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# THE SOCIAL SECURITY EARNINGS TEST AND LABOR SUPPLY OF OLDER MEN

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## EXECUTIVE SUMMARY

The social security earnings test reduces a 65–69-year-old's benefits at a 33-percent rate and a 62–64 year-old's benefits at a 50-percent rate once earnings pass a threshold amount—among the highest marginal tax rates in the economy. Previous research dismissed the importance of the earnings test but failed to take advantage of three more recent changes in the earnings-test rules, each applying to some age groups and not others, in order to identify its impact. Data on earnings distributions before and after these rules changes demonstrate that a significant number of older workers are clustered with earnings just at or below the earnings-exempt amount—so the earnings test leads some beneficiaries to hold down their labor supply. Furthermore, the bunching moves when the exempt amount moves and disappears when the earnings test is eliminated. An econometric model of labor supply is also formulated to incorporate the entire range of beneficiaries' responses to the earnings test. The resulting estimates imply substantial deadweight loss from older workers changing their labor supply to avoid taxation. Simulations predict a 5.3-percent boost to aggregate labor supply from eliminating

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the earnings test, and at a minimal fiscal cost. In contrast, a slight decrease in labor supply is predicted from the recently legislated increase in the exempt amount. It will be important to keep in mind this apparent sensitivity of older workers to tax and transfer rules conditional on working, which will affect the outcome of policies that attempt to induce people to work longer. Another important consideration involves 62–64-year-olds, who face an earnings test as restrictive as it was in the mid-1970s. The tighter earnings test rules will be extended to 65- and 66-year-olds as the normal retirement age is raised.

## 1. INTRODUCTION

With the life expectancy of those who reach old age having risen substantially and with the elderly continuing to grow as a percentage of the population, their economic well-being has been a major policy focus in recent decades. Social security has been key in increasing the income of the elderly both in absolute terms and relative to other groups of the population. When it was established during the Great Depression, one motive for social security was to encourage older workers to leave the labor force and make way for younger workers.[1] This was accomplished not simply by giving benefits to older workers, but also by conditioning benefits on a reduction in earnings. The earnings test took away an entire month's benefits when monthly earnings exceeded $15. With median monthly wage and salary income at $73 in 1940, the earnings test in effect tied benefit eligibility to retirement.

In the decades since social security was established, labor-force participation among older workers has plummeted. After a slow decline since the late 1800s, the participation rate of men aged 65 and over fell from 41.8 percent in 1940 to 19.3 percent in 1980.[2] With life expectancy continuing to rise, the work force shrinking, and savings rates at an all-time low, the increasing length of retirement has come to be viewed as unsustainable. One consequence is the fiscal drain on the social security system, which is projected to be insolvent by around 2030. The policy focus in turn has shifted to encouraging the aged to be more reliant on their own resources by working longer and saving more.

To ease the penalty against working, the earnings test was gradually

[1] Quadagno (1988), Graebner (1980).

[2] Data from the U.S. Census. During the 1930s the labor-force participation rate also dropped considerably, probably several percentage points. However, measuring participation rates before 1940 is problematic because earlier census questions did not ask about participation. See Ransom and Sutch (1988).

liberalized beginning in the 1950s. The exempt amount has been raised and the implicit tax on earnings lowered, principally for those aged 65 and over. In 1996 a beneficiary aged 65–69 earning more than $12,500 lost $1 in benefits for every $3 in additional earnings—which functions as a 33% tax on wages. March 1996 legislation gradually raises the exempt amount to $30,000 by 2002. Beneficiaries aged 62–64 face a 50-percent tax rate for earnings above $8,280. Further easing of the earnings test does not appear on the horizon. The principal argument made against any such move is the consequent fiscal squeeze. However, it does not appear to be well understood that much of the lost revenue would be compensated over the medium run because of other rules involving the impact of the earnings test on future benefits. Meanwhile, beginning in 2000 the earnings test will grow more restrictive, as the tighter earnings test for 62–64-year-olds is extended to 65- and 66-year-olds as the normal retirement age slowly rises.

In spite of the substantial popular attention to the earnings test, it is no longer clear what role it plays in influencing the labor supply of the elderly. The increases in the exempt amount might mean the earnings test no longer leads people to retire, as long as they can freely work and earn less than the exempt amount. Nevertheless, the earnings test should continue to affect the choice of hours among those who do work. Recent research provides little insight about the hours elasticities of the working elderly, but does conclude that the earnings test has little impact on labor supply. While the econometric modeling in that literature has often been highly sophisticated, two major problems arise with the data—based principally on information from the 1970s, they have become outdated, and they cover a time period when there were no significant changes in the earnings-test rules. With no policy changes shifting the incentives people face, the econometric estimates depend solely on how hours of work are correlated with the variation in wages and income across individuals. Differences across individuals in wages and income are likely to be correlated with the other determinants of labor supply, however. This identification problem makes it hard to pinpoint the impact of the earnings test.[3]

To isolate the role of the earnings test, I focus on several recent changes in the earnings test rules. Observing the corresponding changes in labor supply tells us about the effect of the earnings test and also about the behavior of the working elderly more broadly. However, if other factors are shifting at the same time, it might not be so simple to attribute the change in labor supply to the earnings test. Another feature

[3] Similar problems emerge in efforts to determine the impact of social security on retirement.

of the rule changes is that they applied only to certain beneficiaries, depending on their age. The availability of similar comparison groups that experienced no changes in the earnings test sets the stage for a natural-experiment analysis of the sort recently used to study other social insurance programs and tax changes.[4]

Even though a strong response to the earnings test emerges in the raw data, it only reveals part of the earnings test's effect. An econometric model of labor supply, described in detail in Friedberg (1997), incorporates the entire range of beneficiaries' responses. This type of structural estimation is typically faulted for overlooking identification and for imposing assumptions on the data that drive the estimates. The aim here is to extend the natural experiment approach by focusing on one of the major changes in the earnings-test rules, which leads to substantial variation in the net wage and income both cross-sectionally and over time.

The resulting estimates indicate a relatively strong effect of income and especially the net wage on hours of work, which implies substantial deadweight loss from the earnings test. The estimates are also used to predict the response to other earnings test changes, such as raising the exempt amount or eliminating the earnings test entirely. They are of more general interest in describing the labor supply choices of the elderly who continue to work, in contrast to the general focus in the literature on retirement. It will be important to keep in mind the apparent sensitivity of older workers to tax and transfer rules conditional on working, which will affect the outcome of policies that attempt to reduce the burden on social security by inducing people to work longer. Furthermore, the results suggest a potentially severe negative effect on labor supply if benefits start to be means-tested.

The rest of this paper is divided into four sections. Section 2 describes how the earnings test functions and how it has changed over time. It also discusses another important set of rules—the actuarial adjustment and the delayed retirement credit—which raise future benefits for current benefits forgone to the earnings test. These credits reduce the fiscal revenues from the earnings test over the long run, and might, but do not appear to, reduce the labor supply distortions from the earnings test.

Section 3 illustrates the theoretical impact of the earnings test and the shifts in the earnings-test rules. It shows why the overall effect on labor supply of easing or eliminating the earnings test is ambiguous, but it also distinguishes clear predictions about the labor supply response.

[4] Recent studies of natural experiments—a term used to describe policy changes that affect otherwise similar people in different ways—include Meyer (1995) on unemployment insurance, Eissa (1995) on income taxes, and Yelowitz (1995) on Medicaid.

Section 4 turns to the data, beginning with information on how many people lose benefits to the earnings test. It then explores patterns of earnings across age groups and over time, which reveals unambiguous responses to the earnings test rules changes. Finally, Section 4 describes the econometric estimation of a more structured labor supply model that permits forecasts of the responses to future potential changes in the earnings-test rules. Section 5 concludes.

## 2. THE EARNINGS TEST

This section describes how the earnings test functions now and how it has been altered over time. It also discusses how other rules eliminate much of the long-term fiscal revenue from the earnings test.

