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SOCIAL SECURITY AND OLDER WORKERS

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ABSTRACT

Many observers have noted that the long-term decline in labor-force participation by older Americans may reflect the evolution of social institutions that effectively discourage work. Often cited factors include employer discrimination against older workers, private pension plans that penalize continued employment, and the Social Security system. Various policies, such as eliminating Social Security's retirement test, have been proposed with a view to eliminating or lessening employment barriers.

This chapter summarizes the economic evidence that addresses the role played by the Old-Age and Survivors Insurance (OASI) programs in retirement decisions. OASI is shown to have statistically significant effects on both the timing of retirement and the amount of post-retirement work; however, the influence is not large relative to the many other factors that determine the labor-supply decisions of older workers. Consequently, changes in Social Security policy of the type and magnitude that are politically feasible are unlikely to result in large changes in retirement behavior.

INTRODUCTION

The well-documented, post-World War II trend to longer retirement periods that begin at earlier ages can be viewed as a laudable achievement made possible by the nation's economic prosperity. Nonetheless, the reduction in the labor supply of older workers that this entails can have adverse consequences. First, to the degree that the Social Security program encourages full or partial retirement from the marketplace, the economy's pool of experienced labor is reduced, and the nation's aggregate output is lower. Second, reductions in labor-market activity by older workers decrease Social Security revenues and increase program expenditures, thereby disturbing the financial balance of the system. And third, reduced earnings can harm the economic well-being of the elderly by affecting both the size and distribution of incomes. In light of the aging of the American population and work force that is projected into the next century, there has been considerable public discussion about the extent to which government programs and policies discourage employment among older workers.[1]

Social Security program rules have always embodied features that were likely to influence work and retirement decisions. A striking example is the original version of the retirement test, in which no earnings were to be permitted if benefits were to be paid that month. This sèvere restriction on work was quickly modified (in 1939 legislation, before it ever went into effect), and the limitation on earnings has been subsequently relaxed many times. More recently, the 1983 amendments to the Social Security Act contained various provisions that are intended to promote work. Congress voted:

- a gradual rise in the normal retirement age to 67. Beginning in 2000, the normal retirement age will be increased to 66 in 2009, and to 67 in 2027.
- a gradual increase in the penalty for early retirement concurrent with increases in the normal retirement age. By 2027, retirement at age 62 will reduce the

[1]For example, see the 1989 Report of the Secretary of Labor, "Older Worker Task Force: Key Policy Issues for the Future."

benefit amount by 30 percent of the primary insurance amount (PIA), rather than the current 20 percent reduction.

- a reduction in the retirement test reduction rate from 1/2 to 1/3 for beneficiaries aged 65-69, effective in 1990.

- a gradual increase in the delayed retirement credit (DRC) from 3 to 8 percent. The DRC is scheduled to rise by 0.5 percent every other year, beginning in 1990, until it reaches 8 percent in 2008.

- continued increases in the annual exempt amount that can be earned under the retirement test. The exempt amount increases each year at the same rate as the increase in average wages.

In addition to changes that have already been enacted, other proposals that are intended to encourage work have been advanced. Among these are:

- Eliminate the retirement test, or liberalize it further by either increasing the annual exempt amount beyond what is currently scheduled, or lowering the benefit reduction rate.

- Accelerate the timing of the scheduled increase in the DRC.

- Further increase the normal retirement age or the early retirement age, or both.

- Change benefit recomputation rules to give more weight to earnings in later years.

- Eliminate the payroll tax for workers aged 65 and older.

- Increase the income threshold at which benefits are subject to federal income taxation.

Some of these changes are clearly more likely than others. For example, there are currently House, Senate, and Administation proposals to increase the retirement test's annual earnings limit for persons aged 65-69 over and above currently scheduled amounts, and some modest change would be no surprise. Other reforms are a more remote possibility.

How effective would these reforms be in inducing Americans to alter their retirement behavior? I recently had occasion to review approximately 100 empirical retirement studies --- most of which were authored during the past decade --- in an effort to discover what is known about the effect of Social Security on retirement

decisions (Leonesio 1990b). On the basis of this research, it appears that changes in Social Security programs of the type and magnitude that are politically feasible in the foreseeable future are unlikely to produce large changes in retirement patterns. This chapter summarizes the evidence.

The discussion will be confined to the Old-Age and Survivor's Insurance (OASI) components of Social Security, and will omit any consideration of the Disability Insurance, Medicare, and Supplemental Security Income programs. Substantial attention is given to one particular feature of the OASI program that is often alleged to pose an employment barrier --- the retirement test.

OASI AND THE DECISION TO RETIRE

The economic literature on the determinants of individual retirement decisions is both extensive and difficult to summarize. Apart from the problem of evaluating the relative credibility of the various studies, in this topic area problems are created by the use of different models, different populations (for example, workers aged 62-65 *versus* workers aged 60 and older), and different definitions of what actually constitutes retirement.[2] Because there is no universally employed definition of the term, it is possible for different "retirement" studies to arrive at apparently conflicting conclusions about the importance of suspected causes due to the fact that they are not actually studying the same phenomenon.

In a way, the research results are probably somewhat at odds with what one might expect on the basis of casual observation. After all, Social Security is the largest

[2] Retirement has been said to occur when individuals: leave their career jobs (even in cases where they continue to work full time), withdraw from the labor force, significantly reduce their hours of work, work or earn less than some specified level, begin to receive a pension or Social Security benefits (or both), or declare themselves to be retired (Murray 1979, Ekerdt and DeViney 1990). In recent years there has been a shift in thinking away from viewing retirement as a discrete *event* towards viewing it as a more protracted *process* (Doeringer 1990).

source of income for the retired population, and certainly seems to play a very large role in the economic well-being of the aged. The post-World War II expansion of the Social Security system roughly coincides with the well-documented decline in the average retirement age of men, and the sharp decline in the labor-force participation rate of men aged 60 and older. Retirement at ages 62 and 65 --- Social Security's early and normal retirement ages --- is popular, as can be seen in Figure 1, which displays male retirement-age patterns in 1960, 1970, 1980, and 1990. Each graph approximates the rates at which men of different ages left the labor force in those four years.[3]

