NORTH-HOLLAND

Financial Services Review 9 (2000) 1–15

FINANCIAL SERVICES REVIEW

Determinants of planned retirement age

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Abstract

Determinants of planned retirement age are analyzed. The prediction equation indicates that planned retirement age increases substantially as people get older, and increases somewhat with higher noninvestment income. Social Security reform should recognize that the capacity to continue working and the ability to afford to retire both influence the age at which people plan to retire. The range of planned retirement ages suggests that research on the adequacy of retirement preparation should focus on planned retirement age. Financial planners should consider the finding that planned retirement age increases with age.

JEL classification: D12; J26

Keywords: Planned retirement age; Retirement adequacy

1. Introduction

The financial viability of the Social Security program in the United States is being debated in response to the aging of the population. The percentage of the U.S. population made up of persons 65 years of age and over is 15% today and is projected to increase to 20% over the next 30 years (U.S. Bureau of the Census, 1998). The demographic pressures of

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1057-0810/00/$ – see front matter
PII: S1057-0810(00)00052-4

population aging will require forward-looking action from policy makers to preserve the financial viability of the Social Security program. One proposed change is to raise the age of eligibility for full retirement benefits further or more rapidly than the currently planned gradual increase from 65 to 67 over the next 25 years. Proposals have also been made to increase the early retirement age from age 62 to age 65 (Mitchell & Quinn, 1995).

The rationale for increasing retirement age is to reduce the long-term deficit in the Social Security Trust Fund. Increasing retirement age would increase the number of years a worker spends in the workforce thereby increasing the amount the worker contributes to the Trust Fund. Additionally, increasing the retirement age would decrease the number of years a retiree spends in retirement thereby reducing the benefits drawn out. The primary justification given for increasing the retirement age is the longer life expectancy and improved health of the nation's elderly.

Raising the retirement age may improve the financial solvency of the Social Security System, but it will also affect the economic well-being of individuals. Implications for individual well-being depend on the importance of Social Security income, the impact of delayed receipt of Social Security income, the ability to continue working to the age of eligibility, and individual preferences related to retirement age. Additionally, raising the age of eligibility for Social Security benefits has possible spill-over effects to other government programs, such as Supplemental Security Income and Disability Insurance (Bovbjerg, 1998).

Previous research documents that a worker's decision to retire is influenced by rules governing pensions and Social Security benefits, wealth, characteristics of jobs held by elderly workers, health insurance coverage, and social norms (Fields & Mitchell, 1984; Hurd, 1997). During this century, social norms and enacted legislation have resulted in retirement at earlier ages. Labor force participation rates of older males declined throughout most of this century, and then stabilized in the mid-1980s. Today, older men (55 to 64 years of age) frequently leave full-time career jobs, but continue working part-time or part-year rather than completely withdrawing from the labor force (Employee Benefit Research Institute, 1999). Although age 65 is currently the age of eligibility for full retirement benefits under the Social Security program, everyone does not plan to retire at age 65. The range of planned retirement ages is quite large. Five percent of today's workers plan to retire before age 55, while 22 percent plan to stay in the labor force until at least age 66 (Retirement Confidence Survey, 1999).

Despite evidence of variation in the age at which individuals plan to retire, some recent studies (Mitchell & Moore, 1997; Bernheim, 1996) evaluating retirement wealth adequacy of preretirees assume age 65 as the retirement age. The standardized assumption of retirement at age 65 without allowing for individual differences can result in significant overestimation or underestimation of the adequacy of retirement wealth. Clearly, assumptions made about planned retirement age are critical in determining whether people have saved 'enough' for retirement. Yuh, Montalto, and Hanna (1998) and Yuh, Hanna, and Montalto (1998) find that planned retirement age has a substantial impact on the estimated adequacy of preparation for retirement. Even though about 75% of workers elect to retire before age 65, there are proposals to increase the minimum age to receive any Social Security retirement pension (Apfel, 1998). Therefore, it is worthwhile to study factors related to planned retirement age to see which types of workers would be impacted most by increases in the minimum age for

receiving Social Security benefits. Additionally, planned retirement age is an important variable in developing rational savings plans for retirement, so improving understanding of planned retirement age has implications for financial planning.

