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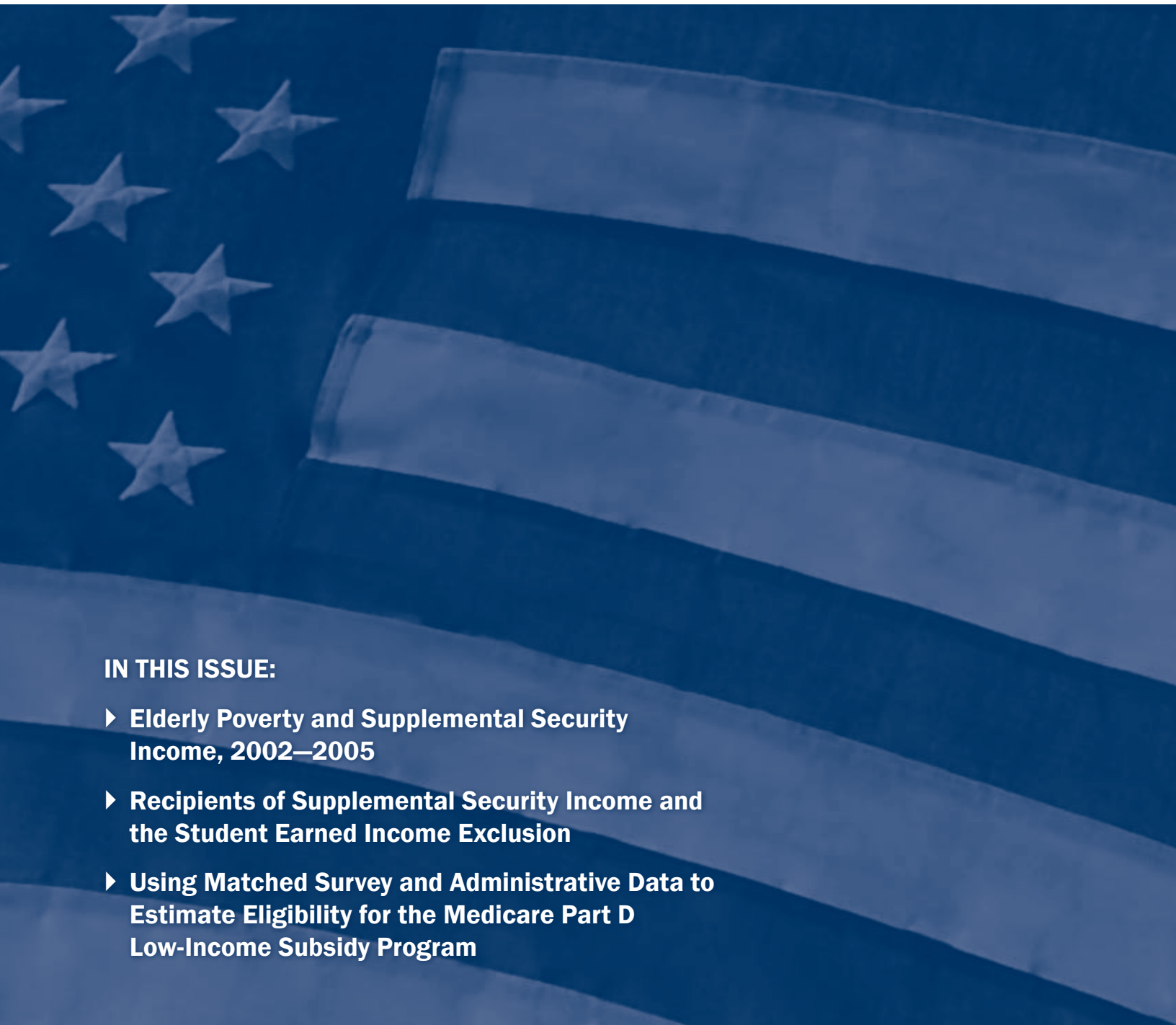

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Elderly Poverty and Supplemental Security Income, 2002–2005

by Joyce Nicholas and Michael Wiseman*

The Supplemental Security Income (SSI) program is the nation's safety net for the aged, blind, and disabled. SSI receipt is often not reported by individuals interviewed in the Current Population Survey (CPS), the statistical base for the Census Bureau's annual estimates of poverty rates. In an earlier article, we explored the effect on estimated poverty rates in 2002 of adjusting CPS income reports using administrative data on earnings and benefits from the SSI and Old-Age, Survivors, and Disability Insurance programs. We assessed poverty using both the official standard and a "relative" standard based on half of median pretax, posttransfer income. This article extends that work through 2005. We find that including administrative data presents challenges, but under the methodology we adopt, such adjustments lower estimated official poverty overall and increase estimated poverty rates for elderly SSI recipients. Relative poverty rates are much higher than official poverty rates. By any of the applied standards and procedures for income adjustment, poverty changed little over the 2002–2005 interval.

Introduction

The Supplemental Security Income (SSI) program acts as a safety net by providing a minimum level of income to the aged, blind, and disabled. As of December 2008, approximately 7.5 million persons received SSI, of which 2 million (27 percent) were aged 65 or older (SSA 2009). This group of recipients is about 5 percent of America's senior citizens. Thus, SSI for the elderly is not a major factor in the social assistance landscape. Nevertheless, it does establish an income floor, and it offers an institutional framework for caring for older people who for some reason reach later life with few resources. Given recent economic developments, it is possible that SSI enrollment may grow. Thus, continuing review of SSI outcomes is valuable.

The success of programs like SSI in ensuring minimum incomes for Americans can be measured in various ways. Typically, leaders and researchers have evaluated persons' economic standing using the official Census poverty standard and data from the Current Population Survey's (CPS's) Annual Social and Economic Supplement (ASEC). The official poverty standard is commonly described as "absolute" because it is based on a family budget established in the 1960s and is fixed in real terms (Fisher 1992). In recent decades, the prevalence of poverty among elderly Americans as measured by the official standard has declined substantially. From 1966 through 2006, the poverty rate for persons aged 65 or older fell from 28.5 percent to 9.4 percent. In 1966, the elderly poverty rate exceeded that of adults aged 18–65 by 18 percentage points. By 1993, parity with the poverty rate of other adults was achieved; since that year, the elderly poverty rate has generally been over a percentage-point lower than that registered for adults of "working

Selected Abbreviations

ASEC	Annual Social and Economic Supplement
CPS	Current Population Survey
DER	Detailed Earnings Record
FBR	federal benefit rate
NRC	National Research Council

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Selected Abbreviations—*Continued*

OASDI	Old-Age, Survivors, and Disability Insurance
PHUS	Payment History Update System
SER	Summary Earnings Record
SSA	Social Security Administration
SSI	Supplemental Security Income
SSN	Social Security number
SSR	Supplemental Security Record

age" (DeNavas-Walt, Proctor, and Smith 2007, 50). However, it is difficult to trace the connection between SSI and poverty because receipt of SSI is substantially underreported in the CPS. For example, the estimated number of SSI recipients in 2002 derived from the CPS is about 30 percent lower than the count obtained from administrative data (Nicholas and Wiseman 2009, Table 8).

In a recent article, we addressed the underreporting issue by merging CPS/ASEC survey data for 2002 with administrative data on earnings and benefits from the SSI and Old-Age, Survivors, and Disability Insurance (OASDI) programs (Nicholas and Wiseman 2009). We encountered two major problems in this effort. First, for various reasons only about three-quarters of persons surveyed for the CPS could be matched to Social Security administrative records. Second, in a significant number of cases, income sources and amounts reported in the CPS do not match administrative records, although often the differences are slight. We developed two alternatives to address these problems. For the problem of the unmatched records, we experimented both with simply leaving unmatched observations in the data set and relying on income as reported in the CPS and with using only the matched observations, but reweighting them using a propensity score technique. For the problem of the difference between administrative data on incomes and amounts reported in the survey, we developed estimates based on alternative "restrictive" and "inclusive" assumptions about which source to use. After addressing these methodological issues, we used our adjusted data to recalculate the prevalence of poverty using the official poverty standard and to investigate the prevalence of poverty using an alternative, "relative" standard.

Our data adjustments had appreciable effects on the estimates for calendar year (CY) 2002. We managed to reduce the weighted CPS undercount of elderly SSI recipients from 42 percent to 5 percent. Adjustment of income with administrative data reduced the national absolute poverty rate by 0.3–2.8 percentage points, depending on the procedure for incorporating unmatched observations and application of the restrictive or inclusive income adjustment procedures. The effect on estimated poverty rates for elderly SSI recipients was sizable. Adjustment of income with administrative data reduced the estimated aggregate poverty rate for elderly SSI recipients by 7.4–9.4 percentage points, again depending on the method adopted for incorporating unmatched observations and whether the restrictive or inclusive income adjustments were applied.

In addition to poverty estimates that are based on the official standard, we experimented with a *relative* poverty standard that identifies people as poor if their gross income adjusted for family size is less than half the national median. (We employ the same income measure for both absolute and relative poverty calculations.) This common relative poverty threshold yields a much higher aggregate poverty rate than is registered using the official standard—22 percent versus 12 percent before adjustment of income using administrative data. This difference persists in virtually the same magnitude after adjustment with administrative data because such adjustment generally shifts the entire distribution of income, not just the lower tail. However, for SSI recipients, adjustment does lower poverty rates, but those rates remain at very high levels—from 75.1 percent without adjustment to 70–72 percent, again depending on the choice between using restrictive or inclusive income adjustments.

When this study began, the 2003 CPS/ASEC was the latest public-use file for which matched administrative data were available. Since that time, comparable studies have been completed within the Social Security Administration (SSA) for the 2004, 2005, and 2006 CPS/ASEC data, allowing replication of our methodology for CYs 2003–2005. This article reports the results of our 2002–2005 analysis and outlines opportunities for additional research.

SSI Background

The SSI program provides a basic monthly national income guarantee, called the federal benefit rate (FBR), to persons aged 65 or older, blind individuals, and qualified children and adults with disabilities. The FBR is adjusted annually for inflation and stays constant in real terms. In 2002, the baseline year for

this study, the FBR was $545 per month for a single individual and $817 for a couple (the 2009 amounts were $674 and $1,011, respectively). SSI is a program that provides a minimum level of income for needy aged, blind, or disabled individuals and acts as a safety net for those who have little or no Social Security or other income and limited resources (SSA 2009). To be eligible for SSI, applicants must pass financial tests involving certain assets and net ("countable") income and a medical test if disabled and nonelderly. Once eligibility is established, the SSI payment is the FBR minus the recipient's countable income and/or any "in-kind support and maintenance" received from others. In all states but two, the federal SSI payment is augmented for at least some SSI recipients by a state supplement (SSA 2008).

Because SSI eligibility is not determined by total household or even family income, a substantial number of recipients living with persons other than their spouse are not poor, although by official standards, anyone living solely on the FBR is considered to be poor. In 2002, the official poverty standard was $9,359 for a nonelderly single person ($8,628 if aged 65 or older) and $12,047 for a nonelderly couple ($10,874 if the "householder" was aged 65 or older). The annualized FBR—$6,450 per year for a single individual and $9,804 for a couple—was therefore even less than the poverty standard applicable to elderly persons. Despite this shortfall, it is possible for SSI payments to lift some persons out of poverty when considered in combination with the income of other family members. For others, SSI at least reduces the gap between income and the poverty standard, especially in states with substantial supplements.

The Data

We use CPS/ASEC data in conjunction with various Social Security administrative files to examine trends from CYs 2002 through 2005.[1] Our administrative data provide information about a person's wages and salaries, self-employment, OASDI, and SSI income. We rely on the CPS for information about all other categories of income.

The Current Population Survey

The CPS is a monthly household survey conducted by the Census Bureau. This survey is the main source of employment information about the civilian noninstitutionalized American population. The CPS provides household, family, and person-level data about employment, unemployment, earnings, hours of work, and other indicators. Additional data are collected in the ASEC for CPS households on various family characteristics plus income received in the previous year. For poverty calculations we follow Census Bureau practice and exclude a small number of children living in households with no relatives because no income data are collected for such persons.