Figure 1, p. 29

In all four years represented in the figure, a pronounced peak occurs at age 65, the normal retirement age, the age at which full Social Security retirement benefits are payable. Unlike the 1960 profile, however, the 1970, 1980, and 1990 graphs show a second peak at age 62, a likely result of the introduction in 1961 of the early retirement age at which reduced retirement benefits are available. The data show that over the past three decades there has been a gradual, marked increase in the popularity of retirement at age 62. If the benefit reduction rate for retirement prior to age 65 is actuarially fair, which it roughly appears to be (Aaron 1982, pp. 62-3), and if individuals could borrow against future Social Security entitlements, then there should be no observed bunching of retirements at age 62. Individuals wanting to retire prior to age 62 could help finance this choice by establishing a retirement fund through private lenders, using their Social Security entitlements as collateral. The fact that capital markets do not finance this type of arrangement results in the peak at age 62 in the retirement-age profile (Crawford and Lilien 1981). Most individuals with small amounts of liquid assets cannot afford to retire before age 62, when they first have access to their

[3]The retirement rate for age x is estimated by taking the difference in the labor-force participation rate at age x with that for age x-1, and dividing by the participation rate at age 55.

Social Security wealth. It is difficult to account for the double-peaked pattern in the 1970-1990 graphs, and the increased popularity of departure from the labor force at age 62, with any explanation that does not assign a central role to Social Security.

In surveys of retirees conducted during the first three decades of Social Security's existence, respondents usually claimed they retired either because their employers terminated jobs, or due to the onset of health problems. The pronounced decline in labor-force participation by men aged 62 and older during the 1960s and 1970s was associated with an increased incidence of voluntary departures from the labor force (Quinn et al, 1990, pp. 43-53.) Sherman (1985) reports that by the early 1980s a majority of new male Social Security beneficiaries were indicating that retirement was self-initiated.

Retirement research proliferated during the 1970s and 1980s, stimulated in large part by the availability of a valuable new data source: the Social Security Administration's Retirement History Survey (RHS). This survey collected information on a nationally representative sample of more than 11,000 men and unmarried women during six biannual interviews conducted during 1969-79. Respondents were aged 58-63 at the initial interview. A large majority of the sample "retired" during the sample period, and the survey documents many of the attendant economic and personal circumstances. Much of what economists currently believe about retirement behavior derives from studies that have used this database.

Most economic research now reflects the view that, for the most part, retirement is a choice made by workers who rationally weigh the personal advantages and disadvantages of continued labor-force participation. Although the emphasis in economic models is certainly on the financial aspects of the decision, the research also addresses the coincidental impact of general economic conditions, personal characteristics (particularly age), health status, and individual attitudes toward work.

In general, the findings support the view that earlier retirements have been largely voluntary, as workers have been increasingly able to afford to retire.

At the core of much of the economic analysis of retirement behavior is a *life-cycle* view of work, saving, and consumption. That is, individuals are assumed to be well-informed, far-sighted planners whose economic decisions represent integrated, long-term plans expected to generate adequate income to support a desired standard of living. Because the level of work activity that is anticipated in each future year is part of a long-range plan, any factor that ostensibly affects the incentive to work during one period can influence the amount of work planned for other periods as well. For example, a progressive tax on earned income might cause work to be shifted from high-earnings years to low-earnings years in order to lower lifetime tax liability. Viewed from a life-cycle perspective, decisions about leaving a career job, accepting a pension, applying for Social Security benefits, working in a post-retirement job, and the like, are all interdependent.

Within this life-cycle framework, Social Security's effects on work are ambiguous; perhaps some persons are induced to retire earlier, and others later. To the extent that the system forces people to save for their retirement, and that the adjustment in benefit levels for delaying the onset of benefits is less than actuarially fair, *earlier* retirements are more likely to be encouraged. The material that follows summarizes the empirical evidence. In the interest of brevity, specific citations are limited to studies that are representative of the most persuasive scholarship; omission should not be taken to construe rejection or criticism.

Because it represents a substantial portion of retirement income for most Americans, Social Security's role in the retirement decision has been closely examined. Monthly benefit amounts influence both the timing of retirement and the choice of post-retirement hours of work. Other things equal, higher benefits are expected to promote

earlier retirement, decrease the likelihood of working among retirees, and reduce hours of work by labor-force participants. However, causation runs in the other direction as well, with the retirement decision affecting the value of the monthly benefit via three separate channels. First, at any time between the ages of 62 and 70, the actuarial adjustment and delayed retirement credit increase the monthly benefit amount when acceptance of benefits is postponed. Second, as long as annual earnings are greater than the smallest value included in the computation years for determining Average Indexed Monthly Earnings (AIME), postponing retirement will increase the Primary Insurance Amount (PIA), upon which the benefit amount is based.[4] Third, for some individuals a delay in retirement can result in an individual accumulating the minimum number of quarters of covered employment to qualify for retirement benefits. Therefore, although in all three instances a delay in retirement would lead to increased monthly benefit amounts, higher benefit levels in and of themselves lower the probability of labor-force participation.

Studies that use appropriate statistical procedures to account for the simultaneity between Social Security benefits and the timing of retirement usually find a negative relationship between benefit amounts and both retirement age and post-retirement labor supply, although there is some variation in the estimated magnitude of the effects. Research on male retirement behavior has shown that increases in monthly benefit levels on the order of 10 to 20 percent have been associated with a decline in retirement age measured more in terms of weeks or a few months, rather than many months or a few years. Defining retirement as a pronounced, permanent decline in annual earnings, Burtless and Moffitt (1984, 1985) find that a 20 percent benefit cut would cause male retirement age to increase by 1 or 2 months. Fields and Mitchell (1984) report about the same result: a 10 percent cut in monthly benefits would delay

[4]The primary insurance amount is the monthly amount payable to a retired worker who begins to receive benefits at age 65, and is calculated on the basis of the individual's earnings record.

retirement (defined as leaving the originally observed job) by about a month. Similarly small effects associated with OASI benefit levels are reported by Burkhauser (1980), Diamond and Hausman (1984), Gordon and Blinder (1980), and Hausman and Wise (1985).