This research investigates the determinants of planned retirement age. Few studies have addressed this issue directly. Although previous studies on retirement behavior have analyzed the observed age of retirement among retirees *ex-post*, little research has focused on the planned retirement age of preretired workers *ex-ante*. Understanding the determinants of the age that current workers plan to retire is important because the planned retirement age of preretirees is a crucial factor affecting saving and investment decisions during the working years. Additionally, proposed increases in the minimum age for receiving Social Security benefits will have the most impact on workers that plan to retire before the minimum age.

The paper is organized as follows. Section 2 provides a review of relevant literature and presents the conceptual framework underlying our estimation of determinants of planned retirement age. The methodology is presented in Section 3, and the results and discussion are provided in Section 4. The summary and policy implications are presented in Section 5.

2. Literature review

There have been many studies on retirement issues since the 1970s. Typically, actual retirement has been treated as a choice variable in the literature, and various economic factors have been shown to play an important role in the retirement decision.

2.1. Related empirical research

Boskin (1977) tries to explain the long-term decline in the labor-force participation of all male age-groups. Using data from the Panel Study of Income Dynamics for 1968 through 1972, he finds that the value of current annual Social Security retirement benefits has a pronounced effect on the decision to retire. The level of net earnings has a strong negative effect on the probability of retirement. Quinn (1977) examines the microeconomic determinants of early retirement among white married men aged 58–63 using the 1969 Retirement History Study. The relative impact of three sets of factors in explaining older men's labor-force participation decisions are investigated: personal and financial characteristics, local labor market conditions, and certain attributes of the individual's job. Quinn finds that health status and current eligibility for Social Security and other pensions are the most important determinants of retirement, and that there is a definite interaction between the two—persons in poor health are more likely to retire in response to financial incentives from Social Security and other private pensions.

Kotlikoff (1979) estimates a model for expected age of retirement using data from the National Longitudinal Survey (NLS) of Older Men. Private pension coverage is an important predictor of expected retirement age. Coverage under a private pension plan is associated with expected retirement 1.2 years earlier; for government pension coverage the impact is 1.8

years. Age has a positive and significant effect, and the health and employment attitudinal variables all have the anticipated negative effects.

Diamond and Hausman (1984) examine factors that affect the actual retirement decision using the National Longitudinal Survey of Older Men. The presence of pensions and Social Security benefits, the level of permanent income, and poor health have strong, positive effects on the probability of retirement. They argue that planned retirement dates change over time. In fact, while planned retirement age has some predictive power for actual retirement age, much unexplained variance remains. Honig (1996) uses data from the first wave of the Health and Retirement Survey and finds evidence that expected and observed retirement functions are similar. Honig suggests that retirement expectations may accurately forecast retirement behavior.

Burtless and Moffitt (1985) develop and estimate a model of the joint choice of retirement age and post retirement hours of work by the aged population using data from the Longitudinal Retirement History Survey (LRHS). They find that Social Security influences both retirement age and choice of post retirement hours of work, but the magnitude of the effect on the age of retirement is small. They also find that an earlier retirement age is related to poor health, lower levels of education, and higher pre retirement wage rates. Burtless (1986) develops a retirement age model and estimates the model using the Longitudinal Retirement History Survey. Poor health, being married, household size, and wealth in excess of $25,000 all reduced the age of retirement.

Samwick (1998) investigates the incentive effects of Social Security and pension benefits on retirement using data from the 1983 Survey of Consumer Finances and the corresponding Pension Provider Survey. The results suggest that the retirement decision is much more sensitive to changes in retirement wealth than to the level of retirement wealth. Further, changes in retirement wealth are primarily determined by pensions, and not Social Security. Samwick finds small effects of Social Security on retirement, and much more substantial effects of pensions.

Uccello (1998) examines the relative importance of health status, income, employment characteristics, and demographic characteristics in the decision to retire using data from the 1990 Survey of Income and Program Participation and the 1994 wave of the Health and Retirement Survey. Simulations reveal that health insurance coverage solely through one's employer and presence of a working spouse have the largest negative effects on the expected level of retirement. Pension coverage, employment in a physically demanding occupation, and being nonwhite have the largest positive impact on the expected level of retirement.

The previous research focuses primarily on *ex-post* analyses of the observed retirement age of retirees using a work-leisure model or a life cycle labor supply model. Typically, data on actual retirement behavior is used to estimate the probability of being retired as a function of Social Security and pension benefits, and other demographic characteristics. The results consistently confirm that higher earning power and good health reduce the probability of retirement, while eligibility for and higher levels of retirement benefits, and higher financial wealth increase the probability of retirement. Previous research has not analyzed factors affecting the age that currently employed workers plan to retire.

