

Understanding Patterns of Social Security Benefit
Receipt, Pensions Incomes, Retirement and
Saving by Race, Ethnicity, Gender and Marital
Status: A Structural Approach

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Abstract

In this paper we use data from the Health and Retirement Study to examine differences in retirement behavior, wealth, Social Security and pension benefits by race and gender. The differences observed among groups are sometimes substantial. We then estimate models jointly explaining retirement and wealth by race and gender. We decompose differences in outcomes into those due to differences in parameters of the preference function for leisure and goods, time preference rates, and those due to differences in the circumstances of the members of each group. By circumstances we mean both the opportunity set, and factors that determine the disutility of continued work, such as health status. We find that differences in outcomes among white, black and Hispanic males are not due to differences in preferences for leisure and goods consumption, but are due both to differences in time preference and to differences in circumstances. Differences in outcomes between men and women are primarily due to differences in preferences.

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I. Introduction.

In this paper we use data from the Health and Retirement Study to examine differences in retirement behavior, wealth, Social Security and pension benefits by race and gender. The differences observed among groups are sometimes substantial. We then estimate models jointly explaining retirement and wealth by race and gender. We decompose differences in outcomes into those due to differences in parameters of the preference function and those due to differences in the circumstances of the members of each group. By circumstances we mean both the opportunity set, and factors that determine the disutility of continued work, such as health status.

The paper begins with a descriptive analysis. It examines retirement outcomes, Social Security incomes, pensions and other wealth. Social Security is further decomposed into AIME and PIA. Distributions are generated for demographic groups delineated by race, ethnicity, gender and marital status.

After examining the differences among groups in these variables, we fit structural retirement models to data for each group and consider the causes of retirement behavior within each group. The approach involves fitting a joint structural model of retirement and wealth for each group individually, and examining the reasons for differences in outcomes. The elements of the budget constraint, Social Security, pensions and wage offers for full and part time work, as well as health status, age and year of birth, are allowed to differ among the groups. They exert separate influences on retirement from those of preferences of those who fall within each group.

A decomposition analysis allows us to determine the reasons for differences in outcomes, and to determine the likely effects of aggregating across categories on the reliability of the estimates obtained with models of retirement.

We find that differences in circumstances promote later retirement by black and Hispanic men relative to whites, while differences in time preferences have the opposite effect. Higher time preference means that actuarial adjustments for postponing benefit receipt is not as attractive for minorities. Differences in outcomes between men and women are primarily due to differences in preferences, which lead to earlier retirements for women.

Section II examines the descriptive data. The retirement model to be estimated is presented in Section III. Section IV presents the basic estimates of the parameters of the structural model. Section V examines the separate influences of the preference functions and circumstances, due to opportunity sets, health status and age. Section VI concludes.

II. Descriptive Analysis

This study uses data from the first six waves of The Health and Retirement Study (HRS), a longitudinal survey designed to allow explicit measurement of these different constraints.¹ The survey is taken every two years, so the data cover the period 1992 through 2002. These data cover 12,652 persons from households with a respondent who was 51 to 61 years old in 1992. The study also uses restricted, linked employer provided pension plan descriptions and Social Security earnings records matched with respondents in 1992.

The dependent retirement variable is based on hours of work.² The percentages retired from full-time work and completely retired are calculated as percentages among those respondents who had retirement status observations at each particular age.³

¹ The Health and Retirement Study is supported principally by a grant from the National Institute on Aging to the Institute for Social Research at the University of Michigan. Additional support is provided by the Social Security Administration and other federal agencies.

² Individuals working over 30 hours per week and more than 1560 hours per year are counted as full-time. Individuals working more than 100 hours per year but less than 25 hours per week or 1250 hours per year are counted as part time, and individuals not doing any work are counted as fully retired. Individuals who fall between full time and part time or between part time and retired are classified on the basis of self reports.

A. Retirement Statistics

Throughout this paper we are going to report results for career workers. To be classified as a career worker, between age 40 and the last year of full time work, a person must have worked full time in at least half the years. In addition, one must be observed to have worked full time in some year at or after turning age 50. The baseline data for all career workers in the HRS is presented in Table 1. The first column of numbers reports retirements from full time work. The second column reports the flow into full retirement. Thus the first column also includes those who leave full time work for partial retirement and directly into full retirement, while the last column includes the flows from full time work directly into full retirement, as well as the flow from partial retirement into full retirement. From columns 1 and 2 we see the familiar sharp spike in retirements at age 62, fourteen percent of career workers leaving full retirement and twelve and a half percent entering full retirement. The smaller spikes in retirements at age 65 are also readily apparent. These numbers, which are really pseudo retirement rates, are calculated as the difference in succeeding ages in the overall level of retirements, as reported in Columns 3 and 4. The difference between columns 3 and 4 is the fraction who are in partial retirement. As can be seen from Table 1, the fraction partially retired is about nine percent at age 60, fourteen percent at age 65, and somewhat smaller thereafter.

To provide some perspective on the effect of using career workers as the basis for the retirement measures employed throughout the rest of this study, we also have calculated retirement outcomes for all persons in the HRS, whatever their work history. These data are

³ A person who is on disability insurance is considered to be out of the retirement calculation. Such a person is not included in either the numerator or the denominator of the retirement measure. For example, if a person worked during the first two surveys, and then entered DI on the third survey, this person is in the calculation in the first two surveys, but is out of the numerator and denominator once having joined DI.

presented in Appendix Table 1. The fraction retired is much higher when the full population is used instead of the career workers, especially at younger ages when an hours based definition of retirement implies that those with little early commitment to the labor force are nevertheless properly categorized as retired. Table 2 calculates the differences in the share of the relevant population retired when the sample is confined to career workers vs. all persons. At age 50, the fraction retired from full time work for career plus noncareer workers exceeds the fraction retired from full time work for career workers by almost 25 percentage points. The difference in the fraction completely retired is about 17 percentage points between estimates based on the two different population bases.

From this point on we report disaggregated results. All disaggregated retirement rates pertain to Career workers. Tables 3 and 4 report the baseline retirement results from Table 1 separately for men and women. Once again, the sharp spikes at ages 62 and 65 are readily apparent. The differences in levels of retirement between men and women are reported in Table 5. From column 1 we see that women are 5.7 percentage points more likely to be retired from full time work than men at age 50; 9.4 percentage points more likely to be retired than men at age 60; 8.5 percent more likely at age 62; and 6.7 percent more likely at age 65. The differences in complete retirement are slightly smaller than for retirement from full time work, except at age 65.

Tables 6, 7 and 8 disaggregate retirement rates for white, black and Hispanic males respectively. Once again each data set shows a sharp spike in retirements at age 62, 14.9 percentage points for white males, 15.8 percentage points for black males, and 12.7 percentage points for Hispanic males. However, the retirement spike is much smaller for white males at age 65 than it is for black and Hispanic males. For whites the age 65 spike in retirements from full

time work is 8.4 percentage points, while for black and Hispanic males it is 15.2 and 12 percentage points, about the same size spike at 65 as at 62.

Differences in the percentages retired from full time work, and the percentages retired completely for males, by race, are reported in Table 9. With exceptions at a couple of ages, blacks are more likely to be retired than whites. The largest difference is 8 percentage points at age 62 in the percent completely retired. Differences between Hispanic and white men are reported in the last two columns of Table 9. After age 60, Hispanic men are less likely to be retired than are white men. The differences rise to over 11 percentage points for 63 and 64 year old men.

