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Gary S. Fields

Cornell University, gsf2@cornell.edu

Olivia S. Mitchell

Cornell University

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Restructuring Social Security: How Will Retirement Ages Respond?

Abstract

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Keywords

Social Security, retirement, retirement patterns, work incentives

Disciplines

Labor Economics | Labor Relations | Social Policy

Comments

Required Publisher Statement

Fields, G. S. "Restructuring Social Security: How Will Retirement Ages Respond?" with Olivia S. Mitchell, in Steven Sandell, ed., *The Problem Isn't Age: Work and Older Americans*. Copyright © 1987 by the author(s). All rights reserved. Reproduced with permission of [ABC-CLIO, LLC](#), Santa Barbara, CA.

Suggested Citation

Fields, G. S., & Mitchell, O. S. (1987). Restructuring Social Security: How will retirement ages respond? [Electronic version]. In S. H. Sandell (Ed.), *The problem isn't age: Work and older Americans* (pp. 192-205). New York, NY: Praeger Publishers, Inc.

Restructuring Social Security: How Will Retirement Ages Respond?

GARY S. FIELDS AND OLIVIA S. MITCHELL

Budgetary pressures on the Social Security system have increased in recent years, prompting a variety of proposals to restructure the U.S. retirement income program. Most of these proposals ignore the possibility that the retirement patterns of older workers are likely to respond to changes in the incentives to retire. This chapter presents two important pieces of information for policy-makers. First, we provide previously unavailable evidence on how changes in the structure of Social Security benefits would alter the economic incentives to retire at different ages. Second, we compute how retirement patterns would change in response to altered incentives to work at later ages.¹

The first section, below, outlines the present structure of Social Security and indicates how benefits will change if a worker postpones retirement to a later age. The second section addresses the question of how proposed reforms would alter the structure of Social Security benefits. The third section poses the question: How do retirement ages depend on Social Security, private pension benefits, and earnings? To answer this question we estimate retirement parameters using data from the Longitudinal Retirement History Survey. The fourth section then employs these estimates to evaluate how retirement ages might be expected to change if the various Social Security reforms described above were to be implemented. The last section summarizes the policy implications of our research.

THE PRESENT STRUCTURE OF SOCIAL SECURITY BENEFITS

This section examines the Social Security components of the older worker's income opportunity set. Our goals here are to quantify initial retirement benefits and to explore how benefits increase as retirement is postponed.

The formulas we describe below are for a worker who turned 60 on January 1, 1982, because the sample we worked with was constructed for people who reached 62 in 1982. The formulas are similar but not identical for people born in other years.²

Social Security Benefit Determination for a Worker Retiring in 1982

The Social Security Administration has changed its benefit formulas many times over the years. The current system, for all its complexity, is a much more streamlined structure than was the case previously. There are three steps used in computing how much an eligible worker will receive in annual Social Security benefits (explained in detail below). First, the Social Security Administration summarizes each worker's lifetime earnings by computing a number known as the Average Indexed Monthly Earnings (AIME). Second, a formula is applied to this earnings measure to come up with the Primary Insurance Amount (PIA). Third and finally, the Social Security Administration determines the individual's actual benefits based on the Primary Insurance Amount and the age at which he or she files for Social Security benefits. Throughout this paper, we call this the "age of retirement."

Step 1: Computing the Average Indexed Monthly Earnings

In order to determine a worker's AIME, the Social Security office compiles annual earnings (up to the Social Security tax ceiling) for each year between 1951 and the year of retirement. The earnings record up to age 60 must then be converted to inflation-adjusted or real dollars, by dividing through by a wage index devised by the Social Security Administration. For a worker who turned age 60 in 1982, the 28 years of highest earnings are then averaged. The final product of this calculation, in monthly terms, is the AIME.

Step 2: Computing the Primary Insurance Amount

A worker's Primary Insurance Amount is determined by a complex formula based on the AIME. The higher a worker's AIME, the higher the PIA.