Once a social security beneficiary earns more than a certain amount, his (or her) benefits are reduced at a rate proportional to additional earnings. The benefit reduction rate is equivalent to a tax applied to wages until benefits are gone. In 1996 a beneficiary aged 62–64 could earn up to $8,280—the earnings *exempt amount*—with no reduction in benefits. If he works more, he loses $1 in benefits for every $2 he earns—a 50-percent *tax rate*. For 65–69-year-olds, the earnings test was less restrictive in 1996, with $12,500 in exempted earnings allowed and a 33-percent tax rate.[5]

Table 1 describes how the earnings test has functioned over time, and Table 2 lists the changes in the earnings test. Until the early 1970s the tax rate was changed most often. Before 1960 the tax rate was infinite, with all benefits lost at the point when earnings passed the threshold amount. Since then the tax rate has been lowered to 33 percent for 65–69-year-olds and 50 percent for 62–64-year-olds. More recently the exempt amount has been raised for older beneficiaries. In 1976 the exempt amount was $7,611 (in 1996 dollars) for everyone subject to the earnings test. It was increased about 25 percent in 1978 for those aged 65 and over, had reached $11,500 in early 1996, and is now set to rise in steps to $30,000 in 2002.[6] In contrast, the earnings test has remained almost unchanged for 62–64-year-olds since 1973. A final set of changes has exempted the oldest beneficiaries from the earnings test—beneficiaries aged 72 and over in 1951 and aged 70 and 71 in 1983.

[5] The earnings test applies to labor income: wages, salaries, and income from self-employment.

[6] The exempt amount for 65–69-year-olds was raised to $12,500 in 1996, will rise by $1,000 each year through 1999, and then goes to $17,000 in 2000, $25,000 in 2001, and $30,000 in 2002. The exempt amount for 62–64-year-olds is raised yearly according to average earnings increases.

**TABLE 1**
***The Earnings Test Rules over Time*[a]**

| Year | 62–64-year-olds | | 65–69-year-olds | | 70–71-year- olds[b] | |
|---|---|---|---|---|---|---|
| | Exempt amount ($) | Tax rate (%) | Exempt amount ($) | Tax rate (%) | Exempt amount ($) | Tax rate (%) |
| 1996 | 8,280 | 50 | 12,500 | 33 | — | — |
| 1985 | 7,874 | 50 | 10,674 | 50 | — | — |
| 1975 | 7,349 | 50 | 7,349 | 50 | 7,349 | 50 |
| | Exempt amount ($) | | Tax rate (%) | Next earnings threshold ($) | | Tax rate (%) |
| 1965 | 5,977 | | 50 | 8,468 | | 100 |
| | Exempt amount, monthly ($) | | | Tax | | |
| 1955 | 472 | (5,659 annualized) | | Entire month's benefits are lost | | |
| 1945 | 101 | (1,215 annualized) | | Entire month's benefits are lost | | |

(a)Exempt amounts expressed in 1996 dollars, inflated using the Consumer Price Index.

(b)Before 1954, people aged 72–74 were also subject to the earnings test, and before 1950 people aged 75+ were.

*Source: Annual Statistical Supplement to the Social Security Bulletin,* Table 2.A29.

**TABLE 2**
***Changes in the Earnings Test Rules***

| Year | Change | Ages affected | Ages not affected |
|---|---|---|---|
| 2000+ | Earnings test rules for 62–64-year-olds extended to 65–66-year-olds as the normal retirement age rises from 65 to 67. | 65–66 | 62–64, 67–69 |
| 1996 | Exempt amount rises to $30,000 in 2002 | 65–69 | 62–64 |
| 1990 | Tax rate lowered to 33% | 65–69 | 62–64 |
| 1983 | Earnings test eliminated | 70–71 | 62–69 |
| 1978 | Exempt amount raised 25%; additional increases scheduled through 1982 | 65–71 | 62–64 |
| 1972 | 100% tax rate eliminated; pegged annual increases in exempt amount to inflation | All ages | — |
| 1961,5,7 | Exempt amount raised | All ages | — |
| 1960 | 50 and 100% tax rates established, instead of complete loss of benefits | All ages | — |
| 1950,2,4,8 | Raised exempt amount | All ages | — |
| 1950,4 | Eliminated the earnings test | 75+, 72–74 | 62–71 |

*Source: Annual Statistical Supplement to the Social Security Bulletin,* Table 2.A.29.

**TABLE 3**
***Impact of the Earnings Test on Future Benefits***

| | Forgo a year of benefits now, and future benefits are raised by | |
|---|---|---|
| Since year | Aged 62–64 (actuarial adjustment) | Aged 65–69 (delayed retirement credit) |
| 1990 | $6\frac{2}{3}\%$ | $\frac{1}{2}\%$ every other year until it reaches 8% |
| 1982 | $6\frac{2}{3}\%$ | 3% |
| 1972 | $6\frac{2}{3}\%$ | 1%, if benefits have not been actuarially reduced |
| 1961 | $6\frac{2}{3}\%$ | No increase |

*Source: Annual Statistical Supplement to the Social Security Bulletin,* Table 2.A.20.

Another set of rules, described in Table 3, governs the relationship between the earnings test and future benefits. Just as people are rewarded with higher benefits in the future if they delay claiming benefits today, beneficiaries also receive an increase in all future benefits for current benefits lost to the earnings test.[7] For beneficiaries under the age of 65 this feature is called the actuarial adjustment and amounts to a $6\frac{2}{3}$-percent increase in future benefits for each year's worth of benefits forgone. For beneficiaries aged 65–69 the adjustment is called the delayed retirement credit; it was introduced in 1973 at 1 percent and beginning in 1990 is being raised very gradually to 8 percent. These credits establish a tradeoff between a year's worth of benefits at present and a percentage increase in all future benefits.

These credits cancel out the fiscal gains from the earnings test. When benefits are reduced today, higher payouts are generated in the future. A 7–8-percent credit is intended to be actuarially fair on average, meaning that the present value of the increased benefits over the rest of the lifetime roughly equals the benefits lost today, across the whole population.[8] Therefore, the net fiscal gain from the earnings test over the medium run is approaching zero as the delayed retirement credit is raised. Similarly, as Honig and Reimers (1989) pointed out, the fiscal cost of eliminating the earnings test, though high at the outset, would gradually be offset because benefits would not rise in the future for

[7] Beneficiaries are compensated if they lose a full month's worth of benefits.

[8] Coile, Diamond, Gruber, and Jousten (1997) used simulations to show that the actuarial adjustment is actuarially fair or better than fair for most retirees, especially when the annuity value of social security is taken into account. If the annuity value is ignored, then claiming benefits at age 62 is better for some people who are single, have short life expectancy, and/or have very low wealth.

beneficiaries who otherwise would be losing benefits to the earnings test today.[9]

Similarly, the dynamic structure of benefits should limit the current effect of the earnings test on labor supply. Someone who perceives the credit to be actuarially fair would be indifferent between receiving the benefit today and receiving the higher stream of benefits over the rest of his expected lifetime. Even if the credits are not thought to be actuarially fair—and the delayed retirement credit is only slowly approaching actuarial fairness—it should still make beneficiaries less sensitive to the earnings test.

There is no evidence that the credits are taken into account with regards to the earnings test, however. A number of reasons for this are possible. People might be unaware that the credits have anything to do with the earnings test—when both *Money* and the *Los Angeles Times* recently discussed the earnings test rules, they did not mention that higher future benefits compensate for current benefits lost to the earnings test.[10] The credits might also be ignored because people are myopic, meaning they place little or no value on getting higher income in the future for income forgone today.[11] Assuming perfect foresight, the effect of the credits still depends on how much people weigh current versus future income, which is a function of their ability to borrow against future income as well as their life expectancy. Even an actuarially fair credit will not be attractive to someone who faces borrowing constraints. Borrowing-constrained people cannot access the higher future income today. If they postpone receiving benefits, their consumption today will be too low and their consumption in the future too high relative to the optimal levels. In sum, short life expectancy, ignorance, myopia, and borrowing constraints can all prevent the actuarial adjustment and delayed retirement credit from reducing the impact of the earnings test.