2.2. Conceptual model

A currently employed individual choosing a planned retirement age must consider whether resources will be adequate, whether working will be possible, and also his or her individual preferences for leisure. The ability to afford to retire is influenced by the individual's accumulated financial resources as well as the earned retirement benefits. The ability to continue to work is influenced by individual productivity and health, as well as characteristics of jobs. Preferences for leisure may be influenced by social norms, but also vary across individuals at a given point in time. The data set used in the empirical analysis allows examination of several of these factors.

A definition of retirement is required before the determinants of planned retirement age can be analyzed. However, there is no consensus in the literature on the definition of retirement (Gustman, Mitchell & Steinmeier, 1995). Various definitions of retirement have been used by economists and other social scientists, including: self-reported retirement; termination of work or looking for work; termination of full-time work; working less than a given number of hours; leaving the main employer (a long-term job); and receipt of an employer-provided pension or Social Security benefits. This study defines retirement as occurring when an individual stops working full-time which is the definition most commonly used in empirical studies (Sickles & Taubman, 1986; Diamond & Hausman, 1984).

3. Methodology

3.1. Data

Data for this study are drawn from the public use tape of the 1995 Survey of Consumer Finances (Kennickell, Starr-McCluer & Sundén, 1997). The Survey of Consumer Finances (SCF) is a triennial survey sponsored by the Federal Reserve with the cooperation of the Department of the Treasury. The purpose of the SCF is to provide comprehensive and detailed information on the financial characteristics of U.S. households. A total of 4,299 families were interviewed in the 1995 SCF survey. The 1995 SCF has five complete data sets called "implicates" as a result of multiple imputation to handle missing data. This study uses repeated-imputation inference (RII) techniques to combine the five different data sets to make valid inferences (Rubin, 1987; Montalto & Sung, 1996).

The Survey of Consumer Finances was chosen for this study because it provides information on a broad age-range of the U.S. population, and it specifically asks currently employed respondents to provide their planned retirement age. To analyze determinants of planned retirement age, heads of household age 35 to 70 years who were currently working full-time were selected, resulting in a sample of 1,607 individuals. Fig. 1 shows the cumulative distribution of the planned retirement age. About 17% of the sample planned to retire by age 55, 35% planned to retire before age 62, and 51% planned to retire by age 62. Almost all respondents (89%) planned to retire by age 65, and 91% planned to retire by age 67.

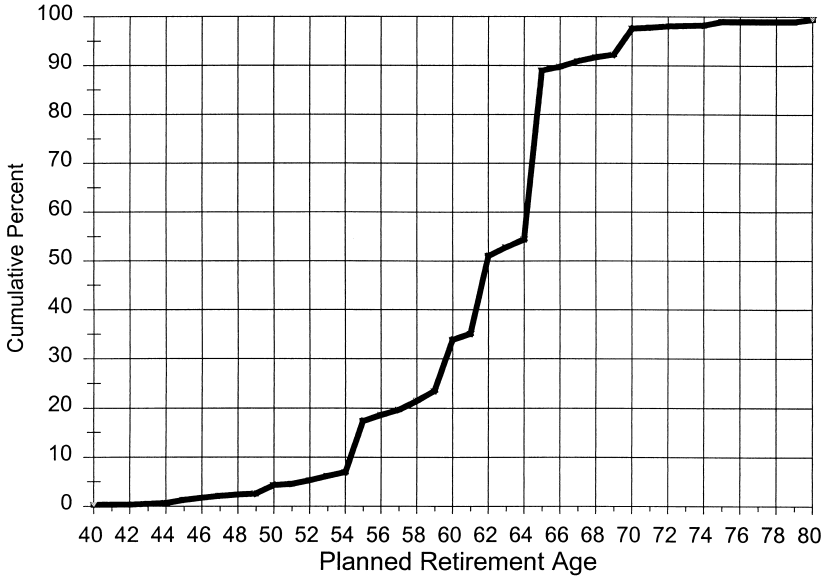

Fig. 1. Cumulative distribution of planned retirement age.