Step 3: Computing the Worker's Annual Benefit Amount

The final step in determining Social Security benefits involves computing an individual's retirement benefits as a function of the PIA and age of retirement. In general, no benefits are provided at ages *younger than 62*, so that the benefit received is zero until age 62 for a worker who leaves the work force at ages 60 and 61. In the case of a worker filing for benefits *between ages 62 and 64*, the government applies an early retirement reduction factor, so that the PIA is reduced by 6.67 percent for every year under age 65. For instance, someone retiring at age 62 would receive the PIA times a multiple of 80 percent (or .80), computed by multiplying 6.67 percent times three years.

Benefits for a 65-year-old retiree are exactly equal to the PIA, so the multiple applied at age 65 is effectively 100 percent (or 1.0). A worker waiting to retire until *after age 65* receives a delayed retirement credit, which increases the PIA multiple by 3 percent for each year after age 65.³ For example, someone retiring at age 68 receives a Social Security benefit that is 109 percent of (or 1.09 times) his or her PIA.

The preceding calculations refer to a retiree's first-year benefits. In subsequent years, benefits increase with inflation.

**Social Security Benefit Determination for a Worker
Deferring Retirement Until After 1982**

A worker who is eligible to retire but postpones retirement will receive higher Social Security benefits when he or she eventually leaves the labor force. This occurs for several reasons. First, current regulations allow earnings after age 60 to replace lower-earnings years in the AIME computations described above. Since the Social Security earnings ceiling has increased rapidly in the last decade, income earned later in life will raise Average Indexed Monthly

Earnings. In addition, earnings after age 60 are not divided by the wage-indexation series. Consequently, an individual receiving wage increases due to an inflation adjustment will have a higher monthly earnings figure and thus higher benefits.

When earnings increase in this way, the worker's PIA will also rise using the formula given above. In addition, a higher earnings figure also entitles the worker's spouse to higher benefits, if the spouse receives benefits based on the primary worker's record.⁴ When there is no spouse, or the spouse receives benefits based on his or her own earnings, this effect is not relevant.

Finally, when a worker postpones retirement, the multiple used to compute benefits will rise with age.

It is instructive to examine the expected payoff to postponed retirement for an "illustrative worker," whom we take to be the average (mean) individual from a representative sample of older workers surveyed in the Longitudinal Retirement History Survey (LRHS). This survey was first developed by the Social Security Administration in 1969, and provides socioeconomic information for each respondent as well as a summary of earnings records taken from Social Security files beginning in 1951. Using this data set as a base, we updated average earnings to the present, to reflect what an older worker in the 1980s might be expected to earn if he or she continued to work. Our updating procedure assumed that older workers participated in economy-wide changes in real (inflation-adjusted) earnings over time.

For each possible retirement age between ages 60 and 68, Social Security benefits were computed for a typical worker by first determining the individual's AIME in 1982 dollars, computing the PIA as described above, and then applying the multiples appropriate for the age in question.⁵ For ages 60 and 61 we assume that the worker leaving employment would file for benefits as soon as he or she is eligible (i.e., at age 62). Between ages 62 and 68, benefit amounts are determined assuming that the individual files in the year he or she retires.⁶

The first row of Table 12.1 presents annual Social Security benefits in 1982 dollars for the illustrative worker at alternative retirement ages. Annual benefits are around \$5,400 for the earliest possible retirement age, rising to a peak of about \$7,900 if the worker defers retirement until age 68. The rate of benefit increases varies markedly across different ages; yearly benefits grow rapidly as

Table 12.1. Social Security Payments When Retirement Is Postponed: The Current Structure of Individual Benefits for the "Illustrative Worker"

	Retirement Age:								
	<u>60</u>	<u>61</u>	<u>62</u>	<u>63</u>	<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>
Annual Social Security Benefits	\$5,378 *	5,401 *	5,456	5,964	6,481	7,017	7,307	7,605	7,610
Present Value of Total Social Security Benefits	\$67,402	67,697	68,387	69,242	69,515	69,341	66,311	63,173	59,928

All figures are expressed in real 1982 dollars.

