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The Future of Retirement: How Has the Change in the Full Retirement Age Affected the Social Security Claiming Decisions of US Citizens?

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THE FUTURE OF RETIREMENT: HOW HAS THE CHANGE IN THE FULL RETIREMENT AGE AFFECTED THE SOCIAL SECURITY CLAIMING DECISIONS OF US CITIZENS?

by

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ABSTRACT

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Social Security benefits serve as a chief form of income for many retirees. However, the value of these benefits varies based on the age at which a person claims in relation to their Full-Retirement Age (FRA). This paper analyzes the effects of the FRA on the claiming decision of Americans using panel data from the Health and Retirement Study. Current policy has resulted in increases to the FRA of eligible claimants based on their birth year. This has been done in an effort to increase the age at which people claim in response to concerns with the long-term solvency of the Social Security System. This paper uses three different models of censored normal regression analysis to differentiate between married respondents with and without their spousal characteristics and unmarried respondents. Further, it draws conclusions across genders. This paper finds that increases in the FRA are associated with slightly less than proportional increases in the claiming age of all respondents. In addition, this study finds that higher self-reported health measures and higher self-reported probabilities of working to age 65 are related to higher claiming ages, while current smokers claim earlier across all respondents. Finally, this study finds that unmarried respondents who believe that their health status limits their ability to work and those who are currently receiving pension income are more likely to claim at an earlier age, while unmarried respondents with Retiree Health Insurance (RHI) claim later.

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CHAPTER ONE

INTRODUCTION

A. Background Information on the Social Security System

The Social Security system was initially developed in order to aid people and families in varying circumstances that adversely affect their ability to work. The two most common circumstances are the elderly (based on age requirements) and families who have disabled laborers. This study is based on Social Security claiming decisions and thus will focus on the aspects of Social Security benefits pertaining to the elderly. The right to these benefits is "earned" throughout a person's employment as people and firms pay taxes out of earned wages to Social Security. This money is essentially transferred from those in the labor force to current claimants and serves as a significant stream of income for many retirees. The Social Security Administration (2014) claims that for typical retirees these benefits cover roughly 40 percent of their income after retirement.

B. Explanation of Social Security Benefits

The Social Security system bases its benefits off of a base age—the full retirement age (FRA). However the FRA varies based on the year a person was born. Table 1 on page 31 shows a representation of the varying birth years and their corresponding FRAs. While the FRA is constantly changing based on birth cohort, people do have the option of claiming early. The earliest a person can claim Social Security benefits is at age 62. However, if a person decides to claim early it will result in a reduction in the value that he or she is able to claim that is determined

based on how early a person claims in comparison to his or her FRA. The reduction works in a two-fold fashion: the first aspect applies to the first three years from the FRA and the second applies to the rest of the time that accrues between when the person claims and three years less than their FRA. If a person claims within 36 months of their FRA then for each month early that he or she claims, he or she will lose 5/9 of one percentage point of the total value of their Social Security wealth. If a person claims more than 36 months before their FRA then every month earlier than the aforementioned 36 month limit results in a further 5/12 percentage point decrease in the total Social Security wealth of the person.

This works in the inverse fashion for the few people who postpone claiming retirement benefits. Those who postpone claims past their FRA receive Delayed Retirement Credits (DRCs), which increase the total value of their claims. However, the DRCs stop accruing after age 69 so postponing benefits is only beneficial until the claimant reaches 69 years of age. Table 2 on page 31 shows the accrual rate of DRCs based on birth year as provided by the Social Security Administration.

C. The Focus and Contributions of this Paper

Utilizing panel data from the Health and Retirement Study (HRS), this paper analyzes the effect of the increasing FRA on the claiming decision of Americans. Of particular interest in this study is those surveyed in the HRS born between the years 1931 and 1953. After controlling for a large number of variables, this paper finds that increases in the FRA are associated with slightly less than proportional increases in the claiming age of eligible claimants. If policymakers aim to alleviate

the concerns with the Social Security System's solvency, further increases the FRA can be used to increase the claiming age and provide slight relief to the system. In addition, this study finds that higher self-reported health measures and higher self-reported probabilities of working to 65 are related to higher claiming ages, while current smokers claim earlier across all respondents. Finally, this study finds that unmarried respondents who believe that their health status limits their ability to work and who are currently receiving pension income are more likely to claim at an earlier age, while unmarried respondents with Retiree Health Insurance (RHI) available to them claim later.

The rest of this paper is organized as follows. Chapter Two includes a review of the literature on the effects of the FRA on various topics including labor force participation rates, the retirement decision, and Social Security benefit claiming. Chapter Three shows and explains the three econometric models used in this study. Chapter Four describes the dataset used to analyze the effect of the full-retirement age on the claiming decision of eligible claimants. Chapter Five discusses the results of the econometric model. Chapter Six presents the conclusions drawn from this analysis.

CHAPTER TWO

A REVIEW OF THE EXISTING LITERATURE ON THE EFFECTS OF THE FULL RETIREMENT AGE

This chapter reviews the existing literature pertaining to the full-retirement age and its effects on labor force participation rates, the retirement decision, and Social Security benefit claiming. Prior literature has examined a number of variables in order to model the retirement and claiming decisions. In doing so, there have been two chief methods that have dominated recent studies; constraint-focused and probit/hazard model focused.

A. Constraint-Focused Analyses

Constraint-focused analyses incorporate a number of restrictions on respondents—such as budget and leisure constraints—in order to determine what decision (i.e. when to claim Social Security benefits) will maximize the utility of the respondent. The constraint-focused models from the existing literature on the claiming and retirement decision in America use a variety of methods to arrive at a number of different conclusions. Gustman and Steinmeier (2005) looked into the retirement peaks that occur at age 62 (early entitlement age) and 65 (the FRA). They also analyzed a policy change in the early entitlement age from 62 to 64. This resulted in an expected shift in the peaks to 64 and 65, but also induced 5% of the population to delay early claims. Blau and Goldstein (2009) examined the changes in the labor force participation rates (LFPR) of older men, as there had been a

significant drop the LFPR throughout the 1980s, followed by a resurgence in the 1990s. It was found that the increase in Social Security (SS) benefits had only a small effect (~16%), while the changes in the FRA and Delayed Retirement Credits (DRC) accounted for 25-50% of the change in LFPR. A majority of the other change was attributed to changes in married women's education levels and their increased LFPR. French and Jones (2011) performed a comparative study on the effects of changes in Medicare vs. changes in SS benefits and found that there were similar effects in both policy changes on retirement (an additional two years of Medicare eligibility increased LFPR by 0.076 years, while a two-year decrease in SS eligibility decreased LFPR by 0.074 years).

B. Probit and Hazard Model Analyses

Studies utilizing the probit and hazard regression models aim to determine the likelihood that a person will retire at a given age based on a number of parameters. These studies are particularly useful as they make for easy comparisons across studies based on the coefficients and significance of shared variables.

The probit and hazard model studies take a variety of different angles in their attempts to model the retirement and/or claiming decision while utilizing a number of different variables. Coile et al. (2002) focused on delayed claims for men and found that men with younger spouses and/or longer life expectancies were more likely to delay for a longer period of time. This study also found an inverse U-shaped effect with regards to total wealth and the claiming decision. In a follow-up study, Coile and Gruber (2007) again looked at the retirement decision of males and found

that there were significant effects on retirement for two variables—expected wealth accrual from future work (a negative effect) and current net wealth (a positive effect). Another interesting finding from this study was that the effects of Social Security and pension incentives are roughly equal despite the waning availability of pensions. Warner, Hayward, and Hardy (2010) looked for patterns in the claiming of Social Security benefits and found that about 75% of men are "off-time" (meaning they do not claim in the year that they reach their FRA). They also found that SS claiming does not have a significant effect on labor force movements as people generally do not retire and claim at the same time. Imrohoroglu and Kitao (2012) focused on further FRA reform past what is currently being done and found that raising the FRA from 66 to 68 increases participation by older workers and decreases early claiming at age 62 by 15 percentage points.

C. Applications for This Study

This study attempts to improve upon the existing literature by focusing on the actual SS reforms that are in place instead of hypothetical ones by using the HRS dataset to examine the effect of the current adjustments in the FRA. This is useful because it provides early insight on what patterns may be expected of the future cohorts who will continue to experience increases in their FRA.