To protect confidentiality, income data in the CPS are subject to top- and bottom-coding. When reported amounts exceed certain thresholds, the actual amounts reported are replaced (top-coded) with average reported amounts for the same item for all surveyed persons with above-threshold amounts and identical (on certain dimensions) demographic characteristics. Bottom-coding occurs for losses from farm and nonfarm self-employment income. When persons are known to have received certain types of income but amounts are not reported, the Census Bureau imputes the missing amount using "hot-deck" methods. In this procedure, missing values are imputed using the amounts reported for sample observations with identical (on certain dimensions) demographic characteristics. It is possible for top- or bottom-coded amounts to be used in such imputations, depending on the data processing sequence.

Social Security Administrative Files

The administrative files we employ from SSA include records of individual earnings in employment covered by the OASDI program as well as SSI payments and OASDI benefits. The data sources for earnings are the Summary Earnings Record (SER) and the Detailed Earnings Record (DER), the Payment History Update System (PHUS) for OASDI, and the Supplemental Security Record (SSR) for SSI.

Summary Earnings Record. Data herein are an extract from SSA's Master Earnings File (MEF). A primary MEF record is created when a person receives a Social Security number (SSN); thus, every person in the CPS/ASEC for whom an SSN match was successfully accomplished will have an SER. The SER is the first administrative file examined when assessing the extent of the CPS/administrative match.

Detailed Earnings Record. These data are an extract from the MEF, which includes data on total earnings from all sources—wages, salaries, and income from self-employment that are subject to Federal Insurance Contributions Act (FICA) and/or Self-Employment Contributions Act (SECA) taxation. DER coverage extends to all earnings reported by employers on

workers' W-2 forms, and amounts are not capped.[2] These data include deferred wages such as contributions to 401(k) retirement plans.[3] Because individuals do not make SECA contributions if they lose money in self-employment, only positive self-employment earnings are reported in the DER. Our data are aggregated across all employers for each individual and include earnings from wages, salaries, and self-employment, in addition to deferred income.[4]

Payment History Update System. These data record OASDI (Social Security) benefits when paid. PHUS data include both total benefit and the amount of benefit subtracted for Medicare Part B premiums. A key feature of the PHUS is that monthly amounts recorded here represent actual payments, not entitlement. Hence if a person begins entitlement for a Social Security benefit in November 2004, but does not actually receive a check for the amount until February 2005, the payment will be recorded for 2005. This corresponds to income received as reported in the CPS/ASEC.[5]

Supplemental Security Record. Data herein provide the information that is needed to calculate and distribute SSI payments. SSA typically creates an SSR record when an individual files an SSI application. Each person's record includes eligibility and payment information as well as income information about ineligible spouses and parents that is pertinent to establishing and maintaining the individual's eligibility. SSR payments are recorded as disbursed. The SSR includes state SSI supplements if federally administered (that is, if SSA makes the payment on the state's behalf). Payments made by state-administered SSI supplement programs are not included in the SSR. For the most part, state supplements are small, and some of the largest (from California, Massachusetts, and New York, for example) are federally administered (SSA 2008, 7). However, benefits in Alaska, Connecticut, Wisconsin, Minnesota, and a few other states are substantial and are administered by the state. By far the largest state-administered SSI supplement is Alaska's. In 2002, that state added $362 to the FBR for singles and $528 to the FBR for couples living independently (SSA 2008, 13).

The Match

The common element among original CPS/ASEC and administrative files is a Social Security number. CPS interviewers request SSNs for all persons aged 15 or older in each household in the address-based CPS household sample. Interviewees are not required to provide these data, but most do, or at least permit the Census Bureau to search Social Security's administrative files for their SSN using name, birth date, and address. SSNs for persons younger than age 15 are all obtained by searching administrative data. Once collected, the CPS data are extensively reviewed and reorganized, missing values are imputed, and potentially identifiable outlier income values are top- or bottom-coded. Upon completion of these adjustments, the Census Bureau produces a public-use data set. CPS public-use data sets do not include respondents' SSNs, but do contain unique household sequence and, within households, person identifiers. These identifiers relate to file structure only and convey no information useful for determining the actual identity of CPS respondents.

Upon release of the public-use CPS data, the Census Bureau provides a special encrypted file to SSA. This "cross-walk" file specifies the SSN for each person in the CPS for whom an SSN has been reported, identified by the household sequence number and person identifier. Only one person at SSA has access to the cross-walk file, who then uses the SSNs to construct SER, DER, PHUS, and SSR files for each person with a corresponding household sequence number and person identifier. Only the CPS identifiers are retained and used to link persons' CPS and administrative records.

Unweighted match rates for CPS person observations and Social Security administrative data are given in Table 1. The key match is for the SER. Primarily because of diminishing respondent willingness to provide SSNs, the match rate declined from the 2003 to the 2005 CPS/ASEC interviews (pertaining to CYs 2002 through 2004). However, the match rate increases substantially for the March 2006 interview. Beginning with the 2006 CPS/ASEC, the Census Bureau altered its policy for collecting SSNs. Rather than asking respondents for their SSNs and for an affirmative agreement for use of such information for data matching, the new protocol requires that respondents not wanting such matches to occur to notify the Census Bureau through that agency's Web site or to use a special mailed response. If no such instruction is received from respondents, SSA uses both the SSN and other information (name, address, age, and sex) that are provided to establish correct SSNs for data matching. As the table indicates, substituting an "opt-out" option for the former "opt-in" procedure for SSN reporting had a major effect.

Table 1.
CPS and Social Security administrative data match rates, 2002–2005

Data	2002		2003		2004		2005	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
CPS/ASEC	215,860	100.0	212,717	100.0	210,152	100.0	207,987	100.0
Matched with records in the—								
SER	165,039	76.5	150,721	70.9	145,948	69.4	183,317	88.1
DER	113,138	52.4	104,255	49.0	97,537	46.4	132,469	63.7
PHUS	37,587	17.4	35,277	16.6	32,712	15.6	44,264	21.3
SSR	11,880	5.5	11,963	5.6	11,227	5.3	13,957	6.7

SOURCE: Authors' calculations using the CPS/ASEC public-use data set matched to Social Security administrative records.

Match rates for earnings (the DER), OASDI benefits (the PHUS), and SSI (the SSR) are lower than for the SER because not everyone for whom a match was achieved in a particular year had earnings or received SSI payments or OASDI benefits. Note that the DER, PHUS, and SSR match groups are subsets of the SER counts.

The Merge

We turn now to procedures for merging the CPS data with administrative records. "Adjusted data" is the term used for any CPS-reported values that have been replaced with administrative data. We discuss income adjustment first and then describe creation of a reweighted sample subset based on persons for whom we have a successful SER match. The outcome is three CPS samples for each year. "Baseline" samples are comprised of the same CPS/ASEC data applied by the Census Bureau to calculate official poverty estimates for any given year. (The terms *baseline*, *official*, and *unadjusted* refer to the same sample.) "Intermediate" samples involve CPS income adjustments that have only been applied to CPS observations with matching SER records. The "final" samples are restricted to individuals living in families with at least one person with a successful SER match and are reweighted to adjust for variation across families in the likelihood the match criterion is met.

Income-Adjustment Strategy

The baseline for our calculations is income as reported in the unadjusted public-use CPS/ASEC data. We distinguish between *restrictive* and *inclusive* assumptions at each step of our adjustment process. For a summary of the procedural protocol, see Nicholas and Wiseman (2009, Table A-1). In general, the restrictive assumption set gives credence to administrative data when both administrative and CPS reports are available, and the inclusive assumption set gives credence to CPS income reports when such reports are not imputed and exceed amounts recorded in our administrative sources.

Our income-adjustment procedure incorporates three important choices. First, when comparing CPS data with income reported in the DER, we generally work with total earnings—the sum of wages, salaries, and self-employment income—rather than distinguish between wages and salaries and income from self-employment. Second, we use reported earnings from the DER, but accept CPS earnings reports in the absence of DER amounts or in cases of loss from self-employment. Third, we rely solely on administrative sources for income from OASDI and SSI. The CPS collects data on 17 types of income, from alimony and veterans' benefits to wages and salaries. Our adjustments involve only earnings, OASDI benefits, and SSI payments. For all other sources the CPS amounts, including imputations and top-coded values, are retained.

The reasons for the earnings strategy are discussed in detail in our previous article. For OASDI and SSI, we rely on administrative data for both our restrictive and inclusive income adjustments. Incorporating OASDI and SSI administrative data is complicated by evidence that CPS respondents sometimes confuse SSI payments with OASDI benefits. In the previous article, we argue that this underreporting is due in part to misidentification of SSI payments as Social Security benefits. If such confusion does in fact exist, we should expect to see and actually do see greater reported OASDI benefits in the CPS among known SSI recipients who fail to report SSI than is the case for individuals who correctly report SSI receipt

(Nicholas and Wiseman 2009, Table 4). Given the misreporting problem, we focus our income adjustment on the combined OASDI and SSI benefit. Our calculations also include an adjustment for state-administered SSI supplements (SSA 2004).

The Consequences of Adjustment

Table 2 reports the outcome of our CPS income adjustments, differentiating observations by their CPS/SER match status and whether their earnings were changed, their combined OASDI/SSI total was changed, or whether both earnings and OASDI were adjusted. We are interested here in the prevalence of adjustments within the sample, so the data are unweighted. The table has two panels: one incorporating the restrictive income adjustments and the other incorporating the inclusive income adjustments. We have tabulated here only income changes, without respect to whether the CPS-reported numbers were increased or decreased. (Our previous article provides greater detail for 2002.)

The following four findings should be noted:

1. Income adjustments are made for only CPS observations with an SER match. The bottom row of Table 2 indicates that the proportion of affected observations ranges from a low of 69.4 percent in the 2005 CPS/ASEC (2004 reference year) to a high of 88.1 percent in the following year.
2. Income adjustments are common. This finding is to some extent misleading because any difference between what is in the CPS and what we gain from administrative data is recorded. Moreover, in considering the large number of cases with no changes for both earnings and the sum of OASDI and SSI benefits, it is important to recall that many of these cases receive neither, so zero matches with zero.
3. The 2006 Census data linkage policy change not only increased the 2005 CPS/SER match rate, but also the proportion of CPS earnings and SSI/OASDI totals that our procedures adjust. This outcome might be attributed to a higher incidence of imputations among those observations added on the basis of the new Census "opt-out" procedure. Our adjustment procedure generally substitutes administrative data for imputations under both the restrictive and inclusive income protocols.
4. Adjustments in earnings are generally less prevalent under the inclusive adjustment procedure. This outcome is a consequence of accepting survey earnings reports by the inclusive procedure if reported amounts exceed administrative data and are not imputed. The restrictive procedure substitutes DER data in most of these cases, and each substitution counts as an adjustment. The obvious question is whether the size and distribution of these adjustments have significant effects on our perception of poverty for the elderly and for individuals and families in general.

We began with the CPS baseline samples. Applying the income adjustments to persons with an SER match creates for each year a second, intermediate data set,

Table 2.
Incidence of SSI, OASDI, and earnings adjustments: Percent of CPS/SER matched sample subset, 2002–2005

Adjustment category	2002	2003	2004	2005
		Using restrictive income adjustment		
Change in earnings	50.4	48.4	48.0	53.4
Change in combined SSI and OASDI total	13.1	14.1	14.0	16.0
Both	60.5	59.4	58.9	65.7
		Using inclusive income adjustment		
Change in earnings	29.5	26.4	27.7	30.6
Change in combined SSI and OASDI total	13.1	14.1	14.0	16.0
Both	40.6	38.4	39.7	44.2
Total CPS sample	215,860	212,717	210,152	207,987
Total CPS sample with SER match	165,040	150,721	145,948	183,317
Percent of total CPS sample	76.5	70.9	69.4	88.1

SOURCE: Authors' calculations using the CPS/ASEC public-use data set matched to Social Security administrative records.

which is somewhat of an amalgam because at least 24 percent of observations in each year lack an SER match. For this group it is necessary to rely solely on income as reported in the CPS.

The Final Sample

Our objective in constructing our third, final sample is to create a data set for which the administrative match is near "universal." However, because poverty is assessed on the basis of family income, universal is somewhat ambiguous. Three alternatives were considered. One was to limit consideration only to singles living alone who were matched to the SER and to families in which every member was matched. A second, less rigorous, alternative was to limit consideration to persons who were themselves matched even if every person in their family was not. The third was to restrict the sample to singles living alone who were matched as well as any person living in a family in which at least one family member was matched. We chose the third alternative, in part because a majority of unmatched persons who ended up being included under this strategy appeared unlikely to have income. The effect of the most rigorous "every family member matched" approach and the second "every person matched" approach would be to reduce the final unweighted samples on average by about 35 percent and 24 percent, respectively.