*These are the benefits the illustrative individual would receive if he or she filed for benefits at age 62 but retired at the age indicated.

Source: Compiled by the authors.

retirement is deferred from age 60 to age 65 as a result of increasing earnings as well as the PIA multiple. At older ages, the additional benefit from postponing retirement is far less, because the late retirement credit after age 65 (3 percent per year) is less than the early retirement reduction factor before age 65 (6.67 percent per year).

Although annual benefits rise when retirement is postponed, the individual has fewer years in which to collect Social Security benefits. It is therefore interesting to compute the present value of benefits, or the cumulative worth of total future benefits after adjusting for inflation, mortality, and preference for income sooner rather than later.⁷ The second row of Table 12.1 displays these accumulations as viewed from age 60 for the illustrative workers. As we see, the present value of Social Security benefits for an age-62 retiree is on the order of \$68,000, while if the same individual waited until age 64 to retire, the cumulative worth of Social Security payments grows to almost \$70,000. Evidently there is a reward of close to \$2,000 as the worker defers retirement from the earliest possible age to the mid-sixties; but beyond this age, Social Security lifetime benefits fall rapidly. In fact, the present value of benefits at age 68 is only about 90 percent of what the age-60 retiree would have received. In this way, the current system rewards retirement before age 65, and actually penalizes those workers who would like to remain on the job until later ages.

RESTRUCTURING SOCIAL SECURITY

Several different policies have been suggested to alter the pattern of Social Security benefits, in the expectation that they might relieve some of the system's more serious financing difficulties. The purpose of this section is to evaluate whether and how restructuring benefit formulas would alter retirement incentives, both in terms of annual payoffs and according to the present value of lifetime benefit streams.

The Experiments

Five specific methods of altering Social Security benefits are considered, which span a wide range of suggestions under current policy review. These are:

- A. Increasing the normal retirement age
- B. Changing the early retirement credit
- C. Increasing the late retirement credit
- D. Increasing the gain for retiring later
- E. Raising benefits in steps

Experiment A

Increasing the normal retirement age means, in practical terms, that the individual would receive his or her full Primary Insurance Amount at age 68 rather than at age 65, as currently is the case. This is achieved by altering PIA multiples to provide full benefits at the new normal age (68) and smaller multiples for retirement prior to 68. The functional relationship between AIME and PIA remains unchanged.

Experiment B

Changing the early retirement reduction factor implies that annual benefits would be determined by applying a lower multiple for retirees filing for Social Security before age 65. For instance, the 62-year-old would receive .55 times his or her PIA, rather than .80, as at present. This multiple would increase to 1.00 at age 65, as now.

In this experiment, the gain is raised for deferring early retirement, while the late retirement credit is left unchanged.

Experiment C

Increasing the late retirement credit might be accomplished by increasing only the multiple for those who defer retirement beyond 65, and using the same multiples for retirement prior to age 65. The worker waiting until age 68 to retire would then receive 1.2 times his or her PIA, in contrast to the current, lower multiple 1.09.

Experiment D

Increasing the gain for retiring later both lowers the benefit from early retirement and raises the benefit from late retirement. The multiple for age 62 retirees becomes .55, rising to 1.0 at age 65, and then rising further to 1.20 at age 68. Therefore this plan provides the largest combined payoff in terms of increases in annual benefits for those who defer retirement.

Experiment E

Raising benefits in steps applies the same early retirement reduction factor to all retirees between the ages of 62 and 64 years, 11 months, so that each of these individuals would receive a benefit amount equal to their PIA times .80. From ages 65 to 67 and 11 months a multiple of 1.00 would be applied. For age 68 and later ages, the multiple would be increased to 1.09, which is where the current age 68 multiple stands. This experiment thus replicates the current system of multiples for ages 62, 65, and 68, but imposes a step function for PIA multiples in between.