Comparable baseline statistics are reported by race for women in Tables 10 through 12, with differences in retirement levels reported in Table 13 between black and white women, and Hispanic and white women. For all three groups, there is a sharp spike in retirements at age 62. The sharpest spike seen for any group at 62 is that for Hispanic women, with 20.6 percent retiring exactly at age 62, compared to 13.2 percent and 14.3 percent of black and white women at age 62. The spike in retirements from full time work at age 65 is very small for white women at just under 8 percentage points. For black women the spike is 7.3 percentage points. But for Hispanic women, the spike is 14.5 percentage points. Although there is strong evidence of retirement at the early and normal entitlement ages of Social Security for all groups, the strongest relation among all groups is found for Hispanic women.

In Table 13 we see only small differences in retirement levels between black and white women. The differences also bounce a lot between white and Hispanic women. Hispanic women are slightly less likely to be retired from full time work than white women through age 55. Then for most of the years through age 63, they are more likely to be retired than white

women, sometimes substantially so. At older ages, the cells get thinner, making the story less clear.

Appendix Tables 2 through 5 present the basic indicators of retirement levels and retirement flows for married and single males, and for married and single females respectively. Table 14 reports the differences in retirement levels between married and singles, for men and women respectively. Married men are much less likely to be retired than single men, while married women are much more likely to be retired than single women. When we focus on the differences in the percent retired from full time work, for those between the ages of 58 and 62, these differences reach double digit levels. They are larger in absolute terms for women than men, but substantial for each.

B. Wealth, Social Security Benefits and Pensions

Table 15 provides descriptive statistics on wealth, Social Security benefits, pension coverage and pension wealth by gender, race and marital status. In the model we will estimate below, wealth is not a determinant of retirement, but is jointly determined with retirement. Social Security benefits and pension benefits actually received depend on work and retirement choices, but are framed by the rules governing Social Security and pensions.

Line 1 of Table 15 reports average values for all career workers in the sample. As of the initial wave of the Health and Retirement Survey, 1992, mean wealth is \$200,000 for the sample, outside of pensions and Social Security. Median wealth is \$98,000. The annualized value of AIME at age 62 averages \$20,500 and the annualized value of the PIA averages \$8,900. Over 70 percent have a pension. Of those with positive benefits from DB plans, the annual DB benefit averages \$12,000, while for those with a DC account, the value at retirement is \$94,000. We do not discuss the distributions of Social Security benefits or wealth here, or the adequacy of

replacement rates in retirement. In earlier work we found that for about three quarters of the HRS population, replacement rates appeared to be adequate, and that Social Security was not as redistributive among families as the PIA formula would suggest. For a discussion of these issues, see Gustman and Steinmeier (1999 and 2001).

Turn now to compare the results for career workers who are men vs. women. Remembering that wealth is a household concept, wealth held by women is 80 percent of the wealth held by men. AIME for women is less than two thirds the AIME for men among those who fit our definition of career workers. PIA for women is about three quarters of the PIA of men, which means that few of these women will be collecting spouse benefits. Five percent fewer women are covered by a pension than men. DB pension benefits at retirement received by women are 60 percent of the value of DB pension benefits received by men, while their DC pension balances are worth 43 percent of the balances for men. Thus the differences in DB pension values are in line with earnings differences while the difference in DC values is wider than the difference in earnings.

Next compare the results for black and Hispanic men to the results for white men. Overall, the differences in nonpension, nonSocial Security wealth holdings between Black and Hispanic men on the one hand, and white men on the other, and in the values of DC accounts, are wider than the difference in covered earnings over their lifetimes. In contrast, the differences in Social Security benefits, pension coverage, and the values of payments under DB plans for those receiving positive payments are narrower than the differences in earnings. To be more specific, wealth held by black and Hispanic men amounts to about a third of the wealth held by white men. Black men earned about three quarters of the level earned by white men, while Hispanic men earned about 70 percent of the level earned by white men. Blacks and Hispanics will enjoy

about four fifths of the PIA received by white men. The difference in pension coverage between black and white men is about 5 percentage points, but it is 25 percentage points between Hispanic and white men. Defined benefit pensions held by black men will pay just over 80 percent of the pensions received by white men, while the pensions held by Hispanic men will pay just under two thirds the benefits received by white men. DC accounts held by black men are worth about 58 percent of the value of the accounts held by whites, while the comparable figure for Hispanic men is 50 of the value of DC plans held by white men.

Differences in wealth levels and DC balances are wider than differences in earnings between black and white women, while differences in Social Security AIME, pension coverage and DB pension values are narrower than differences in earnings – indeed, DB pension values are higher for black women receiving benefits than they are for white women. Differences in wealth levels, pension coverage, and DB pension values are wider than differences in earnings between Hispanic and white women. Specifically, black women have about 40 percent of the wealth of white women, while Hispanic women average about 56 percent of the wealth of white women, with a smaller value when median wealth is compared. Black women earned about 94 percent of the earnings of white women, with Hispanic women earning about 86 percent of the earnings of white women. Black women's AIME is about 96 percent of the value for white women, while the ratio of Hispanic women is 86 percent. There is only a one percentage point difference in pension coverage between white and black women, while the difference is 20 percentage points between Hispanic and white women. Pensions are six percent higher for black women with DB benefits than for white women, while Hispanic women have DB pensions worth about three quarters of the value of DB pensions for white women. Black women have three

fourths the DC balances of white women, while Hispanic women have over 85 percent of the DC balances of white women.

Although single men have 11 percent lower earnings (as measured by AIME) than married men, and single women have seven percent lower earnings (AIME) than married women, the differences in wealth holdings are much greater between married and singles. Singles actually have higher DC balances than married. Remembering that the wealth figures are not prorated in married households, in the case of males, the differences in wealth holdings are almost two to one, while for women they are bigger than two to one, so if taken on a per capita basis, wealth levels held by married and singles are not so greatly out of line with differences in earnings. Indeed, given the predominance of two earner households, wealth levels may be disproportionately lower in two earner households in comparison to earnings. Otherwise, except for a ten percentage point difference in pension coverage, other differences between married and singles are not substantial.

III. The Basic Retirement Model

The basic model is a structural, dynamic model of retirement and saving that we have developed in previous work.⁴ This model specifies a lifetime expected utility function with the time path of consumption and leisure as arguments. The constraints include an asset accumulation equation and an uncertain lifetime. Workers are allowed to partially retire, usually in different jobs from those held in prime working age. As a result, work when partially retired typically pays a lower wage rate. Social Security enters as income in the asset accumulation equation in the years that benefits are received. The current utility value of the future benefits is,

⁴ We have used the model for policy analysis, in one case simulating the effects of raising the Social Security early entitlement age (Gustman and Steinmeier, forthcoming) and in another, simulating certain proposals made by the President's Commission to Strengthen Social Security (Gustman and Steinmeier, 2002). A full description of the methodology in estimating the model and using it to simulate policy is found in our earlier work.

of course, heavily dependent on the worker's time preference rate. Retirement preferences and time preferences are both allowed to be heterogeneous among workers.

The utility function is given by

$$U = \int_0^T e^{-\rho t} \sum_{m=1}^3 \left\{ s_{mt} \left[\frac{1}{\alpha} C_{mt}^\alpha + e^{\beta X_t + \varepsilon} L_{mt}^\gamma \right] \right\} dt \quad \alpha, \gamma < 1.$$

In this equation, T is the maximum lifespan and m refers to the family structure at time t (both spouses alive, only the husband alive, or only the wife alive). s_{mt} is the probability of family structure m at time t , C is consumption, and L is the leisure, which takes on a value of 0 for full-time work, 1 for full retirement, and $\frac{1}{2}$ for partial retirement.⁵ X includes a constant, age, health status, and vintage. The age variable and worsening health cause leisure to become gradually more attractive as the individual ages. The time preference term ρ is a fixed effect, and the leisure preference term ε is a random effect drawn from a normal distribution. γ is also random effect, taken so that the term L^γ comes from the exponential distribution $f(L^\gamma) = ke^{\delta L^\gamma}$ defined over the range $\frac{1}{2}$ to 1, which is the theoretically acceptable range for L^γ . k is the constant necessary for the density function to integrate to unity, as it must. Since partial retirement seems to become relatively more attractive as the individuals age, we specify δ to be increasing in age: $\delta = \delta_0 + \delta_a(\text{Age})$. Estimation is based on the general method of simulated moments. The simulated moments come from the average moments of solving the model for 10,000 draws of the random effects.

