The Effect of the SSI Program on Labor Supply: Improved Evidence from Social Security Administrative Files

by David Neumark and Elizabeth T. Powers

We use public-use microdata linked to Social Security Administration records to reexamine the impact of the Supplemental Security Income program on work disincentives among older individuals nearing the age of eligibility for Supplemental Security Income for the aged and likely to use the program. The administrative records provide significant advantages relative to past research and yield strong evidence that the Supplemental Security Income program induces some individuals nearing the age of eligibility to reduce their labor supply.

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Summary

The Supplemental Security Income (SSI) program for the aged offers income support for the population aged 65 and older that has low income and few assets. Although the incentive effects of other income support programs have received a good deal of attention, the potential incentive effects of the SSI program have received far less. Because eligibility for this program is conditioned on an income test and an asset test, the incentives embedded in the program could lead individuals to reduce both labor supply and saving at ages leading up to eligibility for the aged component of the program.

Past research by the authors has found evidence that older men approaching the age of eligibility who have a relatively high likelihood of participating in the SSI program are more likely to reduce their labor supply and saving. This research used publicly available data that had some important limitations, however. First, inferences had to be made about the likely future participation in the aged component of the SSI program of younger individuals using models of the participation behavior in the program of older individuals (aged 65 or older) from earlier cohorts. Second, the data could not distinguish SSI participation based on age compared with participation based on disability, undermining the accurate prediction of SSI-aged participation.

This article uses confidential Social Security Administration data on earnings histories and SSI recipiency that were linked to multiple panels of the Survey of Income and Program Participation to reexamine the labor supply incentive effects of SSI during the period between 1984 and 1993. This article has two goals: to provide improved estimates of the work incentives (or disincentives) posed by the SSI program, and to highlight some of the unique advantages of incorporating Social Security's administrative data into the study of the behavior of older workers, perhaps thus inspiring more researchers to work with these data.

The key policy parameter relied upon for the theoretical arguments and empirical implementation is the generosity of the SSI benefit. In particular, states may supplement the basic federal SSI benefit, and this supplementation is the major source of independent variation in policy. A simple two-period theoretical model was developed to derive empirical hypotheses. The major theoretical

predictions are that more generous SSI benefits either have no effect on labor supply before the age of eligibility or cause a decline in that labor supply. Further, an increase in SSI generosity increases the lifetime utility associated with participation in the SSI program. Since all choices involving participation in the program are associated with lower levels of labor supply, labor supply is unambiguously lower when the program is more generous. The basic testable hypothesis is that, all else being equal, increased SSI generosity is associated with a lower level of labor supply for those who might find participation in the program attractive in old age.

The basic sample consists of men aged 40 to 64 in the panels from 1984, 1990, 1991, and 1993 of the Survey of Income and Program Participation. These observations are linked to administrative data on earnings, covered employment, and participation in the SSI program. A series of difference analyses are conducted that compare the behavioral response to SSI benefit levels of likely and unlikely participants and older (aged 60 to 64) and younger (aged 40 to 59) men. The empirical evidence that results from using the administrative data leads to stronger evidence that the SSI program creates labor supply disincentives. In states that generously supplement the benefits, labor supply among individuals relatively likely to participate in the SSI program falls off more than in less generous states, as workers approach the age of eligibility. This is true for all of the labor supply measures considered in the article. The magnitude of the estimated effects is substantial, particularly when administrative data are used.

The research findings add to the evidence that, as economic theory would lead one to predict, income and asset limits in the SSI program reduce the incentives of older individuals who might soon become beneficiaries to accumulate additional resources. Furthermore, the evidence points to the value of incorporating Social Security Administration administrative data into the study of the behavior of older workers.

Introduction

The Supplemental Security Income (SSI) program for the aged offers income support for individuals and couples aged 65 and older who have low income and assets. Although the incentive effects of other income support programs—most notably Temporary Assistance for Needy Families (TANF), formerly Aid to Families with Dependent Children—have received a good deal of attention, the potential incentive effects of SSI have received far less. However, because eligibility for SSI is conditioned on both an income test and an asset test, the incentives embedded in SSI could lead individuals to reduce both labor supply and saving at ages leading up to eligibility for the aged component of the program.

Total SSI spending exceeds that on the more-often-researched welfare programs, TANF and Food Stamps. Spending on just 5.5 million individuals in the TANF program by state and federal governments was $29.7 billion in fiscal year 2001. Total SSI outlays in fiscal year 2002 stood at $34.6 billion, with a substantial share of this total, or $8 billion, paid to almost 2 million participants over the age of 64; about $5 billion went just to those who applied to receive SSI on the basis of age, rather than disability. Although dwarfed by participation and expenditures in the Old-Age, Survivors, and Disability Insurance (OASDI) program, SSI is a substantial program by the standards of U.S. welfare policy.

In our past research, we have found evidence that older men approaching the age of eligibility (in particular, those aged 60–64) who have a relatively high likelihood of participating in SSI are more likely to reduce their labor supply and saving (Neumark and Powers 1998, 2000); the disincentives for saving may be particularly strong because SSI has strict asset limits.[1] In that research, we attempted to identify individuals who are likely to go on SSI at age 65 or later and then studied their behavior at ages before 65. However, that research relied solely on data from the Survey of Income and Program Participation (SIPP). The major limitation of the public-use data is the absence of historical data on earnings and SSI applications and receipts. Because the SIPP panels cover at most 3 years, it was usually impossible to observe both an individual's labor supply in his or her early 60s and his or her ultimate SSI-aged participation.[2] Thus, likely SSI participation had to be inferred by estimating a participation model for older individuals (aged 65 or older) and then using that model to predict participation for those under age 65. But using these data to predict participation in this way is problematic, given changes in behavior across cohorts. In addition, in the SIPP data it is difficult to distinguish participation based on age versus that based on disability (given that we do not know the age at which a person first came onto the program), further undermining accurate prediction of SSI-aged participation.

In contrast, this article uses confidential Social Security Administration (SSA) data on earnings histories and SSI recipiency, linked to multiple panels of the SIPP, to reexamine the labor supply incentive effects of SSI during the period 1984–1993. The use of SSA administrative records strengthens the empirical evidence that can be brought to bear on this issue by providing complete information on SSI receipt. Using information on individuals' subsequent behavior—rather than data on different, older individuals—leads to superior classification of individuals as likely SSI participants.

This article has two goals. A first, quite specific goal is to provide improved estimates of the work incentives (or disincentives) posed by the SSI program. Such estimates may prove useful to policymakers in evaluating the impact of the SSI program and in weighing alternative means of providing income support for the elderly, including reforms to Social Security with respect to both means testing of benefits and early retirement. A second, more general goal is to highlight some of the unique advantages of incorporating Social Security's administrative data into the study of the behavior of older workers, perhaps inspiring more researchers to work with these data.

Background of the Supplementary Security Income Program

The SSI program was begun in 1974 to provide a uniform federal safety net for the elderly and disabled. The concern of this article is with the elderly component, in which sufficiently poor individuals may participate upon attaining age 65. Although SSI is largely a federal program, state variation exists in policy and administration. The federal government sets eligibility criteria and maximum benefit levels for individuals and couples in the federal portion of the program. Since some states (those with more generous safety nets prior to 1974) were required, and other states chose, to supplement the basic federal benefit, there is also cross-state benefit variation. Wealth holdings also affect eligibility. In the federal program, resources—after exclusions of specific items like home equity—may not exceed $3,000 for couples or $2,000 for individuals (Social Security Administration 2001).