For population inference, the original CPS weights still work for CPS observations without matching SER records because all original CPS observations are used for our *intermediate* analyses. However, this is not true for the final sample, which excludes unmatched observations. Before generating our *final* estimates, we must adjust the person weights of our CPS restricted sample members.

The absence of a CPS/SER match can be treated as a problem in unit nonresponse—as if failure to provide an SSN that could be matched to the SER is equivalent to refusing to cooperate with the survey at all (Lehtonen and Pahkinen 2004, 115). Adjusting data for nonresponse then requires specifying, to some extent, the circumstances that affect the likelihood of cooperation (Groves and Couper 1998). The simplest assumption is that such outcomes are a random phenomenon, and each sampling unit shares a common probability of responding. The response rate for the survey then provides an estimate of this common probability, and population totals for various features of interest could be obtained by multiplying the analysis weights for respondents by a nonresponse adjustment factor. However, even the simplest tabulation indicates that the match rate is not independent of demographic characteristics. Hence without adjustment, the subset of observations for which matches are achieved cannot be used to make inference about the U.S. population as a whole.

We address this problem by reweighting our matched sample in a manner that reflects the varying propensity across interview units to provide SSNs or the information required for SSA to obtain them. Both poverty and income distribution statistics are based on families and single individuals. Given that absolute poverty assessment involves considering the income of all family members, it would be convenient if every family member had a CPS/SER match. In practice, there are families who have members without a CPS/SER match, and this issue presents a choice of what sample to use in generating population estimates. We choose to generate our final estimates from CPS observations who live in families in which someone in the family is matched, but not necessarily the observations themselves because this selection criteria is the least restrictive. For each year's data, we compute the parameters of a logistic regression for the log odds of being matched in this sense for each of the persons in the CPS sample (Folsom 1991; Iannacchione 1999). We estimate separate functions for persons who are either younger than age 18, aged 18–64, or aged 65 or older (Nicholas and Wiseman 2009, Appendix C-2). We use this function to calculate i and an adjusted weight for each individual observation. These calculations produce a third or final sample made up of unrelated individuals with an SER match and persons in families with at least one member with an SER match, each with a propensity-adjusted weight and both restrictive and inclusive income estimates.

It should be emphasized that these estimates are not only experimental, but we have not attempted to estimate variances for the sample estimates. Because of confidentiality issues, the design information necessary to estimate variances for sample statistics from the CPS is not publicly released, and the variance estimation methodology provided by the Census Bureau is not applicable to the final sample we construct because of the additional reweighting step applied (Census Bureau and Bureau of Labor Statistics 2002; Valliant 2004).

The Results: Absolute Poverty

We turn now to the results, treating 2002 (that is, the income data from the 2003 CPS/ASEC) as the baseline of this study. The same data presentation employed in our previous article for 2002 is used here, and results for 2003–2005 are given in Table A-1.

Poverty in 2002

We begin by examining the consequence of CPS income and weight adjustments on poverty rate estimates using the same poverty thresholds applied in Census Bureau publications. As already noted, for 2002 a single, nonelderly adult living alone was considered poor if his or her gross cash income after transfers but before taxes for the year fell below $9,359; for a family of four with two children, the reference amount is $18,244 (Proctor and Dalaker 2003, 4). The standard increases with family size and varies with composition. Elderly persons living alone or with spouses are assumed to require about 10 percent less income than do nonelderly persons in the same circumstance.

Poverty rates by age group for CY 2002 are reported in Table 3. The table is divided into two parts: (1) results for the total U.S. population as covered by official poverty statistics and (2) results for the SSI recipient population. For both groups, we present results (a) using the same *baseline* CPS/ASEC data applied for official estimates published by the Census Bureau, (b) based on an *intermediate* CPS/ASEC

Table 3.
Poverty rates across age and SSI recipient groups before and after adjustment using Social Security administrative data: Total U.S. population and SSI recipient population, 2002

		Restrictive		Inclusive		Data summary		
Age group	Estimated population	Number living below poverty [a]	Percent living below poverty	Number living below poverty	Percent living below poverty	Person records	Income	Weights
1(a): U.S. population; estimates based on unadjusted CPS income data [b]								
0–17	72,695,775	12,127,725	16.7	12,127,725	16.7			
18–64	178,387,747	18,859,737	10.6	18,859,737	10.6			
65 or older	34,233,824	3,576,169	10.4	3,576,169	10.4			
Total	285,317,346	34,563,631	12.1	34,563,631	12.1	215,860	Unadjusted	Unadjusted
1(b): U.S. population; estimates based on adjusted CPS income data [c]								
0–17	72,695,775	11,942,960	16.4	9,684,218	13.3			
18–64	178,387,747	18,702,806	10.5	15,030,345	8.4			
65 or older	34,233,824	3,111,542	9.1	3,043,279	8.9			
Total	285,317,346	33,757,308	11.8	27,757,842	9.7	215,860	Adjusted	Unadjusted
1(c): U.S. population with income adjustment, sample restriction, and reweighting [d]								
0–17	72,451,591	11,832,495	16.3	9,453,838	13.0			
18–64	172,660,884	18,192,264	10.5	13,616,602	7.9			
65 or older	33,001,207	2,768,217	8.4	2,677,064	8.1			
Total	278,113,682	32,792,976	11.8	25,747,504	9.3	185,284	Adjusted with sample restriction	Adjusted
2(a): SSI recipient population; estimates based on unadjusted CPS income data [e]								
0–17	364,804	132,151	36.2	132,151	36.2			
18–64	3,595,948	1,577,196	43.9	1,577,196	43.9			
65 or older	1,192,268	572,868	48.0	572,868	48.0			
Total	5,153,020	2,282,215	44.3	2,282,215	44.3	3,635	Unadjusted	Unadjusted
2(b): SSI recipient population; estimates based on adjusted CPS income data [f]								
0–17	830,116	219,764	26.5	181,242	21.8			
18–64	3,809,850	1,609,734	42.3	1,557,189	40.9			
65 or older	1,695,088	688,697	40.6	668,344	39.4			
Total	6,335,054	2,518,195	39.8	2,406,775	38.0	4,381	Adjusted	Unadjusted

Continued

Table 3.
Poverty rates across age and SSI recipient groups before and after adjustment using Social Security administrative data: Total U.S. population and SSI recipient population, 2002—*Continued*

Age group	Estimated population	Restrictive: Number living below poverty [a]	Restrictive: Percent living below poverty	Inclusive: Number living below poverty	Inclusive: Percent living below poverty	Data Summary: Person records	Data Summary: Income	Data Summary: Weights
2(c): SSI recipient population with income adjustment, sample restriction, and reweighting [g]								
0–17	862,176	228,729	26.5	187,873	21.8			
18–64	3,880,146	1,729,553	44.6	1,666,596	43.0			
65 or older	1,956,997	781,043	39.9	754,997	38.6		Adjusted with sample	
Total	6,699,319	2,739,325	40.9	2,609,466	39.0	3,707	restriction	Adjusted

SOURCE: Authors' calculations using 2003 CPS/ASEC public-use data matched to Social Security administrative records.

NOTE: Weight adjustments are based on person-level records differentiated by age group.

a. Persons are identified as "poor" if their CPS total family income record is less than their corresponding CPS family poverty standard record. Family income records may include top-coded components. These totals differ slightly from official reports, which are based on actual reported income without top-coding.

b. Figures have been generated from the entire 2003 CPS/ASEC sample of 215,860 persons used by the Census Bureau to estimate poverty rates.

c. Income adjustments made using administrative data on SSI, OASDI, and earnings receipt, following decision rules as presented in text and Nicholas and Wiseman (2009).

d. Estimates derived from a reduced 2003 CPS/ASEC poverty sample of 185,284 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules discussed in text and presented in detail in Nicholas and Wiseman (2009). Weights have been adjusted by propensity estimates derived from a regression model involving person-level records.

e. Persons identified as SSI recipients if they have a positive CPS SSI record.

f. Income adjustments made using administrative data on SSI, OASDI, and earnings receipt, following decision rules presented in text. SSI status based on adjusted data.

g. Estimates derived from a reduced 2003 CPS/ASEC poverty sample of 185,284 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules presented in text. Weights have been adjusted by propensity estimates derived from a regression model involving person-level records; see text and Nicholas and Wiseman (2009) for methodology; propensity model estimates are available from the authors upon request. Persons are identified as SSI recipients if they have a positive SSR SSI record.

data that only involve income adjustments, and (c) from a *final* sample involving a CPS/administrative matched data set limited to observations with matching SER records as well as CPS income- and weight-adjusted records. Within each estimate group, we present results for children aged 17 or younger, adults aged 18–64, and for those aged 65 or older.

Tabulations in panels 1(a) and 2(a), in Table 3, are based on the same CPS data used by the Census Bureau to generate official poverty estimates. (Our estimates differ slightly from figures published by the Census Bureau because it uses data without top-codes, and we use the public-use sample, which is top-coded.) The official estimates appear for reference for both the restrictive and inclusive computations. We are particularly interested in poverty rates among the elderly and SSI recipients. National poverty rates for working-age and elderly populations in 2002 were 10.6 percent and 10.4 percent, respectively. As anticipated, poverty rates for SSI recipients in all age groups are much higher than rates estimated for the age groups in the U.S. population as a whole.

Tabulations in panels 1(b) and 2(b) report the results of applying our restrictive and inclusive income-adjustment protocols. At this stage of our research, the entire CPS sample is retained, and CPS data are used for all persons for whom a CPS/SER match was not achieved, so the total sample size does not change from that recorded for the CPS. Looking first at the data for all persons, the effect of incorporating administrative data is sensitive to the assumption set. The restrictive income adjustment decreases the estimated aggregate poverty rate from 12.1 percent to 11.8 percent; the estimated rates for all three age groups decline, with the greatest change for the elderly. The inclusive income adjustment produces a much larger reduction

in poverty rates for all groups, most notably among the nonelderly. Both adjustments produce lower SSI poverty rates. The effect is most dramatic for persons aged 17 or younger. Under the restrictive income estimate procedure, the poverty rate for elderly SSI recipients is 40.6 percent, more than 7 percentage-points less than the unadjusted CPS estimate. Using our inclusive income-adjustment procedure, the estimate is 39.4 percent, 8.6 percentage-points less than the unadjusted CPS estimate. The unweighted SSI recipient count (the number in the "person records" column under the data summary section of the table) goes up by over a fifth, from 3,635 to 4,381 when administrative data are employed. This outcome is another manifestation of underreporting of SSI in the CPS.

Tabulations in panels 1(c) and 2(c) report the results of applying CPS income adjustments, reweighting the observations' CPS person weights using propensity scores, and restricting the sample to persons living in families with at least one member with matching individual CPS and SER records. The combined effect of our CPS income and weight adjustments (panel 1(c)) is a modest additional decrease in estimated aggregate poverty rates under the restricted convention when compared with estimates based only on adjusting the CPS income data for respondents who could be matched to SSA records. When the inclusive adjustment is employed, estimated poverty rates fall further. The effect varies among SSI recipients; child and nonelderly adult SSI poverty estimates are greater, and elderly rates are less than those estimated without sample restriction and reweighting (Table 3, panels 1(b) and 2(b)).

What drives the difference between the final restrictive and inclusive income estimates? Our previous article indicates that the most sizable difference between our two sets of *final* estimates is that for earnings and self-employment income, the restricted calculations rely on the DER, that is, earnings reported by employers. The inclusive alternative takes CPS reports when the amounts reported in the survey exceed what appears in matching administrative records. Therefore, inclusive income estimates are larger than those that are restrictive. For the elderly, earnings are less important (although they count because poverty is estimated on the basis of total family income, not just the income of the elderly themselves), but correcting for SSI underreporting has a noticeable impact. Aside from imputations for state-administered SSI supplements, the same correction is applied in both the restrictive and inclusive procedures, and the consequence in both cases is an 8–9 percentage-point reduction in estimated poverty, particularly among elderly SSI recipients. This alteration comes about principally because of the effect on prevalence of SSI receipt, not amounts reported.