3.2. Sample selection

Planned retirement age in this study is defined as the age at which the individual plans to stop working full-time. Thus, the variable of interest is only observed for those individuals currently working 35 hours per week or more. If current hours of work and planned retirement age are correlated, then analysis of planned retirement age using only the sample of individuals currently working full-time will produce inconsistent estimates of the parameters of the planned retirement age equation. A positive correlation between current hours of work and planned retirement age is plausible, since a "taste" for work would likely result in more hours of work and a later age of planned retirement. If this "taste" for work is not controlled in the planned retirement age equation, a specification error is committed by omitting a relevant variable. This type of specification error is commonly referred to as selection bias. In other words, an estimation of the effect of age on planned retirement age may be biased because older workers with a preference for earlier retirement are selected out of the sample of individuals currently working full-time.

Heckman's (1979) two-step estimation procedure is used to estimate a planned retirement age equation that includes a variable to correct for potential selection bias. In the first step, probit analysis is used to estimate the probability of working full-time for the full sample of heads of household age 35 to 70 years. The probit results are then used to calculate the selection bias correction variable (also referred to as the inverse Mills ratio) for each observation. In the second step, the determinants of planned retirement age are estimated by ordinary least squares on the sub sample of heads of household age 35 to 70 years who were currently working full-time. The selection bias correction variable is used as an independent

variable in this equation, thereby producing consistent estimates of the parameters of the planned retirement age equation.

3.3. Probability of working full-time equation

The probability of currently working full-time is estimated with a probit regression on the sample of heads of household age 35 to 70 years ($N = 2{,}731$). The dependent variable is a dichotomous variable equal to one if the respondent is currently working full-time, zero otherwise. Independent variables include variables capturing potential barriers to full-time employment as well as the standard human capital variables. The probit estimating equation contains eighteen independent variables and can be represented as

$$\begin{aligned}\text{FULL-TIME} = {} & \beta_0 + \beta_1 \text{ Black non-Hispanic} + \beta_2 \text{ Hispanic} + \beta_3 \text{ Other} \\ & + \beta_4 \text{ Unmarried male, living alone} + \beta_5 \text{ Unmarried female, living alone} \\ & + \beta_6 \text{ Unmarried male, living with others} + \beta_7 \text{ Unmarried female, living with others} \\ & + \beta_8 \text{ Poor health} + \beta_9 \text{ Children under 6 years} + \beta_{10} \text{ Children 6 to 17 years} \\ & + \beta_{11} \text{ High school} + \beta_{12} \text{ Some college} + \beta_{13} \text{ College grad} + \beta_{14} \text{ Age} \\ & + \beta_{15} \text{ Age over 45} + \beta_{16} \text{ Age over 55} + \beta_{17} \text{ Age over 65} + \beta_{18} \text{ Experience} \qquad (1)\end{aligned}$$

Potential barriers to full-time employment are measured with categorical dichotomous variables for race/ethnicity and marital status/living arrangement, and dichotomous variables for self-reported poor health of the respondent, presence of children under age 6 in the household, and presence of children 6 to 17 years of age in the household. Human capital is measured with categorical dichotomous variables for education, a spline variable for respondent's age (Suits, Mason & Chan, 1978), and a continuous variable measuring the respondent's previous years of full-time work experience. Means for the continuous variables and percentages for the dichotomous variables are presented in Table 1 .

The probit equation is estimated on the combined data from the five implicates of the Survey of Consumer Finances, resulting in unbiased coefficient estimates. In order to correct the standard errors for imputation error, the estimated covariance matrix of the estimated coefficients is needed. The Probit procedure in SAS does not generate this matrix when the model includes dichotomous variables as dependent or independent variables (SAS Institute Inc., 1990, p. 1338). As a result, the standard errors cannot be corrected for imputation error, and the statistical significance of the coefficient estimates may be overestimated. However, since the purpose of the probit equation is to generate the selection bias correction variable, the criteria of unbiased coefficient estimates is relatively more important, and the significance of relationships of lesser importance in this application.