Previous research on the credits does not shed much light on these issues. The actuarial adjustment does appear to have some impact on the timing of claiming benefits, but much less than predicted. Among eligible men retiring before the age of 62 in the 1982 New Beneficiary Survey, the age of claiming was associated with some of the factors that raise the value of the actuarial adjustment, according to Coile, Diamond, Gruber,

[9] Poterba (1997) describes a similar policy where the long-term costs are overestimated. The estimated tax expenditures from tax-deductible pension and retirement saving contributions ignore the taxes that will be paid when the assets are drawn down in the future.

[10] Simon (1996) and Kristof (1997).

[11] Evidence that a significant proportion of the population act myopically in their consumption and savings patterns goes as far back as Flavin (1981).

and Jousten (1997). Nonetheless, about three-quarters claimed benefits immediately upon turning 62, although simulations suggested it would be optimal for most people to wait until 65. Reimers and Honig (1993, 1996) investigated the sensitivity of labor-force re-entry to the earnings test and the credits. They found that the influence of the exempt amount on re-entry by male retirees did not differ for those under or over the age of 65, although it should have if people took the credits into account.

In the formal modeling in Friedburg (1997) I take the view that the credits adjusting future benefits do not affect labor supply decisions. The influence of the earnings test will be demonstrated later in this paper and belies the impact of the credits. I tried estimating a model of the earnings test capturing the effect of the delayed retirement credit, but no such effect emerged. As the estimation results and simulations are discussed, it will be important to keep in mind the apparent distortions to current labor supply from the earnings test, along with the diminishing fiscal benefits over the medium run.

## 3. HOW THE EARNINGS TEST SHOULD AFFECT LABOR SUPPLY

This section discusses how the earnings test shifts the incentives people face. Its impact on the choice of how much to work depends on how much one would work without the earnings test and may be positive or negative. Its potential impact on retirement itself depends on whether the choice of hours can be made with full flexibility or not.

### *3.1 The Earnings Test and Budget Constraints*

The earnings test alters the incentive to work by changing the net wage and total income of beneficiaries, depending on how much a beneficiary works. The impact of the earnings test can be understood by graphing the budget constraint which the earnings test generates. Budget constraints demonstrate the tradeoff between two things which people value: time for leisure and earnings for consumption. A person chooses how much leisure to give up in order to have higher income, with the terms of that tradeoff governed by wages and taxes. The horizontal axis in Figure 1 measures hours of leisure, and as the person moves left towards the origin he works more and enjoys less leisure time. The vertical axis measures annual income.[12] The person may be endowed

[12] The diagram has been simplified by assuming no other sources of income besides social security and earnings and by abstracting from income taxes, which generate additional kinks in the budget constraint.

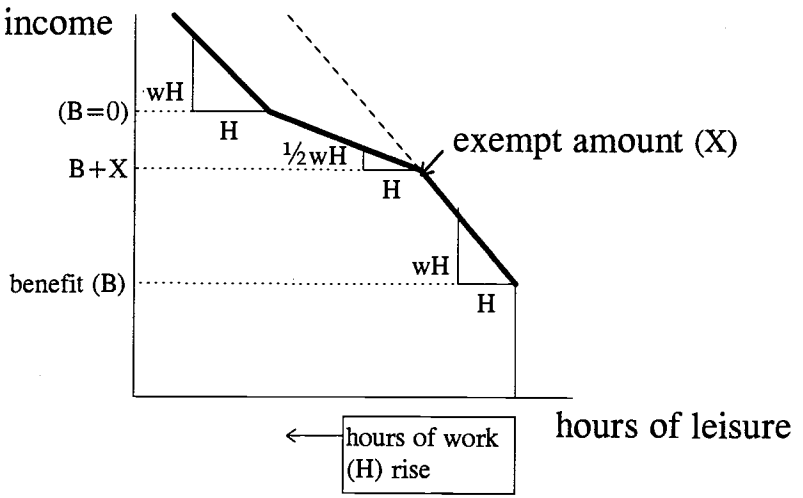


FIGURE 1. *The Budget Constraint*

with some amount of non-labor income and get additional income only by working and sacrificing leisure.

The bold segments in Figure 1 illustrate how social security shapes the budget constraint. A person decides both whether and how much to work depending on his hourly wage rate $w$, the size of his benefit $B$, and his preferences over consumption relative to leisure. When the person does not work, he enjoys the maximum hours of leisure available and has income $B$. If he works $H$ hours, his income rises by $wH$, so the wage measures the return for an hour of work and determines the slope of the budget constraint. The earnings test changes the net wage once earnings exceed the exempt amount $X$. If the person earns another dollar above $X$, his benefits shrink. For someone aged 62–64, benefits are reduced by 50 cents, and total income only rises by 50 cents. Working another hour at wage $w$ raises net income by $\frac{1}{2}w$, as illustrated in Figure 1. For someone aged 65–69, working another hour raises net income by $\frac{2}{3}w$. The abrupt decline in the net wage generates a kink in the budget constraint. At the kink, a person is on the margin between two different net wages: if he works an hour less he still gets $w$, but if he works an hours more he gets $\frac{1}{2}w$ as the slope of the budget constraint flattens out. After all of someone's benefits have been taxed away, the net wage returns to $w$ along the upper segment of the budget constraint.

The social security benefit expands the budget constraint, therefore. The earnings test further alters the budget constraint and changes incentives in two distinct ways. Intuitively, one expects that people work less

when work is taxed. This incentive to substitute leisure for work is known as the *substitution effect*—and is quite large when the tax rate is 33 or 50 percent. In addition, the earnings test makes people poorer by reducing their total income for a given amount of work. This negative *income effect* may actually lead people to work more. The substitution and income effects work in contrary directions, making the overall impact of the earnings test ambiguous. Some people work less because of the earnings-test tax, but others might work more because of the loss in income, depending on their relative sensitivity to the substitution and income effects.

These conflicting effects make it difficult to determine from raw data on beneficiaries' labor supply how much they respond to the earnings test. Nonetheless, a strong and unambiguous prediction about behavior emerges—the earnings test should lead some beneficiaries to keep their earnings just at or below the exempt amount. Earning slightly more, a person would suddenly face a 33- or 50-percent tax rate. If we see beneficiaries with earnings bunched just at the kink in the budget constraint, it is a signal that the earnings test does affect labor supply. There is no other reason to observe people clustered together with a particular level of earnings, since the earnings distribution is otherwise fairly smooth. If we do not observe bunching at the exempt amount, then there is not likely to be any reaction to the earnings test by others.

### 3.2 *Changes in the Earnings Test Rules*

How would we expect people to respond if the earnings test is eliminated? As the dashed line in Figure 1 demonstrates, getting rid of the earnings test removes the kink in the budget constraint and the consequent substitution effect that deterred work. Those who kept their labor supply just at the kink, earning just up to the exempt amount, will now choose to work more at the higher net wage. However, those already working more are now better off, and this income effect has a contrary impact discouraging work. The more a person initially worked and lost benefits, the stronger the income effect is. For someone who lost some but not all their benefits, the net wage and total income both rise; labor supply might rise or fall, depending on their relative sensitivity to the substitution and income effects. Someone who previously worked too much to get any benefits now receives benefits, with no change in the net wage. For them, the income effect alone operates to lower labor supply. The direction of the income and substitution effects and the overall change in labor supply depend, therefore, on how much someone was initially working, as demonstrated in Table 4.

Less radical changes in the earnings test also change labor supply incentives. In 1990 the tax rate for 65–69-year-olds was reduced from 50 to 33

**TABLE 4**
***Predicted Labor Supply Responses to Earnings Test Changes***

| Earnings test change | Direction of response: Lower segment[a] Over-all | At the kink[a] Sub. effect | At the kink[a] Inc. effect | At the kink[a] Over-all | Middle segment[a] Sub. effect | Middle segment[a] Inc. effect | Middle segment[a] Over-all | Upper segment[a] Sub. effect | Upper segment[a] Inc. effect | Upper segment[a] Over-all |
|---|---|---|---|---|---|---|---|---|---|---|
| Earnings test is eliminated | No effect | ↑ | No effect | ↑ | ↑ | ↓ | ↑ or ↓ | None | ↓ | ↓ |
| Tax rate falls | No effect | ↑ | No effect | ↑ | ↑ less | ↓ less | ↑ or ↓ | ↓ for some, no effect for most | | |
| Exempt amount rises | No effect | ↑ | No effect | ↑ | ↑ for some | ↓ | ↑ or ↓ | ↓ for some, no effect for most | | |

[a]Initial location on the budget constraint.