The federal SSI benefit is generous relative to benefits from other welfare programs, and the SSI program is a potentially substantial source of income for the elderly poor. Federal SSI, when combined with Food Stamps, brings an elderly household's resources to a substantial fraction of the federal poverty line. State supplements can also be large. For example, in January 1991 (which is within our sample period), the maximum monthly federal benefit was $610 for a couple and $407 for an individual. At that time, the highest state benefit for couples was in California, where the total monthly benefit was $1,167 for couples and $630 for individuals.

SSI benefits are reduced with other sources of retirement income. For each month, $20 of unearned income, $65 of earned income, and one-half of earnings exceeding $65 are disregarded in computing the SSI benefit.[3] The disregards are not indexed for inflation, nor are they differentiated by household type (couple or individual).[4] In most cases, the monthly SSI benefit is determined by the following formula:

$$\text{SSI benefit} = \text{Guarantee} - \tfrac{1}{2}\,\text{Max}\{\text{earned income} - \text{Min}\{\text{earned income}, \$65\},0\} - \text{Max}\{\text{unearned income} - \text{Min}\{\text{unearned income}, \$20\},0\} - \{\text{means-tested transfer income}\}.$$

The guarantee is the benefit amount paid when there is no other income. Earned income refers to the current earnings of the SSI recipient. Unearned income includes income from private pensions, public pensions such as Social Security, interest income, and the like. Means-tested transfer income, such as veterans' benefits, offsets SSI income dollar for dollar, and none of it is disregarded. These deductions for other income are first applied to the federal benefit amount. Any excess income is deducted from the state supplemental payment (Social Security Administration 1994, ii–iii). When the computed SSI benefit is positive, the person or couple is eligible for the program.[5]

The number of SSI-aged recipients has been falling over the program's history. By 1998, 1.4 million elderly participated in SSI, down from 2.3 million in 1975 (Social Security Administration 1999, Table 7.A3, 287).[6] The downward trend is due to the increasing affluence of the elderly, increasing Social Security coverage of the population, and increasing value of Social Security benefits claimed. SSI recipients are *required* to apply for all public benefits for which they may be eligible, including Social Security, and most SSI recipients are eligible for at least a modest Social Security benefit. By September 1993, near the end of our sample period, 65 percent of aged SSI recipients received Social Security benefits and 22 percent received some other unearned income. Most SSI recipients have other income to rely upon, although the amount is small. Only 2.1 percent reported any earned income, and almost none reported private pension income (Committee on Ways and Means 1994, Tables 6-16 and 6-17).

Because of the receipt of Social Security benefits, the average SSI-aged benefit payments that households actually receive are fairly low. In September 1989, the average federal payment to all elderly households on SSI was $163, with an average state supplement of $133; 49.6 percent of aged federal SSI recipients received a state supplement (Committee on Ways and Means 1990, 717). Perhaps because many elderly would collect relatively small SSI benefits or are precluded from participating in SSI at all because of their Social Security benefits, use of SSI by the poor elderly is quite low. Zedlewski and Meyer (1989) estimate that only about 30 percent of the elderly poor receive SSI benefits. McGarry (1996) analyzes SSI participation and attributes

much of the low take-up by potential eligibles (about 50 percent) to the quite modest cash benefits for which most elderly poor would actually qualify.

Work Disincentive Effects of SSI

To highlight the key channels of work disincentive effects of SSI, we consider a simple model in which people live for two periods, and there is no saving except through the accumulation of pension benefits. In the first period, the worker chooses how much to work and consume. In the second period, consumption is financed solely by pension benefits and welfare. Financial resources cannot be transferred between periods. Pension benefits, which may be from both private and public sources, are determined as an increasing function of first-period earnings. Since all income is consumed each period, once the first-period leisure choice is made, the other choices are determined. First-period work hours affect second-period retirement income by increasing Social Security and private pension benefits.

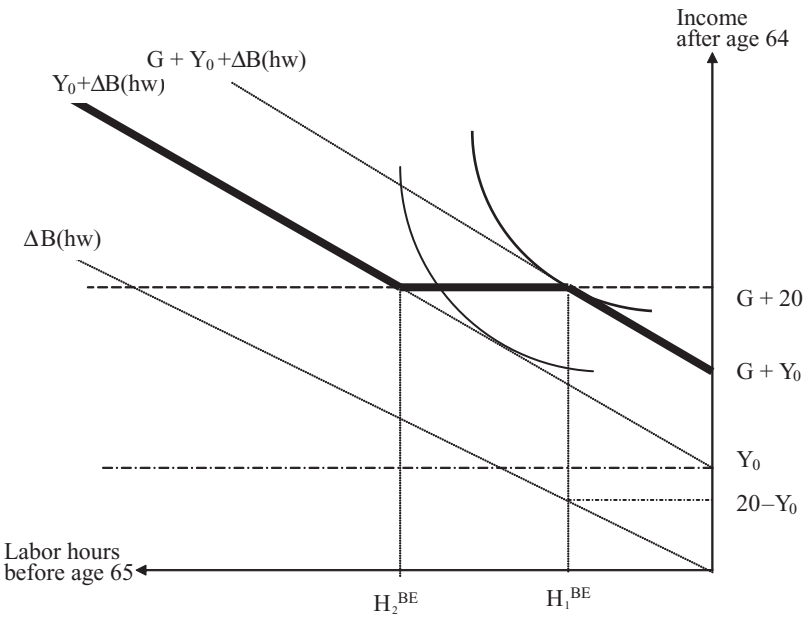
We introduce an SSI policy into this framework. An SSI policy is characterized by a maximum benefit level (G), an amount of pension income that is disregarded before the benefit is computed (D), and a rate at which pension income in excess of D is reduced (in the case of SSI, this rate has always been 100 percent). In the first period, the person is not age eligible for SSI. In the second period, the person is age eligible and could be income eligible, so long as retirement income is not too high.

Chart 1 illustrates the relationship between current work hours and possible unearned income after age 64. Hours worked before age 65 are represented on the horizontal axis, and unearned income after age 64 is represented on the vertical axis. The amount of unearned postretirement income that is predetermined by past choices is Y_0, which can be thought of as a monthly annuity. The function $\Delta B(hw)$ relates current labor income (hours worked times the hourly wage) to postretirement, non-SSI income and is presumably increasing in its argument. This latter income may consist of Social Security benefits, private pension benefits, and the return on savings out of current earned income. In fact, for most SSI recipients, this income is either zero (if there is no OASDI coverage) or the incremental gain (in perpetuity) in Social Security benefits. In Chart 1, the function $\Delta B(hw)$ is drawn as a straight line for simplicity.