⁵ In recognition that consumption is more valuable while both spouses are alive, the consumption function is adjusted so that the *marginal* utility for a surviving spouse is approximately equal to that for a couple consuming 40% more.

The model is estimated for each specified demographic group from the Health and Retirement Study using observations for the first six waves of the survey, every other year from 1992 through 2002. Earnings profiles are taken from Social Security records or, if these are not available, from the retrospective information in the respondent surveys. Actual earnings from 1992 through 2002 are taken from the respondent survey. Future potential earnings are projected on the basis of tenure and experience coefficients of earnings regressions. Pension benefits, conditional on tenure in the job providing the pension, are based on information in the summary pension descriptions, provided by the employers. Social Security benefits are based on the earnings histories and figured according to the Social Security rules.

The model has 8 parameters to be estimated. These include the consumption parameter α , four elements of β including the constant and coefficients for age, poor health, and birth year, two elements of δ including a constant and a coefficient of age, and the standard deviation of retirement preferences given by σ_e . The model is estimated using the generalized method of simulated moments.⁶ This method essentially chooses the parameters so as to minimize the differences between a set of observed statistics (moments) in the sample and the values of those statistics that would be implied by the model. In the minimization, the moments are weighted so as to provide the most precise estimates possible with the data.

The estimation uses 46 moments, including the fraction of the sample working full time and the fraction fully retired at various ages. Additional moments are calculated at various ages for specific groups in the sample, including early and late birth cohorts, high and low lifetime earners, and those with poor health. If the model is correct, the q-statistic comes from a χ^2 distribution with the degrees of freedom given by the number of moments minus the number of parameters. In the present model, this translates into a χ^2 distribution with 38 degrees of

⁶ For a description, see Greene (2000).

freedom (46 moments less 8 parameters), which has a 95% confidence bound of approximately 53.4.

The estimation also calculates a value of ρ_i , the time preference rate, for each individual in the sample. The values of ρ_i are calculated so that for the parameter values, the assets that are calculated from the model for each individual are equal to the assets (including financial, real estate, and business assets) actually observed in 1992. The resulting distributions of ρ implies a wide variation in the rates of time preference for different individuals.

As in our recent work, the model is capable of simulating most of the spike in retirements at age 62, despite the fact that there are no age dummy variables included in the model, and that the Social Security benefit formula is actuarially fair around age 62.

IV. Estimates of the Structural Models

Estimates of the parameters of the structural models for men and women are presented in Tables 16 and 17. These tables are for married men and married women who have been married for the long term, where long term marriage is defined as not having a prior marriage after the age of 35. All of the key parameters are significant.

There are considerable differences in the preference parameters between men and women. Most notable are the differences in the coefficients on the age variables for β , suggesting women will be less sensitive to incentives from Social Security and other rewards than men. There also are differences in the parameters associated with health status, with women less sensitive to poor health than men. To judge the effects of these parameter differences on retirements, in the next section we will conduct a number of simulations.

We also tried to estimate the differences in retirement preferences by race for men. We began by estimating the model for white males in long term marriages. Parameters are close in

value to those presented in Table 16, which provided a hint of the results to come. We then attempted to estimate the retirement model for married black males. There were too few observations to allow convergence. The same was true for runs for Hispanic males. Accordingly, we pooled the data for married males of all races, and added four variables to the preference function for minority status. Two dummy variables indicated the person was black or Hispanic, and two variables reflecting an interaction between minority status and age. As seen in Table 18, the coefficients on these dummy variables are not close to significant at conventional levels.

We should note that although we use the same utility function parameters for different ethnic groups due to the failure find that the dummy variables for black and Hispanic males were significant, there are clear differences among these three groups in time preferences. Using the combined parameters, 57.6% of whites have time preferences of below 10%, plus or minus 2.8%, blacks have 34.6% below 10%, plus or minus 5.4%, and Hispanics have 25.8% below 10%, plus or minus 6.2%. The numbers are little affected if we use the model with specific parameters for each group. These results undoubtedly arise from the fact that whites are more likely to have financial wealth.

As a result, when analyzing differences by race and ethnicity for men, we will be focusing on results analyzing the effects of differences in what we can call *circumstances*, which include both differences in the values for the variables in the utility function and the budget line, and differences in time preference rates. Here we use the same parameters in the utility function for white males, black males and Hispanic males, allowing the time preference rates and budget lines to differ.

V. Simulations to Separate the Retirement Effects of Preference Parameters from Those of Individual Circumstances.

In this section we separate the effects on retirements due to variation of individual circumstances by gender, race and ethnicity from those of the parameters of the utility function. Here we define individual circumstances as health, age, vintage and elements of the budget set.

Tables 19 presents the results of simulations of the effects on both retirement outcomes – retirement from full time work and full retirement -- of the different utility function parameters estimated separately for men and women, as well as the effects of the different circumstances unique to men and women. Thus these retirement outcomes are generated with the utility function parameters for men and the circumstances for men and then women, and then the utility function parameters for women, and the circumstances for men and then women.

Tables 20 and 21 present the differences in retirement outcomes from changing the utility function and keeping the circumstances constant, and changing the circumstances, but keeping the utility function constant. Table 20 pertains to retirements from full time work, while Table 21 pertains to complete retirements. Column 1 in each table presents the actual differences in retirement outcomes between women and men, showing the considerable tendency for women to retire earlier than men. The differences in column 2 compare outcomes using the utility function and circumstances for women minus the utility function and circumstances for men. This fully simulates the sources of differences in retirement tendencies between women and men. The model overstates the difference in retirements for women from age 56 to 62, turning a twelve to sixteen percentage point differential into an 18 to 22 percent differential. Otherwise, it does a good job of simulating the reasons for differences in retirement rates between women and men.

We present basic Oaxaca decompositions. Columns 3 and 6 are one decomposition and columns 4 and 5 are the other. The 4,5 decomposition says that the utility function explains practically the entire difference, with the budget sets playing only a small role. The 3,6 decomposition says that the utility function parameters overexplain the difference, with the budget sets actually working in the reverse direction. It is entirely possible for the two ways to do an Oaxaca decomposition to give different results, so this is not necessarily a failure of method. The general message is that the utility function parameters are much more important relative to circumstances in explaining the differences between the retirements of men vs. women.

Since the parameters of the utility functions are statistically indistinguishable among white, black and Hispanic men, but time preference rates are not, Table 22 reports the joint effects of differences in time preferences and circumstances. This calculation uses a utility function in which there are no dummy variables for race or ethnicity, and no interactions of race and ethnicity with age.⁷ The outcome reported is the probability of complete retirement. Tables 23 and 24 decompose the total effects into those due to differences in circumstances (Table 23) and to differences in time preference (Table 24). These findings indicate that differences in circumstances promote later retirement by black and Hispanic men relative to whites, while differences in time preferences have the opposite effect. Because the effects of differences in time preference may be substantial, it will be important for studies of retirement among men to standardize for the effects of differences in time preference among men from different racial and ethnic backgrounds. This finding is in contrast to the findings with regard to preferences for consumption goods vs. leisure, which do not seem to differ among groups.

⁷ Appendix Table 6 reports results using the utility function estimates which include the (insignificant) coefficients on measures of the impact of race and ethnicity. Outcome levels are reported by race and ethnicity for both retirement from full time work and full retirement.