While most economic models treat income streams as if they can be accurately foreseen, Burtless (1986) investigates the implications of changes in income that are *unexpected*, which was probably the case for most Social Security beneficiaries when large real increases in benefit levels were approved by Congress in 1969 and 1972. Benefit increases of 10 percent above those that would have occurred under the existing rules were passed in these years. In a span of 3 years, real benefit levels rose approximately 20 percent beyond those that would have been anticipated. The estimated effect was to reduce the average retirement age of men by just over a month (where retirement is defined as a discontinuous drop in annual hours worked). Had these income changes been fully anticipated, the long-run effect would have been to reduce the average retirement age by about 2 months.[5]

The effects of other Social Security features have been studied as well. On average, the influence of Social Security's normal retirement age (NRA) on the timing of retirement also appears to be modest. Gustman and Steinmeier (1985) examine the effect of raising the NRA to 67, while increasing the penalty for early retirement at age 62 to 30 percent of PIA. This is predicted to move the peak in the male retirement age

[5]Bernheim (1988) tests the accuracy with which expectations were formed about Social Security benefit amounts in the Retirement History Survey data. Both men and women underestimated their benefits, indicating that the large real increases in Social Security benefit levels that occurred in the early 1970s were unanticipated, as suggested by Burtless. Individuals appear to think seriously about future benefits, but do not forecast values very precisely. While they process the information that they have reasonably efficiently, many persons appear not to incorporate a great deal of relevant information available from the Social Security Administration. Note that the RHS data were collected well before the advent of the Personal Earnings and Benefit Estimate Statements (PEBES) that are now available on request. These statements inform individuals of their estimated Social Security benefits based on past and anticipated earnings.

distribution (self-assessed definition) from age 65 to age 67, and would increase the percentage of men working full time at ages 65 and 66 by about 4 to 6 percentage points, and lower the percentage working part-time by 1 to 2 percentage points. This translates into an increase of about 2 months in the average retirement age. Fields and Mitchell (1984) simulate the effect of raising the NRA to 68, leaving the actuarial adjustment rate for early retirement unchanged; that is, persons applying for benefits at age 62 would receive 60 percent of PIA. This increases the average retirement age by 1.6 months, a little smaller than the magnitude of response predicted by Gustman and Steinmeier. Burtless and Moffitt (1984) conduct the same exercise and report an increase of 2.5 to 4.5 months.

Increasing the DRC is thought to be one of the more effective ways to encourage labor supply after age 65, but again, the responses tend to be on the order of magnitude of a few months. Burtless and Moffitt (1984) predict that actuarially fair adjustments for delaying benefit acceptance would delay retirement by about 4.5 months, on average. Gustman and Steinmeier (1985) confirm this magnitude: full-time employment among men aged 65-66 would rise by 4 to 6 percentage points, while partial retirement would fall by about 2 percentage points. Fields and Mitchell (1984) indicate that increasing the DRC to 6.6 percent would delay retirement by about a week.

Although most studies conclude that Social Security's influence on overall retirement patterns is modest, it is plausible that the program's financial incentives have very different effects on retirement decisions depending on other factors such as financial status, health, or job characteristics. Kahn (1988) conjectures that, contrary to the assertions of Blinder, Gordon, and Wise (1980), work is not subsidized by the Social Security system for many older workers, particularly among those aged 62-64. In fact, work may be penalized to a greater extent among those who are observed retiring

at earlier ages. When the distribution of male retirement ages (self-assessed) reported in the Retirement History Survey is plotted as in Figure 1, the graph is double-peaked, with the higher peak at age 62-3. However, when the sample is divided into high-wealth and low-wealth subgroups, only the distribution for the low-wealth group is double-peaked, with a very pronounced spike at age 62. The distribution for the high-wealth group is single-peaked at age 65. This is consistent with the view that the liquidity constraint is more powerful among those with fewer liquid assets.[6]

Kahn constructs Social Security wealth profiles using discount rates of 3 and 12 percent. The higher discount rate is consistent with the view that many workers face liquidity constraints in their life-cycle work-consumption plans. When using the lower rate, Social Security seems to neither encourage nor discourage work for persons aged 62-4. At the higher rate it is a clear disincentive; Social Security wealth falls 2.5 to 5 percent for each additional year of work. The use of higher discount rates undermines the basic Blinder-Gordon-Wise result that Social Security subsidizes work between the ages of 62 and 65.

Quinn (1977) investigates the relative impact of three sets of factors in explaining individual labor-force participation decisions of men aged 58-63: 1) personal and financial characteristics, 2) local labor market conditions, and 3) job attributes. Although health is found to be the single most influential variable --- lowering the probability of participating by .20 --- Social Security eligibility had a predictably negative effect. The influence of economic variables differed by health status. The effect of Social Security is 8 times as large for those with poor health. Quinn (1978) finds clear support for the view that people with bad jobs are more likely to retire. Persons with poor health are consistently more sensitive to job characteristics, especially those who are also eligible for Social Security retirement benefits. These results support

[6]Note, however, that this pattern can also be partially explained if low-wealth individuals have lower wage offers and less agreeable job characteristics.

the view that health status interacts with other retirement influences, particularly job characteristics and Social Security eligibility, in determining retirement status.

In one of the few studies of women's retirement behavior, Pozzebon and Mitchell (1986) find that the retirement decisions of married women appear to be insensitive to financial incentives such as Social Security, a conclusion that is similarly drawn by McCarty (1990). Working married women value retirement leisure highly, and there appears to be complementarity with their husbands' retirement leisure. In general, family considerations such as the husband's health status and income, as well as the difference between the husband's and wife's ages appear to be the stronger influences.

Despite the shortcomings that are inherent in most empirical work, the retirement literature has evolved to the point where certain conclusions can be drawn about Social Security's role. Viewed in total, the evidence indicates that the OASI program has contributed to the decline in the labor-force participation of older men, but the direct financial effects appear to be modest. The Social Security system has contributed to the popularity of retirement at ages 62 and 65, as depicted in Figure 1, but appears to be a minor force in the long post-World War II trend to retire at earlier ages.