For completeness, we assume that the predetermined portion of retirement income does not already exceed $20 per month. So long as the addition to future income from current work does not push unearned income above $20 per month, an additional hour worked today results in an increase in future unearned income of $\Delta B'(hw)w$. As hours increase, the disregard level is exactly met at break-even hours $H_1^{BE} = \Delta B^{-1}(20-Y_0)/w$. At greater work hours, increases in future unearned income due to increases in current labor supply are exactly offset by decreased SSI benefits. Eventually, at break-even hours H_2^{BE} ($= \Delta B^{-1}(20 + G - Y_0)/w$), the household obtains higher future income per hour worked today if they do not participate in the SSI program but instead support themselves in retirement from income $Y_0 + \Delta B(hw)$. The effective budget constraint faced by an agent intent on maximizing future consumption for given hours worked today is therefore illustrated by the heavy shaded line.[7]

The worker maximizes lifetime utility by considering the best choice that can be made in each of three possible scenarios (corresponding to finding the local maximum along each of the three regions of the budget constraint in Chart 1). Each scenario is described by the decision to participate or not, as well as whether second-period income is above or below the disregard. The first scenario is one in which the individual participates in SSI in the second period but has income in that period below the disregard; given that the disregard is low, this is unlikely. In this scenario, additional labor supply in the first period boosts resources in the second period. Thus, a higher SSI guarantee in the second period reduces first-

Chart 1.
Trade-off between preretirement work effort and postretirement unearned income with an SSI program



period labor supply, via an income effect. In the second, more likely scenario, an individual participates, but his or her pension income in the second period exceeds the disregard amount. In this case, there is no way to influence resources in the second period by adjusting first-period labor supply; these resources remain G+D regardless, so the individual does not choose to work any more than H_1^{BE}. Finally, the third scenario entails nonparticipation. The best of these three possible outcomes for an individual is then the global, or overall, maximizing choice.

A particular set of preferences has been drawn in Chart 1 (one imagines that there is a range of preferences for leisure versus future consumption in the population) to illustrate a choice that is predicted to be quite common among participants: the case in which the worker chooses to work the number of hours that will raise retirement income to G+20 (the worker participates in SSI) but will not raise retirement income so much that the implicit 100 percent tax on unearned income imposed by SSI is incurred. Note that many individuals are expected to cluster at H_1^{BE} hours, because no utility-maximizing individual wishes to work between H_1^{BE} and H_2^{BE} hours and incur the 100 percent implicit tax on additional retirement income.

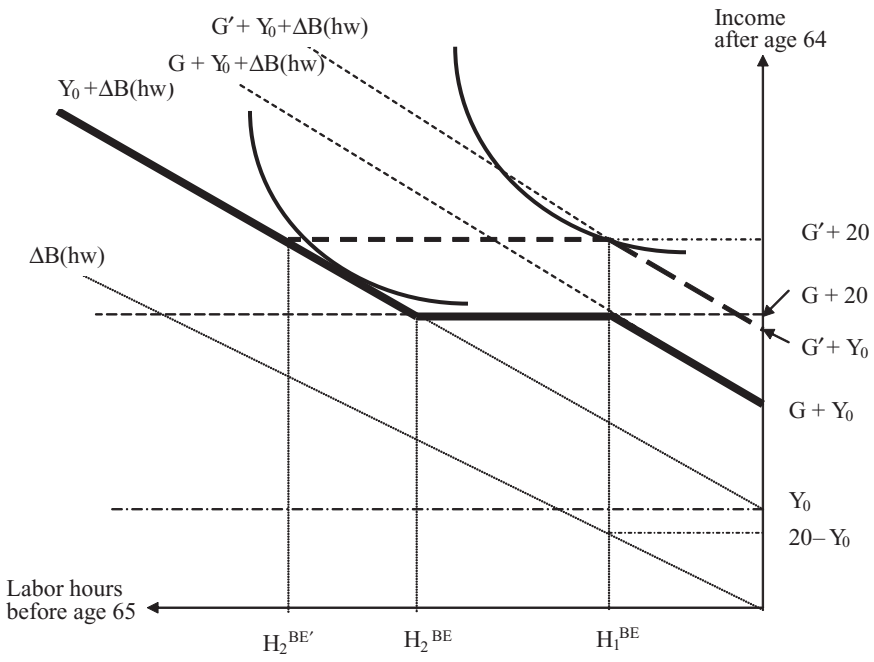
Chart 2 illustrates how local optima and the choice of a global optimum may change with an increase in the maximum SSI benefit (G). At hours below H_1^{BE}, an increase in G shifts the budget constraint vertically. If the initial local optimum is below H_1^{BE}, the pure income effect leads to increased leisure. Chart 2 illustrates this reoptimization due to an increase in G, from an equilibrium choice of nonparticipation (where hours exceed H_2^{BE}) to a choice associated with SSI participation at H_1^{BE} hours. Note from Chart 2 that a *ceteris paribus* increase in G widens the range of hours at which there is no future return to work—that is, the horizontal line at G+20 or G´+20 that runs from H_1^{BE} to H_2^{BE} (or $H_2^{BE\prime}$) hours. This increase in the range in which the income generated by today's work is taxed tomorrow at 100 percent also induces more people to decrease their labor supply and shift to the global equilibrium associated with SSI participation.

To summarize the major predictions of the theoretical model, no matter the initial placement along the three regions of the budget constraint, more generous SSI benefits either have no effect on pre-eligibility labor supply or reduce that labor supply. Furthermore, Chart 2 illustrates that an increase in the SSI guarantee increases the lifetime utility associated with SSI participation relative to nonparticipation (that is, the individual moves to a higher indifference curve). Since all choices involving SSI participation are associated with lower labor supply, the fact that an increase in G widens the portion of the budget constraint over which participation is attractive implies that the increase in G decreases labor supply globally.[8] Our empirical analysis of labor supply in the years immediately preceding SSI-aged eligibility is intended to capture the predicted incentive effects of SSI in the first period of this model.

This simple analysis ignores a few issues. First, saving outside of the pension is also possible, although as noted above, most of the wealth of those likely to participate in SSI is probably held in the form of Social Security. Nonetheless, once we introduce saving and the corresponding asset test for SSI eligibility, the conclusion is only reinforced, as the need to run down assets before retirement contributes added incentive to reduce labor supply.

Second, there are a number of sources of uncertainty, including health, family structure, and job stability. Individuals facing a high probability of adverse health shocks have a greater incentive to ensure SSI eligibility through their preretirement actions, because SSI usually confers Medicaid coverage.[9] In the preretirement period, individuals may be uncertain of their future marital status and work options. The prospect of widowhood introduces

Chart 2.
Optimal choice with lower (G) and higher (G′) guaranteed benefit



uncertainty about the size of the future benefit payment and consumption needs. Those facing high probabilities of job loss might engage in precautionary saving to prevent a "zero consumption" outcome. These precautionary savings may be sufficient to render them ineligible for SSI (at least at age 65), even though others with equal permanent income might make choices that ensure SSI eligibility. In a world of certainty, people intending to participate in SSI might display low work effort and low saving throughout much of their lives. However, uncertainty may cause people to delay committing to an SSI-participation strategy until sufficient information is revealed or, put another way, until they are reasonably close to the eligibility age. For this reason, we focus on ages just before the age of eligibility in our empirical analysis.