3.4. Planned retirement age equation

The determinants of planned retirement age are estimated by ordinary least squares on the sub-sample of heads of household age 35 to 70 years who were currently working full-time. Repeated-imputation inference (RII) techniques are used to combine data from all five implicates of the Survey of Consumer Finances to generate the coefficient estimates of the

Table 1
Descriptive statistics and probit analysis of the probability of working full-time

Variable	Mean percent[1]	Probit regression[2]		
		Estimate	Std. error	P-value[3]
Working full-time (dependent variable)	67.4%			
Intercept		0.5026	0.6099	0.4099
Respondent's race/ethnicity (reference category: White non-Hispanic)				
Black non-Hispanic	12.6%	−0.2844	0.1116	0.0109*
Hispanic	5.7%	−0.1621	0.1540	0.2926
Other races	4.2%	0.1842	0.1566	0.2396
Marital status/living arrangement (reference category: Married or living with partner)				
Unmarried male, living alone	7.3%	−0.2421	0.1189	0.0417*
Unmarried female, living alone	11.9%	−0.2662	0.1207	0.0274*
Unmarried male, living with others	3.9%	−0.3032	0.1782	0.0889
Unmarried female, living with others	13.1%	−0.2832	0.1088	0.0092**
Respondent self reports poor health	6.3%	−1.4016	0.1607	0.0001***
Presence of children < age 6 in the household	13.4%	−0.0097	0.1081	0.9288
Presence of children 6 to 17 in the household	35.9%	0.2058	0.0823	0.0124*
Respondent's education (reference category: Less than high school graduate)				
High school graduate	30.6%	0.2418	0.1042	0.0203*
Some college education	23.2%	0.2924	0.1091	0.0073**
College graduate or more	27.6%	0.5225	0.0992	0.0001***
Respondent age (spline variable)				
Years of age	49.77	−0.0108	0.0148	0.4646
Years of age over 45	6.87	−0.0515	0.0241	0.0328*
Years of age over 55	2.49	−0.1280	0.0236	0.0001***
Years of age over 65	0.31	0.1050	0.0452	0.0201*
Respondents previous years of full-time work experience	25.6	0.0452	0.0041	0.0001***

[1] Descriptive statistics are weighted and estimated using RII techniques.

[2] Probit analysis is unweighted and estimated on the pooled sample; standard errors are not corrected for imputation error and the statistical significance of the coefficient estimates may be overestimated.

[3] * $p < .05$, ** $p < .01$, *** $p < .001$.

Source: 1995 Survey of Consumer Finances, combined data set, N = 13,655 (2,731 in each implicate).

planned retirement age equation. Standard errors are corrected for imputation error to enable valid tests of significance of coefficients.

The dependent variable is the planned retirement age of the respondent. The independent variables are selected in accordance with the conceptual model where a currently employed individual considers the adequacy of retirement resources, the feasibility of continued employment, and individual preferences for leisure when selecting the age at which retirement will occur. The independent variables include financial variables and variables capturing access to resources, characteristics of employment, and respondent demographic characteristics and perceptions. The selection bias correction variable is included as an independent variable to correct for potential selection bias. Means for the continuous variables and percentages for dichotomous variables are presented in Table 2 . The ordinary least squares regression equation contains twenty seven independent variables and can be represented by

$$\text{Planned retirement age} = \alpha_0 + \alpha_1 \ln \text{Noninvestment income} + \alpha_2 \ln \text{Financial assets} + \alpha_3 \ln \text{Nonfinancial assets} + \alpha_4 \ln \text{Debt} + \alpha_5 \ln \text{IRA/KEOGH} + \alpha_6 \ln \text{Defined contribution} + \alpha_7 \text{Defined benefit} + \alpha_8 \text{Employed spouse/partner} + \alpha_9 \text{Household size} + \alpha_{10} \text{Retirement saving goal} + \alpha_{11} \text{Poor health} + \alpha_{12} \text{Self-employed} + \alpha_{13} \text{Technical} + \alpha_{14} \text{Service} + \alpha_{15} \text{Precision/Repair} + \alpha_{16} \text{Operators} + \alpha_{17} \text{Farming} + \alpha_{18} \text{Life expectancy} + \alpha_{19} \text{Age} + \alpha_{20} \text{Age-squared} + \alpha_{21} \text{Black non-Hispanic} + \alpha_{22} \text{Hispanic} + \alpha_{23} \text{Other} + \alpha_{24} \text{High school} + \alpha_{25} \text{Some college} + \alpha_{26} \text{College graduate} + \alpha_{27} \text{Selection bias correction variable} \quad (2)$$