A number of the studies in the literature review have direct applications to this study. Two of the studies from the literature review, French and Jones (2011) and Imrohoroglu and Kitao (2012) examined the effects of FRA policy changes and found that increases to the FRA increase the age at which people retire. By using

actual data to determine the relationship between the FRA and the claiming age of a respondent, the findings from this analysis are used to draw similar policy implications. Coile et al (2002) found that men with both younger spouses and longer life expectancy claimed later. The age of spouses is also included in a regression utilizing married respondents with their spousal characteristics in this study. Life expectancy will be represented in a more abstract sense as the report of self-health from the HRS dataset is used. While this may not result in a perfect comparison, the findings are still relatable. Coile and Gruber (2007) found significant effects for the income from future work (+) and the level of retirement wealth (-) on the age people retire. This study checks to see if the implications of these variables on when people retire are transferrable to when people claim Social Security benefits (i.e. higher future income levels would influence people to claim later and higher levels of retirement wealth would influence people to claim earlier).

CHAPTER THREE

ESTIMATING THE EFFECTS OF THE FULL RETIREMENT AGE ON THE CLAIMING DECISION

This analysis uses three separate econometric models to analyze the probability that a person will claim Social Security benefits. The first model will be run for all married respondents without spousal characteristics, the second model will be run for all married respondents with spousal characteristics, and the third model will be run for all unmarried respondents. In addition, each of these three models will be run using the full sample of respondents meeting these criteria (i.e. married vs. unmarried) and subsequently split by gender to reflect the differences between males and females in these marital groups. The base model below is adapted in order to fit the requirements for the three different models discussed above.

A. Econometric Models Used to Estimate the Effects of FRA on the Claiming Decision

Base Model

$$\text{Claiming Age} = \beta_0 + \beta_1 FRA + \beta_2 FEMALE + \beta_3 AGE + \beta_4 BLACK + \beta_5 OTHER + \beta_6 EDU + \beta_7 CHILD + \beta_8 WEALTH + \beta_9 INCOME + \beta_{10} SF\_EXCELLENT + \beta_{11} SF\_VG + \beta_{12} SF\_GOOD + \beta_{13} FAIR + \beta_{14} EXP + \beta_{15} SS\_WEALTH + \beta_{16} PENSION + \beta_{17} RHI + \beta_{18} MC\_HOSP + \beta_{19} MC\_EXP + \beta_{20} HEALTH\_LW + \beta_{21} PROB\_WORK\_65 + \beta_{22} SMOKER + \beta_{23} FORMER + \beta_{24} FP\_YEAR + \beta_{25} FP\_FEW\_YEAR + \beta_{26} FP\_5TO10\_YEAR + \beta_{27} FP\_10P\_YEAR + \beta_{28} S\_AGE + \beta_{29} S\_BLACK + \beta_{30} S\_OTHER + \beta_{31} S\_EDU + \beta_{32} S\_SF\_EXCELLENT + \beta_{33} S\_SF\_VG + \beta_{34} S\_SF\_GOOD + \beta_{35} S\_SF\_FAIR + \beta_{36} S\_EXP + \beta_{37} S\_SS\_WEALTH + \beta_{38} S\_PENSION + \beta_{39} S\_RHI + \beta_{40} S\_MC\_HOSP + \beta_{41} S\_MC\_EXP + \beta_{42} S\_HEALTH\_LW + \beta_{43} S\_PROB\_WORK\_65 + \beta_{44} S\_SMOKER + \beta_{45} S\_FORMER + \beta_{46} S\_FP\_YEAR + \beta_{47} S\_FP\_FEW\_YEAR + \beta_{48} S\_FP\_5TO10\_YEAR + \beta_{49} S\_FP\_10P\_YEAR + \varepsilon_i$$

Dependent Variable

- *Claiming Age*: Claiming age as reported by respondent. This variable is censored for those respondents who have not yet claimed.

Independent Variables (Respondent)

- *Full-Retirement Age [FRA]*: Based on the birth year of respondent and his or her corresponding FRA as determined by the Social Security Administration.
- *Female [FEMALE]*: FEMALE = 1 if reported gender is female, 0 otherwise.
- *Age [AGE]***:** Age as reported.
- *Black [BLACK]*: Race as reported. White utilized as reference. BLACK = 1 if respondent reports race as black, otherwise 0.
- *Other [OTHER]*: Race as reported. White utilized as reference. OTHER = 1 if respondent reports race as other, otherwise 0.
- *Education [EDU]*: Total years of education as reported.
- *Number of Children [CHILD]*: Total number of living children, including stepchildren, as reported.
- *Wealth [WEALTH]*: Total wealth including secondary residence as reported, converted to constant dollars in $100,000's.
- *Total Household Income [INCOME]*: Total household income as reported, converted to constant dollars in in $10,000's.
- *Self-Report of Health Excellent [SF_EXCELLENT]*: SF_EXCELLENT = 1 if respondent reports self-health is excellent, 0 otherwise. Self-Report of Health Poor used as reference.
- *Self-Report of Health Very Good [SF_VG]*: SF_VG = 1 if respondent reports self-health is very good, 0 otherwise. Self-Report of Health Poor used as reference.
- *Self-Report of Health Good [SF_GOOD]*: SF_GOOD = 1 if respondent reports self-health is good, 0 otherwise. Self-Report of Health Poor used as reference.
- *Self-Report of Health FAIR [SF_FAIR]*: SF_FAIR = 1 if respondent reports self-health is fair, 0 otherwise. Self-Report of Health Poor used as reference.
- *Job Experience [EXP]*: Total years of work as reported.
- *Predicted SS Wealth of Pre-Retirees [SS_WEALTH]*: Predicted Social Security Wealth, converted to constant dollars in $10,000's.
- *Receiving Pension [PENSION]*: PENSION = 1 if respondent reports that he or she is currently receiving pension income, 0 otherwise.
- *Retiree Health Insurance Availability [RHI]*: RHI = 1 if respondent reports that RHI is available to him or her, 0 otherwise.
- *Whether Health Limits Work [HEALTH_LW]***:** HEALTH_LW = 1 if respondent reports that his or her current health status limits his or her ability to work, 0 otherwise.
- *Self-Reported Probability of Working to 65 [PROB_WORK_65]*: Self-reported probability of working to age 65, as reported.
- *Current Smoker [SMOKER]:* SMOKER = 1 if respondent reports that he or she is a current smoker, 0 otherwise.
- *Former Smoker [FORMER]*: FORMER = 1 if respondent reports that he or she is a former smoker and is not currently smoking, 0 otherwise.

- *Financial Planning Horizon – Year [FP_YEAR]*: FP_YEAR = 1 if respondent reports a financial planning horizon of a year, 0 otherwise. Financial planning horizon of a month used as reference.
- *Financial Planning Horizon – Few Years [FP_FEW_YEAR]*: FP_FEW_YEAR = 1 if respondent reports a financial planning horizon of a few years, 0 otherwise. Financial planning horizon of a month used as reference.
- *Financial Planning Horizon – 5 to 10 Years [FP_5TO10_YEAR]*: FP_5TO10_YEAR = 1 if respondent reports a financial planning horizon of 5 to 10 years, 0 otherwise. Financial planning horizon of a month used as reference.
- *Financial Planning Horizon – 10 Plus Years [FP_10P_YEAR]*: FP_10P_YEAR = 1 if respondent reports a financial planning horizon of 10 or more years, 0 otherwise. Financial planning horizon of a month used as reference.