THE RETIREMENT TEST[7]

Perhaps no feature of the OASI program has attracted more sustained, vocal criticism over the years than the retirement (or earnings) test. Critics argue that the test is discriminatory (it applies only to persons aged 62-69), that it discourages some beneficiaries from working at all, and that it causes others to reduce their hours of work to avoid a loss of benefits. Discussions about institutional barriers to increased labor-

[7]A comprehensive review of economic evidence about the effects of the retirement test on older workers' labor supply can be found in Leonesio (1990a), from which material in this section is drawn.

market activity by older workers often single out this feature of the Social Security system (Herz and Rones 1989). There is certainly no shortage of anecdotal evidence about beneficiaries limiting their earnings to avoid loss of benefits (Christensen 1990).

The rationale for the retirement test is that retired-worker benefits are a form of social insurance, and as such, serve a purpose distinct from private pensions and annuities. The indemnified contingency under the Old-Age provisions is the loss of sufficient earned income in later years to support an adequate standard of living, not the specific condition of being old (Brown 1972, pp. 125). In recognition that some individuals will retain the capacity and desire to earn income in their later years, the retirement test has always been an integral feature of the retirement program. The test can be viewed as a means of targeting benefits at those persons likely to be in need of transfer income to replace lost earnings.

How The Test Works

Currently, the retirement test allows beneficiaries aged 62 to 69 to earn income up to a specified annual limit, the annual exempt amount, without loss of benefits. When earnings exceed this level, benefits are reduced $1 for every $3 earned over the limit for beneficiaries aged 65 to 69, and at a rate of $1 for every $2 for beneficiaries aged 62 to 64. Thus, for the older group annual earnings in excess of the exempt amount are currently subject to a benefit reduction rate of 33 and 1/3 percent. The dollar amount of the limit depends on the worker's age; for persons aged 62 to 64, the 1992 figure is $7,440, and for those aged 65 and older, $10,200. These amounts are increased yearly at the same rate as the increase in average wages.

At first glance, the effect of the retirement test on work effort appears to be clear-cut. Because the test lowers the financial reward for work when earnings exceed the exempt amount, it is tantamount to a tax on work and would seem, therefore, to discourage employment. Nonetheless, the test's actual labor-supply impact could be

modest for at least three reasons. First, other Social Security provisions that interact with the retirement test --- such as the delayed retirement credit and automatic benefit recomputation --- can substantially offset its effect. Second, the retirement test creates different types of work incentives depending on individual circumstances. For example, a worker whose desired annual earnings are several thousand dollars over the annual limit might reduce work effort to avoid loss of benefits, while a worker with earnings so high that benefits are fully withheld might work more to restore the lost income.[8] Third, in the course of calculating the amount by which the retirement test increases marginal tax rates for some workers, it is easy to forget the distinction between work incentives and the degree of responsiveness to those incentives. Although the retirement test might provide a disincentive to work in some situations, this alone is insufficient to conclude that the test causes an appreciable reduction in overall work effort by older persons. It is necessary to know the extent to which behavior actually changes.

Before turning to the evidence about the work response to the retirement test, consider the first of these points. The actuarial adjustment (AA) for early retirement and the delayed retirement credit reduce the apparent penalty when current benefits are withheld because of the test. From age 62 to 64, the AA restores lost benefits at age 65 at an annual rate of 6.67 percent of the PIA, a rate that is considered to be actuarially fair on average. Insured persons aged 65 to 69 who lose benefits receive a DRC, which works in approximately the same way as the actuarial adjustment. At its 1992 rate of 4.0 percent, the DRC falls considerably short of the 8 percent value that is thought to be about actuarially fair.

A numerical example can clarify how the DRC lowers the earnings test's effective penalty rate. If a retired worker currently aged 65 or older loses some, but not

[8]That is, economists recognize that the retirement test can create both income and substitution effects that have opposing influence on work effort.

all, retirement benefits under the retirement test, an additional $300 of earnings results in a further reduction in benefits of $100. If the DRC causes future annual benefits to rise by an actuarially fair amount (say, 8 percent), the present value of the additional $8 per year (8 percent of $100) is equal to the $100 in current benefits lost to the test. The actuarially-fair DRC fully restores lost benefits, and the overall penalty rate is zero. In contrast, with the DRC at only 4.0 percent, future annual benefits rise by only $4.00, with a present value of $50 [(4.0/8.0) x $100]. With this amount of the retirement test penalty restored by the DRC, the effective tax rate is only 16.7 percent [($100 - $50)/$300], rather than the apparent 33 and 1/3 percent. Most current proposals to liberalize or eliminate the retirement test focus on the rules that apply to persons aged 65 and older. Further discussion here will assume that the test operates in the context of a less than actuarially fair DRC.

In addition to the DRC, automatic benefit recomputation (ABR) can lead to increased future benefit payments when current benefits are lost to the retirement test. As long as annual earnings are greater than the smallest indexed value included in the computation years for determining AIME, the ABR provision dictates that continued work will increase future values of the PIA. Thus, the apparent deterrent effect of the retirement test provision can be further offset for workers aged 65 and older by ABR, as well as by the DRC. Prior to the introduction of indexed earnings in the 1977 Social Security amendments, ABR was estimated to provide men turning age 65 in 1975 with an average wage subsidy of 54 percent (Blinder, Gordon, and Wise 1980). The switch to indexed earnings in the AIME formula no doubt substantially lowered the average subsidy rate.

Evidence

A simple procedure for determining whether the retirement test deters work is to examine annual earnings patterns among Social Security beneficiaries to see whether

unusually large numbers of workers report earnings that are at or near the annual earnings limit. This finding would be consistent with the view that retirees restrain earnings to avoid the retirement test penalty. I recently tabulated 1988 earnings data from the Social Security Administration's Continuous Work History Sample for persons aged 65 to 69 who were either: 1) Old-Age beneficiaries, or 2) fully-insured nonbeneficiaries. Some of the results of this exercise are displayed in Figure 2; not depicted in the figure are the 5,651,500 persons with no reported earnings during the year, nor are the 333,200 who earned more than $30,000.