VI. Conclusion

This paper has used data from the Health and Retirement Study to examine differences in retirement behavior, wealth, Social Security and pension benefits by race and gender. The differences observed among groups are sometimes substantial. We estimated models jointly explaining retirement and wealth by race and gender. We decomposed differences in outcomes into those due to differences in parameters of the preference function and those due to differences in the circumstances of the members of each group. Circumstances include both the opportunity set, and factors that determine the disutility of continued work, such as health status.

Because of limited numbers of black and Hispanic married males, we pooled the data for married males of all races, and added four variables for minority status to the preference function for leisure. Two dummy variables indicated the person was black or Hispanic, and two variables reflected an interaction between minority status and age. Jointly, these four variables are statistically not significant. However, the distribution of time preferences is statistically different among the groups, so we report the effects of differences in circumstances vs. differences in time preferences. Differences in circumstances promote earlier retirement by black and Hispanic men relative to whites, while differences in time preferences have the opposite effect.

Next we consider the results of simulations of the effects on retirement outcomes of the different preference function parameters estimated separately for men and women, as well as the effects of the different circumstances unique to men and women. Thus these retirement outcomes are generated with the preference function parameters for men and the circumstances for men and then women, and then the preference function parameters for women, and the circumstances for men and then women. Differences in preferences provide the major explanation for the earlier retirement of women. That is, women retire earlier than men due not

to differences in health or the budget set, but primarily due to differences in preferences for market work.

In addition to providing an in depth analysis of differences in wealth, Social Security and pensions by gender and race, these findings also lead to a recommendation on methodology. In conducting studies of retirement and saving, researchers need not allow for differences in parameters by race and ethnicity reflecting preferences for leisure and consumption; but time preference rates do differ by race and ethnicity and should be incorporated in any analysis of retirement. Researchers should also allow for differences in preference function parameters between men and women.

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Table 1: Retirements for Career Workers, Both Genders, All Races, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	7.4	5.6	7.4	5.6	1344
51	1.3	0.6	8.7	6.2	1835
52	1.4	0.6	10.1	6.8	2351
53	2.4	2.4	12.5	9.1	2714
54	2.6	1.8	15.1	10.9	3044
55	4.0	3.1	19.1	14.0	3342
56	2.1	1.6	21.2	15.6	3696
57	2.2	1.6	23.4	17.2	3866
58	3.1	2.2	26.5	19.4	4031
59	3.8	2.9	30.3	22.3	4166
60	6.0	4.9	36.3	27.2	4112
61	7.1	5.9	43.5	33.1	3666
62	14.3	12.6	57.7	45.8	3298
63	6.4	4.5	64.1	50.3	2970
64	5.0	5.7	69.2	56.0	2626
65	8.8	7.2	77.9	63.2	2241
66	3.7	2.9	81.6	66.1	1884
67	2.6	3.3	84.2	69.4	1568
68	2.5	1.9	86.6	71.3	1265
69	1.7	3.1	88.4	74.4	945

Observations: 8768

Table 2: Difference in Retirement Rates by Career Status:
 Rates for Career Plus Noncareer Workers Minus Rates for Career Workers
 Percent Retired

Age	From Full Time Work	Completely Retired
50	24.6	16.7
51	23.2	15.4
52	20.6	14.1
53	19.5	13.5
54	18.3	12.7
55	16.5	11.4
56	15.8	11.5
57	15.6	11.2
58	14.9	11.0
59	14.0	10.5
60	12.9	10.1
61	11.1	8.6
62	7.9	6.2
63	6.5	5.9
64	5.7	5.3
65	3.9	4.2
66	3.0	3.7
67	2.5	2.9
68	2.1	2.7
69	1.6	2.1

Table 3: Retirements for Career Workers, Males, All Races, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	3.9	3.1	3.9	3.1	514
51	1.8	1.2	5.7	4.3	810
52	1.5	0.9	7.2	5.3	1141
53	2.1	1.5	9.2	6.8	1373
54	2.5	1.7	11.8	8.5	1577
55	3.6	2.7	15.4	11.2	1776
56	2.3	1.7	17.7	12.9	2032
57	1.9	1.6	19.5	14.5	2154
58	3.4	2.7	23	17.2	2254
59	3.2	1.9	26.2	19.2	2391
60	6.2	5.1	32.4	24.2	2386
61	7.1	6.0	39.5	30.2	2157
62	14.9	12.8	54.4	42.9	2003
63	6.2	4.1	60.5	47.0	1845
64	5.8	5.9	66.3	52.9	1682
65	9.3	7.4	75.6	60.2	1474
66	3.9	3.4	79.6	63.6	1278
67	3.0	3.6	82.6	67.2	1079
68	2.7	1.8	85.3	69.0	912
69	2.6	4.5	87.9	73.4	730

Observations: 5059

Table 4: Retirements for Career Workers, Females, All Races, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	9.6	7.1	9.6	7.1	830
51	1.5	0.5	11.1	7.6	1025
52	1.7	0.6	12.8	8.2	1210
53	3.1	3.4	15.9	11.6	1341
54	2.7	2.0	18.6	13.6	1467
55	4.8	3.6	23.4	17.2	1566
56	2.1	1.7	25.5	18.9	1664
57	2.7	1.7	28.2	20.6	1712
58	2.7	1.7	31.0	22.3	1777
59	4.8	4.4	35.8	26.6	1775
60	6.0	4.7	41.8	31.3	1726
61	7.3	6.0	49.1	37.4	1509
62	13.8	12.7	62.9	50.1	1295
63	7.0	5.5	70.0	55.6	1125
64	4.2	6.0	74.2	61.7	944
65	8.1	7.2	82.3	68.8	767
66	3.5	2.4	85.8	71.3	606
67	1.9	2.9	87.7	74.2	489
68	2.4	3.1	90.1	77.3	353
69	-0.3	0.3	89.8	77.7	215

Observations: 3709

Table 5: Difference in Retirement Rates by Gender:
Rates for Females Minus Rates for Males

Age	Percent Retired From Full Time Work	Completely Retired
50	5.7	4.0
51	5.4	3.3
52	5.6	2.9
53	6.7	4.8
54	6.8	5.1
55	8.0	6.0
56	7.8	6.0
57	8.7	6.1
58	8.0	5.1
59	9.6	7.4
60	9.4	7.1
61	9.6	7.2
62	8.5	7.2
63	9.5	8.6
64	7.9	8.8
65	6.7	8.6
66	6.2	7.7
67	5.1	7.0
68	4.8	8.3
69	1.9	4.3

Table 6: Retirements for Career Workers, Males, Whites, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	3.4	2.7	3.4	2.7	414
51	1.6	1.1	4.9	3.7	647
52	1.3	0.9	6.2	4.6	898
53	2.0	1.3	8.2	5.9	1099
54	2.5	1.4	10.7	7.3	1280
55	4.1	3.4	14.8	10.7	1454
56	1.7	1.4	16.5	12.0	1654
57	1.7	1.6	18.2	13.6	1754
58	4.2	3.2	22.4	16.8	1847
59	3.2	1.7	25.6	18.5	1955
60	6.8	5.5	32.4	24.0	1959
61	7.2	6.0	39.6	30.1	1777
62	14.9	12.1	54.5	42.2	1669
63	6.5	4.3	61.1	46.5	1554
64	6.3	6.4	67.3	52.9	1420
65	8.4	6.8	75.7	59.7	1242
66	3.9	3.7	79.6	63.3	1069
67	3.0	3.5	82.6	66.9	902
68	2.6	1.6	85.2	68.5	765
69	2.8	4.4	88.1	72.9	612