Effects of the Five Experiments on Social Security Benefits

Table 12.2 presents how each of the five experiments would alter the Social Security benefits available to the illustrative worker described above. Annual amounts are listed in the top half, and present values of these streams are found in the bottom half.

Table 12.2. Effects of Five Experiments on Social Security Benefits for the “Illustrative Worker”

	Retirement Age								
	<u>60*</u>	<u>61*</u>	<u>62</u>	<u>63</u>	<u>64</u>	<u>65</u>	<u>66</u>	<u>67</u>	<u>68</u>
<u>ANNUAL SS BENEFITS:</u>									
Status Quo	\$5,378	5,401	5,456	5,964	6,481	7,017	7,307	7,605	7,910
Experiment A	4,034	4,052	4,093	4,588	5,092	5,614	6,148	6,696	7,256
Experiment B	3,698	3,714	3,752	4,818	5,903	7,017	7,307	7,605	7,910
Experiment C	5,379	5,402	5,457	5,965	6,481	7,017	7,567	8,131	8,707
Experiment D	3,698	3,714	3,752	4,918	5,903	7,017	7,567	8,131	8,707
Experiment E	5,379	5,402	5,457	5,506	5,555	7,107	7,094	7,174	7,909
<u>PRESENT VALUE OF</u>									
<u>TOTAL SS BENEFITS</u>									
Status Quo	\$67,402	67,697	68,387	69,242	69,515	69,341	66,311	63,173	59,928
Experiment A	50,566	50,783	51,300	53,275	54,624	55,474	55,798	55,621	54,974
Experiment B	46,352	46,551	47,025	55,936	63,316	69,342	66,311	63,172	59,922
Experiment C	67,421	67,711	68,399	69,256	69,521	69,342	68,674	67,540	65,969
Experiment D	46,352	46,551	47,025	55,936	63,316	69,342	68,674	67,540	65,969
Experiment E	67,421	67,711	68,399	63,926	59,592	69,342	64,380	59,596	59,922

The figures are benefits computed for single individuals. Spouses' benefits remain constant, since they are calculated from the primary earners' PIA, which does not change in these five experiments. All figures are expressed in real 1982 dollars.

*Annual benefits are the amounts the illustrative individual would receive if he or she filed for benefits at age 62 but retired at the age indicated.

Source: Compiled by the authors.

In the three experiments that lower retirement benefits at early ages (Experiments A, B, and D), we find that the present value of Social Security benefits has changed significantly. Here benefits rise a great deal if a worker defers retirement from age 60 to 65, in contrast to the status quo, where it changes very little for that age range.

Turning to post-65 benefits, we find that the present value of Social Security benefits always falls after age 65, even when the late retirement credit is raised (Experiments C and D). Experiment E has the effect of lowering the cumulative value of Social Security benefits relative to the status quo at ages 63 and 64, and again at ages 66 and 67. Consequently, none of these policies actively encourages continued work beyond age 65.

The resultant patterns are of three different shapes. Under the status quo and Experiment C, the total Social Security benefit value rises slightly until age 65, where it turns down. Under Experiments A, B, and D, the pattern is an inverted U-shape. Finally, in Experiment E, the present value of benefits is level until age 62, then falls until age 65, rises sharply at age 65, and then falls again thereafter.

THE DETERMINANTS OF RETIREMENT BEHAVIOR

Our analytical framework posits that older workers decide when to retire on the basis of two sets of factors: (1) their preferences for the income they gain from work versus the extra leisure they enjoy if they retire, and (2) the amount of extra income they get if they postpone retirement.⁸ The income from postponing retirement is composed of earnings, private pensions, and Social Security. This is not meant to imply that monetary factors are the only considerations that enter into the retirement decision; we recognize that factors such as health, occupation, family situation, and many others affect retirement behavior as well. These other factors are incorporated into an older worker's preferences and/or income opportunities.