Figure 2, p. 30

There is a clear tendency for workers to keep earnings at or below the retirement test's 1988 annual earnings limit of $8,400.[9]

The group most likely to respond in the short run if the retirement test were eliminated is the approximately 200,000 workers with earnings at or near the annual limit (in the $7,500-8,500 range). These are individuals who have demonstrated that they want to work, and their earnings levels suggest that they may be sensitive to the annual limit and avoid the retirement test penalty by reducing their work hours. However, this group represents only about 2 percent of insured persons aged 65-69, a figure that necessarily limits the impact that their behavior could have on aggregate labor supply. Furthermore, it is not obvious that all earners in this range limit work activity because of the test. Finally, any increase in work effort forthcoming from this group would be contingent on their ability to adjust work hours freely, an option that may not be available to all employees, or their willingness to change jobs.

Hours adjustments could also be expected by other current workers with

[9]Despite the actuarial fairness (on average) of the AA, the distribution of earnings among beneficiaries aged 62-64 is similar in appearance, exhibiting a spike near their 1988 annual limit of $6,120.

reported earnings either below or above the annual limit. Although some workers have only modest earnings aspirations and are not affected by the test, others might well respond to elimination or liberalization of the retirement test by switching to higher-paying jobs. Workers whose benefits are partially reduced by the retirement test --- approximately 200,000 ---might either increase or decrease hours of work, depending on whether they react primarily to the work stimulus of a higher rate of pay, or to their enhanced ability to afford retirement leisure when retirement test-reduced benefits are restored. Hanoch and Honig (1983) find that the dominant effect is likely to be increased work effort in response to the higher take-home wage.

Some individuals are likely to reduce their labor supply in the short run. Beneficiaries with earnings so high that benefits are fully withheld --- approximately 250,000 --- would have a clear incentive to work less. Eliminating the retirement test would increase their incomes, enhancing their ability to afford retirement leisure, but would leave their net wage unchanged at the margin. In addition, people currently eligible for retirement benefits, but who do not claim them since their earnings are sufficiently high that most or all benefits would be lost to the test, would be likely to apply for benefits. Apart from their decision to apply for benefits, these individuals would be expected to behave in much the same way as current beneficiaries whose benefits are wholly offset.

The tendency for many beneficiaries to report earnings at or near the annual earnings limit, as depicted in Figure 2, has been documented by many researchers (Gallaway 1965, Sander 1968, Burtless and Moffitt 1984, Vroman 1985, Lingg 1986, and Packard 1990). Collectively, these studies support the view that the retirement test has through the years depressed the earnings of older workers, but the magnitude of this phenomenon appears to have declined through time as the test has been substantially liberalized. Vroman (1985) reports that as the earnings limit was increased annually

during 1970-80, the noticeable cluster of workers with earnings just below the limit appeared to move upward accordingly, consistent with the view that workers were aware of the current exempt amount and continued to restrain earnings to avoid exceeding the limit. However, the clustering became less pronounced over the period. Vroman also notes that labor-force reentry rates for retirees aged 65 to 71 appeared to be unresponsive to these changes in the earnings limit, even after unusually large increases in 1973 and 1978.

Periodic changes in earnings test rules and coverage have afforded some of the best opportunities for learning about the impact of the retirement test on labor supply. When key provisions of the test are changed, post-change behavior can be compared with that recorded during the pre-change period. In 1983, the age at which OASI beneficiaries were exempt from the earnings test was lowered from 72 to 70. Packard (1990) compares the labor-force participation rates of 70- and 71-year-olds before and after 1983, looks for evidence of increases in earnings among those who do choose to work, and checks for increased labor-force reentry rates. He finds little change in the labor-force participation rate of 70- and 71-year-olds when they were no longer subject to the retirement test. There is some evidence that the number of men and women returning to the labor force increased slightly in 1983 and 1984, but fell back to former rates in 1985, suggesting that eliminating the retirement test might have had some short-term effect on beneficiaries who were fully retired. A number of elderly workers increased earnings from below to above the earnings limit when they were no longer subject to the test. This was especially true for men, where the proportion of men increasing their earnings in this way more than doubled when compared with the 5-year average prior to 1983.

Packard reports one curiosity: most of the reentrants reported earnings that were below the annual exempt amount, and would not have lost benefits in any case,

indicating possible misperception of retirement test rules by retirees who want to work. Apparently many current and prospective beneficiaries are not well-informed about the details of the retirement test provision, let alone the way it interacts with the DRC and ABR.[10] This raises a number of interesting questions about the accuracy of predicting the behavioral consequences of changing a provision that is poorly understood.[11]

Generally, studies that use aggregate labor-supply measures such as participation rates or numbers of older workers indicate that the retirement test has little impact on the overall retirement picture. Nonetheless, it is possible that a minority of the elderly population is quite sensitive to the retirement test, and that these individuals appreciably modify their desired work schedules. These retirement test-induced labor-supply adjustments might be hard to detect given the relatively small number of people involved, and the co-existence of other confounding influences. To accomplish this task requires more refined statistical analysis of detailed information on individuals' work histories, income sources, and personal characteristics.

Pellechio (1978) authored one of the earliest of these attempts to estimate the effect of the retirement test on work and reports that repealing the test in 1972 would have resulted in an additional 3 hours of work per week by those beneficiaries who worked.[12] It is important to note that this result is derived from a period in which the

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[10]Packard (1985) examined 1982 New Beneficiary Survey data in which recent retirees were asked several questions about retirement test rules. Although 73 percent of retirees under age 72 knew of the test, less than half of working retirees could identify the annual earnings limit accurately (within 5 percent of the true figure). Nonworking beneficiaries were substantially less knowledgable than their working counterparts.

In a recent study of 36 older workers in the New York City metropolitan area, many individuals reported part-time and self-employed jobs that were off the books (Christensen 1990). In most instances, they claimed that earnings were not reported for fear of losing Social Security benefits, depite the fact that typical earnings were less than $5,000 per year --- well below the annual exempt amount in 1987 ($8,160).