The financial variables include amounts of noninvestment income, financial assets (excluding IRA/KEOGH and defined contribution values), nonfinancial assets, defined contribution benefits, IRA/KEOGH, and debt. These amounts are measured as the natural logarithm (ln) to reduce heteroskedasticity (unequal variance of the disturbances). An indicator variable is included for ownership of a defined benefit plan. Access to resources is measured with an indicator variable for an employed spouse or partner, a continuous variable for household size, and an indicator variable equal to one if retirement is one of the top three household saving goals. Higher levels of financial variables, lower levels of debt, and increased access to resources through family members or saving behavior increase the ability to "afford" to retire and are expected to decrease the planned age of retirement. Alternatively, employment of a spouse or partner may suggest interdependent decision making regarding the timing of retirement and may increase the planned retirement age. Larger household size may also increase the level of resources needed in retirement, thus increasing the planned age of retirement.

Characteristics of the respondent's employment are measured with indicator variables for self-reported poor health, and for self-employment of the respondent, and categorical dichotomous variables for respondent's occupation. The occupation controls are rather crude since the information in the data set only identifies six broad categories of occupation. This information is used in an attempt to control for differences across these occupation categories in the characteristics of jobs held by elderly workers. Poor health may reduce the ability to continue working thus lowering the planned retirement age. The effect of health problems on the ability to work may also depend on the type of job one has, the opportunities for accommodating health problems, and the opportunities to switch to less demanding jobs. Some of this effect may be picked up by the occupation variables. Self-employment may enable one to extend the working life at their own discretion, and is expected to be positively associated with planned retirement age.

Respondent's demographic characteristics are measured with linear and quadratic terms for respondent's current age, and categorical dichotomous variables for race/ethnicity, and for the highest level of educational attainment. The respondent's perception of life expectancy is measured with a continuous variable. The availability of reduced Social Security benefits at age 62, and the increase in the benefit level per year that receipt is deferred (up to age 65) is actuarially fair for a person with average life expectancy, and better than fair for someone with longer than average life expectancy. However, for persons whose life expectancy is lower than the average, Social Security wealth decreases the longer they

Table 2
Descriptive statistics and ordinary least squares regression of planned retirement age

Variable	Mean percent[1]	OLS regression[2]		
		Estimate	Std. error	P-value[3]
Planned retirement age (dependent variable)	61.97			
Intercept		69.3167	6.7182	0.0001***
Financial variables/access to resources				
Log(non-investment income)	10.72	0.3885	0.1781	0.0309*
Log(financial assets excluding IRA/KEOGH and defined contribution)	8.70	−0.1797	0.0720	0.0127*
Log(nonfinancial assets)	10.99	−0.1976	0.0833	0.0179*
Log(debt)	9.24	0.0448	0.0415	0.2812
Log(IRA/KEOGH)	3.44	−0.0759	0.0357	0.0335*
Log(defined contribution)	4.28	−0.0520	0.0311	0.0954
Defined benefit ownership	34.2%	−0.7557	0.3411	0.0268*
Employed spouse/partner	47.3%	0.3024	0.3162	0.3388
Household size	3.0	0.0769	0.1168	0.5102
Retirement is a saving goal	34.1%	−0.4173	0.3179	0.1893
Characteristics of employment				
Respondent self-reports poor health	1.0%	0.5543	1.9092	0.7716
Respondent is self employed	10.8%	0.3040	0.3985	0.4456
Respondent's occupation (reference category: Managerial and professional specialty)				
Technical, sales, administrative support	24.6%	0.4040	0.4192	0.3355
Service	9.0%	−1.4772	0.7020	0.0354*
Precision production, craft and repair	12.9%	−1.2691	0.6032	0.0355*
Operators, fabricators, and laborers	20.0%	−0.0331	0.5526	0.9522
Farming, forestry, and fishing	1.8%	−2.0350	1.1511	0.0772
Respondent demographic characteristics and perceptions				
Respondent's life expectancy (years)	80.22	0.0511	0.0163	0.0024**
Age of respondent	46.09	−0.8195	0.2483	0.0010**
Age of respondent squared	2184.14	0.0116	0.0026	0.0001***
Respondent's race/ethnicity (reference category: White non-Hispanic)				
Black non-Hispanic	10.7%	−2.4825	0.6583	0.0002***
Hispanic	5.1%	−2.3700	0.8655	0.0066**
Other races	4.7%	−0.9494	0.7092	0.1813
Respondent's education (reference category: Less than high school graduate)				
High school graduate	30.2%	0.7226	0.6793	0.2877
Some college education	25.6%	1.3220	0.7007	0.0593
College graduate or more	33.6%	1.7421	0.7366	0.0181*
Selection bias correction variable	0.28	0.6124	1.1247	0.5861