Independent Variables (Spouse)

- *Spouse Age [S_AGE]*: Spouse age as reported.
- *Spouse Black [S_BLACK]*: Spouse race as reported. White utilized as reference. S_BLACK = 1 if spouse race is reported as black, 0 otherwise.
- *Spouse Other [S_OTHER]*: Spouse race as reported. White utilized as reference. S_OTHER = 1 if spouse race is reported as other, 0 otherwise.
- *Spouse Education [S_EDU]*: Spouse's total years of education as reported.
- *Spouse Self-Report of Health – Excellent [S_SF_EXCELLENT]*: S_SF_EXCELLENT = 1 if spouse's self-health is excellent, 0 otherwise. Spouse Self-Report of Health Poor used as reference.
- *Spouse Self-Report of Health – Very Good [S_SF_VG]*: S_SF_VG = 1 if spouse's self-health is very good, 0 otherwise. Spouse Self-Report of Health Poor used as reference.
- *Spouse Self-Report of Health – Good [S_SF_GOOD]*: S_SF_GOOD = 1 if spouse's self-health is good, 0 otherwise. Spouse Self-Report of Health Poor used as reference.
- *Spouse Self-Report of Health – Fair [S_SF_FAIR]*: S_SF_FAIR = 1 if spouse's self-health is fair, 0 otherwise. Spouse self-Report of Health Poor used as reference.
- *Spouse Job Experience [S_EXP]*: Spouse's total years of work as reported.
- *Spouse Predicted SS Wealth of Pre-Retirees [S_SS_WEALTH]*: Spouse's predicted Social Security Wealth, converted to constant dollars in $10,000's.
- *Spouse Receiving Pension [S_PENSION]*: S_PENSION = 1 if spouse is receiving pension income, 0 otherwise.
- *Spouse Retiree Health Insurance Availability [S_RHI]*: S_RHI = 1 if spouse has RHI available, 0 otherwise.
- *Spouse Whether Health Limits Work [S_HEALTH_LW]*: S_HEALTH_LW = 1 if spouse's health limits his or her ability to work, 0 otherwise.
- *Spouse Self-Reported Probability of Working to 65 [S_PROB_WORK_65]*: Spouse's self-reported probability of working to age 65 as reported.
- *Spouse Current Smoker [S_SMOKER]:* S_SMOKER = 1 if spouse is a current smoker, 0 otherwise.

- *Spouse Former Smoker [S_FORMER]*: S_FORMER = 1 if spouse is a former smoker and is not currently smoking, 0 otherwise.
- *Spouse Financial Planning Horizon – Year [S_FP_YEAR]*: S_FP_YEAR = 1 if spouse reports a financial planning horizon of a year, 0 otherwise. Spouse financial planning horizon of a month used as reference.
- *Spouse Financial Planning Horizon – Few Years [S_FP_FEW_YEAR]*: S_FP_FEW_YEAR = 1 if spouse reports a financial planning horizon of a few years, 0 otherwise. Spouse financial planning horizon of a month used as reference.
- *Spouse Financial Planning Horizon – 5 to 10 Years [S_FP_5TO10_YEAR]*: S_FP_5TO10_YEAR = 1 if spouse reports a financial planning horizon of 5 to 10 years, 0 otherwise. Spouse financial planning horizon of a month used as reference.
- *Spouse Financial Planning Horizon – 10 Plus Years [S_FP_10P_YEAR]*: S_FP_10P_YEAR = 1 if spouse reports a financial planning horizon of 10 or more years, 0 otherwise. Spouse financial planning horizon of a month used as reference.

The model uses the age of claiming as the dependent variable. As mentioned above, this variable is censored for all respondents who have yet to claim. Ultimately, the model will be used to generate the expected claiming age of a given person based on his or her characteristics. The primary independent variable is FRA and is determined based on the birth year of each respondent. It is expected that as FRA increases, the age that a person will claim increase as well.

A number of demographic variables are used in this analysis. AGE and S_AGE represent the age of the respondent and spouse respectively. Spouse Age was found to be a significant variable in Coile et al. (2002) for married men as it was found that they were more likely to delay claiming Social Security benefits if they had younger spouses. BLACK/S_BLACK and OTHER/S_OTHER are used to represent differences in the race of the respondents and their spouses, with white respondents serving as the reference group and are used to analyze whether people of different races are

more likely to claim earlier than others. EDUCATION/S_EDUCATION show the number of years of education that the respondent or their spouse has. It is expected that higher education levels for respondents and spouses will increase the age that a person will claim at. CHILD represents the number of children that the respondent cares for, including all stepchildren. It is expected that as the number of children increases for a respondent, the age of claiming increases as the necessary care will serve as an added financial responsibility for the respondent. Other studies have found that parents are more likely to delay retirement when putting children through college (Handwerker 2011).

There are two financial variables in particular that have been found significant in determining the claiming and retirement ages of people in past studies. WEALTH is measured in constant hundred thousands of dollars as total wealth excluding secondary residences. It is expected that as WEALTH increases for respondents their expected claiming age will decrease (Coile and Gruber 2007). INCOME is measured in constant ten thousands of dollars and represents the total household income for the respondent. INCOME may have an ambiguous effect on claiming because higher income may serve as a deterrent to retirement due to its ability to increase wealth, but may also be correlated with increased levels of retirement wealth. However, Coile and Gruber (2007) did find that higher levels of expected accrual of wealth from future work (i.e. income) leads to a later retirement age.

The health of elderly people has been found to be a significant determinant of the claiming age of people in past studies as well. The four variables beginning with

SF/S_SF [i.e. SF_EXCELLENT] represent the self-reported health of the respondent or their spouse. SF_POOR/S_SF_POOR will be used as the reference group for the other self-reported health variables. It has been found that better self-reported health of a respondent or their spouse will increase the age that a person will retire, Blau and Gilleskie (2008), and also increase the age at which a person will claim (Coile et al. 2002).

A number of work-related variables are also used in this analysis and are expected to play a role in the claiming decision. EXP/S_EXP represent the total years of job experience that a respondent or their spouse has. It is expected that the more years a person has worked the closer he or she is to retiring and thus the closer he or she is to claiming SS benefits. SS_WEALTH/S_SSWEALTH is measured in constant ten thousands of dollars and represents the level of accrued Social Security Wealth that the respondent or his or her spouse has based on information from the Social Security Administration (SSA). It is expected that as SS_WEALTH/S_SSWEALTH increase the age that a respondent will claim will decrease. PENSION/S_PENSION is used to represent whether the respondent or spouse is currently receiving pension income or not. It has been found that if a respondent or spouse is receiving pension income they will be more likely to retire at a younger age (Coile and Gruber 2007).

There are also a number of health and insurance related independent variables used in this model. RHI/S_RHI is used to represent whether or not the respondent or spouse has Retiree Health Insurance (RHI) available to them upon retirement. It is expected that if RHI is available to the respondent or spouse then they are more likely to retire at an earlier age (Blau and Gilleskie 2008) and thus

more likely to claim at an earlier age. HEALTH_LW/S_HEALTH_LW represent whether or not the respondent or spouse reported that their health limits their ability to work. It is expected that if a respondent or spouse believes that their health limits their ability to work then the respondent will be more likely to claim at an earlier age. PROB_WORK_65/S_PROB_WORK_65 represent the probability that a respondent or spouse will work to the age of 65. It is expected that the higher the probability that a respondent or spouse will work to age 65, the higher the age that the respondent will claim at.

Two variables in this analysis deal with the smoking habits of the respondent and their spouse (SMOKER/S_SMOKER and FORMER/S_FORMER). It is expected that respondents and respondents with spouses who are current smokers will claim earlier as smoking is detrimental to the health of respondents and spouses, making them less likely to work as long and have shorter life expectancies. Former smoking respondents and respondents with spouses who were former smokers are also expected to claim at younger ages than those who have never smoked.

The final group of variables used in this analysis is the financial planning horizon variables (i.e. FP_YEAR/S_FP_YEAR). It is expected that people with shorter financial planning horizons will claim SS benefits earlier than those with longer financial planning horizons. For example, the coefficient for FP_FEW_YEAR is expected to be larger than the coefficient for FP_YEAR in relation to FP_MONTH, which will serve as the reference point group this selection of variables.

This study estimates three econometric models using censored normal regression analysis. Censored normal regression analysis is necessary because in a

large number of cases the respondent has not yet claimed Social Security benefits. Censored normal regression analysis allows for the censoring of the dependent variable in instances when the dependent variable has a missing value for some observations and an actual value for others. The three econometric models are used to draw comparisons across respondents based on their different marital statuses. The first model runs a regression on all married respondents, but does not include their spousal characteristics. The second model also runs a regression on all married respondents and does include spousal characteristics. The third model runs a regression on all unmarried respondents. In addition, each of these models is used to run regressions on both male and female respondents based on their marital status. As a result, each model is run three different times: once including all respondents, the second using only male respondents, and the third using only females.