[11]Blinder, Gordon, and Wise (1980) suggest that work effort might be stimulated if Social Security provisions were better understood. Some individuals might be reducing their labor supply while thinking the restrictions on working are more severe than they are.

retirement test was substantially more restrictive, and when the DRC was only 1 percent and restored a smaller portion of the benefits lost to the retirement test.

Several researchers have examined the retirement test's effect from a more explicit life-cycle planning perspective. That is, people are assumed to make decisions about all aspects of their lifetime work schedules as part of an integrated planning problem. Once these more complex decision rules have been estimated, it is possible to determine how various components of lifetime labor supply would adjust to changes in key determinants. Burtless and Moffitt (1984, 1985) estimate the effect of outright elimination of the retirement test for all age groups, including those aged 62 to 64. Only 10 percent of 62-year-old retirees would respond at all, but the average increase for this group is a substantial 10.6 hours per week. The size of the increase would decline with age. The estimated change in the timing of retirement (defined as a pronounced decline in annual earnings) is small; for the average retiree with earnings above the limit, the retirement date would occur about 3 weeks earlier. Noting that only about 10 percent of 62-year-old retirees are affected by the test, Burtless and Moffitt conclude that eliminating the retirement test provision would have little effect on the overall retirement picture.

Gustman and Steinmeier (1991) simulate the labor-supply response to changes in the retirement test and related provisions. Changes in the DRC are shown to dominate the effect of eliminating the retirement test. In any event, the predicted increase in aggregate male labor supply is relatively small. Simply increasing the DRC to 8 percent in 1990 expands the number of full-time male workers aged 65 to 69 by about 45,000, while eliminating the retirement test in the face of the gradual rise in the DRC scheduled under current law produces an increase of 17,000 full-time workers. A

[12]Increasing the annual exempt amount from $1,680 to $10,000 would raise annual hours by 57, while lowering the benefit reduction rate from 50 to 25 percent resulted in a decline in annual hours of 98 to 140, depending on the assumed exempt amount.

combined policy of eliminating the retirement test and immediately increasing the DRC to 8 percent increases the supply of full-time male workers by 47,000, only marginally larger than the response forthcoming from solely increasing the DRC.

Reimers and Honig (1990) look at whether the retirement test deters labor-force reentry among men who have left a career job. They find that among white males, the probability of labor-force reentry is negatively affected by the current value of monthly Social Security benefits. A 10 percent increase in monthly benefits lowers the re-entry probability by .037. The number of hours that individuals can work before reaching the retirement test's annual earnings limit also affects the reentry probability. A 10 percent increase in the hours implied by the limit increases the probability of reentry by .20, even for persons under age 65.

Finally, an interesting piece of evidence comes from the Canadian experience (Tracy 1982). Canada's social security system abolished a fairly restrictive retirement test in 1975. At the time, the Canadian annual earnings limit was even lower than that in force for Americans (US$1,868 versus US$2,520), with the same benefit reduction rate of 50 cents on the dollar for earnings over the limit. The labor-force participation rates of men aged 65-69 *declined* in 4 of the 5 years following repeal of the test. During the entire 1962-80 period, the single largest decline in participation (4.5 percentage points) occurred in the year immediately following elimination of the test. There has been no rigorous investigation of this information, in which other factors that may have been at work are taken into account, so conclusions drawn from this episode must be viewed with some skepticism. Nonetheless, it provides some evidence that the expectation of a large increase in work activity in response to eliminating the retirement test might be unfulfilled.

In sum, economic research indicates that Social Security's retirement test plays a relatively small role in determining the aggregate labor supply of older workers. There

appear to be several explanations for these findings. First, research suggests that retirement decisions are influenced by the availability and generosity of Social Security and private pensions, health status, job characteristics, wage offers, family circumstances, and personal preferences for work versus leisure time. These other contributing factors which encourage or enable retirement appear to be dominant. Second, other Social Security provisions, particularly the actuarial adjustment for early retirement, the delayed retirement credit, and the automatic benefit recomputation feature, significantly offset the retirement test's apparent penalty. Third, the retirement test has been substantially liberalized over the years, permitting beneficiaries to earn more money without loss of benefits. Although earlier, more stringent forms of the test may have posed significant work disincentives, the current rules are far less restrictive. Fourth, some beneficiaries are undoubtedly sensitive to the retirement test and respond by making important adjustments in their lifetime labor supply plans. Nonetheless, the relatively small size of this group limits any impact that their response can have when the aggregate behavior of many millions of people is measured. Finally, many workers have limited control over the number of hours worked on their jobs and, therefore, may show little reaction to changes in the retirement test in the short run.

CONCLUSIONS

Social Security probably causes a reduction in labor-force activity by older workers. This conclusion is consistent with two widely cited rationales for Social Security's existence, both of which imply that the system promotes earlier retirements. As pointed out by Hagens (1980), the forced saving rationale argues that individuals are often myopic, and must be induced to save for their old age. If the program accomplishes this, individuals will enter their later years with greater personal wealth, and will be able to afford more of all commodities, including their own leisure, so they

will retire earlier. In the insurance rationale, OASI provides insurance against the loss of earnings. The retirement date is uncertain when workers are young, and Social Security provides insurance for this risk. If retirement occurs late, workers might have more savings than they need to finance continuation of their normal lifestyles; however, early retirement can result in inadequate savings levels. The Social Security system can transfer resources from the former group to the latter if adjustments made to benefit payments in response to changes in the retirement date are less than actuarially fair. If late retirees effectively subsidize early retirees, the system encourages early retirements. Retirement neutrality has never been a primary goal of the OASI program, and is inherently at odds with both the forced savings and insurance rationales.

Of course, it is possible to argue that the conclusions about the OASI program's influence on labor supply are in error, and that somehow the economic studies have produced evidence that is a poor guide to what might be anticipated in the future. There are several reasons for hesitating to embrace these conclusions fully, particularly in predicting behavior in the 1990s and beyond.