*Notes:* The arrows represent the direction of the impact on labor supply of the substitution and income effects that result from particular changes in the earnings test rules. The substitution and income effects depend on where someone is initially located on the budget constraint that is illustrated in Figure 1.

percent, altering the budget constraint as in Figure 2. The middle segment becomes steeper, reflecting the greater reward to work. Some people who were keeping their earnings just below the exempt amount will now work more because of the substitution effect. On the other hand, people who were already losing some benefits now have more income and might work more or less. Some people who were working too much to get benefits now keep some benefits and face a 33-percent tax rate, and both effects combined will lead them to work less. Lastly, others working a lot are unaffected by the changes. Overall, the impact on labor supply of lowering the tax rate is ambiguous. The strongest prediction arises once again for those at the kink in the budget constraint: some people with earnings at the exempt amount will increase their labor supply.

In 1978 and 1996 the exempt amount was raised for those aged 65 and over. Figure 3 illustrates the resulting change in the budget constraint. Raising the exempt amount will unambiguously raise the labor supply and earnings of people bunched at the exempt amount. The positive substitution effect is also felt by some beneficiaries working only a little above the exempt amount. For most beneficiaries working more than the exempt amount, there is no substitution effect encouraging work, while the positive income effect from having more benefits may lead them to work less.

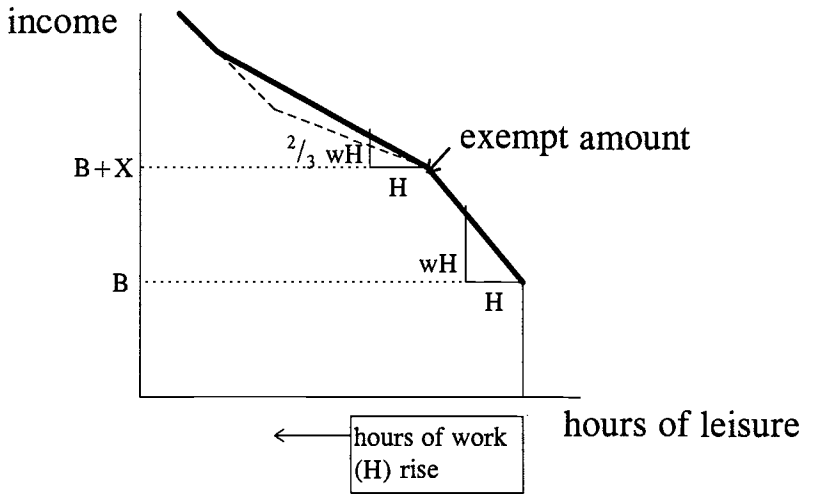


FIGURE 2. *Lowering the Earnings-Test Tax Rate*

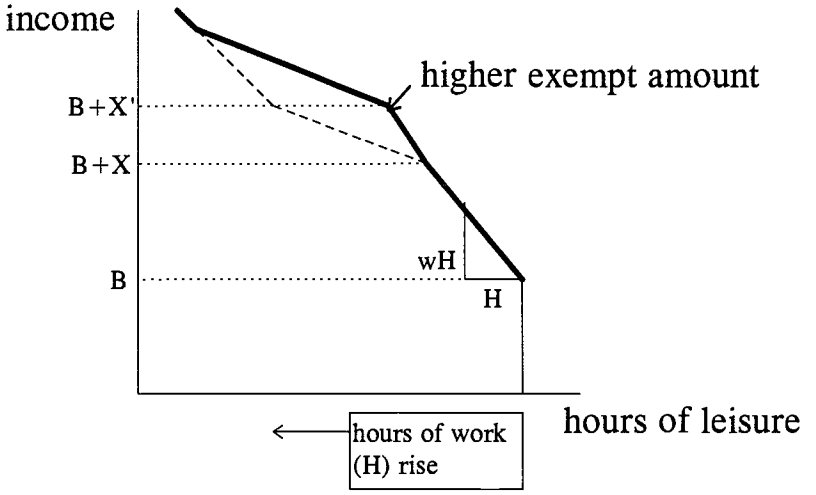


FIGURE 3. *Raising the Exempt Amount*

### 3.3 *The Earnings Test Can Affect Retirement Too*

The analysis above implies that the earnings test will not influence the decision of whether to work or retire. Someone on the margin of choosing whether to work would not be affected by the earnings test, because his first several thousand dollars of earnings are exempted. The earnings test would only affect the decision of how much to work *conditional on* wanting to work and earn more than the exempt amount. However, evidence from studies on prime-age workers suggests various reasons why the budget constraint may not be continuous, as drawn in the previous section. For instance, minimum hours requirements or fixed costs of work—which create discontinuities in the budget constraint at zero hours—will link the decision of how much to work with the decision of whether to work at all.[13] In that case, the presence of the earnings test will lead some people to retire.

For example, suppose that firms require their employees to work a minimum number of hours. Workers might be less productive if they only worked a few hours, or there might be fixed costs of employing people. If there are minimum-hours requirements, say $H_1$ or $H_2$ in Figure 4, then the lowest section of the budget constraint is not available. Someone who would prefer working a small number of hours must choose between not working and working the minimum required. If minimum hours are $H_1$, yielding earnings below the exempt amount, then the earnings test still does not affect the decision whether to work. However, if minimum hours are $H_2$, then some people who would have chosen to work $H_2$ or less without the earnings test will choose not to work rather than work and lose benefits.

Another kind of discontinuity at zero hours arises if people face fixed costs of working, as illustrated in Figure 4—for example, the cost of transportation or work clothing. In that case, a person will choose not to work unless his earnings are high enough to pay at least for the cost of working, which effectively eliminates the lowest part of the budget constraint. The higher the fixed costs of work, the more the earnings test will deter work altogether because net income after the earnings test will not cover costs.

If the budget constraint is discontinuous at zero hours, therefore, the earnings test will keep some people from working at all, and changes in the earnings test will alter retirement rates. Any move to liberalize the

[13] Evidence from Hausman (1980), Cogan (1981), and Blank (1988) implies significant fixed costs of work. Card (1990) found evidence consistent with minimum-hours constraints; Altonji and Paxson (1988) documented the inflexibility of work schedules.

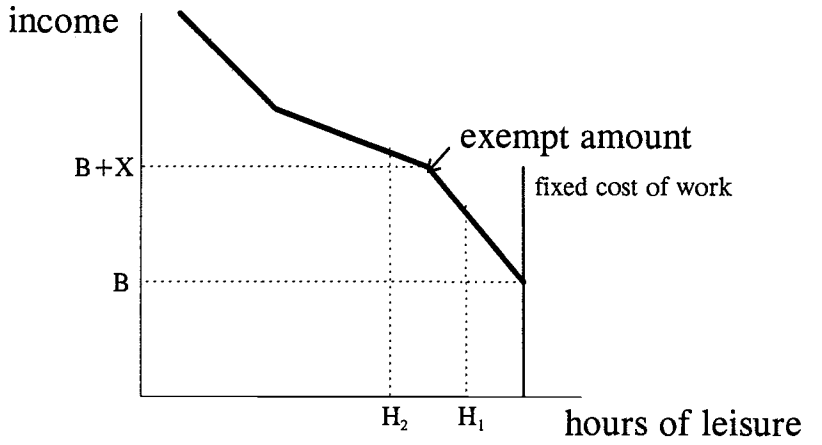


**FIGURE 4.** *A Discontinuous Budget Constraint*

earnings test—either raising the exempt amount or lowering the tax rate—will reduce retirement rates.

It should also be noted that other sources of rigidities in labor supply or labor demand might generate discontinuities along the rest of the budget constraint. For whatever reason, hours might be inflexible upward or downward at some jobs. People in those jobs could not respond to the earnings test, even if they wished to. On the other hand, if the earnings test is constraining enough, then the response will be more powerful—the person can leave the job entirely, either to find a new job with more suitable hours, which might also involve a lower wage, or to withdraw from the labor force, as described above.