Family structure has been ignored. Husbands and wives may determine their labor supplies jointly, and presumably saving decisions are made collectively. In the "male chauvinist" model (Killingsworth 1983), the wife regards the husband's labor supply (and income) as exogenous to her labor supply decision. This would imply that when analyzing married men, we need not be concerned with wives' labor supply. However, there is some evidence against this model, more consonant (in some circumstances) with joint decisionmaking (see, for example, Lundberg 1988). Consequently, we include exogenous factors affecting the wife's labor supply in the husband's labor supply specification.

Finally, we have also not considered the possibility that older people move and that they take the generosity of state SSI benefits into account when they make this decision. In this case, individuals would be less responsive to the level of SSI benefits in their preretirement state of residence. Although moving for retirement occurs and is significant within the context of all interstate moves, less than 5 percent of those aged 65–69 moved across state lines during the period 1995–2000. Many elderly people move to warm-weather southern and western states, which do not have particularly generous SSI supplements. Although we ignore the mobility question in the empirical implementation below, the failure to account for moving will only bias *against* finding work disincentive effects of current-state SSI policy on the 60- to 64-year-olds in our samples (see Neumark and Powers 2004, for an exploration of SSI migration issues).

Data and Implementation

Hypothesis Tests and Empirical Specifications

To test the effects of SSI on labor supply, we use a difference-in-differences estimation strategy. For this analysis, we need to classify sample members according to two major characteristics: whether they live in a state with a generous SSI supplementation policy and whether they possess characteristics indicating that they are sufficiently likely to participate in SSI-aged in the future that they would respond to the incentives posed by SSI before the age of eligibility. Our cutoff for generous states is that their supplement exceeds 20 percent of the federal benefit. To sharpen the distinction, observations from households residing in states that supplement, but by less than 20 percent, are discarded. In our regressions, the key comparison is between residents of states that supplement SSI benefits by 20 percent or more and residents of states that do not supplement at all.[10] Table 1 lists the states in our sample and indicates the amount by which they supplement couple and individual benefits, if at all, as well as whether the supplementation is generous (that is, meets the 20 percent standard).

The construction of the variable indicating whether a sample member is a likely future SSI participant or not is more involved. In previous work, we estimated an SSI participation equation using public-use data from the SIPP on SSI recipiency for the contemporaneous sample of the elderly (that is, those aged 65 or older and hence eligible for SSI). To determine the threshold probability value for "likely participant" status, we selected a cutoff value; for most of our previous analyses, and in this article, we classify as "likely participants" those whose predicted probability of participation is at the 90th percentile or higher.[11]

There are two potential sources of inaccuracy in these imputations based solely on the SIPP data. First, there is an implicit assumption that the model of SSI participation is unchanging from one birth cohort to the next. Particularly since SSI is a relatively new program (only 10 years old at the outset of our sample), this assumption could be problematic. Second, from the limited information provided in the SIPP, we do not know whether a person older than 64 is truly an SSI-aged participant or whether they came onto the program earlier through SSI-disabled. Since SSI-disabled participation is no doubt governed by a very different process, this is also a potentially serious problem. In this article, we remedy these shortcomings by using longitudinal administrative data on each individual in our sample. The administrative data allow us to track sample members' post-SIPP SSI use and to define SSI receipt more sharply as SSI-aged or SSI-disabled, depending on whether the age at first receipt of benefits exceeds 64. This gives us a better model with which to predict who is a likely participant.

We use classifications of generous states and likely participants to conduct several types of "difference" comparisons, following standard practice in using geographical variation to estimate policy effects (see Table A-1 for a list of comparisons).[12] The "simple difference" specification examines only the activities of likely future

SSI recipients and tests whether their choices vary significantly with the generosity of their state's SSI benefits. Given the considerations outlined above, the following specification is estimated for older individuals (those aged 60–64) likely to participate in SSI:

$$Y = \zeta + \alpha \cdot Supp + X \cdot \Psi + \varepsilon, \quad (1)$$

where Y is the dependent variable related to labor supply, X is a vector of control variables, Supp is a dummy variable for states that supplement SSI benefits generously, ζ is a constant, and ε is a random error; α simply measures the difference between the behavior of likely participants in states with generous supplements and that of likely participants in states without generous supplements. A negative effect of SSI on labor supply is identified if older likely participants in states with more generous SSI payments work less ($\alpha < 0$).

Table 1.
State SSI supplemental maximum benefits as of January of the calendar year (in dollars)

State	1984			1990			1991			1992			1993		
	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]
Alabama	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Arizona	70	. . .	Yes	70	. . .	No	70	. . .	No	70	. . .	No	70	. . .	No
Arkansas	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
California	163	414	Yes	244	588	Yes	223	557	Yes	223	557	Yes	186	488	Yes
Colorado	58	272	Yes	58	309	Yes	45	294	Yes	56	323	Yes	56	323	Yes
Connecticut	152	113	Yes	366	525	Yes	359	522	Yes	325	461	Yes	313	442	Yes
Delaware	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
District of Columbia	15	30	No	15	30	No	15	30	No	15	30	No	15	30	No
Florida	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Georgia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Hawaii	5	9	No	4.9	8.8	No	4.9	8.8	No	4.9	8.8	No	4	8.8	No
Indiana	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Iowa	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kansas	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Kentucky	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Louisiana	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Maine	10	15	No	10	15	No	10	15	No	10	15	No	10	15	No
Maryland	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Massachusetts	129	202	Yes	129	202	Yes	129	202	Yes	129	202	Yes	129	202	Yes
Michigan	24	36	No	30	45	No	31	46	No	14	21	No	14	21	No
Minnesota	35	66	No	75	88	No	81	132	Yes	81	129	Yes	81	126	No
Mississippi	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Missouri	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Montana	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Nebraska	67	100	Yes	38	65	No	24	34	No	30	48	No	28	39	No
Nevada	36	74	No	36	74	No	36	74	No	36	74	No	36	74	No
New Hampshire	14	1	No	27	21	No	27	21	No	27	21	No	27	21	No
New Jersey	29	23	No	31	25	No	31	25	No	31	25	No	31	25	No
New Mexico	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
New York	61	76	No	86	103	Yes	86	103	Yes	86	103	Yes	86	103	No
North Carolina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Ohio	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Oklahoma	60	120	Yes	64	128	Yes	64	128	Yes	64	128	No	60	120	No
Oregon	2	0	No	2	0	No	2	0	No	2	0	No	2	0	No
Pennsylvania	32	49	No	32	49	No	32	49	No	32	49	No	32	49	No
Rhode Island	52	98	Yes	64	121	Yes	64	121	No	67	125	No	64	121	No
South Carolina	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Tennessee	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Texas	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Utah	10	20	. . .	6	12	. . .	6	12	. . .	5.3	10.6	. . .	5	10	. . .

Continued

Table 1.
Continued

State	1984			1990			1991			1992			1993		
	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]	Lone	Couple	Generous supplement [a]
Virginia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Washington	38	36	. . .	28	22	. . .	28	22	. . .	28	22	. . .	28	22	. . .
West Virginia	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Wisconsin	100	161	Yes	103	166	Yes	103	166	Yes	93	146	Yes	93	146	Yes
Maximum federal benefits	314	472	. . .	386	579	. . .	407	610	. . .	422	633	. . .	434	652	. . .

SOURCE: *State Assistance Programs for SSI Recipients* , various years.