- Rudimentary data analyses of the historical evidence (e.g., Figure 1) seem to present a circumstantial case that the development of the Social Security system has had an important impact on American retirement patterns. Ransom and Sutch (1988) find that retirement rates among nonagricultural workers were declining over the 1870-1930 period. In contrast, retirement rates for older men increased from 1940 until the mid-1980s. Although there are numerous possible causes for this turnaround apart from the advent of Social Security, the results from the microeconometric studies are --- at least on the surface --- somewhat at odds with this pattern.

- Although the economic and statistical modeling displays impressive skills and industry on the part of the researchers, even the best retirement models ignore what would appear to be significant facets of the individual decision-making process, and are consequently misspecified. The complexity of the retirement process certainly stretches the limits of economic modeling, and the modest explanatory power of the best empirical models indicates that much of the story is missing. Even the most sophisticated models bypass some or all of such factors as uncertainty, liquidity constraints, replanning, the physical demands imposed by jobs, employer-imposed constraints on work choices, and unmeasured individual differences among workers. No single study attempts to address more than one or two of these phenomena. Only modest attention has been given to the way financial incentives might interact with other factors such as health status, the physical demands of jobs, and other nonmonetary influences. It is conceivable that better models (that will certainly require better data) will attribute larger labor-supply influence to the Social Security system.

- Most of the influential economic studies have used data from a single source: the Retirement History Survey. Not only is this database becoming rather dated, but it documents the retirement behavior of a cohort whose life experiences may have shaped economic decisions and behavior in ways that are unlikely to be repeated in later generations. The RHS respondents were born during 1905-11, lived through the Depression and World War II in the early part of their adult lives, and benefited handsomely from the start-up phase of the Social Security system. Attitudes about work and saving present in the cohorts represented in the RHS are likely to differ from those of later cohorts, and these differences may be reflected in the measured responsiveness of older workers to the incentives implicit in employment offers, Social Security, and private pension plans.

- Nearly all empirical retirement studies have focused on the behavior of white, male, wage and salary workers. Only a few studies have examined the retirement decisions of women, minority groups, and self-employed workers. Very little research has looked at the joint retirement decisions made by couples.

- Econometric investigations have treated private pension rules, asset levels, tastes, and other retirement factors as largely independent of the Social Security system, but Social Security --- because of its size and visibility --- may have established important guideposts to which personal preferences and other institutions have conformed. That is, there may be more endogeneity present in these models than has been explicitly addressed.

Most of the research reviewed in this chapter was conducted at a time when the labor-force participation rates of older men had been falling for decades. It is interesting to note that this long-term decline apparently stopped in the mid-1980s, and rates have risen slightly during each of the past six years. Whether this represents a temporary halt in a trend that will shortly resume, or an historic turnaround, is not yet evident. At this point, however, the Department of Labor is forecasting a 1.1 percentage point increase in the participation rate for men aged 55-64 during 1988-2000 (following a decline of 8 percentage points from 1976-88; Fullerton 1989).

The available evidence argues against the view that there are politically-acceptable changes in Social Security policy that are likely to result in a substantial increase in the labor-force participation of older workers. Nonetheless, in their focus on monetary incentives, economic models might be missing the nature of a key element of Social Security's influence. That is, because it is the single largest player in the arena, it perhaps establishes an important social norm. One aspect of policies such as an

increase in the normal retirement age, or elimination of the retirement test, involves changes in financial incentives. However, these types of policy change also send strong messages about society's expectations concerning work and retirement. There can be little doubt that Social Security and other institutions over the years have consistently signaled that early retirement is desirable and well-deserved.[13] Policies that clearly indicate that longer worklives are expected and will be rewarded may well generate larger work responses than changes in monetary incentives alone might suggest. At this time, there appears to be no solid evidence that this would be the case, so such a scenario must be regarded as speculative.

[13]For example, Burtless and Moffitt (1984, 1985), Gustman and Steinmeier (1986), and Reinsdorf (1987) all find that individual preferences appear to change rapidly or shift in favor of leisure at the time of retirement, a phenomenon that could, in part, be caused by Social Security's well-known early and normal retirement ages.

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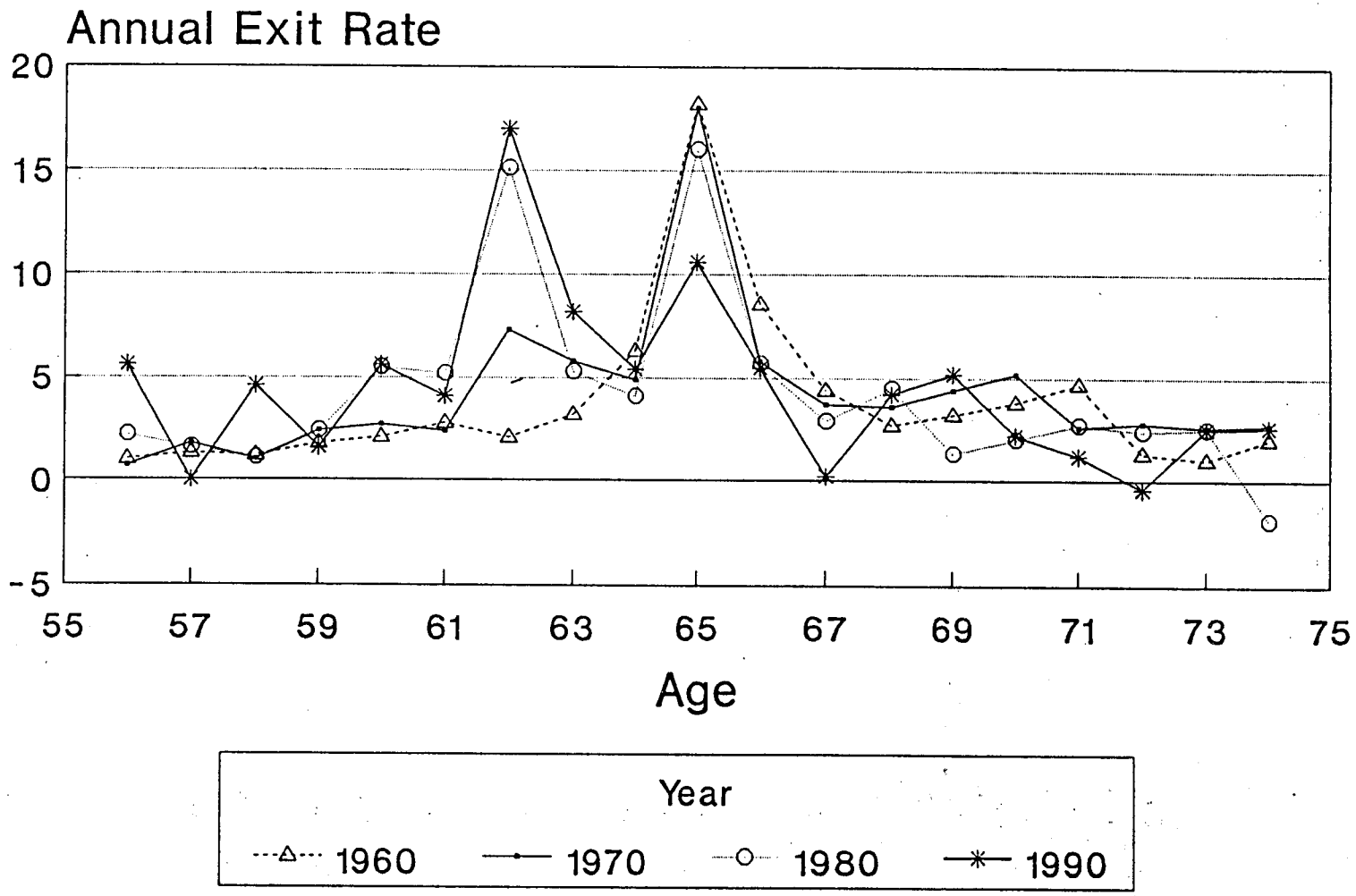
Figure 1