Changes in Poverty, 2002–2005

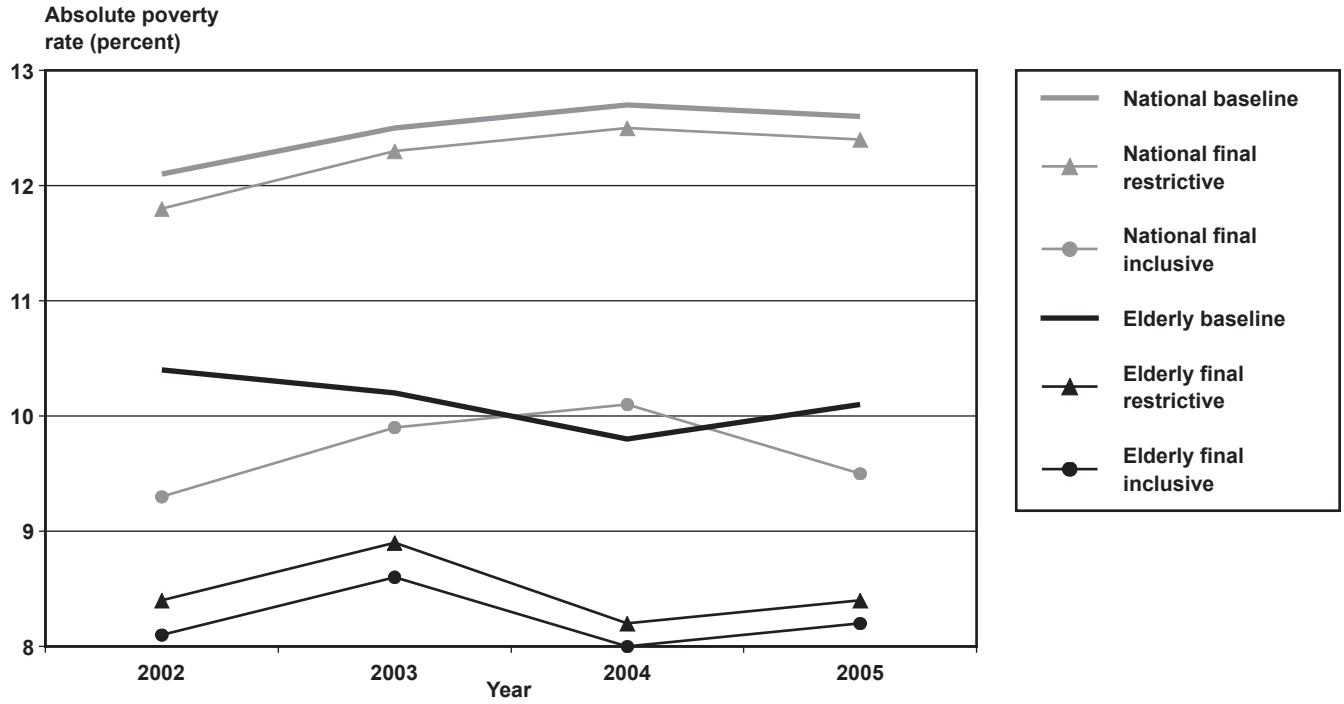
CPS adjustment with administrative data produces poverty estimates for 2002–2005 that differ from official ones generated from unadjusted CPS data. Charts 1 and 2 focus on the differences between unadjusted CPS *baseline* estimates (reported in panels 1(a) and 2(a) of Table 3) and our final restrictive and inclusive estimates based on adjusted CPS/administrative matched data (reported in panels 1(c) and 2(c) of Table 3). (A complete version of Table 3 is presented for each reference year in Table A-1.)

Chart 1 illustrates absolute poverty rates estimated for the entire national and elderly populations. The basic relationships between *baseline* and *final* estimates change marginally in later years. For the U.S. population as a whole, poverty estimates based on our restrictive final data are slightly below those generated from unadjusted CPS data, and estimates based on CPS inclusive final data are lower. The noted restrictive and inclusive income adjustments produce the same outcomes for the elderly from one reference year to another by reducing their absolute poverty estimates by approximately 1–2 percentage points.

Chart 2 plots *baseline* and *final* estimates for elderly SSI recipients. This chart is based on poverty estimates appearing in panels 2(a) and 2(c) of Table 3. For 2002, the chart shows that incorporating CPS elements with administrative data produces a sizable reduction in estimated poverty rates for elderly SSI recipients. In contrast, for 2003–2005, adjusted estimates for the elderly are greater, regardless of the income adjustment applied.

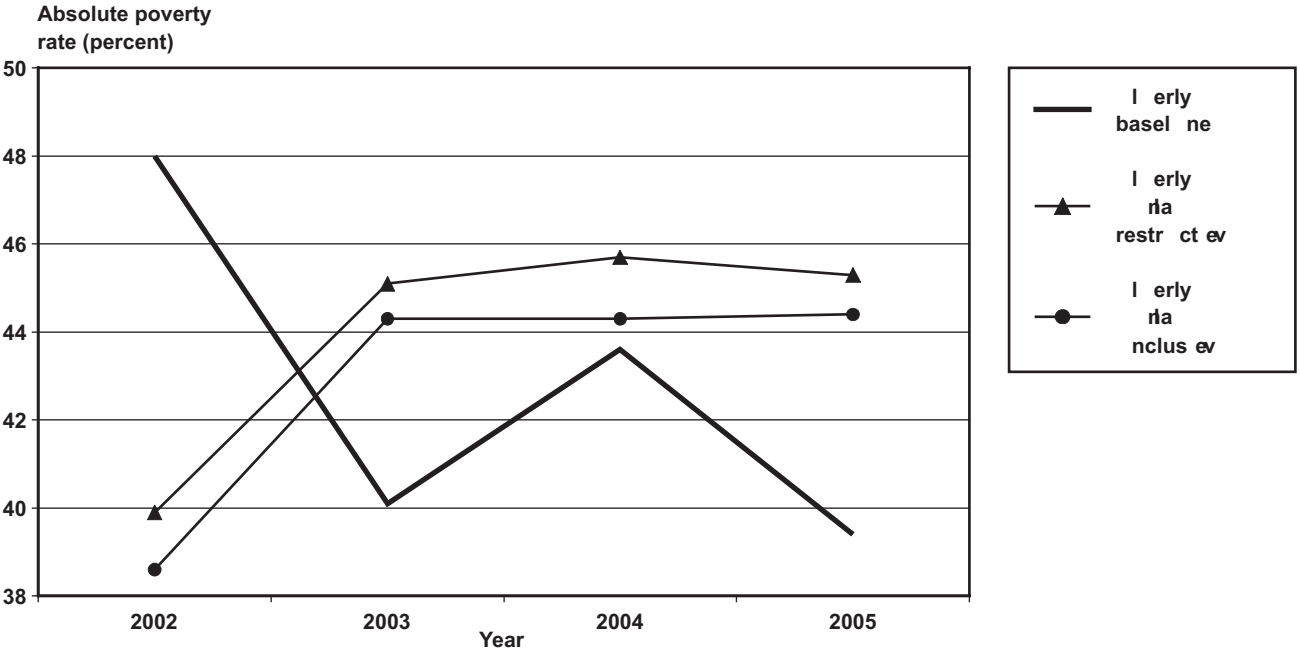
The relationship between our baseline and final poverty estimates for elderly SSI recipients differs substantially from the corresponding national estimates. For both the total U.S. population and all elderly persons, our restrictive and inclusive final estimates of the poverty rate for the 2002–2005 period are consistently below the baseline official estimates. For elderly SSI recipients, however, this is true for 2002 (as reported in our previous article), but not for the 2003–2005 period.

Chart 1.
Poverty rates for the entire national and elderly populations before and after inclusion of administrative data, 2002–2005



SOURCE: Authors' calculations using the CPS/ASEC public-use data set matched to Social Security administrative records.

Chart 2.
Poverty rates for elderly SSI recipients before and after inclusion of administrative data, 2002–2005



SOURCE: Authors' calculations using the CPS/ASEC public-use data set merged with Social Security administrative records.

What is going on in Chart 2 is unclear, but it is possible to say more about what is driving the change between the outcome for 2002 and for subsequent years. Recall that in moving from baseline to final estimates in each year, the sample base changes. The baseline includes only observations for people who report SSI receipt in the CPS. The sample base for the final estimates includes only observations for people in families matched to Social Security administrative records (using our match criteria) for the year. Persons who report SSI receipt and for whom matches to the SSR SSI records are found are included in both the baseline and final samples. The baseline poverty rates for this group are quite high, ranging from 44–50 percent over the 4 sample years. The final rates are only slightly changed with adjustment of family earnings, family income from other sources including SSI, and reweighting. Poverty rates adjusted for actual SSI receipt among persons who did not report SSI receipt in the 2002 CPS, but in fact were SSI recipients, were substantially lower than rates for those who reported SSI receipt, but for whom no administrative match was obtained. For the final poverty estimates, persons not meeting our CPS/SER match criteria were deleted from the sample of elderly SSI recipients, and persons known from administrative records to be recipients but who did not report so in the CPS were added and counted as SSI recipients. The observations in the resulting subsample were reweighted to reflect the sample adjustments. The result is a lower overall poverty rate than what is obtained from the baseline sample (Chart 2).

For subsequent years, things change. Persons who did not report SSI receipt to the CPS but in fact were SSI recipients have poverty rates higher than estimated for persons in this category in 2002. In 2003 and 2004, these higher rates are similar to those for the persons reporting SSI, but for whom no administrative confirmation is available. The effects of adjustment on the family income of those who did report receiving SSI are larger and result in substantial reduction in average estimated family income. The combination of changes causes the final samples to have a higher overall poverty rate that exceeds the baseline estimates. Because of the procedural change for collection of SSNs, discussed earlier, the match rate for the 2005 data is much higher, and the proportion of the elderly persons reporting SSI receipt that is verified with administrative data increases. Nevertheless, the final poverty estimates are similar to those for 2003 and 2004. In sum, to our knowledge the difference between the 2002 and 2003–2005 samples cannot be related to some change in the way the CPS collects SSI data or other administrative factors, so the outcome remains an anomaly.

SSI Population Estimates

CPS income and weight adjustments substantially increase the sample-based estimates of the total population of SSI recipients. Estimates of the total SSI recipient population by age group for the original and modified CPS samples for each year are given in Table 4. The first bank in column (1) specifies the sum of sample weights for persons for whom the unadjusted 2003 CPS/ASEC reports receipt of SSI in 2002. The second column indicates *intermediate* estimates generated from the same CPS sample used for official poverty estimates, but matched to administrative sources and involving adjustment to only CPS income records. The third column gives our final estimates of the number of recipients calculated on the basis of our restricted CPS/administrative-matched sample with CPS income and weight adjustments. Column (4) shows the average monthly SSI caseload for 2002, indicated by SSA's 1 percent SSR sample. Column (5) gives, from the same 1 percent SSR sample, an estimate of the number of persons in the CPS sample *universe* who had income from SSI in 2002.

Relative Poverty

We turn now from absolute to relative poverty assessment. Reliance on absolute poverty measures, especially measures as old as the official U.S. standard, is controversial. In our previous article, we considered the consequences of evaluating poverty on a relative basis, using the common Organisation for Economic Co-operation and Development standard of 50 percent of median income before taxes (Förster and Mira d'Ercole 2005). We convert family income into "individual equivalents" using an equivalence scale suggested by a recent National Research Council (NRC) review of recommendations for poverty standard reform.[6] Because of data limitations, we conduct this analysis using the same "pretax, posttransfer" income measure as that employed in official statistics. Ideally we would include income benefits such as food stamps, earned income credit, and housing subsidies, but we could not do so. This issue is discussed further in our conclusions.