NOTES: States not separately identified in the Survey of Income and Program Participation are not listed in the table. Those states are Alaska, Idaho, North Dakota, South Dakota, Vermont, and Wyoming. The state of Illinois is omitted because supplementary benefits are decided on a case-by-case basis.

. . . = not applicable.

a. The state supplement exceeds 20 percent of the federal benefit amount in at least one category (lone or couple).

Consider, however, that unobserved, state-varying characteristics may affect the labor supply behavior of older workers independently of SSI benefit policy. It is important to control for these state-level differences. Otherwise, the benefit policy may merely serve as a proxy for these other factors.[13] Two alternative "difference-in-differences" specifications address this problem. The first introduces as a control group sample members who are the same age (60–64) but are unlikely to use SSI. If it is assumed that state-specific differences are common to all persons in a state aged 60–64, a regression for all persons that age comparing the behavior of likely and unlikely participants should address the spurious correlation between SSI policy and behavior of this type. We then use the difference-in-differences estimator from the regression

$$Y = \zeta + \alpha \cdot Supp \cdot Part + \beta \cdot Supp + \gamma \cdot Part + X \cdot \Psi + \varepsilon \qquad (2)$$

to estimate the effect of SSI, where Part is a dummy variable for likely participants. In this specification, β picks up the difference in Y between states with and without generous SSI supplements; γ captures the difference in Y, common to all states, between likely participants and unlikely participants; and α captures the extent to which the difference in Y between likely and unlikely participants differs in states with generous SSI supplements relative to states without generous supplements. Consequently, this estimator of the effect of SSI nets out differences in the levels of Y between 60- to 64-year-olds in the two types of states and identifies the effect of SSI from the extent to which the difference in Y in high-supplement versus low-supplement states is greater (or less) for likely participants relative to unlikely participants. This estimator uses the unlikely participants aged 60–64 as a "control sample" to capture state-specific differences that are common to all persons of that age (whether or not they are likely participants) in a state. The key empirical hypothesis is $\alpha < 0$.

The second difference-in-differences specification restricts attention to those likely to participate in SSI but extends consideration to younger sample members. The younger sample members in the same state are used to control for state-specific labor supply differences common among likely participants. In particular, we look at 60- to 64-year-olds as the group potentially affected by SSI and use 40- to 59-year-olds as a control. Letting Age6064 be a dummy variable indicating those in the 60–64 age range, we now use the sample of 40- to 64-year-old likely participants and estimate the difference-in-differences regression

$$Y = \zeta + \alpha \cdot Supp \cdot Age6064 + \beta \cdot Supp + \gamma \cdot Age6064 + X \cdot \Psi + \varepsilon. \qquad (3)$$

In this regression β picks up the difference in Y, assumed common to all ages, between states with and without generous SSI supplements; γ captures the difference in Y, common to all states, between persons aged 40–59 and those aged 60–64; and α now captures the extent to which the difference in Y between the two age groups differs in states with generous SSI supplements relative to states without generous supplements. As before, the hypothesis is $\alpha < 0$. Thus, this estimator of the effect of SSI nets out differences in the levels of Y between likely participants of all ages in the two types of states and identifies the effect of SSI from the extent to which the difference in Y for likely participants in high-

supplement states versus low-supplement states is greater (or less) for those aged 60–64 than for those aged 40–59.

The estimators in equations (2) and (3) could still be inadequate if their identifying assumptions are invalid. For example, equation (3) identifies the effect of SSI from the extent to which the difference in Y for likely participants in high-supplement states versus low-supplement states is greater (or less) for those aged 60–64 than for those aged 40–59. But if the slope of the age profile of labor supply is different in high-supplement states for other reasons, we may be identifying an effect of something other than SSI. We can solve this problem if we also use the unlikely participants to capture state-specific differences in *age profiles* of labor supply. This difference-in-difference-in-differences estimator requires the assumption that state-specific factors affecting the slopes of age profiles of labor supply are common to likely and unlikely participants in a state. In this case, we use the sample of all 40- to 64-year-olds and estimate the effect of SSI from the regression

$$Y = \zeta + \alpha\cdot Supp\cdot Part\cdot Age6064 + \beta\cdot Supp + \gamma\cdot Age6064 + \delta\cdot Part + \theta\cdot Supp\cdot Age6064 + \kappa\cdot Supp\cdot Part + \lambda\cdot Age6064\cdot Part + X\cdot\Psi + \varepsilon. \quad (4)$$

In this regression β picks up the difference in Y between states with and without generous SSI supplements, γ captures the difference between the 60–64 and 40–59 age groups, and δ measures the difference between likely and unlikely participants. The simple interactions capture the differences between older and younger individuals in high- versus low-supplement states (θ), likely and unlikely participants in high- versus low-supplement states (κ), and younger and older likely participants versus unlikely participants (λ). What α identifies, then, is the extent to which the difference in Y between likely participants aged 60–64 and 40–59, relative to the difference between unlikely participants aged 60–64 and 40–59, varies between high- and low-supplement states.

This specification can be interpreted in one of two ways. First, it compares the differences across states between the labor supply of older and younger likely participants, using the unlikely participant differences as a control for state-specific differences in age profiles. Alternatively, it compares the differences across states between the labor supply of likely and unlikely participants, using younger individuals as a control for state-specific differences in labor supply between those whose characteristics make them more or less likely to participate in SSI.[14] This specification provides the most rigorous test for labor supply effects of SSI, in that it is the most flexible in terms of allowing for other sources of differences across states—aside from the generosity of SSI supplements—in the labor supply behavior of older likely SSI participants.

Matched SSA-SIPP Samples

We use multiple public-use panels from the 1984, 1990, 1991, and 1993 SIPP. We extract data on male household heads aged 40–64. Although the analysis is restricted to men, we match spouse information and include information about wives that may be relevant for husbands' choices in all specifications.

The Social Security Administration allowed us access to SIPP-matched confidential data on covered earnings and SSI use. The SSA data usually correspond to wave 1 or 2 of the SIPP panels. Typically, about 10 percent of SIPP adults fail to match to the earnings record database because of errors in reporting the Social Security number.[15] We have each sample member's complete history of Social Security–covered earnings from 1951 through 1999.

We also have a record of each sample member's SSI administrative activity from 1974 through 1999. Access to the SSI record provides several advantages. First, the SIPP self-reports of SSI use may be less accurate than SSA's records. Second, by using the age at first benefit receipt, we are able to better distinguish between SSI-aged and SSI-disabled cases.[16] Third, because the SSA file follows panel members for as many as 15 years after the Census Bureau has finished with them, we are able to determine SSI-aged receipt (over a reasonable horizon) for men who are younger than 65 when they are surveyed in the SIPP; we can then use this information on individuals' subsequent behavior—rather than data on different, older individuals—to classify likely SSI participants. Of course, we are increasingly able to observe eventual SSI-aged receipt (or nonreceipt) the older is the sample member during the survey and the earlier the SIPP panel.

One limitation of the administrative data is that when there are disputes or mistakes about benefit eligibility or amounts, upon resolution the SSI administrative file is altered to reflect the history of SSI receipt for individuals as it should have been, not as it actually unfolded. This practice generates errors in the recorded timing of payments. But given our focus on the aged, whose eligibility rules are fairly straightforward (in contrast to the disabled), this should not generate substantial errors.