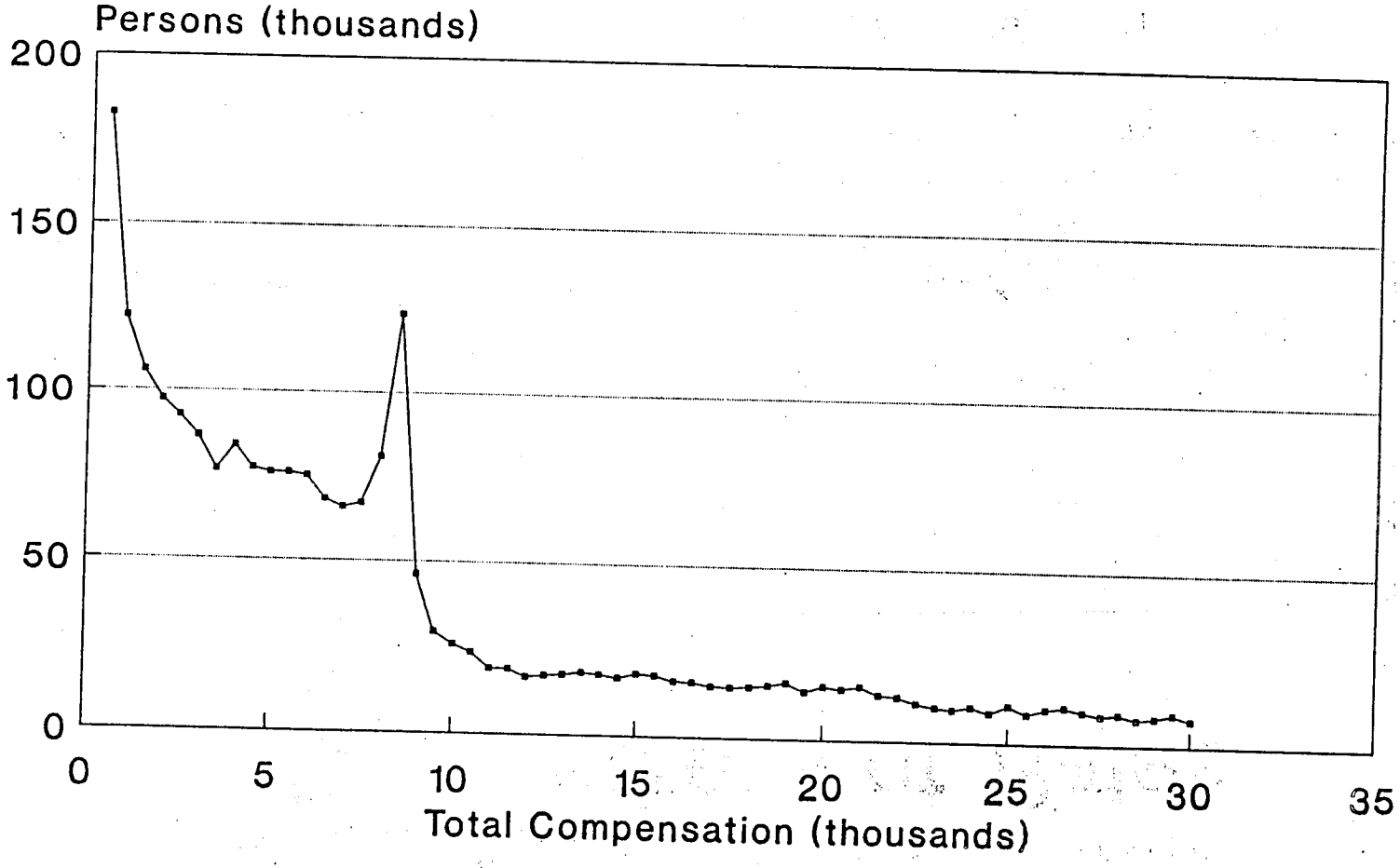
Male Retirement Rates



Source: 1960 data taken from Munnell (1977, Table 4-3). Participation rates for later years are from unpublished data obtained from the Department of Labor.

Figure 2

1988 Retiree Earnings Patterns
OASI beneficiaries and fully insured nonbeneficiary workers, aged 65-69



Source: Continuous Work History Sample