CHAPTER FOUR

DATA DESCRIPTION AND SAMPLE SELECTION

This chapter describes the Health and Retirement Study and provides descriptive statistics for the observations used in the analysis.

A. Description of the Health and Retirement Study

The Health and Retirement Study (HRS) is a longitudinal household survey of the elderly (people ages 50+) that collects information on both health and retirement factors every two years. When surveying households the study surveys primary respondents who are over the age of 50 and their spouses for married or partnered couples. The HRS serves as a nationally representative sample that began in 1992 and currently studies six different cohorts. Cohort 1 is the AHEAD cohort, which comprises all respondents born before 1924. Cohort 2 is the Children of Depression (CODA) cohort and consists of all respondents born between 1924 and 1930. Cohort 3 is the initial Health and Retirement Study (HRS) cohort and contains all respondents born between 1931 and 1941. Cohort 4 is the War Baby (WB) cohort and includes all respondents born between 1942 and 1947. Cohort 5 is the Early Baby Boomer (EBB) cohort and consists of all respondents born between 1948 and 1953. Finally, Cohort 6 is the Mid Baby Boomer (MBB) cohort and contains all respondents born between 1954 and 1959. These cohorts and the years for which information was gathered from each of them are shown in Table 3 on page 32.

The HRS dataset is an appropriate dataset for this study. The primary reason for this is that the variables it collects are all geared towards retirement studies. This can be seen as it is used in six of the seven aforementioned studies in the literature review, although some studies draw on a variety of sources for different measures. In addition, the one study that did not utilize the HRS dataset was focused on labor force participation rates as a whole instead of strictly retirement.

B. Sample Selection and Descriptive Statistics

The sample in this analysis is drawn from the full list of respondents in the HRS dataset who are part of Cohort 3, Cohort 4, or Cohort 5 and had not claimed Social Security benefits at the time of their first interview. Only those respondents who recorded a response for each of the variables used in this study during the first wave of their cohort's inception are used in this analysis. Further, all respondents and spouses of married respondents who provided an answer to a question that was represented in the dataset as a missing value (including a refusal to respond) for any of the variables required for this analysis have also been dropped from the analysis. Ultimately, these criteria result in 6,518 total observations. This includes 4,099 observations for married respondents (2,372 men and 1,727 women) and 2,419 unmarried respondents (843 men and 1,576 women).

Table 4 on page 33 represents the un-weighted descriptive statistics for all married respondents. Column 1 shows the results for all respondents, while Columns 2 and 3 represent both men and women respectively. All values except for claiming age are as of the first time each respondent was interviewed. The reason

for this is that the dependent variable, claiming age, is censored. This means that for a respondent who had not claimed by his or her first interview, later waves were examined in order to construct his or her claiming age. However, if the respondent did not claim by the time of his or her last interview then his or her claiming age had to be censored, which lists the respondents claiming age as "greater than his or her current age" in order to best represent this data. The average claiming age of married respondents is roughly 62.5 years old (censored), while the average full retirement age of these respondents is about 65.5 years old. A second important observation is that the censor variable applied to 32.5% of the respondents, meaning that nearly 1/3 of married respondents had not yet claimed at the end of their most recent interview. The demographics show that married respondents are primarily White (just less than 85%), with Black accounting for around 10.5% of respondents, and only 4.2% of respondents representing Other. Married respondents are also heavily centered in Cohort 3 (about 67%), while Cohort 4 represents 12.8% and Cohort 5 represents 20.2%.

Table 5 on page 35 shows the un-weighted descriptive statistics for all unmarried respondents. Column 1 includes all unmarried respondents, while Columns 2 and 3 split the respondents into men and women respectively.

CHAPTER FIVE

REGRESSION RESULTS – DETERMINING THE EFFECT OF A PERSON'S FRA ON HIS OR HER DECISION TO CLAIM SOCIAL SECURITY BENEFITS

This chapter discusses the results of the censored normal regression analysis. It is divided into three sections: the first section discusses the results for married respondents when spousal characteristics are not included in the regression, the second section discusses the results for married respondents when spousal characteristics are included in the regression, and the third section discusses the results for unmarried respondents.

A. Regression Results for Married Respondents without Spousal Characteristics

Table 6 on page 37 shows the weighted censored normal regression results for married respondents, not including spousal characteristics. Column 1 shows the results for all married respondents, while Columns 2 and 3 shows results for men and women respectively. The dependent variable in this regression is claiming age (measured in years) and is censored for those respondents who had not claimed at the end of their last interview. The results show that Full Retirement Age (FRA) is a significant variable and for every one-year increase in the FRA, respondents are likely to delay claiming by 0.95 years. However, this effect is only significant for women as they are found to delay claiming by 1.98 years for each yearly increase in FRA. Overall, these results agree with the original hypothesis that increases in FRA will result in significant increases to the claiming age of respondents, but it is troubling to find that FRA is not significant for men. While FRA was the focal

variable in this analysis there are a wide number of other variables that were also found to be significant in the regression found for married respondents without spousal characteristics.

A number of other independent variables were found to have a significant effect on the claiming age of respondents. For each one-year increase in the age of the respondent, his or her expected claiming age increased by 0.09 years. This effect was found to be significant for both men (0.08 yrs.) and women (0.13 yrs.). Married male respondents who reported as Other were found to claim 0.97 years earlier than white respondents. Education was also found to be a significant determinant of claiming age as a one-year increase in education was associated with a 0.09 year increase in claiming age (men 0.08 years, not significant for women).

Unlike Coile et al. (2002) and Coile and Gruber (2007), this regression did not find that wealth was a significant variable in determining the claiming age of married men. This may be the result of the inverse U-shaped effect that wealth has on delayed claiming that Coile et al. (2002) mentions. This implies that people with very low and very high wealth are likely to claim benefits as soon as they are eligible because poorer people need to supplement their income and extremely wealthy people have such significant streams of income that the benefits gained from delaying benefits are very small anyways. Conversely, those with medium wealth have sufficient wealth to delay claiming and still value the ability to gain DRCs by delaying until they reach or surpass their FRA.

For each additional $10,000 of income that a married male respondent earns he is found to claim 0.02 years later. Coile and Gruber (2007) also found that

expected wealth accrual from future work (i.e. income) was a significant variable, with higher levels of income causing married men to claim earlier, but this study found that higher levels of income resulted in later claiming.

All self-health variables were also found to be positive and significantly related to claiming age when compared against a response of poor: excellent health increased claiming age by 3.65 years (men 2.61 years, women 5.74 years), very good health increased claiming age by 3. 50 years (men 2.37 years, women 5.75 years), good health increased claiming age by 3.20 years (men 2.25 years, women 5.08 years), and fair health increased claiming age by 2.53 years (men 1.54 years, women 4.51 years). These results concur with Coile et al. (2002) as men with higher life expectancies were found to delay claiming longer than those with shorter life expectancies. In this case healthy men are representative of a longer life expectancy and worse self-health reports can be seen to cause decreases in claiming delays.

A respondents level of Social Security Wealth was found to have a significant negative effect on the claiming age of the respondent as every $10,000 increase in SS Wealth is associated with a 0.03 year earlier claiming age (men -0.05, not significant for women). Respondents who are receiving pension income are found to claim 0.48 years earlier than those who are not (only significant for men -0.73 years). In addition, a respondent who believes that his or her current health status limits his or her ability to work is found to claim benefits 0.67 years earlier than respondents who do not (men -0.84 years, not significant for women). For each one-percentage increase in the probability that the respondent will work to age 65, he or she will delay claiming by 0.01 years (men 0.01 years, women 0.01 years). That translates to

roughly a quarter of a year increase in claiming age for each 25-percentage point increase in the probability. Finally, respondents who are current smokers are found to claim 0.78 years earlier than those who are not (men -.74 years, women -.91 years).