There is little evidence about the flexibility of choices for the working elderly over whether to work or how many hours to work. Hours of work are more variable among the elderly, and part-time work is more prevalent. Moreover, the flexible reaction to changes in the earnings test, demonstrated in the next section, makes it clear that some workers do not face difficulties in adjusting their hours. Still, it will be important to keep in mind this potential source of rigidity in labor supply that may either mute the response to the earnings test or make it stronger than expected by inducing people to leave their jobs.

## 4. EVIDENCE ON THE EARNINGS TEST'S IMPACT

Section 3 illustrated theoretical predictions about the earnings test's impact; this section presents evidence about how social security beneficia-

ries respond to the earnings test. It focuses first on the number of people on different parts of the budget constraint. A brief review of the earlier literature on the earnings test follows. Then, I present data on earnings distributions and the degree of bunching at the exempt amount—behavior which can be attributed unambiguously to the earnings test. I also show how the bunching responds to changes in the earnings test rules. After finding strong evidence in the raw data, I discuss estimates of an econometric model of labor supply which incorporates the entire budget constraint generated by the earnings test. The estimates allow predictions about the response to possible future changes like the elimination of the earnings test or an increase in the exempt amount.

### *4.1 How Many Are Affected*

The number of people affected by the earnings test gives a preliminary indication of its importance. Table 5 summarizes data from the *Social Security Bulletin*. Of 9.8 million retired-worker beneficiaries aged 62–69 in 1989, about 926,000 lost some of all of their benefits to the earnings test. Particularly affected are 65–69 year olds—757,560 beneficiaries suffered a reduction in benefits, representing 10.5 percent of the total and 38.3 percent of working beneficiaries. Estimates also suggest there were 173,700 65–69-year-old beneficiaries in the immediate vicinity of the kink in the budget constraint and 582,000 eligibles with earnings who did not claim benefits and should be located on the upper segment of the budget

**TABLE 5**
***Number of People Affected by the Earnings Test, 1989***

| | |
|---|---|
| Aged 65–69 | |
| Number of retired worker beneficiaries[a] | 7,229,512 |
| who do not work[b] | 5,253,500 |
| who work and | |
| had benefits withheld[a] | 757,560 |
| had earnings within 90–110% of exempt amount[b] | 173,700 |
| Number who have not claimed benefits and still work[b] | 582,000 |
| Aged 62–64 | |
| Number of retired worker beneficiaries[a] | 2,549,084 |
| who work and had benefits withheld[a] | 168,782 |
| Total, beneficiaries who had benefits withheld | 926,342 |

[a]Bondar, *Social Security Bulletin*, 1993.

[b]Leonesio, *Social Security Bulletin*, 1990

constraint in Figure 1. Therefore, with over one-third of working 65–69-year-olds losing benefits to the earnings test and hundreds of thousands more affected as well, it appears that the earnings test could have a potentially important impact on labor supply.

### *4.2 Previous Research on the Earnings Test*

With so many working beneficiaries affected by the earnings test, it is not surprising that the earnings test receives substantial popular attention. In the New Beneficiary Survey of 1982, 73 percent of retirees under age 72 said they knew of the earnings test.[14] Magazines like *Money* and AARP's *Modern Maturity* regularly feature information about the earnings test. The 1989 study *Paying People Not to Work* (Robbins and Robbins, 1989), while flawed, was widely cited in the media.[15] Concern over the distortions induced by the earnings test spurred Congress to raise the exempt amount in 1996 for 65–69-year-olds.

Nevertheless, the previous scholarly literature on the earnings test generally dismissed its importance. One argument made in several previous papers is that the earnings test is unimportant because it does not affect many people. This view was expressed in several articles in the *Social Security Bulletin* and also by Burtless and Moffitt (1985).[16] They argued that a small percentage of the elderly are affected by the earnings test. However, the data in Table 5 make it clear that a large percentage of working beneficiaries are affected.

The most thorough papers to date, by Burtless and Moffitt (1985) and Gustman and Steinmeier (1986), incorporated the effect of the earnings test into joint models of retirement and post-retirement labor supply. The post-retirement hours choice was modeled using the budget constraint illustrated in Section 3. Each paper used the Retirement History Survey, a rich longitudinal survey that lasted from 1969 to 1979, but with a major weakness for studying the earnings test. During that time period beneficiaries of all ages faced the same earnings test parameters, with a single minor change in the rules over time.[17] Thus, variation across

[14] Reported in Leonesio (1990).

[15] Leonesio (1990) noted "serious theoretical and methodological shortcomings of their work," which led to the conclusion that 700,000 more of the elderly would return to work if the earnings test were eliminated.

[16] Bondar (1993), Leonesio (1990), Packard (1990), Lingg (1986).

[17] The 1972 change in the earnings test, noted in Table 2, eliminated a 100-percent tax rate for earnings past a second threshold above the exempt amount. However, the 1972 change is less useful than later ones for identifying the reaction to the earnings test. It applied to beneficiaries of all ages, yielding no natural comparison group to control for time-series changes—particularly critical at that juncture because retirement rates were rising sharply.

people in the shape of the budget constraint—which drives the labor-supply estimates—arises not because of changes in external policy, but because of variation across people in the net wage and non-labor income. However, the net wage and non-labor income not only shape the budget constraint, but might also be correlated with other determinants of labor supply. For instance, a person's past history of productivity and labor supply might be correlated with the present wage and probably also with present labor supply. Past earnings determine present social security and pension benefits. This joint causation creates an *identification* problem—estimates of the substitution and income elasticities end up reflecting other factors that affect labor supply as well. As a result, the estimates do not convey an accurate picture of the response to the earnings test.

In contrast to previous work on the earnings test, the empirical analysis in this paper is centered on periods before and after changes in the earnings test rules. Changes in the exempt amount and the tax rate cause major changes in the net wage and non-labor income which shift the budget constraint. This source of variation is independent of individual level determinants of labor supply and offers a way around the identification problem. It might still be difficult to pinpoint the earnings test's effect if other changes in labor supply were occurring over a similar time period. However, each of the recent rule changes applied to beneficiaries of one age group and not others. The unaffected age groups form a natural comparison group to control for other changes in labor supply behavior, by comparing the change in labor supply for the affected group with the labor supply over the same time period of the unaffected group.

### *4.3 How People React to the Earnings Test*

Empirical strategies for evaluating the effect of tax policies on labor supply vary in the degree to which they formalize individual behavior: the more structured the approach, the more closely the conclusions resemble theoretical concepts of interest, but also the more the accuracy of the conclusions depends on the formalization itself being a good description of reality.

I present two distinct approaches to this question. In order to focus on the strongest theoretical implication, this subsection analyzes earnings

Also, there was no apparent reaction to the second kink in the budget constraint or to its elimination. While that bounds the potential responsiveness of beneficiaries to the earnings test, it nevertheless remains consistent with a strong reaction to the initial kink, as estimated here. For any given reaction at the initial kink, the propensity of beneficiaries to locate at the higher kink is smaller because of its proximity to the reverse kink in the budget constraint where all benefits disappear, which people tend to avoid.

patterns relative to the earnings exempt amount. Comparing earnings before and after the rule changes decomposes how people respond to the exempt amount and to the tax rate, while comparing their response with that of other unaffected groups over time controls for aggregate trends which also move the earnings distribution. However, capturing the responses of people along other parts of the budget constraint, and quantifying those responses in terms of income and substitution effects, will require a more structured framework. The next subsection will discuss estimates from a model that incorporates the entire budget constraint illustrated in Figure 1 into a model of labor supply.

Figures 5A–C begin by showing earnings distributions *relative to the exempt amount* before and after the exempt amount was raised for 65–71-year-olds in 1978. Using data from March Current Population Surveys (CPS), the graphs compare the earnings in the previous year of 67–69-year-old men and 63–64-year-old men, who did not experience any change in the exempt amount. Figure 5-A shows, before 1978, how many of the older and the younger group had earnings in each $1000 interval above and below the kink in the budget constraint defined by the exempt amount, as a proportion of the total number of people in the age group.[18,19]

Figure 5-A demonstrates a strong response to the kink in the budget constraint generated by the exempt amount. People in both age groups bunch just at or below the kink—over 20 percent of 67–69-year-old workers have earnings within $1000 below the kink, along with almost 10 percent of 63–64-year-old workers. Roughly the same number of people appear in each increment for several steps below the kink, followed by a big drop in the step from just below to just above the kink. The visible reaction to the earnings test contrasts with earlier conclusions that the earnings test has little effect.