Descriptive Statistics

Statistics for the data used in the analyses are presented in Table 2. The sample statistics for the largest group of persons aged 40–64 are broken down by SIPP panel, and the statistics for the combined panels are reported for those aged 65 or older. The labor supply measures we study include employment, weekly hours, and the change

in quarters of Social Security–covered earnings over the previous 5 years (from the administrative data). The first two are alternative measures of contemporaneous labor supply, and the last reflects labor supply over the recent past. Although mean employment rates and hours may fall slightly over time, total covered quarters increase over the panels, reflecting the secular increase in Social Security coverage of workers.[17]

Characteristics of the men in the sample and their spouses also vary across subsamples, as one would expect (note that, throughout, spouse variables are set to zero for lone men). Older cohorts have less education; for example, 41 percent of the 1984 subsample has graduated from high school compared with 53 percent of the 1993 sample. Similar patterns hold for spouses' educational attainment. Lifetime use of another welfare program, Food Stamps, is fairly similar across panels. However, it is much lower for the group aged 65 or older, suggesting that welfare use is less prevalent in older cohorts. There is variation in macroeconomic factors across the panels. The 1984 sample faces the highest average state unemployment rate, at 7.6 percent, compared with just 5.5 percent for the 1990 sample.

Finally, we contrast the SSI participation data available in the SIPP and SSA administrative records. Although 3.4 percent of the group aged 65 or older report receiving SSI income in the SIPP, 4.9 percent are recorded in current (that is, in the sample period) payment status in the administrative records. The SIPP data may reflect some confusion among the elderly about which old-age payments come from which programs, since SSI could easily be confused with Social Security because they are administered from the same local offices. Some of these matched sample members are also on SSI-disabled (3.0 percent of the group aged 65 or older have a first SSI payment recorded at age 65 or later).

Empirical Findings

SSI Participation

Recall that a sample member is assigned to the "treatment" group if he or she is a likely future SSI recipient living in a generous state, based on the predicted probability of SSI participation. Table 3 presents the findings from two probits that use alternative information on SSI participation to construct this prediction. The table first presents the findings from probits relying entirely on SIPP public-use data on sample members aged 65 or older to estimate SSI participation, following Neumark and Powers (2000). The results are similar albeit with slight differences due to the addition of public-use data for 1993 and the inclusion of information on the men's spouses. Except for the panel dummies and spouse's age (not reported in the table), all coefficients are estimated to be significantly different from zero at the 1 percent level, and the signs are as one would hypothesize. Higher education of self and spouse (even at levels below high school completion) decreases the probability of participation. Living in a state with a generous SSI benefit and a higher state unemployment rate increases the probability of participation. Blacks are more likely to participate in SSI than others. We also include a dummy variable indicating whether, at the time of the survey, the respondent had *ever* been authorized to receive Food Stamps. Aside from conveying information about past income, this indicates prior experience with welfare programs, which may be associated with superior knowledge about programs or less stigma regarding program use. As expected, having received Food Stamps is estimated to increase the probability of SSI participation.[18]

As we have noted, the administrative data can be used to construct a longitudinal measure of SSI participation for selected sample members and to better identify SSI-aged participation. Thus, instead of estimating a probit for SSI participation for those aged 65 or older and then using these estimates to infer predicted probabilities of SSI participation for sample members below age 65, we use the actual administrative information on eventual SSI-aged participation for those under age 65 when they appear in the SIPP sample. To reduce the problem of right-censoring in the data, the sample is restricted to sample members who reach at least age 67 by the end of the administrative record in 1999.[19] The dependent variable equals one if a sample member is recorded as first receiving SSI at age 65 or later. Table 3 presents findings for the probit estimates using the administrative record on matched sample individuals' subsequent SSI participation.

The estimates using the administrative data on individuals' SSI participation and the SIPP data on SSI participation among older sample members display some differences. Using the administrative data, the coefficient of benefit generosity is very similar in magnitude to the estimate based on the SIPP data for older cohorts. Estimated effects of the education of self and spouse are also significantly different from zero with the expected signs, but the magnitudes are smaller in absolute value with the administrative data, as is also true for many of the other coefficient estimates. One expects some of the explanatory variables to have less power because of measurement error when looking over a longer horizon. For example, the unemployment rate in the sample year is not perfectly correlated with the unemployment rate at the time of future SSI participation, and it does not significantly predict an individual's future participation. Similarly, perhaps, welfare use and marital history at the

Table 2.
Sample characteristics from 1984–1993 SIPP samples and matched SSA administrative records

Characteristic	Aged 40 to 64				Aged 65 or older,
	1984	1990	1991	1993	1984–1993
			Labor supply		
Covered quarters	96.18	98.96	99.70	103.87	100.76
	(31.08)	(35.38)	(35.95)	(7.74)	(40.12)
Change in covered quarters over past 5 years	12.93	12.95	12.96	12.80	4.20
	(5.69)	(5.61)	(5.63)	(5.74)	(5.63)
Employed, wave 4	0.839	0.831	0.818	0.829	0.174
	(0.367)	(0.375)	(0.386)	(0.377)	(0.358)
Hours, wave 4	37.44	37.12	36.79	37.00	5.36
	(19.40)	(20.32)	(20.68)	(19.86)	(12.67)
			Individual controls		
Aged 60–64	0.183	0.156	0.145	0.142	0
	(0.387)	(0.363)	(0.352)	(0.349)	
Highest grade completed x high school education or less	6.21	5.49	5.28	5.04	6.79
	(5.43)	(5.54)	(5.56)	(5.60)	(5.25)
More than high school education	0.407	0.477	0.501	0.534	0.281
	(0.491)	(0.500)	(0.500)	(0.500)	(0.447)
Black	0.075	0.101	0.071	0.072	0.084
	(0.264)	(0.301)	(0.256)	(0.258)	(0.276)
Never married	0.033	0.048	0.047	0.045	0.038
	(0.178)	(0.214)	(0.211)	(0.208)	(0.189)
Divorced, widowed, or separated (and not currently married)	0.106	0.141	0.138	0.124	0.192
	(0.307)	(0.348)	(0.345)	(0.330)	(0.384)
Ever authorized for food stamps	0.134	0.135	0.130	0.151	0.059
	(0.341)	(0.342)	(0.336)	(0.358)	(0.232)
Spouse age	41.24	37.15	37.52	37.57	51.84
	(18.99)	(20.71)	(20.50)	(20.45)	(29.39)
Spouse highest grade completed x high school education or less	6.36	5.02	4.95	4.61	5.87
	(5.62)	(5.66)	(5.68)	(5.63)	(5.41)
Spouse has more than high school education	0.27	0.33	0.35	0.38	0.194
	(0.44)	(0.47)	(0.48)	(0.49)	(0.39)
			State-level characteristics		
State unemployment rate	7.59	5.51	6.71	6.93	6.91
	(1.71)	(0.87)	(1.24)	(1.36)	(1.55)
Maximum state SSI supplement exceeds 20 percent of federal benefit	0.196	0.321	0.319	0.288	0.275
	(0.397)	(0.467)	(0.466)	(0.453)	(0.447)
			Program receipt		
SSI receipt (SIPP)	--	--	--	--	0.034
					(0.179)
Current SSI payee (administrative record)	--	--	--	--	0.049
					(0.215)
First SSI payment after age 64 (administrative record)	--	--	--	--	0.030
					(0.163)
N	4,753	4,795	3,140	5,389	7,352

SOURCE: Data are from 1984–1993 Surveys of Income and Program Participation and administrative records of the Social Security Administration.