The Income Distribution in 2002

Again, we use 2002 and our previous analysis as an anchor. The results appear in the two parts of Table 5:

Table 4.
Estimated SSI population compared with Social Security administrative data count (including Medicaid institution adjustment), 2002–2005

Age group (at time of CPS/ASEC)	Total SSI recipients estimated from— CPS/ASEC (1)	CPS/ASEC using adjusted income data (2)	CPS/ASEC using restricted/ reweighted sample and adjusted income data (3)	Average monthly recipient caseload from administrative data (4)	Total SSI recipients in CPS/ASEC universe estimated from administrative data [a] (5)	Ratio, CPS/ASEC unadjusted reweighted sample population estimate to administrative recipient count (6)	Ratio, CPS/ASEC restricted/ reweighted sample population estimate to administrative recipient count (7)
				2002			
0–17	364,804	830,116	862,176	897,771	1,024,500	0.356	0.842
18–64	3,595,948	3,809,850	3,880,146	3,862,587	4,308,000	0.835	0.901
65 or older	1,192,268	1,695,088	1,956,997	1,998,249	2,064,200	0.578	0.948
Total	5,153,020	6,335,054	6,699,319	6,758,608	7,396,700	0.697	0.906
				2003			
0–17	364,478	866,916	902,579	936,516	1,051,400	0.347	0.858
18–64	3,783,005	3,903,433	4,132,750	3,932,819	4,379,600	0.864	0.944
65 or older	1,225,478	1,690,810	1,994,570	1,996,932	2,070,500	0.592	0.963
Total	5,372,961	6,461,159	7,029,899	6,866,267	7,501,500	0.716	0.937
				2004			
0–17	408,915	901,805	957,402	981,877	1,098,500	0.372	0.872
18–64	4,036,944	4,136,748	4,158,826	4,007,361	4,443,700	0.908	0.936
65 or older	1,117,640	1,620,585	1,832,597	1,993,369	2,058,900	0.543	0.890
Total	5,563,499	6,659,138	6,948,825	6,982,606	7,601,100	0.732	0.914
				2005			
0–17	379,909	951,558	997,049	1,027,372	1,120,200	0.339	0.890
18–64	3,900,117	4,115,297	4,493,624	4,069,369	4,506,400	0.865	0.997
65 or older	1,176,402	1,825,269	1,878,685	1,992,673	2,047,500	0.575	0.918
Total	5,456,428	6,892,124	7,369,358	7,089,414	7,674,100	0.711	0.960

SOURCE: Authors' calculations using the noted year CPS/ASEC universe and Social Security 1 percent SSR beneficiary samples. SSI population in 2002 estimated using 2003 CPS/ASEC universe matched to Social Security administrative records; 2003 population estimated using 2004 survey data matched to administrative records; 2004 population estimated using 2005 survey data matched to administrative records; and 2005 population estimated using 2006 survey data matched to administrative records.

a. Estimated number of persons ever receiving SSI in a given year who were alive and in indicated age group at the time of the CPS March Supplement interview of the following year. This estimate is reduced by the approximate number of persons who live in communal facilities, but includes homeless persons not counted in the CPS/ASEC.

part 1—based on the restrictive adjustment protocol, and part 2—based on the inclusive alternative. Both parts of the table show results for unadjusted CPS data, the sample that combines adjusted data for matched households with CPS data alone for the unmatched, and a third sample of matched CPS data reweighted to adjust for nonresponse. Looking first at part 1, the table identifies the points of demarcation for various deciles of the income distribution for each of the three samples and then the proportion of all observations that fall within the corresponding interval (to save space, deciles 30 and 40 and deciles 70 and 80 are combined). By definition, for each sample, 10 percent of all people fall within each decile. What is of interest here is the location of the median, the corresponding poverty standard, and the proportion of the elderly and elderly SSI recipients who fall below this standard. The median is quite similar across the

Table 5.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjusted protocols, 2002

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Part 1: Restrictive 2002—												
(a) using unadjusted income percentiles for all people [a]												
Upper bound ($)	7,462	12,000	20,862	25,712	31,350	47,696	64,793	. . .	12,856	215,860		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.0	215,860		
Elderly [b]	7.8	16.1	29.1	11.9	9.2	13.3	6.0	6.7	27.5	20,384		
Elderly SSI [c]	32.9	39.0	14.8	5.0	3.6	2.9	1.0	0.8	75.1	778	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [d]												
Upper bound ($)	7,579	12,134	20,856	25,662	31,284	48,302	66,451	. . .	12,831	215,860		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.7	215,860		
Elderly	7.2	15.2	29.1	12.2	9.7	14.1	6.1	6.4	25.2	20,384		
Elderly SSI [e]	35.4	33.4	12.4	5.6	5.0	5.7	1.2	1.4	70.0	1,081	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [f]												
Upper bound ($)	7,624	12,109	20,726	25,527	31,086	47,903	66,343	. . .	12,764	185,284		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.6	185,284	Adjusted with sample restriction	
Elderly [b]	6.8	14.9	28.5	12.2	10.0	14.9	6.4	6.4	24.0	14,564		
Elderly SSI [g]	35.2	34.2	11.5	5.8	4.8	5.7	1.4	1.5	70.7	906		Adjusted

Continued

Table 5.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjusted protocols, 2002—*Continued*

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Part 2: Inclusive 2002—												
(a) using unadjusted income percentiles for all people [a]												
Upper bound ($)	7,462	12,000	20,862	25,712	31,350	47,696	64,793	. . .	12,856	215,860		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.0	215,860		
Elderly [b]	7.8	16.1	29.1	11.9	9.2	13.3	6.0	6.7	27.5	20,384		
Elderly SSI [c]	32.9	39.0	14.8	5.0	3.6	2.9	1.0	0.8	75.1	778	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [d]												
Upper bound ($)	8,708	13,585	23,095	28,325	34,441	52,321	72,435	. . .	14,163	215,860		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.3	215,860		
Elderly	10.1	17.6	28.7	10.8	8.5	12.7	5.8	5.8	29.6	20,384		
Elderly SSI [e]	42.3	27.4	13.2	4.2	5.1	5.1	1.4	1.4	70.7	1,081	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [f]												
Upper bound ($)	9,000	13,896	23,444	28,718	34,843	52,919	73,743	. . .	14,359	185,284		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.0	185,284	Adjusted with sample restriction	
Elderly [b]	10.0	17.3	28.3	10.7	8.6	13.2	5.9	5.9	29.0	14,564		
Elderly SSI [g]	46.7	23.9	12.4	3.7	5.2	5.3	1.5	1.4	71.7	906		Adjusted

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to Social Security administrative records and the NRC equivalence scale.

NOTE: . . . = data not applicable.

a. Figures involve unadjusted CPS income data and weights as well as the entire 2003 CPS/ASEC poverty sample of 215,860 persons.

b. Persons with a CPS-reported age of 65 or older.

c. Persons with a positive CPS SSI record.

d. Estimates are based on adjusted CPS income records, unadjusted weights, and involve the entire 2003 CPS/ASEC poverty sample.

e. Persons are identified as SSI recipients if either they have no matching CPS/SER records and a positive CPS SSI record or matching CPS/SER records and a positive SSR SSI record.

f. Figures involve adjusted CPS income data and weights and a reduced 2003 CPS/ASEC poverty sample.

g. Persons are identified as SSI recipients if they have a positive SSR SSI record.

three samples, causing the relative poverty standard to vary by less than $100. For the estimates in panel (c) the standard is $12,764. This is the amount for a single individual; the NRC equivalence scale says that for a family of two adults and two children, this should be increased by a factor of $(2 + .5 * 2)^{0.7} = 2.16$, that is, to $27,540. As noted in our earlier article, the relative poverty standard assesses a larger proportion of the population to be in poverty (22 percent versus the 12.1 percent reported in Table 3). In contrast to the results for absolute poverty rates, the poverty rate for the elderly now exceeds that for the population as a whole, and the poverty rate for elderly SSI recipients rises to 70.7 percent for the adjusted and reweighted sample.

The same calculations using the inclusive version of the data set are shown in part 2 of Table 5. The inclusive income estimates increase estimated median income and thereby increase the poverty standard. However, the estimated poverty rates do not change much at all. We do find that a larger fraction of elderly SSI recipients are estimated to fall in the lowest decile of the income distribution. On the other side of the distribution, between 8.2 percent (inclusive) and 8.6 percent (restrictive) of elderly SSI recipients live in families with total incomes that place their members in the upper 20 percent of the income distribution.

Changes in the Income Distribution, 2002–2005

Both parts of Table 5 are replicated for 2003–2005 in Table A-2. Our text discussion is based on an extract of that data and focuses on comparison of baseline estimates with the *final* estimates developed with the restricted/reweighted data set and the restrictive and inclusive income-adjustment protocols. We begin with changes in median income over time and the resulting changes in the poverty standard. The standard for all 4 years of our data set is reported in Table 6. To facilitate comparison, we have adjusted the data to 2002 prices using the Consumer Price Index.

Income distributions change slowly, so we do not expect much change over a 4-year interval. By and large, the restrictive income-adjustment procedure produces a relative poverty standard slightly lower than what is computed using the baseline, unadjusted data; the inclusive measure moves the estimated income distribution to the right and raises the standard. Perhaps the most interesting feature is the general decline in the relative standard from 2002–2004, followed by an increase in 2005. Recall that the federal SSI payment for a single individual is indexed for price changes. Annualized, the 2002 monthly individual FBR amounted to $6,540 per year, or nearly 45 percent of the 2002 "final inclusive" relative standard ($14,350).

Medians capture only one feature of the income distribution. Dispersion is relevant as well, especially in the context of relative poverty assessment. Table 7 reports the 90/10 and 80/20 decile cutoff ratios for the total population for each of the 4 years under study. The 90/10 ratio is equal to the ratio of the demarcation point for the 90th decile in the income distribution to the demarcation for the 10th decile. The 80/20 ratio is defined in a similar manner, but obviously does not reach as far out on the tails of the distribution.

Four things stand out in these results.

1. Adjustment with administrative data generally reduces estimated dispersion of the income distribution.
2. Estimates based solely on the inclusive income-adjustment protocol generally produce the lowest dispersion.
3. Dispersion as measured by the 90/10 ratio grew over this period, regardless of the income-adjustment protocol followed.

Table 6.
Relative poverty standard values, by estimate group, 2002–2005 (in 2002 dollars)

Estimate group	2002	2003	2004	2005
Baseline	12,856	12,844	12,766	12,852
Final restrictive	12,764	12,669	12,604	12,852
Final inclusive	14,359	14,104	14,051	14,702

SOURCE: Authors' calculations using CPS/ASEC public-use data matched to Social Security administrative records.

4. Most changes in the distribution of income occur among those belonging to the bottom and top quintiles of the national income distribution. The estimated change in the 90/10 ratio is larger than the estimated change in the 80/20 ratio.

Finally, relative poverty rates for each of the 4 years under study for all persons—the elderly and the subset of the elderly who are SSI recipients—are given in Table 8. Basically, no trends are evident in the general income distribution. The baseline shows some decline for the elderly and for elderly SSI recipients. This is consistent with trends in the official poverty rate shown in Chart 2. However, the adjusted data show little change. As with the data for the official poverty rate, results after adjustment using administrative data provide little evidence of improvement in the prevalence of poverty among elderly SSI recipients using either poverty standard.

Conclusions

In this article, we have applied the experimental procedures developed in our earlier study of the incomes of elderly SSI recipients in 2002 as well as 3 subsequent years of data. In general, the results for 2003–2005 are consistent with 2002. Even given the incomplete match between CPS and administrative records, we have produced an adjusted data set that yields estimates of the prevalence of SSI receipt that are much closer to administrative totals than can be achieved using the standard CPS data set. Unlike what might be inferred from unadjusted CPS data, we see no evidence of significant decline in poverty rates

Table 7.
Comparison of national income dispersion ratios, by estimate group, 2002–2005

Estimate group	2002	2003	2004	2005
		National 90/10 ratios		
Baseline	8.63	9.11	9.16	9.22
Final restrictive	8.70	8.72	8.93	9.28
Final inclusive	8.19	8.44	8.51	8.63
		National 80/20 ratios		
Baseline	3.97	4.09	4.02	4.01
Final restrictive	3.96	3.96	4.01	4.09
Final inclusive	3.81	3.86	3.88	3.88

SOURCE: Authors' calculations using CPS/ASEC public-use data matched to Social Security administrative records.

Table 8.
Relative poverty rates, by estimate group, 2002–2005 (in percent)

Estimate group	2002	2003	2004	2005
		U.S. population		
Baseline	22.0	22.4	22.2	22.2
Final restrictive	21.6	21.8	21.9	22.1
Final inclusive	21.0	21.4	21.4	21.3
		Elderly population		
Baseline	27.5	27.7	26.4	26.1
Final restrictive	24.0	23.6	21.9	23.2
Final inclusive	29.0	28.2	26.7	28.8
		Elderly SSI recipient population		
Baseline	75.1	73.3	67.3	71.5
Final restrictive	70.7	73.9	69.8	71.3
Final inclusive	71.7	74.7	70.8	72.2

SOURCE: Authors' calculations using CPS/ASEC public-use data set matched to Social Security administrative records.

among the elderly or among elderly SSI recipients over this interval.