Observations: 3987

Table 7: Retirements for Career Workers, Males, Blacks, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	7.4	5.6	7.4	5.6	54
51	3.5	4.2	10.9	9.8	92
52	1.9	-0.6	12.8	9.2	141
53	2.0	1.7	14.7	10.9	156
54	1.5	1.9	16.3	12.8	172
55	2.0	-0.2	18.3	12.6	191
56	5.3	4.2	23.6	16.7	233
57	2.2	1.6	25.8	18.4	256
58	0.7	0.7	26.5	19.1	257
59	3.5	3.7	30.0	22.7	277
60	4.1	4.2	34.1	27.0	267
61	7.7	5.7	41.7	32.6	242
62	15.8	17.8	57.5	50.5	212
63	4.6	1.6	62.1	52.1	190
64	1.6	1.7	63.7	53.8	171
65	15.2	9.9	79.0	63.7	157
66	3.4	3.2	82.4	66.9	136
67	1.6	2.0	84.0	68.9	106
68	1.4	1.9	85.4	70.8	89
69	-0.5	5.9	84.9	76.7	73

Observations: 667

Table 8: Retirements for Career Workers, Males, Hispanics, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	4.3	4.3	4.3	4.3	46
51	1.3	-1.5	5.6	2.8	71
52	2.2	3.1	7.8	5.9	102
53	4.0	3.4	11.9	9.3	118
54	4.9	5.9	16.8	15.2	125
55	0.8	0.1	17.6	15.3	131
56	3.8	2.0	21.4	17.2	145
57	3.6	1.5	25.0	18.8	144
58	-0.3	0.6	24.7	19.3	150
59	2.4	1.4	27.0	20.8	159
60	1.7	1.1	28.8	21.9	160
61	5.3	5.7	34.1	27.5	138
62	12.7	12.6	46.7	40.2	122
63	2.8	5.4	49.5	45.5	101
64	6.5	5.0	56.0	50.5	91
65	12.0	12.1	68.0	62.7	75
66	6.0	-1.0	74.0	61.6	73
67	6.3	7.4	80.3	69.0	71
68	5.9	3.4	86.2	72.4	58
69	4.9	3.1	91.1	75.6	45

Observations: 405

Table 9: Differences in Retirement Rates By Race and Ethnicity
for Males: Rates for Blacks and Hispanics Minus Rates for Whites.

Age	Black Minus White		Hispanic Minus White	
	From Full Time Work	Completely Retired	From Full Time Work	Completely Retired
50	4.0	2.9	0.9	1.6
51	6.0	6.1	0.7	-0.9
52	6.6	4.6	1.6	1.3
53	6.5	5.0	3.7	3.4
54	5.6	5.5	6.1	7.9
55	3.5	1.9	2.8	4.6
56	7.1	4.7	4.9	5.2
57	7.6	4.8	6.8	5.2
58	4.1	2.3	2.3	2.5
59	4.4	4.2	1.4	2.3
60	1.7	3.0	-3.6	-2.1
61	2.1	2.5	-5.5	-2.6
62	3.0	8.3	-7.8	-2.0
63	1.0	5.6	-11.6	-1.0
64	-3.6	0.9	-11.3	-2.4
65	3.3	4.0	-7.7	3.0
66	2.8	3.6	-5.6	-1.7
67	1.4	2.0	-2.3	2.1
68	0.2	2.3	1.0	3.9
69	-3.2	3.8	3.0	2.7

Table 10 Retirements for Career Workers, Females, Whites, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	9.9	7.1	9.9	7.1	646
51	1.3	0.3	11.2	7.4	784
52	1.5	0.8	12.7	8.2	912
53	3.0	3.3	15.7	11.5	1011
54	2.4	2.2	18.2	13.7	1096
55	5.3	3.9	23.4	17.6	1174
56	1.8	1.4	25.2	19.0	1243
57	2.8	1.6	27.9	20.6	1278
58	2.5	1.6	30.5	22.1	1333
59	5.1	4.5	35.6	26.7	1324
60	5.9	4.5	41.4	31.2	1303
61	7.6	6.4	49.0	37.6	1145
62	13.2	12.5	62.2	50.1	990
63	6.9	5.2	69.2	55.3	856
64	5.5	6.7	74.7	61.9	730
65	7.9	6.6	82.5	68.6	601
66	2.7	1.1	85.2	69.6	474
67	2.3	3.1	87.5	72.7	377
68	2.6	3.9	90.1	76.6	273
69	-1.4	-0.8	88.8	75.7	169

Observations: 2720

Table 11 Retirements for Career Workers, Females, Blacks, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	9.0	7.6	9.0	7.6	145
51	2.5	1.2	11.5	8.7	183
52	2.0	0.2	13.5	9.0	223
53	4.6	4.8	18.0	13.7	255
54	2.2	0.6	20.3	14.3	286
55	3.2	1.8	23.5	16.1	298
56	2.1	2.0	25.6	18.1	320
57	1.4	1.1	27.0	19.2	333
58	4.2	2.6	31.2	21.9	343
59	4.9	4.2	36.1	26.1	341
60	8.1	6.5	44.2	32.6	319
61	6.3	3.8	50.5	36.4	275
62	14.3	12.1	64.8	48.5	233
63	7.0	6.8	71.8	55.3	206
64	0.7	5.0	72.6	60.4	164
65	7.3	6.3	79.8	66.7	129
66	7.8	8.6	87.6	75.2	105
67	-1.3	0.9	86.4	76.1	88
68	2.0	-1.1	88.3	75.0	60
69	2.8	4.4	91.2	79.4	34

Observations: 740

Table 12 Retirements for Career Workers, Females, Hispanics, All Marital Status Groups

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	7.7	5.1	7.7	5.1	39
51	0.9	1.8	8.6	6.9	58
52	3.4	-1.6	12.0	5.3	75
53	-1.3	0.0	10.7	5.3	75
54	8.2	4.1	18.8	9.4	85
55	3.5	5.5	22.3	14.9	94
56	6.4	4.9	28.7	19.8	101
57	6.9	5.9	35.6	25.7	101
58	1.0	0.0	36.6	25.7	101
59	0.6	2.4	37.3	28.2	110
60	1.2	1.6	38.5	29.8	104
61	7.6	8.4	46.1	38.2	89
62	20.6	17.4	66.7	55.6	72
63	7.9	6.3	74.6	61.9	63
64	-2.6	0.1	72.0	62.0	50
65	14.5	19.1	86.5	81.1	37
66	2.4	4.1	88.9	85.2	27
67	6.9	6.5	95.8	91.7	24
68	-0.8	3.3	95.0	95.0	20
69	5.0	5.0	100.0	100.0	12

Observations: 249

Table 13: Differences in Retirement Rates By Race and Ethnicity for Females: Rates for Blacks and Hispanics Minus Rates for Whites.

Age	Black Minus White		Hispanic Minus White	
	From Full Time Work	Completely Retired	From Full Time Work	Completely Retired
50	-0.9	0.5	-2.2	-2.0
51	0.3	1.3	-2.6	-0.5
52	0.8	0.8	-0.7	-2.9
53	2.3	2.2	-5.0	-6.2
54	2.1	0.6	0.6	-4.3
55	0.1	-1.5	-1.1	-2.7
56	0.4	-0.9	3.5	0.8
57	-0.9	-1.4	7.7	5.1
58	0.7	-0.2	6.1	3.6
59	0.5	-0.6	1.7	1.5
60	2.8	1.4	-2.9	-1.4
61	1.5	-1.2	-2.9	0.6
62	2.6	-1.6	4.5	5.5
63	2.6	0.0	5.4	6.6
64	-2.1	-1.5	-2.7	0.1
65	-2.7	-1.9	4.0	12.5
66	2.4	5.6	3.7	15.6
67	-1.1	3.4	8.3	19.0
68	-1.8	-1.6	4.9	18.4
69	2.4	3.7	11.2	24.3

Table 14: Differences in Retirement Rates By Marital Status
for Males and Females: Rates for Married Minus Rates for Singles.