NOTES: Sample means are reported with standard deviations in parentheses.

All data on labor supply and individual controls come from Survey of Income and Program Participation files. When using the administrative record to establish SSI receipt, the sample is restricted to men reaching a minimum age of 67 by the end of the administrative record.

-- = not available.

time of the survey do not help predict which sample members ultimately participate in SSI-aged. In addition, the estimates may differ because in the SIPP data, participation in SSI-aged is difficult to distinguish from participation in SSI-disabled.

Labor Supply

Our central findings—estimates of the effects of SSI on labor supply—are shown in Table 4. The simple difference estimates reported in Panel A do not reveal any disincentive effects of SSI on labor supply. This result holds whether we use the predicted probability of SSI participation based on the public-use SIPP data or the administrative SSA data. The estimated labor supply differentials associated with generous SSI benefits more often have a positive sign but are never statistically significant.

Two alternative sets of difference-in-differences estimates are also reported in Table 4. To control for state-specific differences in labor supply, Panel B uses unlikely participants also aged 60–64 as the control, and Panel C uses younger (aged 40–59) likely participants.

Table 3.
SSI participation probits from 1984–1993 SIPP samples and matched SSA administrative records

Characteristic	Men aged 65 or older, using public-use data	Men under 65, using SSA longitudinal information
Maximum state SSI supplement exceeds 20 percent of federal benefit	0.011 ***	0.010 ***
	(0.003)	(0.003)
Highest grade completed x high school education or less	-0.004 ***	-0.002 ***
	(0.001)	(0.001)
More than high school education	-0.053 ***	-0.019 ***
	(0.006)	(0.005)
Black	0.011 ***	0.004
	(0.003)	(0.003)
Divorced, widowed, or separated (and not currently married)	-0.015 ***	-0.002
	(0.004)	(0.004)
Ever authorized for food stamps	0.012 ***	0.003
	(0.004)	(0.005)
Spouse highest grade completed x high school education or less	-0.002 ***	-0.001 **
	(0.0005)	(0.0005)
Spouse has more than high school education	-0.029 ***	-0.011 **
	(0.006)	(0.006)
State unemployment rate	0.003 ***	0.0009
	(0.001)	(0.0006)
1990 panel	-0.001	-0.0005
	(0.004)	(0.004)
1991 panel	-0.002	-0.003
	(0.003)	(0.004)
1993 panel	0.001	-0.002
	(0.003)	(0.004)
N	7,352	4,427

SOURCE: Data are from 1984–1993 Surveys of Income and Program Participation and administrative records of the Social Security Administration.

NOTES: Spouse age is also included in all specifications, but it is not reported (estimated coefficient was close to zero and insignificant in each case).

Partial derivatives of the participation probability are reported with standard errors based on probit coefficients in parentheses.

*** Significant at the 1 percent level; ** significant at the 5 percent level.

Subtracting out differences between states with high and low SSI benefits for a control group leads to more evidence of disincentive effects of SSI on labor supply. In Panel B, five out of the six estimates are now negative, although none are statistically significant. In Panel C, however, all of the estimates are negative, and four of the six are statistically significant at the 5 percent or 10 percent level.[20] More significantly from the perspective of this article, using the SSA administrative data on SSI receipt of the sample members, which is expected to lead to more precise classification of likely SSI participants, yields considerably stronger evidence of labor supply effects.[21] In every case in Panels B and C, the estimated disincentive effects are larger using the administrative data, often by a factor of two or more.

Finally, Panel D reports the difference-in-difference-in-differences estimates, which essentially ask whether labor supply is particularly low among likely participants in high-benefit states who are in the older age brackets (and therefore are expected to respond to the incentives posed by SSI). These estimates largely mimic those in Panel C, indicating disincentive effects of SSI on labor supply in

Table 4.
Estimated effects of SSI on labor supply of likely participants aged 60–64 based on 1984–1993 SIPP samples and matched SSA administrative records

Data source [a]	Sample size	Measures of labor supply: Employment	Hours	5-Year change in covered quarters
		A. Simple difference estimates		
Survey data	262	-0.035	0.889	1.42
		(0.075)	(2.99)	(1.04)
Administrative records	231	0.000	2.73	1.74
		(0.103)	(4.09)	(1.47)
		B. Difference-in-differences estimates [b]		
Survey data	2,057	-0.079	-0.524	0.871
		(0.079)	(3.35)	(0.99)
Administrative records	1,908	-0.127	-2.87	-0.162
		(0.083)	(3.66)	(1.08)
		C. Difference-in-differences estimates [c]		
Survey data	1,420	-0.121 *	-4.20	-0.095
		(0.072)	(3.04)	(0.966)
Administrative records	379	-0.232 *	-10.23 **	-2.90 *
		(0.124)	(4.77)	(1.63)
		D. Difference-in-difference-in-differences estimates [d]		
Survey data	13,309	-0.097 **	-5.14 *	0.038
		(0.049)	(2.99)	(0.908)
Administrative records	3,121	-0.244 **	-10.95 **	-2.63 *
		(0.117)	(5.16)	(1.56)

SOURCE: Data are from 1984–1993 Surveys of Income and Program Participation and administrative records of the Social Security Administration.

NOTES: For employment, estimated partial derivatives are reported with standard errors based on probit coefficients. Tobit coefficients and standard errors are reported for hours. For the change in covered quarters, ordinary least squares coefficients are reported with standard errors. Panel dummy variables for 1990, 1991, and 1993 are also included in every specification, as are the own and spouse characteristics listed in Table 2. The SSI supplement effect from the SSI participation probit in Table 3 is zeroed out in computing the participation probabilities for the labor supply analysis, so that average characteristics are the same for likely participants in high- and low-benefit states. Standard errors are reported in parentheses.

** Significant at the 5 percent level; * significant at the 10 percent level.

a. Data source used to determine probability of participation.

b. Likely participants aged 60–64 minus unlikely participants aged 60–64.

c. Likely participants aged 60–64 minus likely participants aged 40–59.

d. (Likely participants aged 60–64 minus likely participants aged 40–59) minus (unlikely participants aged 60–64 minus unlikely participants aged 40–59).

almost all cases and, in particular, statistically significant and stronger effects for all three labor supply measures when the administrative data are used in predicting the likelihood of SSI participation.

One prominent feature of these results is that evidence of labor supply disincentives emerges only from the specifications exploiting cross-age comparisons—those that use younger workers with characteristics similar to older likely participants as a control group. This implies that there are general differences across states in the level of work activity of individuals with characteristics associated with participation, which are correlated with SSI. In particular, labor supply of these individuals tends to be higher in states with high SSI benefits (as the estimates in Panel A show), so the negative effect of SSI is obscured if comparisons are not made with younger individuals with similar characteristics. In contrast, such comparisons reveal that relative to these younger individuals, labor supply of older individuals drops off more with age in states with high SSI benefits.