Several features of this analysis deserve more attention. The difference between our restrictive and inclusive estimates is quite broad generally because of reliance on administrative data alone for the restrictive estimates. For a significant number of persons with an SER match, earnings reported in the CPS are substantially greater than what is recorded in the DER. On balance, the reduction in incorporated earnings for this group under the restrictive protocol almost offsets the addition to income made for those without CPS earnings, but with a DER report. Clearly more thought needs to be given to alternatives for using administrative data, and the sensitivity of the outcomes to procedural variation deserves more thorough investigation. Beyond sensitivity to definition, some investigation of confidence intervals for the many point estimates we have tabulated is essential.

There are noticeable differences between results for 2004 and 2005. The 2005 data are the first collected following the procedural change in obtaining CPS respondent consent for data matching. It is possible that the observed changes are the product of differences between those persons who prior to 2005 would not have been matched and those who would have been captured in the sample had procedures gone unchanged. Of course it is impossible to identify just who would and who would not have consented under the Census Bureau's *opt-in* interviewer policy. But it would be possible to use the match propensity models estimated for prior years to identify those observations in 2005 that would have been least likely in previous years to have been matched to Social Security administrative data and to use propensity scores to reduce the 2005 sample to a rate consistent with earlier years. The analysis could then be replicated with an eye toward consequences for income distribution estimates obtained using the procedural change adopted with the 2006 CPS/ASEC.

Recently, various groups have shown renewed interest in the recommendations of the NRC for reform of the poverty standard. In March, the Census Bureau announced plans for a "supplemental poverty measure" (SPM) "broadly based" on the NRC recommendations, to be first published in the fall of 2011 (Census Bureau 2010). As the name suggests, at least initially, the new measure will not replace the current poverty standard, but rather provide a broader perspective on both the resources and needs of families and individuals. The Census Bureau's Web site now includes an ingenious table generator for experimenting with alternative equivalence scales and poverty standards, including relative measures based on position in the income distribution. However, aside from differences in top- and bottom-coding, the generator, like the Census Bureau's other experimental analyses, relies on reported amounts of income from sources such as SSI, OASDI, and Temporary Assistance for Needy Families (TANF). A major part of the reform agenda and the modifications incorporated in the SPM involves addition to measures of income from sources such as Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) benefits and payments from the Earned Income Tax Credit, which are not now included. Underreporting will need to be addressed as well, possibly through more systematic incorporation of administrative data. Our experience suggests that incorporating administrative data is important, but not easy.

Table A-1.
Poverty rates across age and SSI recipient groups before and after adjustment using Social Security administrative data: Total U.S. population and SSI recipient population, 2003–2005

Age group	Estimated population	Restrictive: Number living below poverty [a]	Restrictive: Percent living below poverty	Inclusive: Number living below poverty	Inclusive: Percent living below poverty	Data summary: Person records	Data summary: Income	Data summary: Weights
				2003				
				1(a): U.S. population; estimates based on unadjusted CPS income data [b]				
0–17	72,999,159	12,862,482	17.6	12,862,482	17.6			
18–64	180,040,766	19,438,817	10.8	19,438,817	10.8			
65 or older	34,659,258	3,552,224	10.2	3,552,224	10.2			
Total	287,699,183	35,853,523	12.5	35,853,523	12.5	212,717	Unadjusted	Unadjusted
				1(b): U.S. population; estimates based on adjusted CPS income data [c]				
0–17	72,999,159	12,458,869	17.1	10,572,783	14.5			
18–64	180,040,766	19,390,106	10.8	16,021,505	8.9			
65 or older	34,659,258	3,281,911	9.5	3,217,534	9.3			
Total	287,699,183	35,130,886	12.2	29,811,822	10.4	212,717	Adjusted	Unadjusted
				1(c): U.S. population with income adjustment, sample restriction, and reweighting [d]				
0–17	72,571,990	12,343,900	17.0	10,341,176	14.2			
18–64	174,596,837	19,083,414	10.9	14,583,316	8.4			
65 or older	33,410,983	2,970,712	8.9	2,877,647	8.6		Adjusted with sample restriction	
Total	280,579,810	34,398,026	12.3	27,802,139	9.9	176,378		Adjusted
				2(a): SSI recipient population; estimates based on unadjusted CPS income data [e]				
0–17	364,478	130,015	35.7	130,015	35.7			
18–64	3,783,005	1,641,514	43.4	1,641,514	43.4			
65 or older	1,225,478	491,079	40.1	491,079	40.1			
Total	5,372,961	2,262,608	42.1	2,262,608	42.1	3,689	Unadjusted	Unadjusted
				2(b): SSI recipient population; estimates based on adjusted CPS income data [f]				
0–17	866,916	232,028	26.8	214,996	24.8			
18–64	3,903,433	1,670,517	42.8	1,621,520	41.5			
65 or older	1,690,810	697,426	41.2	687,139	40.6			
Total	6,461,159	2,599,971	40.2	2,523,655	39.1	4,422	Adjusted	Unadjusted
				2(c): SSI recipient population with income adjustment, sample restriction, and reweighting [g]				
0–17	902,579	242,513	26.9	224,514	24.9			
18–64	4,132,750	1,847,519	44.7	1,786,457	43.2			
65 or older	1,994,570	898,805	45.1	883,584	44.3		Adjusted with sample restriction	
Total	7,029,899	2,988,837	42.5	2,894,555	41.2	3,641		Adjusted

Continued

Table A-1.
Poverty rates across age and SSI recipient groups before and after adjustment using Social Security administrative data: Total U.S. population and SSI recipient population, 2003–2005—*Continued*

Age group	Estimated population	Restrictive: Number living below poverty [a]	Restrictive: Percent living below poverty	Inclusive: Number living below poverty	Inclusive: Percent living below poverty	Data summary: Person records	Data summary: Income	Data summary: Weights
				2004				
				1(a): U.S. population; estimates based on unadjusted CPS income data [h]				
0–17	73,241,407	13,032,729	17.8	13,032,729	17.8			
18–64	182,165,671	20,542,896	11.3	20,542,896	11.3			
65 or older	35,209,459	3,453,014	9.8	3,453,014	9.8			
Total	290,616,537	37,028,639	12.7	37,028,639	12.7	210,152	Unadjusted	Unadjusted
				1(b): U.S. population; estimates based on adjusted CPS income data [c]				
0–17	73,241,407	12,841,996	17.5	10,831,290	14.8			
18–64	182,165,671	20,389,278	11.2	17,005,469	9.3			
65 or older	35,209,459	3,153,166	9.0	3,089,437	8.8			
Total	290,616,537	36,384,440	12.5	30,926,196	10.6	210,152	Adjusted	Unadjusted
				1(c): U.S. population with income adjustment, sample restriction, and reweighting [i]				
0–17	72,780,925	12,673,526	17.4	10,516,356	14.4			
18–64	174,149,526	19,695,068	11.3	15,120,123	8.7			
65 or older	34,341,153	2,822,185	8.2	2,731,627	8.0			
Total	281,271,604	35,190,779	12.5	28,368,106	10.1	171,025	Adjusted with sample restriction	Adjusted
				2(a): SSI recipient population; estimates based on unadjusted CPS income data [e]				
0–17	408,915	137,954	33.7	137,954	33.7			
18–64	4,036,944	1,636,391	40.5	1,636,391	40.5			
65 or older	1,117,640	487,229	43.6	487,229	43.6			
Total	5,563,499	2,261,574	40.7	2,261,574	40.7	3,654	Unadjusted	Unadjusted
				2(b): SSI recipient population; estimates based on adjusted CPS income data [f]				
0–17	901,805	288,788	32.0	264,954	29.4			
18–64	4,136,748	1,704,145	41.2	1,642,760	39.7			
65 or older	1,620,585	704,398	43.5	685,532	42.3			
Total	6,659,138	2,697,331	40.5	2,593,246	38.9	4,371	Adjusted	Unadjusted
				2(c): SSI recipient population with income adjustment, sample restriction, and reweighting [j]				
0–17	957,402	316,299	33.0	290,332	30.3			
18–64	4,158,826	1,831,598	44.0	1,750,954	42.1			
65 or older	1,832,597	837,655	45.7	811,304	44.3			
Total	6,948,825	2,985,552	43.0	2,852,590	41.1	3,542	Adjusted with sample restriction	Adjusted

Continued

Table A-1.
Poverty rates across age and SSI recipient groups before and after adjustment using Social Security administrative data: Total U.S. population and SSI recipient population, 2003–2005—*Continued*

Age group	Estimated population	Restrictive: Number living below poverty [a]	Restrictive: Percent living below poverty	Inclusive: Number living below poverty	Inclusive: Percent living below poverty	Data summary: Person records	Data summary: Income	Data summary: Weights
				2005				
				1(a): U.S. population; estimates based on unadjusted CPS income data [k]				
0–17	73,285,108	12,876,738	17.6	12,876,738	17.6			
18–64	184,344,650	20,445,497	11.1	20,445,497	11.1			
65 or older	35,504,791	3,603,363	10.1	3,603,363	10.1			
Total	293,134,549	36,925,598	12.6	36,925,598	12.6	207,987	Unadjusted	Unadjusted
				1(b): U.S. population; estimates based on adjusted CPS income data [c]				
0–17	73,285,108	12,991,585	17.7	10,181,026	13.9			
18–64	184,344,650	20,435,725	11.1	15,549,429	8.4			
65 or older	35,504,791	3,087,589	8.7	3,000,478	8.5			
Total	293,134,549	36,514,899	12.5	28,730,933	9.8	207,987	Adjusted	Unadjusted
				1(c): U.S. population with income adjustment, sample restriction, and reweighting [l]				
0–17	73,122,462	12,906,491	17.7	9,962,323	13.6			
18–64	187,594,219	20,881,714	11.1	15,301,606	8.2			
65 or older	35,489,782	2,986,274	8.4	2,894,087	8.2		Adjusted with sample restriction	
Total	296,206,463	36,774,479	12.4	28,158,016	9.5	195,241		Adjusted
				2(a): SSI recipient population; estimates based on unadjusted CPS income data [e]				
0–17	379,909	163,268	43.0	163,268	43.0			
18–64	3,900,117	1,663,514	42.7	1,663,514	42.7			
65 or older	1,176,402	463,754	39.4	463,754	39.4			
Total	5,456,428	2,290,536	42.0	2,290,536	42.0	3,578	Unadjusted	Unadjusted
				2(b): SSI recipient population; estimates based on adjusted CPS income data [f]				
0–17	951,558	306,242	32.2	272,135	28.6			
18–64	4,115,297	1,776,404	43.2	1,715,613	41.7			
65 or older	1,825,269	804,188	44.1	789,392	43.2			
Total	6,892,124	2,886,834	41.9	2,777,140	40.3	4,513	Adjusted	Unadjusted
				2(c): SSI recipient population with income adjustment, sample restriction, and reweighting [m]				
0–17	997,049	326,283	32.7	290,511	29.1			
18–64	4,493,624	2,028,375	45.1	1,959,127	43.6			
65 or older	1,878,685	850,640	45.3	835,042	44.4		Adjusted with sample restriction	
Total	7,369,358	3,205,298	43.5	3,084,680	41.9	4,298		Adjusted

Continued

Table A-1.
Poverty rates across age and SSI recipient groups before and after adjustment using administrative data: Total U.S. population and SSI recipient population, 2003–2005—*Continued*

SOURCE: For the 2003 panel of the table, authors' calculations using 2004 CPS/ASEC public-use data matched to Social Security administrative records; for 2004, authors' calculations using 2005 survey data matched to administrative records; and for 2005, authors' calculations using 2006 survey data matched to administrative records.