After 1978, the cluster of 67–69-year-olds moves up to the new exempt amount. Figure 5-B shows earnings of both age groups in relation to the

[18] The figures show earnings from wages and salaries plus earnings from self-employment, which is what the earnings test counts. The age groups were narrowed because the CPS reports age in March following the working year, instead of exact birthdays. The sample is restricted to men because spousal benefits are complicated by the choice of receiving benefits as a dependent or as a retiree. Dependent benefits are earnings tested on both the retiree's and the dependent's earnings, while retiree benefits are earnings tested only on the retiree's earnings. The type of benefit a spouse receives is not reported in the CPS.

[19] While the theory predicts a cluster exactly at the exempt amount, measurement error or small rigidities in labor supply will plausibly spread out the cluster in the neighborhood of or just below the exempt amount. The interval width of $1000 was chosen because respondents tend to round off reported earnings to the nearest thousand, so a different interval length confounds the measurement of bunching.

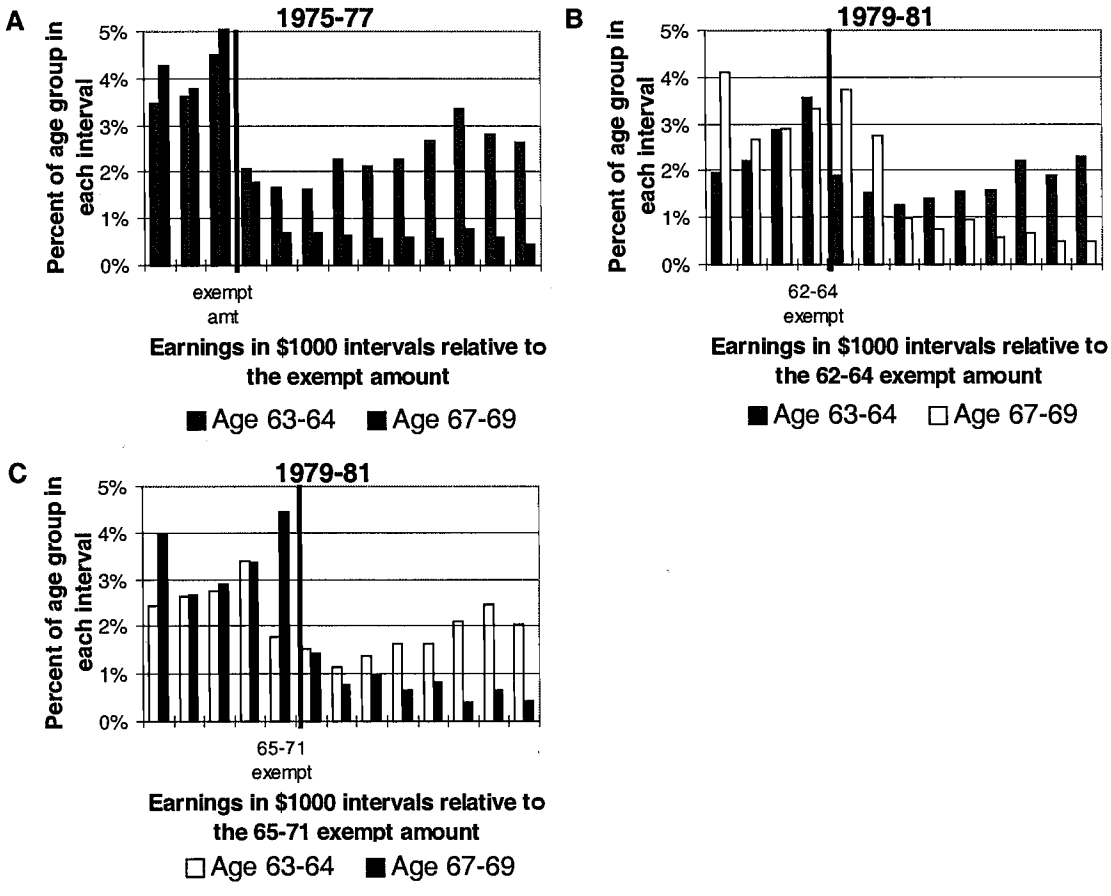


FIGURE 5. *Earnings Distributions Before and After 1978*

unchanged exempt amount of the younger group. The 63–64-year-olds cluster just below it as before, but the earnings of 67–69-year-olds have clearly shifted upwards. Figure 5-C shows them bunching at their new higher kink. Quantifying the visual evidence allows conclusions about statistical significance, as reported in Friedberg (1997). The bunching at the exempt amount is statistically different from the behavior along other parts of the budget constraint, and the shift in the bunching is statistically significant as well. Together, the visual and statistical evidence confirms that a significant number of people react to the earnings test by limiting their earnings.

Figures 6A–D make the same comparisons of earnings around the exempt amount before and after 1983, when the earnings test was eliminated for 70–71-year-olds. Figures 6-A and 6-B illustrate earnings patterns before 1983.[20] Figure 6-A compares the earnings of the affected group with that of a younger group that faces the earnings test both before and after 1983. The clustering at the exempt amount by those of both ages is, again, substantial. Figure 6-B gives a sense of the counterfactual by comparing the affected group with an older group of 73–75-year-olds who do not face the earnings test and whose earnings decline smoothly over the same range. Figures 6-C and 6-D make the same comparisons after 1983. Now, the earnings of the affected 71–72-year-olds decline smoothly over the range of the earnings kink in resemblance of the older group, while the younger group continues to bunch at the exempt amount.

The analysis concludes with Figures 7A–B, focusing on the 1990 decline in the tax rate from 50 to 33 percent for 65–69-year-olds. Figure 7-A shows earnings of 63–64- and 67–69-year-olds before 1990, and Figure 7-B shows earnings after 1990. In both, we see the familiar piling up at the exempt amount. Yet, comparing the graphs, it is difficult to detect a change in the degree of bunching by the older group relative to the younger. While the lack of reaction places a bound on the underlying responsiveness of labor supply, it need not contradict the evidence of strong reactions to the other changes.[21] The 17-percentage-point decline in the tax rate represents a smaller change than the earlier ones, when the tax rate went to zero. Furthermore, though it makes sense for psychological rather than economic reasons, people might act to avoid all high

[20] Figure 6 actually shows 71–72-year-olds, since they were 70–71 when the earnings were earned. 1982 is omitted because the change had been scheduled to occur in 1982 but was postponed in 1981 for one year.

[21] The estimates in Friedberg (1997) do imply a slight decline in hours resulting from the decline in the tax rate.