Conclusion

This article reexamines evidence on the work disincentives created by the Supplemental Security Income program's limits on income and assets of SSI recipients. It improves on past research by using confidential Social Security Administration data linked to multiple panels of the Survey of Income and Program Participation. In our empirical approach, the likelihood of SSI participation has to be inferred to identify a group of older workers who are not yet eligible for SSI but are likely to respond to the incentives posed by the asset and income limits of the program. In past work, we used information in the SIPP on SSI receipt among an older sample to construct a model of SSI participation that was then applied to the individuals we study. In contrast, the administrative data matched to the SIPP allow us to look ahead longitudinally at who actually participates in SSI after passing the age of eligibility and thus to estimate a more accurate model for inferring the likelihood of SSI participation.

The empirical evidence that results from using the administrative data—as we conjectured going into this research—leads to stronger evidence that the SSI program creates labor supply disincentives. In particular, the various analyses reveal that, among those individuals relatively likely to participate in SSI, labor supply falls off more as workers approach the age of eligibility for SSI in states that generously supplement SSI benefits. This is true for all of the labor supply measures that we consider: current employment, current hours, and the change in quarters of Social Security–covered earnings over the previous 5 years.

The magnitudes of the estimated effects are substantial, particularly when administrative data are used. The preferred specification (Panel D in Table 4) indicates that a likely participant aged 60–64 is nearly 10 percentage points less likely to be employed at all in a more generous state, rising to almost 25 percentage points less likely using administrative data. There are large commensurate effects of benefit policy on weekly hours (estimated from 5–11 hours less per week). The difference in the accumulation of covered quarters, although insignificantly different from zero for public-use data, indicates over one-half a year less of work over the preceding 5 years because of SSI policy. These large magnitudes suggest that SSI policy may exert a powerful influence on the labor supply of older workers targeted by the program as they near the SSI eligibility age.

The research findings we report add to the evidence that, as economic theory would lead us to predict, income and asset limits in the SSI program reduce the incentives of older individuals who might soon go on the program to accumulate additional resources. Furthermore, the evidence we present points to the value of incorporating SSA administrative data into the study of the behavior of older workers. We trust that additional research will both refine the analysis of the effects of the SSI program and develop additional methods of bringing to bear evidence from Social Security administrative records.

The evidence presented in this article has implications for program design. Welfare systems can unintentionally

Table A-1.
Estimators of the effects of SSI on labor supply

Estimator	Treatment group	Comparison group	Sample members
Simple difference	OLPs in high-benefit states	OLPs in low-benefit states	OLPs
Difference-in-differences	OLPs – OUPs in high-benefit states	OLPs – OUPs in low-benefit states	OLPs and OUPs
Difference-in-differences	OLPs – YLPs in high-benefit states	OLPs – YLPs in low-benefit states	OLPs and YLPs
Difference-in-difference-in differences	{OLPs – YLPs in high-benefit states} – {OUPs – YUPs in high-benefit states}	{OLPs – YLPs in low-benefit states} – {OUPs – YUPs in low-benefit states}	OLPs, YLPs, OUPs, and YUPs

SOURCE: Authors' calculations.

NOTE: OLP = Old (60–64) likely participant; OUP = old unlikely participant; YLP = young (40–59) likely participant; YUP = young unlikely participant.

build in perverse financial penalties on behavior that is normally thought of as desirable, like work. Changes in program design that would better integrate SSI and Social Security, such as giving SSI recipients greater credit for their Social Security contributions in the SSI benefit formula (Burkhauser and Smeeding 1981), would ease the implicit 100 percent tax on retirement income.[22]

Notes

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[1] One means of reducing labor supply is to take early retirement in the Social Security system, if possible. Powers and Neumark (2003) explore this issue more directly by examining the present value of public transfer wealth lost by delaying Social Security retirement for prospective SSI recipients.

[2] Throughout the article we interchangeably use "SSI" and "SSI-aged" to refer to the program for which sufficiently poor elderly qualify. We refer to the disability portion of the program as "SSI-disabled."

[3] If the $20 of general income exclusion is not used for unearned income, then it can be applied to the earned income exclusion, thus increasing this amount from $65 to $85. The program also excludes certain home energy and support and maintenance assistance, Food Stamps, most federally funded housing assistance, state assistance based on need, one-third of child support payments, and other sources of income that are received infrequently or irregularly.

[4] Although the amounts that some states disregard vary from the federal level, incorporating this information in our analyses proved too difficult, given the idiosyncratic way in which different disregards are applied and the detailed knowledge about income sources that is needed to use them appropriately.

[5] The benefit computation rules make it possible for individuals to receive a state benefit without receiving a federal SSI benefit. Only federal payment status is recorded in SSA databases. Due to the Medicaid rules of some states that pay supplements, it may also be advantageous for some households to participate only in the federal portion of SSI.

[6] However, the era of our sample (1984–1993) is fairly stable, with roughly 1.5 million elderly participating each year.

[7] Moffitt (1992) discusses the phenomenon of "nonparticipating eligibles"—those who locate on the line $Y_0 + \Delta B(hw)$ at work hours below H_2^{BE}. We do not treat this situation explicitly in our analysis. Historically, around one-half of the aged imputed to be eligible for SSI actually participate.

[8] This result is demonstrated more formally in Powers and Neumark (forthcoming).

[9] Those with sufficient quarters of covered earnings are eligible to purchase Medicare coverage at modest premiums after age 65, but Medicaid and Medicare do not provide equivalent coverage.

[10] In our earlier work, we found that the results are not very sensitive to using a somewhat different threshold, or a continuous measure of the state supplement.

[11] Again, results were qualitatively similar when we varied this threshold somewhat.

[12] Our analysis follows that in Neumark and Powers (2000).

[13] As an example, in a state with a relatively high-tech economy, older individuals may be less employable.

[14] The resulting estimates are numerically identical; the different interpretations come from simply rearranging terms in the triple differences.

[15] Communication from Howard Iams, Division of Policy Evaluation, Office of Research, Evaluation, and Statistics, Office of Policy, Social Security Administration.

[16] The distinction is still not perfect. For example, a person may have received SSI-disabled, made a full recovery, and then come into SSI-aged. We would record that person as SSI-disabled, since their first payment was received before age 65.

[17] Although not reported in the table, covered quarters are of course highest for persons aged 60–64. However, reflecting declining labor supply at older ages, the average 5-year change in covered quarters, as well as mean employment rates and hours, are lower at these ages than at younger ages.

[18] It is also possible that this coefficient reflects reverse causality from SSI to Food Stamps participation, as the Social Security Administration is required to ask all applicants if they wish to apply for food stamps. We are grateful to a reviewer for pointing this out.

[19] We can establish later SSI-aged receipt for just over 1 percent of those aged 60–64.

[20] Because the SSI variable is a dummy indicator for generous SSI benefits, the magnitudes of the estimates are easy to interpret. For example, in the hours specification in Panel C, the estimate of -10.23 implies that older workers supply 10.23 fewer hours relative to the control group in states with high SSI benefits than in states that do not supplement SSI.

[21] This is true despite the larger standard errors attributable to the smaller sample size of matched observations with at least some period of "exposure" to SSI-aged eligibility, especially when data are required on younger individuals (see Panels C and D).

[22] Although the Social Security benefit formula is progressive, our point is that the SSI benefit formula undoes this completely.

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