NOTE: Weight adjustments are based on person-level records differentiated by age group.

a. Persons are identified as "poor" if their CPS total family income record is less than their corresponding CPS family poverty standard record. Family income records may include top-coded components. These totals differ slightly from official reports, which are based on actual reported income without top-coding.

b. Figures have been generated from the entire 2004 CPS/ASEC sample of 212,717 persons used by the Census Bureau to estimate poverty rates.

c. Income adjustments made using administrative data on SSI, OASDI, and earnings receipt, following decision rules as presented in text and Nicholas and Wiseman (2009).

d. Estimates derived from a reduced 2004 CPS/ASEC poverty sample of 176,378 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules discussed in text and presented in detail in Nicholas and Wiseman (2009). Weights have been adjusted by propensity estimates derived from a regression model involving person-level records.

e. Persons identified as SSI recipients if they have a positive CPS SSI record.

f. Income adjustments made using administrative data on SSI, OASDI, and earnings receipt, following decision rules presented in text. SSI status based on adjusted data.

g. Estimates derived from a reduced 2004 CPS/ASEC poverty sample of 176,378 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules presented in text. Weights have been adjusted by propensity estimates derived from a regression model involving person-level records; see text and Nicholas and Wiseman (2009) for methodology; propensity model estimates are available from the authors upon request. Persons are identified as SSI beneficiaries if they have a positive SSR SSI record.

h. Figures have been generated from the entire 2005 CPS/ASEC sample of 210,152 persons used by the Census Bureau to estimate poverty rates.

i. Estimates derived from a reduced 2005 CPS/ASEC poverty sample of 171,025 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules discussed in text and presented in detail in Nicholas and Wiseman (2009). Weights have been adjusted by propensity estimates derived from a regression model involving person-level records.

j. Estimates derived from a reduced 2005 CPS/ASEC poverty sample of 171,025 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules presented in text. Weights have been adjusted by propensity estimates derived from a regression model involving person-level records; see text and Nicholas and Wiseman (2009) for methodology; propensity model estimates are available from the authors upon request. Persons are identified as SSI beneficiaries if they have a positive SSR SSI record.

k. Figures have been generated from the entire 2006 CPS/ASEC sample of 207,987 persons used by the Census Bureau to estimate poverty rates.

l. Estimates derived from a reduced 2006 CPS/ASEC poverty sample of 195,241 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules discussed in text and presented in detail in Nicholas and Wiseman (2009). Weights have been adjusted by propensity estimates derived from a regression model involving person-level records.

m. Estimates derived from a reduced 2006 CPS/ASEC poverty sample of 195,241 persons who have at least one family member with matching CPS/SER records. Figures are based on the adjustment of CPS income records using administrative data following decision rules presented in text. Weights have been adjusted by propensity estimates derived from a regression model involving person-level records; see text and Nicholas and Wiseman (2009) for methodology; propensity model estimates are available from the authors upon request. Persons are identified as SSI beneficiaries if they have a positive SSR SSI record.

Table A-2.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjustment protocols, 2003–2005

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Restrictive 2003—												
(a) using unadjusted income percentiles for all people [a]												
Upper bound ($2002)	7,252	11,826	20,568	25,687	31,377	48,166	66,090	. . .	12,844			
Upper bound ($2003)	7,416	12,094	21,035	26,270	32,089	49,258	67,589	. . .	13,135	212,717		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.4	212,717		
Elderly [b]	7.2	15.9	29.5	11.3	8.8	14.2	5.9	7.0	27.7	20,369		
Elderly SSI [c]	25.0	44.8	15.6	5.5	2.7	3.9	0.9	1.1	73.3	813	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [d]												
Upper bound ($2002)	7,420	11,914	20,487	25,457	31,004	47,663	65,694	. . .	12,728			
Upper bound ($2003)	7,588	12,184	20,952	26,034	31,707	48,744	67,184	. . .	13,017	212,717		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.0	212,717		
Elderly	7.3	14.7	29.0	11.3	9.1	15.1	6.2	7.3	25.4	20,369		
Elderly SSI [e]	33.6	36.4	14.2	4.7	3.6	4.5	1.7	1.3	72.5	813	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [f]												
Upper bound ($2002)	7,458	11,917	20,471	25,337	30,843	47,213	65,008	. . .	12,669			
Upper bound ($2003)	7,627	12,187	20,935	25,912	31,543	48,284	66,483	. . .	12,956	176,378		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.8	176,378	Adjusted with sample restriction	
Elderly [b]	7.0	14.0	58.3	11.5	9.4	16.0	6.3	7.6	23.6	13,539		
Elderly SSI [g]	37.3	34.9	13.5	4.3	3.3	4.5	1.2	1.1	73.9	880		Adjusted
Inclusive 2003—												
(a) using unadjusted income percentiles for all people [a]												
Upper bound ($2002)	7,252	11,826	20,568	25,687	31,377	48,166	66,090	. . .	12,844			
Upper bound ($2003)	7,416	12,094	21,035	26,270	32,089	49,258	67,589	. . .	13,135	212,717		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.4	212,717		
Elderly [b]	7.2	15.9	29.5	11.3	8.8	14.2	5.9	7.0	27.7	20,369		
Elderly SSI [c]	25.0	44.8	15.6	5.5	2.7	3.9	0.9	1.1	73.3	813	Unadjusted	Unadjusted

Continued

Table A-2.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjustment protocols, 2003–2005—*Continued*

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Inclusive 2003—(continued)												
(b) using adjusted income percentiles for all people (unadjusted weights) [d]												
Upper bound ($2002)	8,259	13,117	22,479	27,728	33,730	51,420	70,804	. . .	13,864			
Upper bound ($2003)	8,446	13,415	22,989	28,357	34,495	52,586	72,410	. . .	14,179	212,717		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.6	212,717		
Elderly	9.4	17.1	28.7	10.2	8.6	13.3	5.9	6.9	29.3	20,369		
Elderly SSI [e]	43.9	28.3	11.9	5.3	2.4	5.9	1.2	1.2	73.2	1,090	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [f]												
Upper bound ($2002)	8,562	13,478	22,882	28,208	34,209	52,071	72,252	. . .	14,104			
Upper bound ($2003)	8,756	13,784	23,401	28,848	34,985	53,252	73,891	. . .	14,424	176,378		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.4	176,378	Adjusted with	
Elderly [b]	9.4	16.7	27.8	10.3	9.3	13.5	6.4	6.8	28.2	13,539	sample	
Elderly SSI [g]	48.0	26.0	11.4	5.0	2.7	5.1	0.9	1.0	74.7	880	restriction	Adjusted
Restrictive 2004—												
(a) using unadjusted income percentiles for all people [h]												
Upper bound ($2002)	7,115	11,854	20,604	25,532	31,040	47,612	65,207	. . .	12,766			
Upper bound ($2004)	7,472	12,448	21,637	26,812	32,596	50,000	68,477	. . .	13,406	210,152		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.2	210,152		
Elderly [b]	7.0	15.6	29.4	11.4	8.8	14.3	6.5	7.0	26.4	20,561		
Elderly SSI [c]	26.2	39.8	18.9	4.1	3.8	3.9	2.2	1.1	67.3	1,030	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [i]												
Upper bound ($2002)	7,307	11,859	20,575	25,415	30,920	47,888	66,087	. . .	12,707			
Upper bound ($2004)	7,673	12,454	21,607	26,689	32,470	50,289	69,401	. . .	13,345	210,152		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.1	210,152		
Elderly	6.5	14.3	29.8	11.7	9.3	15.3	6.6	6.7	24.1	20,561		
Elderly SSI [e]	34.0	31.7	17.9	4.8	3.5	5.8	1.3	1.1	68.6	1,030	Adjusted	Unadjusted

Continued

Table A-2.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjustment protocols, 2003–2005—*Continued*

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Restrictive 2004—(continued)												
(c) using adjusted income percentiles for all people (adjusted weights) [j]												
Upper bound ($2002)	7,399	11,823	20,468	25,209	30,632	47,453	66,072	. . .	12,604			
Upper bound ($2004)	7,770	12,416	21,494	26,473	32,168	49,833	69,385	. . .	13,237	171,025		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.9	171,025	Adjusted with sample restriction	Adjusted
Elderly [b]	6.0	13.3	29.2	11.9	9.9	16.3	6.9	6.7	21.9	13,135		
Elderly SSI [g]	38.7	28.3	17.2	5.0	3.7	5.6	1.0	0.5	69.8	815		
Inclusive 2004—												
(a) using unadjusted income percentiles for all people [h]												
Upper bound ($2002)	7,115	11,854	20,604	25,532	31,040	47,612	65,207	. . .	12,766			
Upper bound ($2004)	7,472	12,448	21,637	26,812	32,596	50,000	68,477	. . .	13,406	210,152		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.2	210,152		
Elderly [b]	7.0	15.6	29.4	11.4	8.8	14.3	6.5	7.0	26.4	20,561		
Elderly SSI [c]	26.2	39.8	18.9	4.1	3.8	3.9	2.2	1.1	67.3	1,030	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [i]												
Upper bound ($2002)	8,138	13,093	22,508	27,655	33,444	51,268	70,343	. . .	13,828			
Upper bound ($2004)	8,546	13,750	23,637	29,042	35,121	53,839	73,870	. . .	14,521	210,152		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.6	210,152		
Elderly	8.4	16.7	29.3	10.8	8.3	13.9	6.2	6.5	27.9	20,561		
Elderly SSI [e]	41.6	26.4	15.8	4.2	4.2	5.0	1.9	0.9	69.7	1,030	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [j]												
Upper bound ($2002)	8,489	13,429	22,860	28,103	33,861	52,099	72,221	. . .	14,051			
Upper bound ($2004)	8,915	14,102	24,006	29,512	35,559	54,711	75,842	. . .	14,756	171,025		
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.4	171,025	Adjusted with sample restriction	Adjusted
Elderly [b]	8.4	15.8	28.9	10.8	8.7	14.4	6.4	6.6	26.7	13,135		
Elderly SSI [g]	45.9	23.9	15.4	4.2	3.8	4.9	1.3	0.6	70.8	815		

Continued

Table A-2.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjustment protocols, 2003–2005—*Continued*

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Restrictive 2005—												
(a) using unadjusted income percentiles for all people [k]												
Upper bound ($2002)	7,185	11,956	20,781	25,704	31,339	47,884	66,250	. . .	12,852	207,987		
Upper bound ($2005)	7,801	12,981	22,562	27,907	34,025	51,989	71,929	. . .	13,954			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.2	207,987		
Elderly [b]	7.0	16.0	28.9	11.0	9.3	14.1	6.1	7.6	26.1	20,413		
Elderly SSI [c]	22.9	45.5	17.0	2.4	4.7	3.7	1.8	2.0	71.5	757	Unadjusted	Unadjusted
(b) using adjusted income percentiles for all people (unadjusted weights) [l]												
Upper bound ($2002)	7,293	11,936	20,735	25,635	31,326	48,800	67,983	. . .	12,818	207,987		
Upper bound ($2005)	7,918	12,959	22,513	27,833	34,011	52,983	73,811	. . .	13,917			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.0	207,987		
Elderly	6.2	14.0	29.2	11.8	9.6	15.4	15.4	6.6	23.3	20,413		
Elderly SSI [e]	35.4	33.7	13.6	5.6	4.1	4.3	2.1	1.2	70.7	1,181	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [m]												
Upper bound ($2002)	7,334	11,953	20,768	25,705	31,433	48,907	68,038	. . .	12,852	195,241		
Upper bound ($2005)	7,963	12,978	22,548	27,908	34,128	53,099	73,871	. . .	13,954			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.1	195,241	Adjusted with sample restriction	
Elderly [b]	6.0	14.0	29.4	11.9	9.7	15.4	6.6	7.1	23.2	19,178		
Elderly SSI [g]	36.7	33.0	13.3	5.8	3.6	4.1	2.2	1.3	71.3	1,128		Adjusted
Inclusive 2005—												
(a) using unadjusted income percentiles for all people [k]												
Upper bound ($2002)	7,185	11,956	20,781	25,704	31,339	47,884	66,250	. . .	12,852	207,987		
Upper bound ($2005)	7,801	12,981	22,562	27,907	34,025	51,989	71,929	. . .	13,954			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.2	207,987		
Elderly [b]	7.0	16.0	28.9	11.0	9.3	14.1	6.1	7.6	26.1	20,413		
Elderly SSI [c]	22.9	45.5	17.0	2.4	4.7	3.7	1.8	2.0	71.5	757	Unadjusted	Unadjusted

Continued

Table A-2.
The effect of merging CPS and Social Security administrative data on the estimated national income distribution using restrictive and inclusive income-adjustment protocols, 2003–2005—*Continued*

National income distribution	Percentiles									Data summary		
	10	20	40	50	60	80	90	Top decile	50 percent of the median	Person records	Income	Weights
Inclusive 2005—(continued)												
(b) using adjusted income percentiles for all people (unadjusted weights) [l]												
Upper bound ($2002)	8,661	13,816	23,668	29,065	35,344	54,098	75,823	. . .	14,533	207,987		
Upper bound ($2005)	9,403	15,000	25,697	31,557	38,374	58,735	82,323	. . .	15,779			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.4	207,987		
Elderly	9.4	16.7	28.6	10.3	8.7	13.3	6.2	6.9	28.3	20,413		
Elderly SSI [e]	46.0	24.5	13.4	5.0	3.9	3.9	1.8	1.6	71.7	1,181	Adjusted	Unadjusted
(c) using adjusted income percentiles for all people (adjusted weights) [m]												
Upper bound ($2002)	8,860	14,039	23,976	29,403	35,669	54,422	76,447	. . .	14,702	195,241		
Upper bound ($2005)	9,620	15,243	26,031	31,924	38,727	59,087	83,000	. . .	15,962			
Distribution (%)												
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.3	195,241	Adjusted with sample restriction	
Elderly [b]	9.6	17.2	28.4	10.2	8.6	13.3	6.0	6.8	28.8	19,178		
Elderly SSI [g]	47.9	23.6	13.1	4.9	3.4	3.6	1.8	1.7	72.2	1,128		Adjusted

SOURCE: For the 2003 panel of the table, authors' calculations using 2004 CPS/ASEC public-use data matched to Social Security administrative records; for 2004, authors' calculations using 2005 survey data matched to administrative records; and for 2005, authors' calculations using 2006 survey data matched to administrative records.