Age	Males		Females	
	From Full Time Work	Percent Retired Completely Retired	From Full Time Work	Percent Retired Completely Retired
50	-1.7	-1.0	1.9	-0.4
51	-1.0	-1.6	3.9	1.6
52	-4.4	-3.2	7.1	4.3
53	-10.0	-7.8	7.8	5.3
54	-7.9	-6.7	6.2	6.4
55	-8.6	-6.8	9.0	9.1
56	-8.9	-8.3	9.4	8.3
57	-6.7	-5.6	12.1	8.1
58	-10.6	-9.6	15.1	11.1
59	-10.6	-9.6	13.2	10.0
60	-10.2	-10.0	12.9	9.2
61	-11.6	-9.8	13.4	11.7
62	-11.5	-9.0	16.8	17.3
63	-6.1	-4.5	16.3	15.4
64	-0.6	-5.1	15.0	13.1
65	-0.1	-8.2	11.1	12.5
66	2.2	-6.8	8.7	9.3
67	0.0	-9.1	9.8	8.1
68	-1.4	-6.1	8.9	8.5
69	0.8	-6.4	6.6	4.1

Table 15: Descriptive Statistics on Wealth, Social Security and Pensions

	Total Wealth Excluding Employer Pensions and Social Security (1992 Mean) (000) ¹	Total Wealth Excluding Employer Pensions and Social Security (1992 Median) (000) ¹	AIME at age 62 (mean)	PIA at age 62 (mean)	Percent with Pension	Mean of Annual DB Benefits, for All Covered Respondents with Positive Benefits ²	Mean of DC Pension Lump Sum, for Covered Respondents with Positive Values ² (000) ²
All Career							
Workers	201	98	20497	8886	71.44	12094	94
Male	220	107	23985	9918	73.65	14398	122
Female	175	88	15279	7344	68.43	8668	53
White Male	257	132	25423	10356	76.45	15078	131
Black Male	86	45	19104	8446	71.06	12051	76
Hispanic Male	86	46	17869	8029	50.37	9795	66
White Female	205	111	15596	7449	70.04	8674	56
Black Female	87	42	14668	7143	68.65	9186	42
Hispanic Female	115	40	13373	6698	50.20	6334	48
Married Male	234	120	24364	10029	75.00	14604	120
Single Male	133	36	21653	9231	65.40	13008	137
Married Female	218	117	15592	7445	69.76	8601	28
Single Female	87	31	14568	7115	65.52	8830	50

1. Excludes those with substantial business wealth.

2. At actual or projected retirement age.

Table 16: Estimation of Parameters of the Utility Function For Long Term Married Males, All Races

Symbol	Description	Coefficient Value	t-statistic
σ_ε	Std. Dev. Of Epsilon	4.88	9.2437
δ_0	Constant	-3.05	-5.6029
δ_1	Age	0.68	3.3981
β_0	Constant	-10.346	-158.037
β_1	Age	0.113	4.7524
β_2	Health	3.65	4.9774
β_3	Vintage	0.03	0.3507
α	Consumption	-0.42	-5.0027
	Number obs.		2231
	q:		69.584

Table 17: Estimation of Parameters of the Utility Function For Long Term Married Females, All Races

Symbol	Description	Coefficient Value	t-statistic
σ_ε	Std. Dev. Of Epsilon	5.52	9.4347
δ_0	Constant	-2.10	-2.0368
δ_1	Age	0.16	2.0827
β_0	Constant	-9.605	-86.4343
β_1	Age	0.174	2.8885
β_2	Health	2.04	2.5493
β_3	Vintage	0.10	1.1121
α	Consumption	0.21	1.9360
	Number obs.		1417
	q:		81.89

Table 18: Estimation of Parameters of the Utility Function For Long Term Married Males, Including Variables Reflecting Ethnicity and Race

Symbol	Description	Coefficient Value	t-statistic
σ_ε	Std. Dev. Of Epsilon	4.80	9.5168
δ_0	Constant	-2.99	-5.3178
δ_1	Age	0.64	3.3888
β_0	Constant	-10.366	-160.012
	Black	-0.046	-0.2926
	Hispanic	-0.245	-0.6028
β_1	Age	0.138	4.2226
	Age*Black	0.105	0.5409
	Age*Hispanic	0.148	0.6536
β_2	Health	3.28	4.6993
β_3	Vintage	0.06	0.7576
α	Consumption	-0.42	-5.2671
	Number obs.		2231
	q:		75.682

Table 19: Simulated Effects for Men and Women of Different Utility Function Parameters and Different Circumstances on Retirement from Full Time Work

Age	Retired from Full Time Work				Fully Retired			
	Men's Utility Function		Women's Utility Function		Men's Utility Function		Women's Utility Function	
	Men's Circumstances	Women's Circumstances	Men's Circumstances	Women's Circumstances	Men's Circumstances	Women's Circumstances	Men's Circumstances	Women's Circumstances
50	2.6	1.6	5.5	7.5	1.6	1.2	3.5	4.9
51	3.8	2.4	7.8	10.2	2.3	1.7	5.0	6.8
52	5.2	3.3	10.4	13.4	3.2	2.2	6.9	8.9
53	6.7	4.7	13.4	17.2	4.3	3.2	9.2	11.7
54	8.6	6.1	17.1	21.0	5.8	4.0	12.0	14.5
55	11.9	8.3	22.6	26.4	8.2	5.6	16.3	18.6
56	15.0	10.4	27.9	31.6	10.6	7.1	20.5	22.6
57	18.8	12.8	33.7	37.3	13.5	8.7	25.3	27.1
58	23.2	15.6	40.0	43.5	17.1	10.6	30.8	32.1
59	28.0	19.1	46.3	49.6	20.9	12.9	36.3	37.1
60	35.1	24.2	54.2	56.9	26.5	16.3	43.3	43.3
61	41.0	28.9	60.7	63.1	31.3	19.3	49.4	48.8
62	53.1	40.1	69.9	71.4	39.5	24.0	58.0	55.5
63	58.0	44.5	74.2	75.4	43.2	26.3	62.5	59.5
64	63.2	50.1	78.6	79.9	47.4	29.5	67.4	64.1
65	71.2	57.8	84.1	84.8	54.3	34.9	73.2	69.8
66	77.0	65.2	87.9	88.7	59.4	41.8	77.6	75.6
67	81.8	71.3	91.0	91.6	63.7	46.3	81.7	79.6
68	86.2	77.9	93.7	94.2	68.1	51.9	85.7	83.9
69	90.3	83.2	95.6	96.0	74.3	60.3	89.0	87.8

Table 20: Differences in Simulated Retirements from Full Time Work for Men and Women Using Different Utility Function Parameters and Different Circumstances

Age	Actual Difference Women minus Men	Women's Utility, Women's Circumstances minus Men's Utility, Men's Circumstances	Men's Utility, Women's Circumstances minus Men's Utility, Men's Circumstances	Women's Utility, Women's Circumstance minus Women's Utility, Men's Circumstance	Women's Utility Function, Men's Circumstances - Men's Utility Function, Men's Circumstances	Women's Utility Function, Women's Circumstances - Men's Utility Function, Women's Circumstances
50	8.1	4.9	-1.0	2.0	2.9	5.9
51	9.0	6.4	-1.4	2.4	4.0	7.8
52	8.7	8.2	-1.9	3.0	5.2	10.1
53	10.3	10.5	-2.0	3.8	6.7	12.5
54	11.3	12.4	-2.5	3.9	8.5	14.9
55	13.0	14.5	-3.6	3.8	10.7	18.1
56	12.2	16.6	-4.6	3.7	12.9	21.2
57	13.6	18.5	-6.0	3.6	14.9	24.5
58	15.1	20.3	-7.6	3.5	16.8	27.9
59	14.6	21.6	-8.9	3.3	18.3	30.5
60	14.8	21.8	-10.9	2.7	19.1	32.7
61	16.5	22.1	-12.1	2.4	19.7	34.2
62	15.7	18.3	-13.0	1.5	16.8	31.3
63	17.2	17.4	-13.5	1.2	16.2	30.9
64	16.0	16.7	-13.1	1.3	15.4	29.8
65	12.5	13.6	-13.4	0.7	12.9	27.0
66	9.8	11.7	-11.8	0.8	10.9	23.5
67	9.4	9.8	-10.5	0.6	9.2	20.3
68	7.5	8.0	-8.3	0.5	7.5	16.3
69	6.1	5.7	-7.1	0.4	5.3	12.8