B. Regression Results for Married Respondents with Spousal Characteristics

Table 7 on page 39 shows the weighted censored normal regression for married respondents, including their spousal characteristics. Column 1 shows results for all married respondents, while Columns 2 and 3 show results for men and women respectively. The dependent variable for this regression is claiming age (measured in years) and is censored for all respondents who have not claimed Social Security benefits at the end of their last interview. FRA was found to be significant for all respondents and results in a 0.89-year increase on claiming age for each one-year increase in the FRA of the respondent. FRA was found to only be significant for women in this regression, resulting in a 1.99-year increase in claiming age per each one-year increase in FRA. As a whole this regression confirms the hypothesis that increases in FRA will cause significant increases in the claiming age of respondents, but it is troubling to see that this did not hold for the regression run on men only.

When married men are examined with their spousal characteristics included the findings from this study disagree with those from Coile et al. (2002) and Coile and Gruber (2007). This study finds that neither wealth nor income is significant for married men when including spousal characteristics. However, while this study

disagrees with the findings in Coile et al. (2002) with regards to the significance of wealth, it does come to a similar conclusion with regards to married men's life expectancies. The self-health measures for married men including spousal characteristics are all significant and exhibit similar effects as those for married respondents without the inclusion of their spousal characteristics as the better the self-health the longer the delay in claiming. When spousal characteristics are included in the regression for married males, former male smokers are found to claim 0.31 years earlier than non-smokers.

Only two spousal variables were found to be significant variables in the determination of respondents claiming age for the regression of married respondents including spousal characteristics. These two variables were also only significant for men. However, spousal age was not one of them, resulting in a disagreement between this study and Coile et al. (2002), which found that spousal age had a significant positive relationship with claiming age. Spousal SS wealth was found to be significant for male respondents and resulted in a 0.04-year increase in the claiming age for every $10,000 increase in SS wealth. Also, married male respondents whose spouse's had RHI available to them were found to claim 0.35 years earlier than those who did not.

All other significant variables from the married regression that did not include spousal characteristics that went unmentioned in the above analysis were also found to be significant with similar coefficients for the regression run including spousal characteristics.

C. Regression Results for Unmarried Respondents

Table 8 on page 42 shows the weighted censored normal regression results for unmarried respondents. Column 1 shows the results for all unmarried respondents, while Columns 2 and 3 split these results into men and women respectively. The dependent variable for this regression is claiming age in years and is censored for those respondents who had not claimed at the end of their most recent interview. A one-year increase in the FRA of the respondent is found to result in a 0.85-year increase in the respondent's claiming age based on the regression for unmarried respondents. For men, the increase is found to be 1.05 years and for women the increase is found to be 0.68 years. This indicates that FRA is a significant variable for determining the claiming age of unmarried men, but not for determining the claiming age of married men. On the other hand, the coefficient for unmarried women is roughly three times lower than the value for married women, showing a large difference in the effects, although they still share the same sign. This agrees with the hypothesis of this analysis as increases in FRA are expected to result in significant increases in the claiming age of respondents.

A number of independent variables were found to have significant effects on the claiming age of respondents in the unmarried regression as well. A one-year increase in the age of a respondent was found to result in twice as large of an increase for unmarried men (0.23 years) compared with married men. For the first time Black respondents were found to claim 0.37 years earlier than white respondents (men -0.60 years, not significant for women). Unmarried male respondents of race Other were not found to have significantly different claiming

ages in comparison to similar white respondents in the same fashion as male married respondents. All self-health measures were significant and positive for unmarried respondents with slightly lower effects across the board (excellent 3.07 years, very good 2.62 years, good 2.33 years, fair 1.69 years) in comparison to married respondents. Conversely, the coefficients for unmarried men were found to have larger effects (excellent 2.98 years, very good 2.36 years, good 2.52 years, and fair 1.81 years) than married men while the coefficients for unmarried women were found to be around half (excellent 3.23 years, very good 2.86 years, good 2.27 years, fair 1.68 years) the coefficients for married women. This indicates that healthy men experience larger delays in claiming when they are unmarried as opposed to married men and healthy women experience larger delays in claiming when they are married as opposed to unmarried women. For every extra year of job experience unmarried male respondents are found to claim 0.03 years earlier, while no married respondents exhibit significant effects based on job experience. Predicted SS wealth is only significant for unmarried males (-0.06 years) whereas it is found to be significant for both all and male respondents who are married. Whether or not the respondent was receiving any pension income was found to be significant for unmarried respondents and about two times larger than the coefficient for married respondents (-1.14 years) with married and unmarried men experiencing similar effects, while unmarried women receiving pension incomes were found to have significant changes to claiming age (-1.26 years) and married women were not. Unmarried respondents had significant effects when they had RHI available to them after retirement (all 0.52 years, men 0.63 years, women 0.43

years) while it was not found significant for married respondents in any capacity. Also, unmarried respondents who believed that their current health status limited their ability to work experience slightly longer delays in claiming than that of married respondents (all -1.10 years, men -1.15 years), while unmarried women are significant (-0.99 years), but married women are not.

Once again, all other unmentioned variables that were found to be significant in the married regression that did not include spousal characteristics were also found to be significant with similar coefficients for the unmarried regression.

CHAPTER 6

CONCLUSION

A. Summary of Findings

This study uses panel data from the Health and Retirement Study to determine the effect of the changing Full Retirement Age on the decision to claim Social Security benefits. A major difference between this study and previous ones is that this study compares across genders and marital status.

This study finds a positive relationship between FRA and claiming age that indicates a slightly less than proportional increase in the claiming age per each yearly increase in the FRA of all respondents. No conclusion can be drawn regarding whether men or women's claiming decision is more greatly affected by changes in the FRA because married females exhibit large delays in claiming (married men are not found to be significantly affected by their FRA), while unmarried men exhibit larger delays in claiming than unmarried women. The higher the self-health report of a respondent, the longer his or her delay in claiming as both men and women show consistency and significance for these measures; this implies that longer life expectancy is associated with delayed claiming. This study also finds that higher self-reported probability of working to age 65 has a positive relationship with claiming age. Respondents who are current smokers are also found to claim about three-quarters of a year earlier than those who are not. Finally, unmarried respondents who believe that their health status limits their ability to work or who are currently receiving pension income are found to claim around a year earlier,

while respondents who have RHI available to them claim about half a year later than those who do not have the same characteristics.

B. Policy Implications

The significance of the FRA on respondents claiming decisions implies that policies aimed at raising the FRA will effectively delay claiming of Americans. As shown in Table 1 on page 31 current policy dictates a gradual increase in the FRA for eligible claimants up to those born in 1960. Therefore, if policymakers desire further increases in the claiming age it should be expected that further raising the FRA of future generations would result in slightly less than proportional increases in the claiming age of Americans. However, it must be acknowledged that raising the claiming age does not necessarily decrease the benefits paid out, as survivorship benefits exist for a number of family members including widows, divorced spouses, and minors.

C. Suggestions for Future Research

Future research on the FRA and its effect on claiming and the retirement decision should utilize the most recent data. Unfortunately, certain necessary variables did not have data points for Cohort 6, ruling out Cohort 6 for inclusion in this study. With the inclusion of Cohort 6 early results concerning the most recent switch in FRA to 66 years of age for those born between 1943-1954 will be analyzable and shed light on what the changes in the FRA will have on the claiming decision of the next decade of claimants. A second result of this is that the recent

recession effects from 2008 could not be examined by this study. It is likely that changes in claiming behavior would be observable during the recovery period that may have lasting effects.

Finally, it would also be advantageous to analyze the effect of the changing FRA on the retirement decision of Americans. Such a study may emulate the methods used in Blau and Goldstein (2009) and use similar methods to analyze a variety of different determinants for labor force participation rates (LFPR). Discoveries from studies focused on the effect of the FRA on the LFPR in America could help to illustrate ways to maintain the solvency of the Social Security System, as this is a chief concern for upcoming generations.