Estimating the determinants of retirement behavior requires that two kinds of information be available for each older worker: (a) the income and leisure opportunities that would have been available at alternative retirement ages, and (b) the actual retirement age chosen. These data requirements are particularly stringent, and no publicly available data set contains exactly what is needed. However,

we use a subset of white married males from the Longitudinal Retirement History Survey (LRHS), mentioned earlier, to derive the most critical information.

To gauge the determinants of older workers' choices of retirement ages, we used a new statistical technique known as Ordered Logit. This technique produces maximum likelihood estimates of the effects of earnings, pensions, Social Security, and leisure on age of retirement. Having obtained these estimates, we use them to predict how each older worker in our sample would respond if presented with the five Social Security reform experiments described above. The results are discussed in the next section.

RESTRUCTURING SOCIAL SECURITY BENEFITS: HOW WILL RETIREMENT AGES RESPOND?

Developing a Budget Set for Current Workers

Before we can predict how today's older workers would respond to changes in the structure of Social Security benefits, we need to develop an idea of what retirement patterns are likely to be for workers facing the current benefits structure. This will serve as a baseline in examining the five policy experiments.

The budget set used for this step of the analysis builds on the LRHS data set, which contains evidence on retirement behavior from the early 1970s. Of course, there has been much inflation since then, and earnings were adjusted accordingly.

Another important difference between income opportunities in the 1970s and the 1980s is that Social Security rules have changed rather markedly. Lifetime benefits available under the current Social Security regulations are determined as discussed in the second section of this chapter, above. Another important difference is that life expectancies have changed among older persons; higher current survival probabilities were used in deriving the present value of lifetime benefits to workers alive today.

To evaluate how retirement age distributions might differ under the five policy experiments, we developed data on workers' total income opportunities under the alternative scenarios and simulated the resultant retirement patterns. Incorporating the Social Security benefit modifications described in the second section shows that Experi-

ments A, B, and D lower the value of lifetime income substantially; this arises from the particular nature of the Social Security reforms in each case. Experiments B and D provide a much larger gain in income if the worker retires, as compared to the present system.

How Retirement Ages Would Respond to the New Structure of Social Security Benefits

Table 12.3 summarizes how retirement ages would be expected to change if workers were to be presented with the five alternative Social Security benefit structures outlined in this paper. We find that the estimated responses vary widely with the type of experiment performed:

1. The largest responses are observed for Experiments B and D, both of which provide lower benefit amounts for all early retirement ages and, in addition, reward continued work before age 65 by the largest amounts. The response would be a delay of retirement by three months.
2. The experiment that also lowers benefits but provides less incentive to remain another year (Experiment A) has an intermediate impact on retirement patterns (one and a half months).
3. The smallest responses are obtained by increasing the late retirement credit (Experiment C) or raising benefits in steps (Experiment E), since these experiments change incentives in early retirement years the least, and most people retire before age 65. These responses are effectively zero.

Table 12.3. Impact of Restructuring Social Security: Anticipated Changes in Average Retirement Ages

Experiment	Effect of experiment on average retirement age in months
A: Increasing the normal retirement age	+ 1.6
B: Changing the early retirement reduction factor	+ 2.9
C: Increasing the late retirement credit	+ 0.2
D: Increasing the gain for retiring later	+ 3.1
E: Raising benefits in steps	+ 0.1

Source: Compiled by the authors.

POLICY IMPLICATIONS

These response patterns suggest four policy implications:

1. *Raising the late retirement credit would be ineffective in inducing later retirement.* It is sometimes suggested that increasing the incentives for later retirement would be a way of inducing older workers to retire later. We estimate that such a policy would have only a minimal effect. This is because most older workers retire well before reaching age 65. In order to take advantage of a larger later retirement credit, they would have to retire after age 65. Thus, the typical worker would have to retire several years later if the late retirement credit is to pay off for him or her. He or she would be willing to do this only if the payoff were to become very much larger. However, raising the late retirement credit in the manner described here would not do this; rather, it would at best undo what is now a substantial penalty. As a result, we would not expect most workers to respond to a late retirement credit.

