

# BEHAVIORAL EFFECTS OF SOCIAL SECURITY POLICIES ON BENEFIT CLAIMING, RETIREMENT AND SAVING

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The central purpose of this paper is to formulate and estimate a retirement model that also includes claiming of Social Security benefits as an outcome, and to use the model to inquire about the effects of various proposals to change the Social Security system. The forerunner to this work is a retirement model previously built to capture the spike in retirement at the Social Security early entitlement age and the wide variation in wealth holdings, even among individuals with similar lifetime earnings. We use the updated model to investigate the effects of several potential changes in the Social Security system, including changes in the early entitlement and normal retirement ages and the elimination of the payroll tax for individuals past the normal retirement age.

The model is estimated for a sample of two person households from the original Health and Retirement Study (HRS). As shown in Figure 1, for the husbands the model tracks the main retirement spike at age 62 fairly well, in spite of the fact that the Social Security actuarial adjustments at that age are generally at least actuarially fair. The spike at age 65 is less well reproduced, probably because the model does not contain the incentives related to Medicare eligibility at that age.

Figure 2 shows that the model tends to underestimate Social Security claiming relative to observed claiming. Note that the estimation of the model does not use any claiming information, so that the simulated claiming behavior in the model is inferred from parameters estimated on the basis of retirement patterns.

The underestimate of claiming leads one to ask whether potential modifications might be able to bridge that gap, and what those modifications might be. Three modifications are considered in the paper. First, individuals might be expecting the currently legislated benefits to be cut in the future in response to the looming insolvency of the system. Secondly, they might be using an interest rate that is higher than the long-run rate used in the model. And third, the husband might not be taking into account survivor benefits that will accrue to the wife after he dies. Figure 3 simulates the effects of these modifications.

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The real issue is whether these modifications affect the ability of the model to predict the results of various changes to the Social Security system. Figures 4-6 look at the results for three potential changes: an increase in the early entitlement age to 64, a change in the full retirement age to 67 (it was 65 for most of this sample), and an elimination of the payroll tax after the full retirement age. These figures indicate that the original model and the modifications yield generally similar results, especially for the increase in the early entitlement age and the payroll tax elimination. For the increase in the full retirement age, the main discrepancy is with the modification involving reduced expected benefits.

Consider first increasing the early entitlement age to 64. The base case and all three modifications of the model are in remarkable agreement: full-time employment will be little affected before age 62 or after age 64, and at ages 62 and 63 full-time employment will increase by approximately 12 percentage points. Essentially, the spike in retirement from full-time work, which presently occurs at age 62, would be shifted to age 64 by this change.

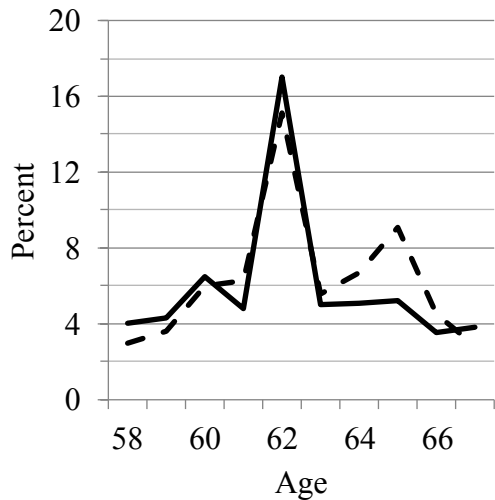
Next, consider increasing the normal retirement age to 67, whereas it was age 65 for most of the individuals in the sample. These simulations show two things: the increases in full-time work caused by increasing the normal retirement age are substantially less than the increases caused by raising the early entitlement age, and the impact of raising the normal retirement age is generally positive.

Lastly, consider the results of simulations for eliminating the payroll tax after the normal retirement age. These simulations all show a reduction in full-time work of between 0.5 and 1 percent between age 60 and age 64 and an increase in full-time work of between 1 and 2 percent at age 65 and thereafter. Overall, the largest retirement changes by far occur with extending the early entitlement age, but the largest changes in the system's funding probably occur with increasing the full retirement age.

A recurring theme of this research is that in designing policies, one should be cognizant of the differences within the population, which imply that policies may have different impacts on different parts of the population. For instance, individuals with high discount rates may be sharply affected by an increase in the early entitlement age, but individuals with low discount rates may delay claiming anyway. Higher future medical expenses may induce those with low discount rates to save more and work longer, but those with high discount rates may simply tighten their belts and rely on whatever welfare programs are available in response to large medical bills. We should recognize these differences and build them into the models we use to gauge the effects of policies.