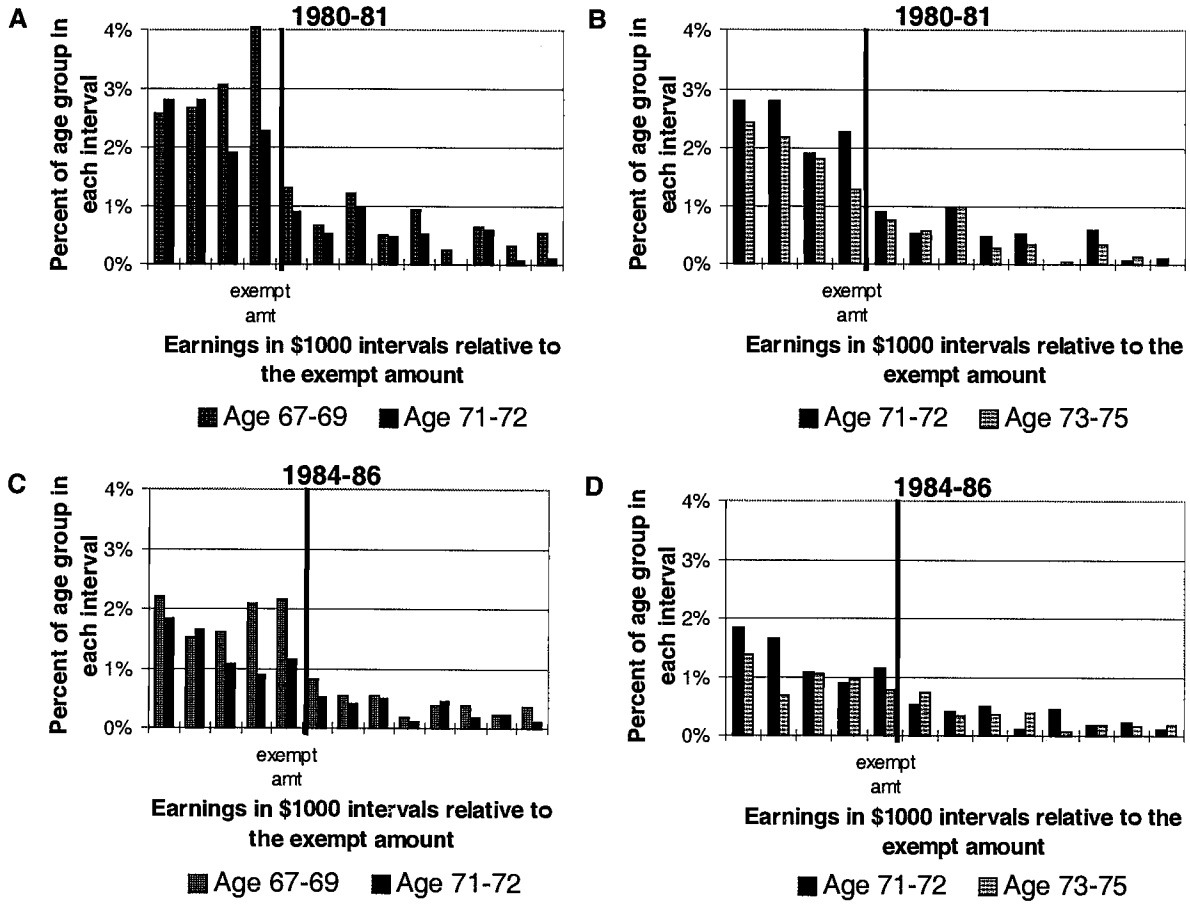


FIGURE 6. *Earnings Distributions Before and After 1983*

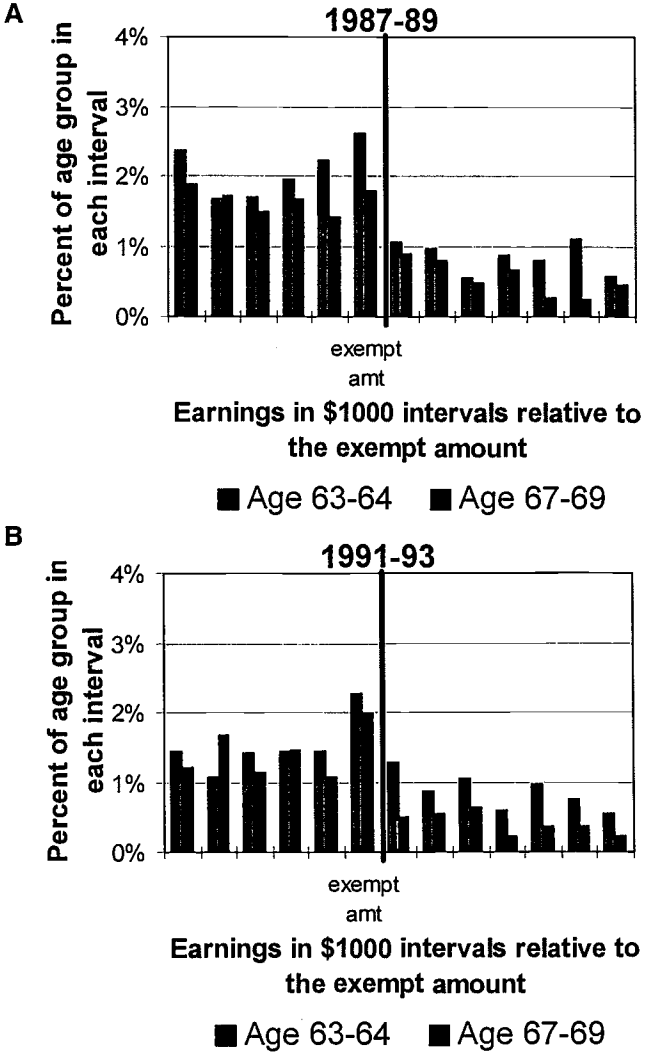


FIGURE 7. *Earnings Distributions Before and After 1990*

tax rates, instead of distinguishing precisely how high the tax rate is. In sum, the earnings patterns demonstrate substantial bunching of beneficiaries at the exempt amount, along with considerable responsiveness to the shifts in the budget constraint when the earnings test rules change. The next subsection will describe a labor supply model based on the entire budget constraint.

### *4.4 Results from a Model of the Earnings Test*

This subsection reports estimates and forecasts from an econometric model of labor supply detailed in Friedberg (1997). The model seeks to explain the choice of hours of work that maximizes utility subject to the kinked budget constraint illustrated in Figure 1. The model captures the bunching at the exempt amount together with reactions along other parts of the budget constraint which are more difficult to detect in the raw data. Because of the need to incorporate exogenous variation in the budget constraint to identify the model estimates, the sample covers the years before and after the 1983 elimination of the earnings test for 70–71- year-olds. This strategy introduces substantial variation in the net wage and virtual income across age groups and over time.

The model yields estimates of the effect of the net wage, non-labor income, and demographic variables on labor supply. The estimates indicate a strong effect of the wage and non-labor income, especially compared to results from the literature on prime-age workers.[22] This apparent sensitivity of older workers to wages and taxes is reflected in the flexible reaction to the earnings test observed in the previous subsection.

Another useful measure of the earnings test's impact is deadweight loss. Deadweight loss indicates how much a tax distorts the labor supply of those seeking to avoid the tax, relative to the amount of tax collected from them. It is measured as

$$\text{deadweight loss} = \text{equivalent variation} - \text{tax revenue}.$$

Equivalent variation is the income equivalent of the utility loss that is caused by the decline in labor supply in response to the earnings test.[23] Subtracted from equivalent variation is the tax revenue, or benefits lost to the earnings test, which is society's gain. Deadweight loss therefore expresses how much social welfare as a whole is lost because of the earnings test. The more sensitive people are to the net wage, the more they will lower their labor supply to avoid the earnings test, which shrinks tax revenue and expands deadweight loss.

[22] The model, the sample from the Current Population Survey, and the estimation are discussed in extensive detail in Friedberg (1997). The estimation results imply an uncompensated substitution elasticity of 0.316 (0.021) and an income elasticity of −0.332 (0.044) at the sample means.

[23] An exact measure of equivalent variation is computed using the estimated labor-supply coefficients according to Hausman (1981). People on the upper segment of the budget constraint do not suffer deadweight loss from the earnings test, because their net wage is unchanged; they face only an income effect from the lost benefits, which is a social gain.

The model estimates imply that older workers are quite sensitive to the net wage, resulting in significant deadweight loss. Table 6 reports the average deadweight loss estimated for people on different parts of the budget constraint. For people located on the earnings kink, average deadweight loss is $947—so the loss in utility caused by their efforts to avoid the earnings test is worth $947 to them—and there is no social gain in the form of reduced benefits collected from them. The average deadweight loss for people with labor supply on the middle segment of the budget constraint, facing a 50-percent tax rate, is $2,365. Their deadweight loss equals more than half the average revenue they surrender to the earnings test of $4,585. Thus, the earnings test imposes very high welfare losses relative to the fiscal savings it immediately generates.