2. *Reducing early retirement benefits by changing the early retirement reduction factor would save the Social Security system money but hurt the average worker.* The idea of reducing Social Security benefits at early ages while keeping the normal benefit at its present level is discussed in political circles from time to time. We estimate that reducing the age-62 benefit from 80 percent to 55 percent of the normal benefit (and corresponding reductions for ages between 62 and 65) would increase retirement ages by an average of three months. Three months of extra work would not be enough to restore a typical retiree's benefit to its previous level. As a result, the Social Security system would save money, but early retirees would end up poorer.

3. *Increasing the normal retirement age while holding the early retirement age at 62 saves the Social Security system money, but hurts the average worker.* In 1983, Congress decided to increase the normal retirement age for future generations of retirees. Our model simulated a reform quite similar to the one actually implemented: raising the normal retirement age from 65 to 68, while holding the early retirement age at 62 and maintaining an early retirement reduction factor of 6.67 percent per year. We conclude that this lowers retirement benefits at all retirement ages, early as well as late. This scheme increases retirement ages by an average of one and a

half months, not enough to restore benefits to their previous levels. The Social Security system will save money, but early retirees will end up poorer.

4. *If early retirement benefits are reduced by changing the early retirement reduction factor or by increasing the normal retirement age, people who cannot postpone early retirement will be hurt the most.* Some older persons are more able than others to go on working if retirement incentives are changed. The people hardest hit by a reduction in early retirement benefits would be those who, by reason of ill health, loss of job, or other misfortune, do not find it viable to prolong their working lives. Penalizing early retirement imposes the heaviest burden on those least able to bear it.

In sum, the retirement responses estimated in this study are quite small—on the order of three months at the outside, for only one of the policy experiments. It must be concluded that the financial savings to the Social Security system generated by these policies would be the result of lower benefits paid out over approximately the same length of time, rather than payment of the same amount for a shorter period of time. If the reforms enacted in 1983 are insufficient to attain financial solvency for the system, benefit levels at all retirement ages will probably have to be reduced. However, this may be most detrimental to those whose retirement options are the least flexible.

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NOTES

1. Changes like those described in this paper were implemented in the 1983 round of amendments to the Social Security Act. For a comparison of the simulated and actual reforms, see Fields and Mitchell (1984).

2. See the *Social Security Handbook* for current regulations and the *Social Security Bulletin: Annual Statistical Supplement* for a summary of changes over time (U.S. Dept. of Health and Human Services 1984, 1985).

3. The 3 percent figure pertains to all workers attaining age 62 in 1982 or later. Previously, the delayed retirement credit was 1 percent per year.

4. The spouse of a retired worker is eligible to receive benefits based on his or her own work record, and in addition can receive benefits based on the retired worker's benefits as well, if these are greater. The spouse of a worker who retires at age 65 may receive as much as 50 percent of the retiring worker's benefit. If the spouse is age 65, the spouse receives 50 percent of the benefit computed as though the worker had retired at age 65. If the spouse files for benefits prior to age 65 (as early as age 62), he or she will be entitled to a reduced benefit, to which an early retirement reduction factor applies.

5. Other retirement ages could be examined as well, but the range of 60 to 68 covers the choices made by the vast majority of retirees.

6. Most older workers are not covered by private pensions, and have relatively little wealth at later ages; thus, labor force withdrawal tends to coincide with filing for benefits in the vast majority of cases, although it is technically possible to withdraw from the labor force at some earlier age and yet defer filing for benefits until age 65.

7. Future benefits are discounted by the inflation rate plus a 2 percent real objective discount rate. Mortality tables are derived from unpublished data supplied by the National Center for Health Statistics, reflecting the most recent life tables available.

8. A detailed discussion of the methodology appears in Fields and Mitchell (1984).