Table 21: Differences in Simulated Complete Retirements for Men and Women Using Different Utility Function Parameters and Different Circumstances

Age	Actual Difference Women minus Men	Women's Utility, Women's Circumstances minus Men's Utility, Men's Circumstances	Men's Utility, Women's Circumstances minus Men's Utility, Men's Circumstances	Women's Utility, Women's Circumstance minus Women's Utility, Men's Circumstance	Women's Utility Function, Men's Circumstances - Men's Utility Function, Men's Circumstances	Women's Utility Function, Women's Circumstances - Men's Utility Function, Women's Circumstances
50	5.3	3.3	-0.4	1.4	1.9	3.7
51	6.3	4.5	-0.6	1.8	2.7	5.1
52	5.1	5.7	-1.0	2.0	3.7	6.7
53	8.2	7.4	-1.1	2.5	4.9	8.5
54	10.2	8.7	-1.8	2.5	6.2	10.5
55	10.8	10.4	-2.6	2.3	8.1	13.0
56	10.1	12.0	-3.5	2.1	9.9	15.5
57	9.6	13.6	-4.8	1.8	11.8	18.4
58	10.8	15.0	-6.5	1.3	13.7	21.5
59	11.6	16.2	-8.0	0.8	15.4	24.2
60	10.6	16.8	-10.2	0.0	16.8	27.0
61	12.4	17.5	-12.0	-0.6	18.1	29.5
62	13.7	16.0	-15.5	-2.5	18.5	31.5
63	15.4	16.3	-16.9	-3	19.3	33.2
64	14.3	16.7	-17.9	-3.3	20	34.6
65	13.4	15.5	-19.4	-3.4	18.9	34.9
66	11.6	16.2	-17.6	-2.0	18.2	33.8
67	9.9	15.9	-17.4	-2.1	18.0	33.3
68	10.4	15.8	-16.2	-1.8	17.6	32.0
69	6.4	13.5	-14.0	-1.2	14.7	27.5

Table 22: Simulated Effects of Differences in Time Preference and Different Circumstances by Race and Ethnicity on Complete Retirement
 (Using Utility function parameters for Married Males from Equation with No Racial Binaries in Beta Vector)

Time Preference	White			Black		Hispanic	
Circumstances	White	Black	Hispanic	White	Black	White	Hispanic
Age							
50	2.7	3.6	2.4	9.8	2.6	10.6	2.0
51	3.9	4.3	2.8	11.8	3.8	13.0	2.8
52	5.3	5.5	3.8	14.1	5.4	15.4	3.9
53	6.8	7.3	4.7	16.5	6.8	18.4	4.6
54	8.9	9.2	5.8	19.3	8.4	21.5	5.8
55	12.4	11.3	7.7	24.1	11.3	25.9	7.6
56	15.7	14.1	9.7	28.0	14.1	29.8	9.7
57	19.6	17.0	12.3	32.2	17.9	34.0	12.2
58	24.1	20.3	15.2	36.7	21.8	38.5	15.8
59	29.0	24.6	18.0	41.4	27.2	43.1	19.6
60	36.2	33.0	23.0	47.5	34.9	49.2	24.1
61	42.2	38.6	28.4	52.6	41.0	54.5	30.0
62	53.0	48.9	38.7	64.3	58.0	66.7	47.4
63	57.7	53.2	43.2	68.7	63.3	71.0	52.5
64	63.0	58.9	48.5	73.0	68.2	75.1	57.6
65	71.6	67.6	56.2	78.8	74.1	80.7	62.9
66	77.5	74.3	62.2	83.0	79.0	84.5	69.0
67	82.3	79.3	68.1	86.6	83.1	87.8	74.5
68	86.6	83.9	74.4	89.9	87.4	90.8	80.8
69	90.3	87.9	79.9	92.9	91.5	93.6	87.7

Table 23: Simulated Effects of Differences in Circumstances by Race and Ethnicity on Complete Retirement
 (Using Utility function parameters for Married Males from Equation with No Racial Binaries in Beta Vector)

Time Preference	White	White	Black	Hispanic
Circumstances	Black minus White	Hispanic Minus White	Black minus White	Hispanic Minus White
Age				
50	0.9	-0.3	-7.2	-8.6
51	0.4	-1.1	-8	-10.2
52	0.2	-1.5	-8.7	-11.5
53	0.5	-2.1	-9.7	-13.8
54	0.3	-3.1	-10.9	-15.7
55	-1.1	-4.7	-12.8	-18.3
56	-1.6	-6	-13.9	-20.1
57	-2.6	-7.3	-14.3	-21.8
58	-3.8	-8.9	-14.9	-22.7
59	-4.4	-11	-14.2	-23.5
60	-3.2	-13.2	-12.6	-25.1
61	-3.6	-13.8	-11.6	-24.5
62	-4.1	-14.3	-6.3	-19.3
63	-4.5	-14.5	-5.4	-18.5
64	-4.1	-14.5	-4.8	-17.5
65	-4	-15.4	-4.7	-17.8
66	-3.2	-15.3	-4	-15.5
67	-3	-14.2	-3.5	-13.3
68	-2.7	-12.2	-2.5	-10
69	-2.4	-10.4	-1.4	-5.9

Table 24: Simulated Effects of Differences in Time Preference by Race and Ethnicity on Complete Retirement
 (Using Utility Function Parameters for Married Males from Equation with No Racial Binaries in Beta Vector)

Time Preference	Black Minus White	Hispanic Minus White	Black Minus White	Hispanic Minus White
Circumstances	White	White	Black	Hispanic
Age				
50	7.1	7.9	-1	-0.4
51	7.9	9.1	-0.5	0
52	8.8	10.1	-0.1	0.1
53	9.7	11.6	-0.5	-0.1
54	10.4	12.6	-0.8	0
55	11.7	13.5	0	-0.1
56	12.3	14.1	0	0
57	12.6	14.4	0.9	-0.1
58	12.6	14.4	1.5	0.6
59	12.4	14.1	2.6	1.6
60	11.3	13	1.9	1.1
61	10.4	12.3	2.4	1.6
62	11.3	13.7	9.1	8.7
63	11	13.3	10.1	9.3
64	10	12.1	9.3	9.1
65	7.2	9.1	6.5	6.7
66	5.5	7	4.7	6.8
67	4.3	5.5	3.8	6.4
68	3.3	4.2	3.5	6.4
69	2.6	3.3	3.6	7.8

Appendix Table 1: Retirements for Career and Non-Career Workers Combined,
Both Genders, All Races, All Marital Status Groups

Age	Retirements		Percent Retired		Observations By Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	32.0	22.3	32.0	22.3	2021
51	-0.1	-0.6	31.9	21.6	2692
52	-1.2	-0.7	30.7	20.9	3325
53	1.3	1.7	32.0	22.6	3842
54	1.4	1.0	33.4	23.6	4292
55	2.1	1.8	35.6	25.4	4666
56	1.4	1.7	37.0	27.1	5087
57	2.0	1.3	39.0	28.4	5334
58	2.4	2.0	41.4	30.4	5568
59	2.9	2.4	44.3	32.8	5739
60	4.9	4.4	49.2	37.3	5637
61	5.4	4.5	54.6	41.7	4996
62	11.0	10.3	65.6	52.0	4468
63	5.0	4.1	70.6	56.2	4010
64	4.2	5.1	74.9	61.3	3517
65	6.9	6.1	81.8	67.4	2978
66	2.8	2.4	84.6	69.8	2475
67	2.1	2.4	86.7	72.3	2030
68	2.0	1.7	88.7	74.0	1604
69	1.3	2.5	90.0	76.5	1176