**TABLE 6**
***Results of the Model***

Current effect of the earnings test

| Average for people located: | Deadweight loss ($) | Benefits lost to earnings test ($) |
|---|---|---|
| at the earnings kink | $947 | $0 |
| on the middle segment | $2365 | $4585 |

Predicted impact of changing the earnings-test rules

| Assumption | Change in average annual hours[a] |
|---|---|
| Current Benchmark: exempt amount up 20%, tax rate 33% | 1782 |
| Earnings test eliminated | 1876 |
| Change from Benchmark | +5.3% |
| Exempt amount raised to $30,000 | 1778 |
| Change from Benchmark | −0.2% |

| | Change in average gross earnings ($) | | | |
|---|---|---|---|---|
| Assumption | Lower segment | Earnings kink | Middle segment | Upper segment |
| Current Benchmark | 3,757 | 8,758 | 18,600 | 43,892 |
| Earnings test eliminated | 3,757 | 13,145 | 21,983 | 42,128 |
| Exempt amount raised to $30,000 | 3,757 | 11,743 | 19,801 | 39,457 |

[a]For all people located at or above the earnings kink.

*Note:* Predictions for 65–69-year-olds based on the labor-supply model described in Friedberg (1997).

Moreover, the delayed retirement credit raises benefit payouts in the future, ultimately boosting deadweight loss further.

The discussion thus far deals with the earnings test in place. Another goal of estimating a formal model is to be able to predict the impact of other changes in the earnings test rules. To that end, the estimates were used to simulate the effect of removing the earnings test for 65–69-year-olds and the effect of raising their exempt amount to $30,000, which has been legislated to occur gradually by 2002. The predicted change in labor supply appears in the middle panel of Table 6. Because the earnings test has been altered since 1983, the forecasts are compared with those identified as the Current Benchmark predictions, where the earnings test parameters have been updated to resemble the rules before the 1996 changes.[24] The Benchmark predicts average annual hours of 1,782 for 65–69-year-olds located at or above the kink in the budget constraint.

The most radical reform would eliminate the earnings test entirely. Removing the earnings test is predicted to raise annual hours for those currently earning at or above the exempt amount from 1782 to 1876, a 5.3-percent increase. Thus, the positive substitution effect from eliminating the earnings test dominates in the aggregate. The last panel of Table 6 makes this more explicit by reporting average gross earnings before and after the simulated changes in the rules, according to people's initial location on the budget constraint. The substitution effect of eliminating the earnings test tax for those currently at the earnings kink causes a 51-percent increase in average earnings, from $8,758 under the Benchmark to $13,145 without the earnings test. While the negative income effect from having higher benefits grows along the middle segment, average earnings are still predicted to rise 18 percent overall, from $18,600 to $21,983. Lastly, the income effect for those initially on the upper segment leads their earnings to decline 4 percent, from $43,892 to $42,128. Nevertheless, the overall effect on hours and earnings of eliminating the earnings test is strongly positive.

Table 6 also reports the results of simulating the increase in the exempt amount to $30,000. Interestingly, aggregate hours for those at or above the kink would be virtually unchanged. The breakdown of earnings by initial location gives more insight into this reaction. Average earnings for those initially on the middle segment rise by only one-third as much as they would without the earnings test. Furthermore, average earnings for those on the upper segment fall by 10.1 percent. Along with

[24] In 1995, 65–69-year-olds faced a tax rate of 33 percent instead of 50 percent and an exempt amount about 20 percent higher in real terms. Each of those changes is predicted to lower hours by less than 1 percent.

the negative income effect for this group, noted earlier, there is a negative substitution effect from facing the earnings-test tax rate. In sum, raising the exempt amount removes the burden of the earnings test for many low earners. However, it makes the earnings test bind for a new group of high earners, who would lower their labor supply as a result.[25]

One argument made against further liberalizing the earnings test is the fiscal cost. While the initial cost is high, the medium-run cost is much smaller and declining.[26] As Honig and Reimers (1989) pointed out, the cost would gradually be offset because the delayed retirement credit would not be granted to beneficiaries who otherwise would get higher benefits later when they lose benefits to the earnings test today. At present, the cumulative fiscal cost of eliminating the earnings test is diminishing as the delayed retirement credit is increased every other year. Once the delayed retirement credit becomes fully actuarially fair on average, the fiscal cost of eliminating the earnings test today will be virtually canceled out within several years.[27]

Another possible argument against further liberalizing the earnings test is that it would primarily benefit high-income beneficiaries. While total income would rise more for high earners, the results also demonstrate that most of the deadweight loss is currently being borne by low and medium earners. Their labor supply is more distorted by the earnings test, and their hours of work would rise the most if the earnings test were lifted.

## 5. CONCLUSIONS

The earnings test has been the subject of a great deal of popular attention, but less academic interest, in recent years. This paper revisits the

[25] This result in particular depends on the assumption, discussed at the end of section 3, that all individuals can adjust their labor supply flexibly. Perhaps those near the kink who are working relatively little can (and do) adjust their hours, but others who work a lot might have less flexibility. If the labor supply of people on the upper segment of the budget constraint were completely inflexible, then the static response to raising the exempt amount to $30,000 would be less negative—and similarly, the response to eliminating the earnings test would be more strongly positive. On the other hand, if the incentives become great enough, people working full time might choose to leave those jobs for others offering part-time hours—a stronger negative response.

[26] Leonesio (1990) reported Social Security Administration forecasts that eliminating the earnings test for 65–69-year-olds would raise payouts by $4.3 billion in the first year. Income, payroll, and benefits taxes due to higher earnings would offset 14.8% of the cost. The estimates used in the forecasts from Hanoch and Honig (1983) are 0.17 for the uncompensated wage elasticity and virtually zero for the income elasticity. The elasticities estimated here would lead to a larger offset through taxes paid from the boost to labor supply.

[27] The medium-run offset might not be complete due to adverse selection: those with a low life expectancy will be less constrained to postpone filing for benefits than they were with the earnings test in place.

evidence on the earnings test using more recent data and a new identification strategy. A series of changes in the earnings-test rules over the last twenty years altered the budget set for beneficiaries of certain ages and not for those of other ages. Studying the response of those changes yields several conclusions.

First, the data reveal a substantial number of workers with earnings clustered just at the earnings exempt amount. The clustering demonstrates that the earnings test leads some beneficiaries to hold down their labor supply. The clustering moves when the exempt amount moves, and disappears when the earnings test is eliminated. Therefore, many beneficiaries are reacting promptly and flexibly to the earnings test rules.

The behavior around the exempt amount is most noticeable but is not a complete picture of how the earnings test affects labor supply. An econometric model of labor supply characterizes the behavior of everyone affected by the earnings test. The resulting estimates imply substantial deadweight loss from older workers changing their labor supply in response to taxation. Even so, the model predicts a slight decline in aggregate labor supply among 65–69-year-olds in response to raising the exempt amount to $30,000, which has been legislated for the year 2002. The positive effect on hours for low earners would be offset by a negative effect for high earners, who would start to face the earnings test tax rate. On the other hand, the model predicts that eliminating the earnings test would lead people to raise their hours of work by 5.3 percent on average, with particularly large increases for those with earnings near the exempt amount. The medium-run cost of eliminating the earnings test would be much smaller than the immediate cost, because the delayed retirement credit would no longer raise future benefits of people losing them to the earnings test. As the delayed retirement credit becomes actuarially fair on average, the medium-run cost approaches zero.

The labor supply estimates also tell us about the labor supply of the working elderly more generally—which is a different focus from that of most of the previous research on the elderly, emphasizing retirement. It will be important to keep in mind the apparent sensitivity of older workers to tax and transfer rules. The environment governing hours choices conditional on working will influence the ultimate success of policies that aim to reduce the burden on social security and other public programs by inducing people to work longer and save more. The results also suggest a potentially severe negative effect on labor supply if benefits start to be means-tested—a proposal gaining attention in Congress.

Another important consideration involves younger beneficiaries. Little attention has been paid to the differential treatment accorded to 62–64-year-olds, who face an earnings test as restrictive as it was in the mid-

1970s. Since then the median retirement age has slipped from 65 to 62. The underlying trends towards earlier retirement and earlier exit from career jobs raise the possibility that 62–64-year-olds have been growing more sensitive to the earnings test. This issue is of increasing importance as the normal retirement age begins to be raised in 2000 from 65 to 67. The tighter earnings test for 62–64-year-olds will be extended concurrently to 65- and 66-year-olds. The lengthening time period over which beneficiaries face the more restrictive earnings test will blunt some of the gains from the recent move to relax the earnings test for older beneficiaries.

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