Model F-statistic = 16.0438 (p-value = 0.0001).
Adjusted R-square ranges from 0.2093 to 0.2194.
[1] Descriptive statistics are weighted and estimated using RII techniques.
[2] Regression analysis is unweighted and estimated using RII techniques.
[3*] $p < .05$, ** $p < .01$, *** $p < .001$.
Source: 1995 Survey of Consumer Finances (1,607) households in each implicate).

postpone benefits beyond age 62, creating an incentive to begin taking benefits at age 62 rather than later (Economic Report of the President, 1999). Lower life expectancy is thus expected to decrease the planned retirement age, and therefore we expect a positive relationship between life expectancy and planned retirement age.

4. Results and discussion

4.1. Probability of working full-time

The probit results for the probability of working full-time are consistent with a priori expectations and previous research (Table 1). For a 40 year old, white, married respondent, in good health, with no dependent children, a high school diploma, and 22 years of previous full-time work experience, the probability of working full-time is 90%. The probability of currently working full-time increases with education and work experience. For the reference case, the probability of working full-time is only 86% for someone who has not completed high school, and increases to 94% for a college graduate. Each additional year of previous full-time work experience increases the probability of currently working full-time by 0.76 percentage points. For the reference case, 25 years of previous full-time work experience increases the probability of currently working full-time to 92.5%. Age is inversely related to the probability of currently working full-time within the sample of people 35 to 70 years old, with the most noticeable declines occurring after age 50. For the reference case, the probability of currently working full-time is 92% at age 35, 90% at age 40, 89% at age 45, 82% at age 50, then declines to 73% at age 55, 37% at age 60, 10% at age 65, and 4% at age 70.

The probability of currently working full-time is lower for Black, non-Hispanic respondents than for otherwise similar White, non-Hispanic respondents (85% vs. 90% given the characteristics of the reference case). Compared to respondents who are married or living with a partner, unmarried respondents living alone, and unmarried female respondents living with at least one other person, are less likely to currently work full-time. Self reported poor health of the respondent also reduces the probability of currently working full-time. For the reference case, poor health reduces the probability of currently working full-time to only 46%.

4.2. Planned retirement age

The retirement age prediction equation explains approximately 21% of the variance, and 13 of the 27 variables are significant at the 0.05 level or better (Table 2). The levels of financial assets (excluding IRA/KEOGH and defined contribution values), nonfinancial assets, and other private pension funds significantly lower the planned retirement age. Levels of financial assets and nonfinancial assets lower the planned retirement age relatively more than levels of IRA/Keogh accounts or defined-contribution pension plans. Ownership of a defined-benefit pension significantly decreases the planned retirement age. Because the dependent variable is planned retirement age, the coefficients of dummy variables can be interpreted as the effect on planned retirement age, holding all other variables constant. For instance, all other things equal, those who have a defined benefit pension have a predicted retirement age 0.76 years lower than otherwise similar households without a defined benefit pension.

Planned retirement age does not vary much across the six broad occupation categories. More detailed information on occupation may be necessary to accurately measure this effect.

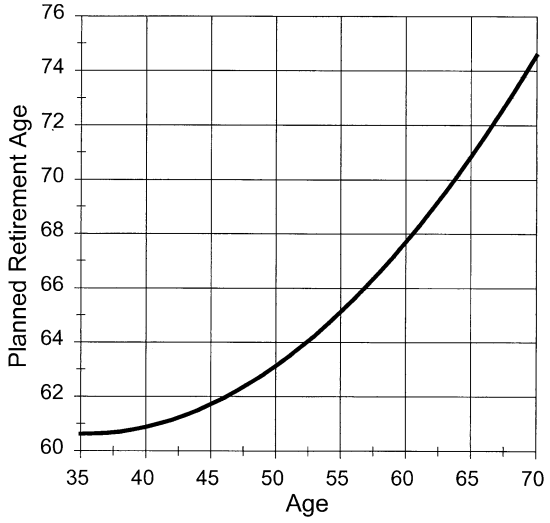

Fig. 2. Predicted planned retirement age by current age.