BIBLIOGRAPHY

Blau, David M. and Donna B. Gilleskie. "The Role of Retiree Health Insurance in the Employment Behavior of Older Men." *International Economic Review* 49, no. 2 (2008): 475-514

Blau, David M. and Ryan M. Goodstein. "Can Social Security Explain Trends in Labor Force Participation of Older Men in the United States?" *The Journal of Human Resources* 45, no. 2 (2009): 328-363

Chien, Sandy, Nancy Campbell, Orla Hayden, Michael Hurd, Regan Main, Josh Mallet, Craig Martin, Erik Meijer, Michael Moldoff, Susann Rohwedder, and Patricia St. Clair "RAND HRS Data Documentation, Version N." Labor & Population Program RAND Center for the Study of Aging (2014)

Coile, Courtney, Peter Diamond, Jonathan Gruber, and Alain Jousten "Delays in Claiming Social Security Benefits." *Journal of Public Economics* 84, no. 3 (2002): 357-385

Coile, Courtney and Jonathan Gruber. "Future Social Security Entitlements and the Retirement Decision." *The Review of Economics and Statistics* 89, no. 3 (2007): 234-246

French, Eric and John B. Jones. "The Effects of Health Insurance and Self-Insurance on Retirement Behavior." *Econometrica* 79, no. 3 (2011): 693-732

Gustman, Alan L. and Thomas L. Steinmeier. "Retirement in Dual-Career Families: A Structural Model." *Journal of Labor Economics* 18, no. 3 (2000): 503-545
"The Social Security Entitlement Age in a Structural Model of Retirement and Wealth." *Journal of Public Economics* 89, no. 2-3 (2005): 441-463

Handwerker, Elizabeth W. "Delaying Retirement to Pay for College." *Industrial and Labor Relations Review* 64, no. 5 (2011): 921-948

Imrohoroglu, Selahattin, and Sagiri Kitao. "Social Security Reforms: Benefit Claiming, Labor Force Participation, and Long-run Sustainability." *American Economic Journal: Macroeconomics* 4, no. 3 (2012): 96-127

Social Security Administration. "Understanding the Benefits." Social Security Administration. January 1, 2014. www.ssa.gov/pubs/EN-05-10024.pdf

Warner, David F., Mark D. Hayward, and Melissa A. Hardy. "The Retirement Life Course in America at the Dawn of the Twenty-First Century." *Population Research and Policy Review* 29, no. 6 (2010): 893-919

Table 1: Age to Receive Full Social Security Benefits

Year of Birth	*Full Retirement Age*
1937 or earlier	65
1938	65 and 2 months
1939	65 and 4 months
1940	65 and 6 months
1941	65 and 8 months
1942	65 and 10 months
1943-1954	66
1955	66 and 2 months
1956	66 and 4 months
1957	66 and 6 months
1958	66 and 8 months
1959	66 and 10 months
1960 and later	67

Source: ssa.gov

Table 2: Delayed Retirement Credit Breakdown

Year of birth	**Credit per year**
1917-24	3.0%
1925-26	3.5%
1927-28	4.0%
1929-30	4.5%
1931-32	5.0%
1933-34	5.5%
1935-36	6.0%
1937-38	6.5%
1939-40	7.0%
1941-42	7.5%
1943 and later	8.0%

Note: Persons born on January 1 of any year should refer to the credit percentage for the previous year.

Source: ssa.gov

Table 3: Wave Collections Based on Cohort

Wave	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	Cohort 6
	HRS	**AHEAD**	**CODA**	**WB**	**EBB**	**MBB**
1	1992	1992	n/a	n/a	n/a	n/a
2	1994	1993	n/a	n/a	n/a	n/a
3	1996	1995	n/a	n/a	n/a	n/a
4	1998	1998	1998	1998	n/a	n/a
5	2000	2000	2000	2000	n/a	n/a
6	2002	2002	2002	2002	n/a	n/a
7	2004	2004	2004	2004	2004	n/a
8	2006	2006	2006	2006	2006	n/a
9	2008	2008	2008	2008	2008	n/a
10	2010	2010	2010	2010	2010	2010
11	2012	2012	2012	2012	2012	2012

Source: RAND HRS Codebook

Table 4: Unweighted Descriptive Stats for Married Respondents

	(1) All		(2) Men		(3) Women	
	mean	sd	mean	sd	mean	sd
Claiming Age (yrs.)	62.508	(3.373)	62.603	(3.195)	62.378	(3.600)
Censor	0.332	(0.471)	0.300	(0.458)	0.375	(0.484)
Full Retirement Age	65.487	(0.428)	65.457	(0.433)	65.527	(0.419)
Female	0.421	(0.494)	0.000	(0.000)	1.000	(0.000)
Age	54.629	(3.185)	55.119	(3.297)	53.955	(2.891)
White	0.857	(0.350)	0.855	(0.353)	0.861	(0.346)
Black	0.101	(0.301)	0.100	(0.301)	0.102	(0.303)
Other	0.042	(0.200)	0.045	(0.208)	0.037	(0.189)
Education (yrs.)	13.182	(2.774)	13.258	(2.908)	13.079	(2.577)
No. Children	3.054	(1.738)	3.051	(1.760)	3.059	(1.707)
Wealth ($100,000)	3.782	(8.507)	3.764	(8.435)	3.806	(8.607)
Income ($10,000)	9.637	(8.969)	9.818	(9.727)	9.387	(7.806)
Self Health Excellent	0.269	(0.444)	0.275	(0.447)	0.261	(0.439)
Self Health Very Good	0.342	(0.475)	0.324	(0.468)	0.367	(0.482)
Self Health Good	0.283	(0.451)	0.293	(0.455)	0.269	(0.444)
Self Health Fair	0.089	(0.284)	0.091	(0.288)	0.085	(0.278)
Self Health Poor	0.017	(0.129)	0.016	(0.126)	0.018	(0.133)
Job Experience (yrs.)	31.955	(9.128)	35.767	(6.393)	26.720	(9.711)
Predicted SS Wealth ($10,000)	11.978	(4.616)	13.399	(4.043)	10.000	(4.635)
Receiving Pension	0.077	(0.266)	0.107	(0.309)	0.035	(0.185)
RHI Availability	0.355	(0.479)	0.441	(0.497)	0.238	(0.426)
Health Limits Work	0.091	(0.287)	0.092	(0.289)	0.089	(0.284)
Probability Work to 65	26.013	(33.107)	31.462	(35.314)	18.528	(28.149)
Current Smoker	0.202	(0.402)	0.226	(0.418)	0.170	(0.376)
Former Smoker	0.384	(0.486)	0.450	(0.498)	0.294	(0.456)
Fin. Plan. Horizon: Month*	0.110	(0.312)	0.105	(0.307)	0.115	(0.319)
Fin. Plan. Horizon: Year*	0.079	(0.270)	0.073	(0.261)	0.087	(0.283)
Fin. Plan. Horizon: Few Years*	0.314	(0.464)	0.305	(0.460)	0.327	(0.469)
Fin. Plan Horizon: 5-10 Years*	0.393	(0.488)	0.406	(0.491)	0.375	(0.484)
Fin. Plan Horizon: 10 Plus Years*	0.104	(0.305)	0.110	(0.313)	0.096	(0.294)
Cohort 3	0.650	(0.477)	0.656	(0.475)	0.643	(0.479)
Cohort 4	0.137	(0.344)	0.133	(0.339)	0.143	(0.350)
Cohort 5	0.213	(0.409)	0.212	(0.409)	0.214	(0.410)

