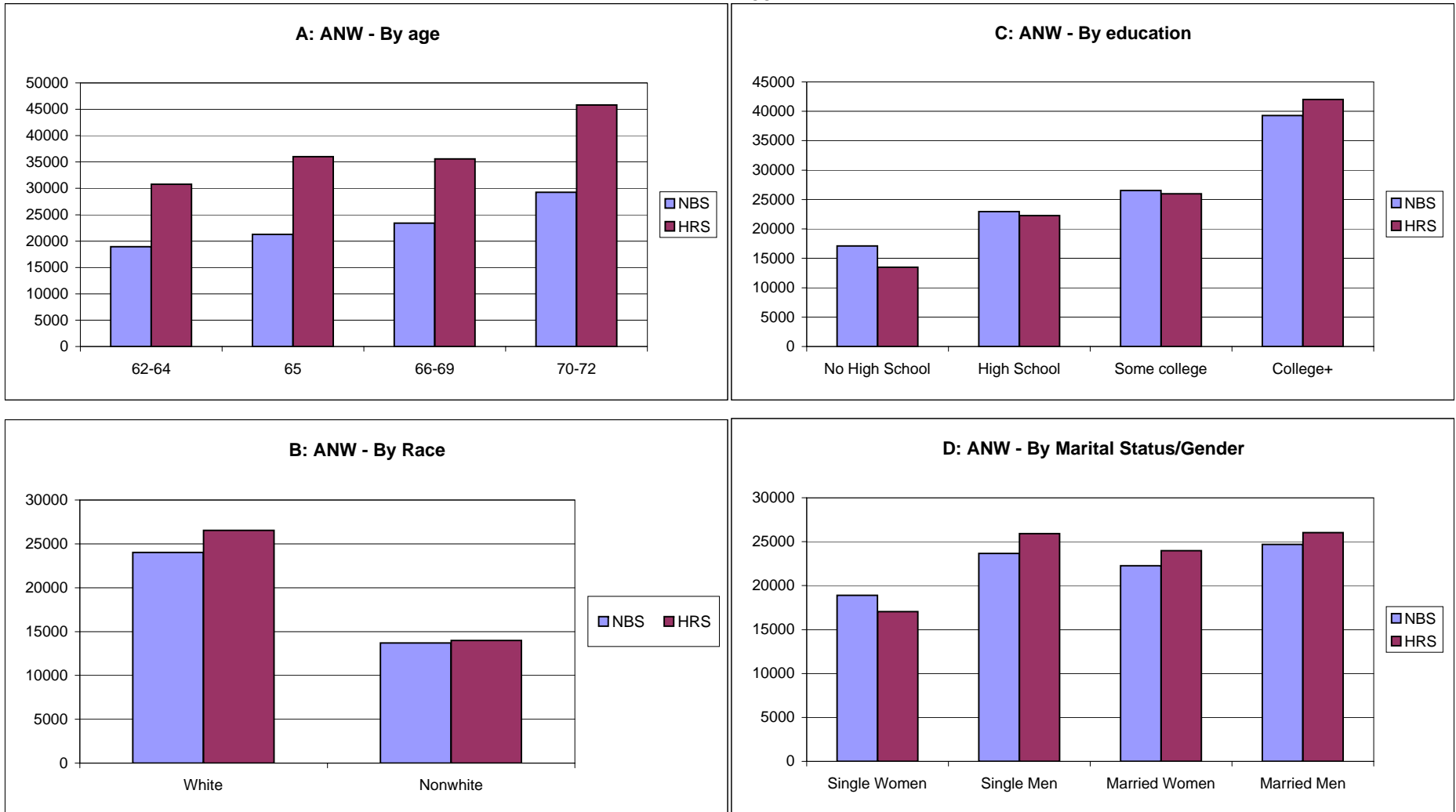


FIGURE 2
Distribution by ANW bins, \$1000



Note: HRS data are not age weighted.

APPENDIX FIGURE 1



APPENDIX FIGURE 2