Observations: 12,652

Appendix Table 2: Retirements for Career Workers, Males, All Races, Married

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	3.6	3.0	3.6	3.0	439
51	1.9	1.1	5.5	4.1	687
52	1.0	0.7	6.5	4.8	967
53	1.2	0.8	7.7	5.6	1164
54	2.9	1.9	10.6	7.5	1345
55	3.5	2.7	14.1	10.2	1512
56	2.3	1.6	16.4	11.8	1744
57	2.3	2.0	18.7	13.8	1871
58	3.0	2.2	21.6	16.0	1965
59	3.1	1.9	24.8	17.9	2075
60	6.2	5.0	31.0	22.9	2073
61	7.0	6.0	38.0	28.9	1883
62	15	12.9	53.0	41.9	1769
63	6.8	4.6	59.9	46.5	1639
64	6.4	5.9	66.3	52.3	1513
65	9.3	7.1	75.6	59.4	1326
66	4.1	3.6	79.8	63.0	1162
67	2.8	3.5	82.6	66.5	993
68	2.6	2.1	85.2	68.5	845
69	2.8	4.6	88.0	73.1	691

Observations: 4348

Appendix Table 3: Retirements for Career Workers, Males, All Races, Single

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	5.3	4.0	5.3	4.0	75
51	1.2	1.7	6.5	5.7	123
52	4.4	2.4	10.9	8.0	174
53	6.8	5.4	17.7	13.4	209
54	0.8	0.8	18.5	14.2	232
55	4.2	2.8	22.7	17.0	264
56	2.6	3.1	25.3	20.1	288
57	0.1	-0.7	25.4	19.4	283
58	6.7	6.2	32.2	25.6	289
59	3.3	1.9	35.4	27.5	316
60	5.8	5.4	41.2	32.9	313
61	8.4	5.8	49.6	38.7	274
62	14.9	12.2	64.5	50.9	234
63	1.5	0.1	66.0	51.0	206
64	0.8	6.4	66.9	57.4	169
65	8.8	10.2	75.7	67.6	148
66	1.9	2.3	77.6	69.8	116
67	5.0	5.8	82.6	75.6	86
68	4.0	-1.0	86.6	74.6	67
69	0.6	4.9	87.2	79.5	39

Observations: 711

Appendix Table 4: Retirements for Career Workers, Females, All Races, Married

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	10.0	7.0	10.0	7.0	681
51	2.0	0.9	12.0	8.0	791
52	2.7	1.3	14.7	9.3	893
53	3.3	3.7	18.0	13.0	979
54	2.4	2.5	20.4	15.4	1043
55	5.6	4.4	26.0	19.9	1102
56	2.4	1.6	28.5	21.5	1134
57	3.7	1.8	32.2	23.3	1145
58	4.1	2.9	36.3	26.2	1149
59	4.3	4.1	40.6	30.3	1129
60	5.9	4.4	46.5	34.7	1095
61	7.6	7.0	54.1	41.7	949
62	14.9	14.6	69.0	56.3	831
63	6.9	4.9	75.9	61.2	717
64	3.9	5.3	79.8	66.6	589
65	6.7	7.1	86.5	73.6	474
66	2.8	1.4	89.3	75.0	364
67	2.3	2.4	91.6	77.4	297
68	2.0	3.2	93.5	80.6	217
69	-1.5	-1.5	92.1	79.1	139

Observations: 2543

Appendix Table 5: Retirements for Career Workers, Females, All Races, Single

Age	Retirements		Percent Retired		Observations by Age
	From Full Time Work	Into Full Time Retirement	From Full Time Work	Completely Retired	
50	8.1	7.4	8.1	7.4	149
51	0.1	-1.0	8.1	6.4	234
52	-0.5	-1.4	7.6	5.0	317
53	2.7	2.7	10.2	7.7	362
54	3.9	1.2	14.2	9.0	424
55	2.9	1.8	17.0	10.8	464
56	2.0	2.4	19.1	13.2	530
57	1.0	2.0	20.1	15.2	567
58	1.1	0.0	21.2	15.1	628
59	6.2	5.2	27.4	20.3	646
60	6.2	5.2	33.6	25.5	631
61	7.1	4.5	40.7	30.0	560
62	11.4	9.0	52.2	39.0	464
63	7.4	6.8	59.6	45.8	408
64	5.2	7.7	64.8	53.5	355
65	10.6	7.6	75.4	61.1	293
66	5.2	4.6	80.6	65.7	242
67	1.2	3.6	81.8	69.3	192
68	2.8	2.8	84.6	72.1	136
69	1.0	2.9	85.5	75.0	76

Observations: 1166

Appendix Table 6: Retirement, Long Term Married Men: Utility Function Includes Indicators of Race and Ethnicity and Interactions with Age

Age	From Full Time Work						Completely Retired					
	Observed			Predicted			Observed			Predicted		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
50	3.4	11.8	4.5	2.8	1.5	0.5	2.5	11.8	4.5	1.8	0.5	0.4
51	4.5	6.1	8.3	4.0	2.2	0.9	2.7	6.1	5.6	2.5	0.8	0.7
52	6.7	8.3	13.8	5.4	3.4	1.4	4.5	8.3	10.3	3.5	1.2	1.1
53	8.9	13.0	13.1	6.9	4.5	2.0	5.9	11.1	8.2	4.6	1.9	1.5
54	11.0	18.3	12.9	9.1	6.4	2.9	6.9	15.0	9.7	6.2	3.0	2.3
55	15.2	14.9	10.3	12.6	9.3	4.3	10.7	10.4	10.3	8.8	4.8	3.4
56	16.5	20.9	14.1	15.8	12.5	6.5	12.4	17.6	9.4	11.4	7.0	5.0
57	19.9	26.6	22.2	19.7	16.5	9.4	15.3	19.3	16.7	14.5	9.9	7.2
58	23.4	29.1	20.8	24.2	21.0	13.0	17.9	19.1	16.9	18.2	13.5	10.1
59	27.1	31.9	24.1	29.1	26.7	17.7	19.7	22.7	20.3	22.1	17.8	13.5
60	33.3	35.4	30.8	36.2	34.9	23.3	26.2	29.2	24.4	28.0	24.4	17.7
61	39.9	41.9	34.7	42.1	42.2	30.3	32.0	33.3	29.3	32.7	30.6	23.1
62	55.2	58.7	43.1	53.0	58.5	46.2	44.0	53.3	36.9	40.4	42.9	34.0
63	61.3	60.9	44.7	57.7	65.1	53.4	47.5	54.3	40.4	44.1	48.4	39.5
64	68.3	63.4	54.5	62.9	71.1	60.7	54.8	56.1	47.7	48.3	54.5	45.6
65	76.1	81.1	68.6	71.6	76.9	66.9	60.6	66.2	62.9	55.5	61.5	52.7
66	80.5	86.4	73.5	77.4	82.2	74.0	64.7	69.7	64.7	60.5	67.7	60.0
67	83.6	87.0	78.1	82.3	86.7	80.5	67.8	69.6	71.9	64.7	72.4	66.7
68	86.8	88.4	82.1	86.5	90.8	86.3	71.3	69.8	75.0	68.7	77.4	72.9
69	88.5	89.2	84.2	90.2	94.2	92.0	75.5	81.1	73.7	73.9	84.0	81.9