Spousal Characteristics						
Age	52.874	(4.988)	51.320	(5.056)	55.008	(4.009)
White	0.860	(0.347)	0.863	(0.344)	0.857	(0.350)
Black	0.101	(0.301)	0.098	(0.297)	0.105	(0.306)
Other	0.039	(0.193)	0.040	(0.195)	0.038	(0.190)
Education (yrs.)	13.198	(2.679)	13.189	(2.460)	13.209	(2.954)
Self Health Excellent	0.273	(0.445)	0.285	(0.452)	0.255	(0.436)
Self Health Very Good	0.340	(0.474)	0.354	(0.478)	0.322	(0.467)
Self Health Good	0.276	(0.447)	0.254	(0.436)	0.307	(0.461)
Self Health Fair	0.091	(0.288)	0.088	(0.284)	0.096	(0.294)
Self Health: Poor	0.020	(0.138)	0.019	(0.136)	0.020	(0.141)
Job Experience (yrs.)	29.685	(9.793)	25.444	(9.305)	35.509	(7.078)
Predicted SS Wealth ($10,000)	11.248	(4.738)	9.634	(4.526)	13.465	(4.080)
Receiving Pension	0.061	(0.239)	0.023	(0.149)	0.113	(0.317)
RHI Availability	0.309	(0.462)	0.228	(0.419)	0.421	(0.494)
Health Limits Work	0.098	(0.298)	0.091	(0.287)	0.109	(0.312)
Probability Work to 65	23.121	(31.092)	18.398	(27.361)	29.609	(34.557)
Current Smoker	0.207	(0.405)	0.197	(0.398)	0.220	(0.414)
Former Smoker	0.359	(0.480)	0.290	(0.454)	0.453	(0.498)
Plan to Retire: Month*	0.109	(0.312)	0.121	(0.326)	0.094	(0.292)
Fin. Plan. Horizon: Year*	0.085	(0.279)	0.087	(0.282)	0.082	(0.275)
Fin. Plan Horizon: Few Years*	0.308	(0.462)	0.310	(0.463)	0.306	(0.461)
Fin. Plan. Horizon: 5-10 Years*	0.386	(0.487)	0.376	(0.485)	0.400	(0.490)
Fin. Plan Horizon: 10+ Years*	0.111	(0.314)	0.106	(0.308)	0.118	(0.323)
Cohort	3.767	(1.119)	3.909	(1.183)	3.572	(0.992)
N	4099		2372		1727	

Notes: sd – standard deviation

- Fin. Plan. – Financial Planning

Table 5: Descriptive Statistics for Unmarried Respondents

	(1) All		(2) Men		(3) Women	
	mean	sd	mean	sd	mean	sd
Claiming Age (yrs.)	62.147	(3.385)	62.053	(3.327)	62.198	(3.416)
Censor	0.341	(0.474)	0.377	(0.485)	0.322	(0.467)
Full Retirement Age (yrs.)	65.509	(0.439)	65.525	(0.435)	65.501	(0.441)
Female	0.652	(0.477)	0.000	(0.000)	1.000	(0.000)
Age	54.772	(2.923)	54.578	(2.838)	54.876	(2.963)
White	0.683	(0.465)	0.751	(0.433)	0.647	(0.478)
Black	0.266	(0.442)	0.209	(0.407)	0.297	(0.457)
Other	0.051	(0.220)	0.040	(0.197)	0.056	(0.231)
Education (yrs.)	12.869	(2.929)	12.824	(3.218)	12.893	(2.763)
No. Children	2.497	(1.994)	2.336	(2.018)	2.584	(1.976)
Wealth ($100,000)	1.808	(6.463)	2.517	(10.095)	1.430	(3.037)
Income ($10,000)	4.767	(5.941)	5.964	(7.708)	4.126	(4.609)
Self Health Excellent	0.234	(0.424)	0.261	(0.439)	0.220	(0.414)
Self Health Very Good	0.285	(0.452)	0.302	(0.460)	0.276	(0.447)
Self Health Good	0.295	(0.456)	0.284	(0.451)	0.301	(0.459)
Self Health Fair	0.147	(0.354)	0.121	(0.326)	0.161	(0.368)
Self Health Poor	0.038	(0.191)	0.032	(0.176)	0.041	(0.199)
Job Experience	30.076	(9.875)	33.134	(8.663)	28.440	(10.095)
Predicted SS Wealth ($10,000)	11.166	(4.703)	11.887	(4.240)	10.777	(4.892)
Receiving Pension	0.087	(0.282)	0.107	(0.309)	0.076	(0.265)
RHI Availability	0.363	(0.481)	0.376	(0.485)	0.356	(0.479)
Health Limits Work	0.106	(0.308)	0.108	(0.310)	0.105	(0.306)
Probability Work to 65	32.777	(36.166)	34.081	(37.239)	32.079	(35.570)
Current Smoker	0.322	(0.467)	0.364	(0.481)	0.299	(0.458)
Former Smoker	0.302	(0.459)	0.339	(0.474)	0.282	(0.450)
Fin. Plan. Horizon: Month*	0.206	(0.404)	0.184	(0.388)	0.218	(0.413)
Fin. Plan. Horizon: Year*	0.099	(0.298)	0.113	(0.316)	0.091	(0.288)
Fin. Plan. Horizon: Few Years*	0.285	(0.451)	0.273	(0.446)	0.291	(0.454)
Fin. Plan. Horizon: 5-10 Years*	0.302	(0.459)	0.324	(0.468)	0.291	(0.454)
Fin. Plan. Horizon: 10+ Years*	0.108	(0.311)	0.107	(0.309)	0.109	(0.312)
Cohort 3	0.594	(0.491)	0.581	(0.494)	0.601	(0.490)
Cohort 4	0.153	(0.360)	0.163	(0.369)	0.148	(0.356)
Cohort 5	0.253	(0.435)	0.256	(0.437)	0.251	(0.434)

N	2419	843	1576

Notes: sd – Standard Deviation

*Fin. Plan. – Financial Planning

Table 6: Weighted Censored Normal Regression – Married – Without Spousal

VARIABLES	(1) All	(2) Men	(3) Women
Full Retirement Age (yrs.)	0.95***	0.31	1.98***
	(0.180)	(0.202)	(0.342)
Female	0.19		
	(0.158)		
Age	0.09***	0.08**	0.13**
	(0.029)	(0.036)	(0.051)
Black	0.10	-0.06	0.19
	(0.265)	(0.336)	(0.421)
Other	-0.60	-0.97*	0.28
	(0.493)	(0.584)	(0.767)
Education (yrs.)	0.09***	0.08***	0.09
	(0.028)	(0.031)	(0.056)
No. Children	-0.00	0.04	-0.07
	(0.035)	(0.043)	(0.058)
Wealth ($100,000)	0.00	0.00	0.01
	(0.010)	(0.014)	(0.015)
Income ($10,000)	0.01	0.02*	0.00
	(0.010)	(0.012)	(0.017)
Self Health Excellent	3.65***	2.61***	5.74***
	(0.729)	(0.673)	(1.359)
Self Health Very Good	3.50***	2.37***	5.75***
	(0.722)	(0.668)	(1.341)
Self Health Good	3.20***	2.25***	5.08***
	(0.715)	(0.664)	(1.326)
Self Health Fair	2.53***	1.54**	4.51***
	(0.752)	(0.703)	(1.390)
Job Experience (yrs.)	-0.00	-0.02	-0.00
	(0.009)	(0.016)	(0.012)
Predicted SS Wealth ($10,000)	-0.03*	-0.05**	-0.03
	(0.018)	(0.023)	(0.029)
Receiving Pension	-0.48**	-0.73***	0.56
	(0.191)	(0.184)	(0.613)
RHI Availability	0.03	-0.03	0.08
	(0.135)	(0.150)	(0.265)
Health Limits Work	-0.67***	-0.84***	-0.37
	(0.252)	(0.307)	(0.403)
Probability Work to 65	0.01***	0.01***	0.01***
	(0.002)	(0.002)	(0.004)
Current Smoker	-0.78***	-0.74***	-0.91***
	(0.177)	(0.220)	(0.275)
Former Smoker	-0.22	-0.26	-0.10
	(0.142)	(0.173)	(0.234)

Fin. Plan. Horizon: Year*	-0.27	-0.67*	0.45
	(0.330)	(0.381)	(0.540)
Fin. Plan. Horizon: Few Years*	-0.31	-0.14	-0.50
	(0.228)	(0.268)	(0.367)
Fin. Plan. Horizon: 5-10 Years*	-0.26	-0.12	-0.57
	(0.230)	(0.266)	(0.385)
Fin. Plan. Horizon: 10 Plus Years*	-0.11	-0.04	-0.05
	(0.298)	(0.340)	(0.535)
Female = o,		-	-
Constant	-7.04	36.95**	-78.24***
	(12.854)	(14.508)	(24.320)
Lamda	2.80***	2.63***	2.99***
	(0.075)	(0.088)	(0.128)
Observations	4,018	2,354	1,664

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Coefficients shown
*Fin. Plan. – Financial Planning