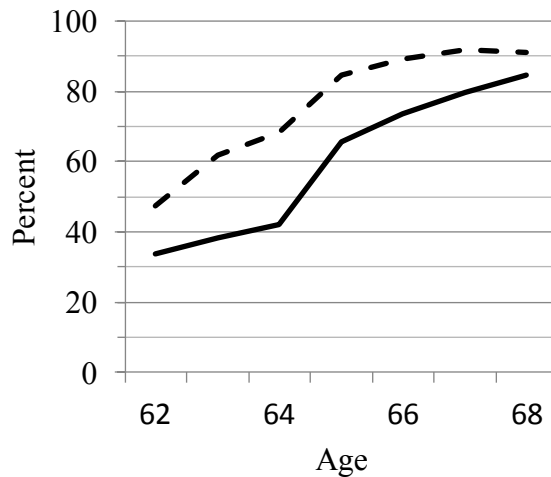
In sum, this paper has specified three behavioral variants of a structural model of retirement and saving to bring predicted Social Security claiming rates closer to the rates observed in the data. Behavioral responses to increasing early entitlement age and eliminating the payroll tax are not affected by the behavioral variant used. Predicted effects of increasing the normal retirement age exhibit more sensitivity. Heterogeneity shapes the responses to these policy changes.

Figure 1  
Retirements from Full-Time Work



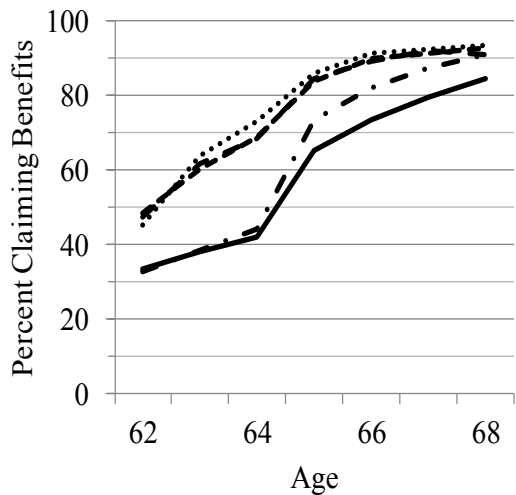
— Simulated - - Observed

Figure 2  
Percent Claiming Social Security Benefits



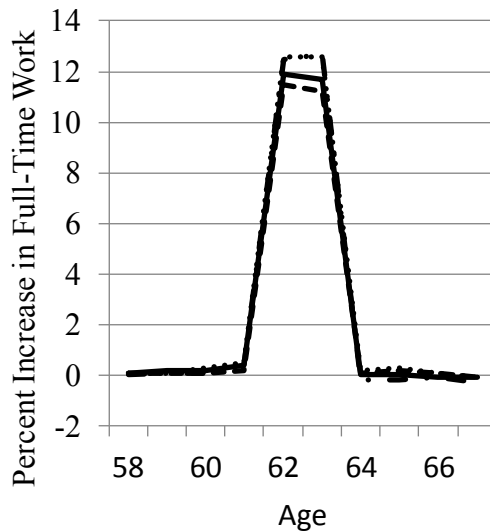
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Figure 3  
Simulations with Modified Models

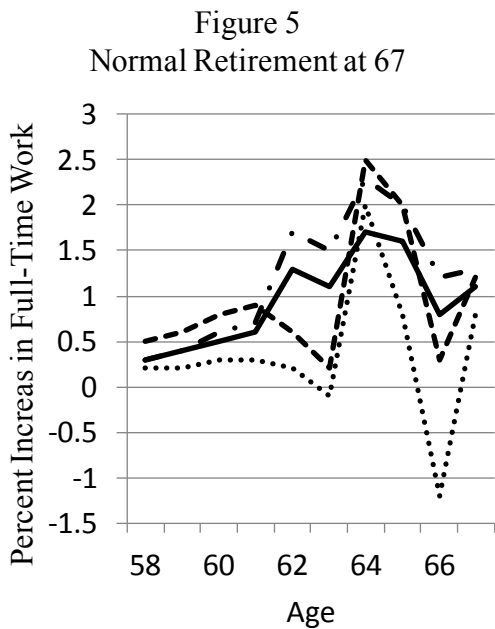


— Simulated - - Observed  
 ..... Insolvency - - - Returns  
 - · - Survivor

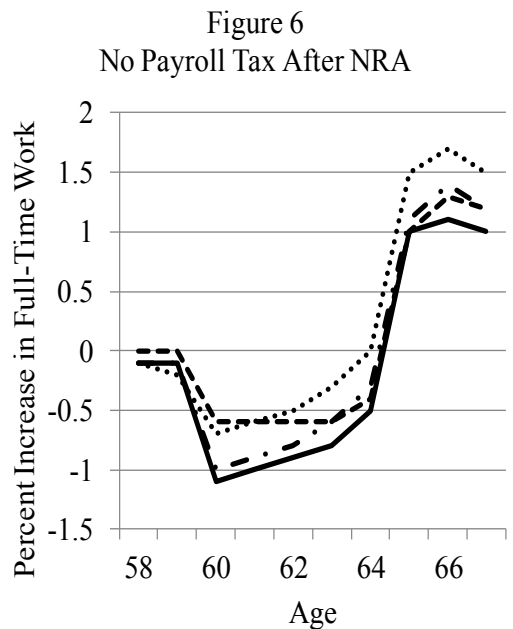
Figure 4  
Early Entitlement Set to 64



— Base ..... Insolvency  
 - - - Returns - · - Survivor



— Base      ····· Insolvency  
 - - - Returns      - · - Survivor



— Base      ····· Insolvency  
 - - - Returns      - · - Survivor

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