Being employed in less-skilled occupations (service; precision production, craft and repair) relative to managerial and professional specialty occupations decreases the planned retirement age by less than 1.5 years. Being Black non-Hispanic, or Hispanic relative to White non-Hispanic decreases the planned retirement age significantly. The planned retirement ages for Black non-Hispanic respondents and Hispanic respondents are 2.4 and 2.2 years lower, respectively, than that of otherwise similar White non-Hispanic respondents.

Planned retirement age increases with noninvestment income, anticipated life expectancy of the householder, the combined effect of linear and quadratic age variables, and education. The selection bias correction variable is not statistically significant. The effect of noninvestment income, although significant, is generally small. For instance, at the mean values of other variables, the predicted effect of income increasing from $10,000 per year to $50,000 per year is a 0.63 year increase in planned retirement age; but an increase from $50,000 per year to $100,000 per year is only a 0.27 year increase in planned retirement age. Planned retirement age of respondents who have graduated from college is 1.7 years higher than that of otherwise similar respondents who have not finished high school. Fig. 2 shows the effect of current age on planned retirement age. At the mean value of other variables, the effect of increasing current age from 35 to 45 is a 1.08 year increase in planned retirement age, while an increase from 45 to 55 is a 3.41 year increase, and an increase from 55 to 65 is a 5.72 year increase.

5. Summary and implications

5.1. Summary

The regression results suggest that financial preparation for retirement, as well as demographic characteristics and perceptions, including current age and anticipated life expect-

ancy, strongly affect planned retirement age. The results also suggest that adjustments to planned retirement age take place over time. These adjustments may be in response to the realization that accumulated resources are not adequate to meet needs in retirement, thus causing workers to postpone retirement. An alternate explanation is that a generational change may result in lower planned retirement ages for younger cohorts of workers since norms regarding retirement age and financial instruments used to save for retirement have changed over time. These differences may produce systematic differences between younger cohorts and older cohorts of workers in the age at which they plan to retire. Either explanation has implications for proposed changes in government policy.

5.2. Implications for financial planning

As Fig. 1 demonstrates, there is a wide range of planned retirement ages. The effect of current age on planned retirement age (Fig. 2) suggests that some workers' plans are not achieved, or that there is a generational change in planned retirement ages. Financial planners should try to assess the likelihood that a client's planned retirement age can be achieved, both in terms of the risks of loss of a high income job before the planned retirement age and the chance that the client will have to work longer than planned. If there is a generational reduction in planned retirement ages, financial planning for retirement will become more challenging and perhaps further increase the need for financial professionals to assist workers.

5.3. Implications for public policy and future research

The ability of workers to adapt to further increases in Social Security retirement age depends on their capacity to extend their working lives and to accumulate enough savings to offset a delay or reduction in Social Security income. Alternatively, workers face retirement with reduced income. Adequacy of retirement resources is influenced by family income and wealth. Policies to increase pension coverage as well as private savings would help counter the negative effects of a decrease in Social Security income. The ability to extend the working life is influenced by health status as well as characteristics of the job. Some workers will have difficulty extending their working lives. Important questions to address with additional research include: Will employers be willing to retain and/or hire older workers? What will happen to older men and women who are not healthy enough to work full-time or who are unable to find jobs? What will happen to older workers in physically demanding jobs?

The relationship between age and planned retirement age should be further explored with different data sets, including the 1998 Survey of Consumer Finances, in order to test the generational explanation of the positive relationship between age and planned retirement age. There are implications for proposed changes in government policy whether workers adjust their planned retirement age over time, or more recent cohorts of workers plan to retire at younger ages than earlier cohorts.

This study focuses on financial, employment and demographic characteristics as determinants of planned retirement age. However, attitudinal and psychological factors might also

affect planned retirement age. In reality, individual responses to work and retirement incentives often vary substantially even among persons who appear to have much in common in terms of background characteristics and financial circumstances. Thus, unobserved, unmeasured individual differences might play an important role in retirement decisions. A comprehensive theory of work and retirement should be able to explain the substantial variations in retirement decisions that are observed among apparently similar individuals (Leonesio, 1996). Research that improves our understanding of factors related to planned retirement age will improve our ability to analyze policy issues, including proposed changes to the Social Security program, as well as provide better insight into how to influence individual behavior related to planning and saving for retirement.

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