Table 7: Weighted Censored Normal Regression – Married with Spousal

VARIABLES	(1) All	(2) Men	(3) Women
Full Retirement Age (yrs.)	0.89***	0.31	1.99***
	(0.182)	(0.208)	(0.351)
Female	0.22		
	(0.197)		
Age	0.11***	0.10***	0.12**
	(0.033)	(0.040)	(0.057)
Black	-0.49	-0.94	-0.21
	(1.239)	(1.111)	(2.138)
Other	-0.72	-1.21*	0.79
	(0.593)	(0.667)	(0.870)
Education (yrs.)	0.07**	0.07**	0.06
	(0.030)	(0.032)	(0.063)
No. Children	0.00	0.05	-0.05
	(0.035)	(0.044)	(0.057)
Wealth ($100,000)	0.00	0.00	0.01
	(0.010)	(0.013)	(0.015)
Income ($10,000)	0.01	0.01	0.00
	(0.010)	(0.012)	(0.018)
Self Health Excellent	3.69***	2.58***	5.92***
	(0.742)	(0.667)	(1.342)
Self Health Very Good	3.53***	2.37***	5.91***
	(0.736)	(0.658)	(1.321)
Self Health Good	3.23***	2.20***	5.24***
	(0.728)	(0.658)	(1.309)
Self Health Fair	2.57***	1.49**	4.84***
	(0.758)	(0.697)	(1.350)
Job Experience (yrs.)	-0.01	-0.02	-0.00
	(0.009)	(0.016)	(0.012)
Predicted SS Wealth ($10,000)	-0.04**	-0.05**	-0.03
	(0.018)	(0.022)	(0.030)
Receiving Pension	-0.42**	-0.64***	0.63
	(0.193)	(0.188)	(0.610)
RHI Availability	0.04	-0.03	0.11
	(0.134)	(0.150)	(0.257)
Health Limits Work	-0.69***	-0.87***	-0.30
	(0.254)	(0.311)	(0.388)
Probability Work to 65	0.01***	0.01***	0.01***
	(0.002)	(0.002)	(0.004)
Current Smoker	-0.76***	-0.77***	-0.89***
	(0.193)	(0.242)	(0.307)
Former Smoker	-0.24	-0.31*	-0.07
	(0.144)	(0.174)	(0.244)

Fin. Plan. Horizon: Year*	-0.28	-0.70*	0.26
	(0.321)	(0.372)	(0.519)
Fin. Plan. Horizon: Few Years*	-0.32	-0.14	-0.62*
	(0.229)	(0.277)	(0.358)
Fin. Plan. Horizon: 5-10 Years*	-0.29	-0.13	-0.71*
	(0.229)	(0.271)	(0.371)
Fin. Plan. Horizon: 10 Plus Years*	-0.12	-0.06	-0.16
	(0.300)	(0.350)	(0.527)
Spousal Characteristics			
Age (yrs.)	-0.02	-0.03	0.02
	(0.018)	(0.020)	(0.035)
Black	0.64	0.94	0.39
	(1.264)	(1.117)	(2.159)
Other	0.18	0.69	-1.18
	(0.525)	(0.609)	(0.809)
Education (yrs.)	0.04	0.03	0.04
	(0.029)	(0.035)	(0.048)
Self Health Excellent	0.33	0.29	0.54
	(0.696)	(0.882)	(1.119)
Self Health Very Good	0.41	0.32	0.64
	(0.689)	(0.876)	(1.108)
Self Health Good	0.58	0.64	0.71
	(0.689)	(0.875)	(1.104)
Self Health Fair	0.38	0.05	1.06
	(0.704)	(0.888)	(1.130)
Job Experience (yrs.)	-0.01	-0.00	-0.01
	(0.008)	(0.009)	(0.018)
Predicted SS Wealth ($10,000)	0.02	0.04*	-0.01
	(0.017)	(0.020)	(0.031)
Receiving Pension	-0.33	-0.19	-0.39
	(0.229)	(0.446)	(0.274)
RHI Availability	-0.21	-0.35**	-0.01
	(0.138)	(0.173)	(0.219)
Health Limits Work	0.27	0.31	0.11
	(0.216)	(0.264)	(0.344)
Probability Work to 65	0.00*	0.00	0.00
	(0.002)	(0.003)	(0.003)
Current Smoker	-0.11	-0.11	-0.06
	(0.184)	(0.216)	(0.337)
Former Smoker	0.04	0.12	0.01
	(0.143)	(0.166)	(0.252)
Fin. Plan. Horizon: Year*	0.09	0.07	0.17
	(0.294)	(0.346)	(0.491)
Fin. Plan. Horizon: Few Years*	0.13	0.12	0.12

	(0.243)	(0.297)	(0.412)
Fin. Plan Horizon: 5-10 Years*	0.17	0.20	0.13
	(0.239)	(0.294)	(0.399)
Fin. Plan. Horizon: 10+ Years*	0.15	0.24	-0.12
	(0.295)	(0.367)	(0.480)
Constant	-4.07	36.04**	-80.74***
	(13.044)	(14.983)	(24.999)
Lamda	2.79***	2.60***	2.97***
	(0.075)	(0.087)	(0.127)
Observations	4,018	2,354	1,664

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Coefficients shown
* Fin. Plan. – Financial Planning

Table 8: Weighted Censored Normal Regression – Unmarried

VARIABLES	(1) All	(2) Men	(3) Women
Full Retirement Age (yrs.)	0.85***	1.05***	0.68**
	(0.233)	(0.345)	(0.302)
Female	-0.26		
	(0.177)		
Age (yrs.)	0.16***	0.23***	0.12**
	(0.038)	(0.061)	(0.049)
Black	-0.37*	-0.60*	-0.29
	(0.208)	(0.358)	(0.261)
Other	0.14	-1.06	0.51
	(0.396)	(0.708)	(0.440)
Education (yrs.)	0.09**	0.10**	0.07
	(0.035)	(0.052)	(0.047)
No. Children	-0.01	0.02	0.00
	(0.045)	(0.074)	(0.059)
Wealth ($100,000)	0.00	-0.00	0.03
	(0.008)	(0.006)	(0.030)
Income ($10,000)	0.03	0.05***	-0.01
	(0.017)	(0.015)	(0.021)
Self Health Excellent	3.07***	2.98***	3.23***
	(0.522)	(0.816)	(0.668)
Self Health Very Good	2.62***	2.36***	2.86***
	(0.521)	(0.823)	(0.655)
Self Health Good	2.33***	2.52***	2.27***
	(0.516)	(0.806)	(0.656)
Self Health Fair	1.69***	1.81**	1.68**
	(0.524)	(0.798)	(0.670)
Job Experience (yrs.)	-0.00	-0.03*	0.01
	(0.010)	(0.018)	(0.011)
Predicted SS Wealth ($10,000)	-0.02	-0.06*	-0.00
	(0.021)	(0.033)	(0.028)
Receiving Pension	-1.14***	-0.74*	-1.26***
	(0.277)	(0.404)	(0.374)
RHI Availability	0.52***	0.63**	0.45**
	(0.175)	(0.271)	(0.227)
Health Limits Work	-1.10***	-1.15**	-0.99***
	(0.295)	(0.477)	(0.371)
Probability Work to 65	0.01***	0.01***	0.01***
	(0.002)	(0.004)	(0.003)
Current Smoker	-0.81***	-0.61*	-0.92***
	(0.201)	(0.314)	(0.262)
Former Smoker	-0.01	0.23	-0.12
	(0.194)	(0.316)	(0.240)

Fin. Plan. Horizon: Year*	-0.51	-1.05**	-0.03
	(0.315)	(0.483)	(0.424)
Fin. Plan. Horizon: Few Years*	-0.15	-0.63	0.23
	(0.247)	(0.432)	(0.302)
Fin. Plan. Horizon: 5-10 Years*	-0.09	-0.61	0.33
	(0.246)	(0.421)	(0.303)
Fin. Plan. Horizon: 10 Plus Years*	0.21	-0.01	0.44
	(0.302)	(0.515)	(0.371)
Constant	-4.21	-20.32	8.81
	(16.627)	(24.573)	(21.595)
	2.93***	2.69***	3.03***
	(0.088)	(0.143)	(0.108)
Observations	2,363	829	1,534

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Coefficients shown
* Fin. Plan – Financial Planning