NOTES: . . . = data not applicable. Both the restrictive and inclusive estimates are replicated for 2002 in Table 5 of this article.

a. Figures involve unadjusted CPS income data and weights as well as the entire 2004 CPS/ASEC poverty sample of 212,717 persons.
b. Persons with a CPS-reported age of 65 or older.
c. Persons with a positive CPS record.
d. Estimates are based on adjusted CPS income records, unadjusted weights, and involve the entire 2004 CPS/ASEC poverty sample.
e. Persons are identified as SSI recipients if either they have no matching CPS/SER records and a positive CPS SSI record or matching CPS/SER records and a positive SSR SSI record.
f. Figures involve adjusted CPS income data and weights and a reduced 2004 CPS/ASEC poverty sample.
g. Persons are identified as SSI recipients if they have a positive SSR SSI record.
h. Figures involve unadjusted CPS income data and weights as well as the entire 2005 CPS/ASEC poverty sample of 210,152 persons.
i. Estimates are based on adjusted CPS income records, unadjusted weights, and involve the entire 2005 CPS/ASEC poverty sample.
j. Figures involve adjusted CPS income data and weights and a reduced 2005 CPS/ASEC poverty sample.
k. Figures involve unadjusted CPS income data and weights as well as the entire 2006 CPS/ASEC poverty sample of 207,987 persons.
l. Estimates are based on adjusted CPS income records, unadjusted weights, and involve the entire 2006 CPS/ASEC poverty sample.
m. Figures involve adjusted CPS income data and weights and a reduced 2006 CPS/ASEC poverty sample.

Notes

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[1] Alexander, Davern, and Stevenson (2010) report discovery of errors in age- and sex-specific population estimates generated from the 2004–2009 CPS for persons aged 65 or older. These errors are apparently produced by misapplication of disclosure avoidance procedures to the CPS and certain other public-use microdata samples (PUMS). According to the authors (p. 11), the problems arise only in disaggregating the data for the elderly by age and sex and do not apply when the data are "grouped into a single age 65 or older category," which is done in the present analysis.

[2] The SER also includes earnings data. However, annual earnings reports in the SER are capped at the FICA/SECA taxable maximum ($84,900 in 2002).

[3] Information on retirement plan contributions in the DER corresponds to codes "d" through "h" in box 13 on the W-2 form: 401(k), SiMPLE, 403(b), 408(k) and (6), SEP, 457(b), and 501(c), (18), and (D) plans (Smith, Johnson, and Muller 2004, 8). See Abowd and Stinson (2005, 10) for a more detailed discussion of elements of gross compensation (for example, pretax health insurance premiums paid by the employee) that will not appear in the DER.

[4] The data aggregation was performed by SSA's Office of Research, Evaluation, and Statistics following a protocol established by the agency.

[5] See Sears and Rupp (2003) for an investigation on the divergence between payment eligibility and payment receipt and the consequence for assessment of errors in OASDI-reporting in the Survey of Income and Program Participation. Koenig (2003) analyzes OASDI/SSI underreporting in the March 1997 CPS, but could use only information on OASDI entitlement, not payments (as in the PHUS) for comparison with CPS reports.

[6] See Iceland (2005). Under the three-parameter NRC equivalence scale, to achieve an equivalent standard of living, for every $1 of income for a single individual, a childless couple would require $1.41; single-parent families would need $(A + + P * (C-1))^F$; and all other families would require $(A + P * C)^F$, where A is the number of adults in a family and C is the number of children. Following the NRC review of the Census Bureau poverty standard, we assume that = 0.8, P = 0.5, and F = 0.7. The parameter P indicates how children are to be weighted relative to adults: P = 0.5 means that each child beyond the first one requires half the income needed for adults. The parameter allows the first child in a single-parent family to be weighted differently from others. F reflects economies of scale.

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Recipients of Supplemental Security Income and the Student Earned Income Exclusion

by Mary Kemp*

This article presents the results of a first effort to create and statistically analyze a data set containing detailed information on the Student Earned Income Exclusion (SEIE), which is part of the Supplemental Security Income (SSI) program. It presents descriptive statistics on (1) demographic characteristics of SSI recipients with SEIE; (2) various measures of SEIE use, such as dollar amounts excluded per year, numbers of months of use per year, and percentages of SSI recipients using the SEIE; (3) seasonal patterns in SEIE use based on month-by-month SEIE amounts; and (4) seasonal patterns in factors driving month-by-month gains and losses of SEIE eligibility, including changes in earnings, student status, age, and eligibility for SSI, as well as effects of the annual SEIE limit.

Introduction: Supplemental Security Income and the Student Earned Income Exclusion

The Supplemental Security Income (SSI) program provides monthly cash payments to persons who are aged, blind, or disabled and have income and resources below certain limits. SSI payments, roughly speaking, bring a recipient's total income up to at least a specified floor. This floor is the individual federal benefit rate (FBR), in the simplest case of an individual living alone in his or her own household.[1] The individual FBR is the maximum possible federal SSI payment to an eligible individual. If the recipient has other income, then depending on its type and amount, actual payments will typically be smaller. This article is based on data from 2004 and 2005; the individual FBR, which is adjusted each year for inflation, was $564 per month in 2004 and $579 per month in 2005.

Among the provisions of the SSI program are several financial supports and incentives for recipients to improve their prospects for employment and self-support. One of these—the Student Earned Income Exclusion (SEIE)—is the subject of this article. The SEIE applies automatically in months when an SSI recipient is under age 22, regularly attending school in grade 7 or above, and receiving earned income (almost always wages).[2] This article focuses on persons who received the SEIE in any month when they were due SSI payment during 2004 or 2005.[3]

Each month's federal SSI payment is typically calculated as the difference between the FBR and the recipient's countable income. If countable income exceeds the FBR, no SSI payment is due. Countable income consists of the recipient's earned and unearned income received in the appropriate month, reduced by certain exclusions such as the SEIE.

For SSI purposes, earned income consists of gross wages, net earnings from self-employment, sheltered workshop earnings, royalties, and honoraria—with

Selected Abbreviations

FBR	federal benefit rate
SEIE	Student Earned Income Exclusion
SGA	substantial gainful activity
SSA	Social Security Administration
SSI	Supplemental Security Income

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wages being by far the most common. When SSI recipients meet the SEIE criteria (age, earnings, and student status), some or all of their earned income is excluded from their countable income. Thus, the SEIE can help an individual gain or maintain eligibility for cash SSI payments and is partly a work incentive and partly a financial support for education. For 2004 and 2005, respectively, the annual limits on the SEIE were $5,520 and $5,670; the monthly limits were $1,370 and $1,410.[4]

Since April 2005, the SEIE has applied to any working student in grade 7 or above and under age 22 whose income affects an SSI payment.[5] Prior to April 2005, the SEIE was known as the Student *Child* Earned Income Exclusion and, under the more restrictive definition of "child," did not apply if the working student was a head of household or married. For SSI purposes, someone who lives alone and has no dependents can still be a head of household; the defining characteristics of a "head of household" are responsibility for day-to-day household decisions and absence of parental support.

For SSI purposes, a "student" may be regularly attending school (grades 7 through 12), college, university, or other training designed to prepare him or her for a paying job; this includes vocational or technical training and government antipoverty programs such as Job Corps.[6] SSI recipients must report their income, and those in the SEIE age group must report changes in their student status. Because they do not have to take any action beyond these basic reporting requirements to receive the SEIE, we cannot, from the available data, distinguish those who deliberately take advantage of the SEIE from those who benefit from it inadvertently.

The criteria for SEIE receipt are based on

- **Age**
- **Earnings**
- **Student status**
- **SEIE annual limit**

and, prior to April 2005, also on

- **Child status**

The SEIE can help an individual gain or maintain eligibility for cash SSI payments. If an SSI claimant has monthly earnings above $65 but below the monthly substantial gainful activity (SGA) level (which was $810 in 2004 and $830 in 2005), then the SEIE can, depending on the amount of countable unearned income, make the difference between establishment of initial eligibility and denial of the SSI claim on the basis of excess income.[7]

The SEIE will not help establish initial eligibility for SSI if the applicant's earnings are above the SGA level because receipt of Section 1619(a) payments—SSI payments received despite earnings that exceed SGA —requires a "prerequisite month" of receipt of regular SSI payment. However, once the "prerequisite month" is satisfied, the SEIE can help someone continue to receive cash SSI payments under Section 1619(a). Section 1619(a) payments are calculated in the same manner as regular SSI payments. Section 1619(a) is considered a work incentive because, in conjunction with the various exclusions for earned income (including the SEIE), it allows people who have already qualified for SSI to continue receiving payments even when their work activity reaches a level that would have resulted in denial of their original SSI claim.

The SEIE does not apply in the threshold test for Section 1619(b) status. Section 1619(b) enables SSI recipients to retain Medicaid eligibility despite having enough total income to reduce their SSI payments to zero; to qualify, they must be eligible for regular SSI payments but for their earnings, and their earnings must be below a certain threshold. Section 1619(b) is also considered a work incentive because it helps people who have received SSI to work without losing the health care benefits that normally accompany SSI eligibility.

For further discussion of the effect of the SEIE on an SSI recipient's income, see Appendix A.

About the Data

The Social Security Administration (SSA) has not previously published detailed statistics on the SEIE. The regular statistical publications covering the SSI program use cross-sectional (that is, single-point-in-time) data captured each December, and one might expect December SEIE recipients not to be representative of all SEIE recipients. First, one might expect students' earnings and hence their SEIE use to exhibit seasonality—to be higher in summer, for instance. Second, many of the highest earners might reach the calendar-year SEIE limit ($5,520 in 2004 or $5,670 in 2005—which is far less than twelve times the monthly limit of $1,370 or $1,410) and cease to receive SEIE prior to December each year.

For these reasons, monthly longitudinal data were used for this article. From a 10 percent sample of all SSI records, all individuals against whose income the SEIE applied during at least one month in 2004 or 2005 were selected. Data for 2 years were used in hopes of detecting any seasonal patterns in SEIE use. Although SEIE amounts *can* be posted to an SSI recipient's record even in months when no SSI payment is due, the selected group was further restricted to count a person as an "SSI recipient with SEIE" in a particular month only if he or she had SEIE applied against income earned in that month *and* was due an SSI payment for that month. For additional information on the sample selection, see Appendix B. For notes on sampling variability and tables showing standard errors, see Appendix C.

For brevity, this article often uses the term "SEIE recipient" to refer to an "SSI recipient with SEIE" as defined here. This article also uses the term "SEIE amount;" this term refers to an amount of money used in the SSI payment calculation, not an amount that is received directly.

Data for 2004 and 2005 were chosen despite the availability of more recent data because earnings, student status, and even disability status can be changed retroactively on the records of SSI recipients. Periodic "redeterminations" sometimes bring to light new information about an SSI recipient. So if the data originally entered for a given month were incorrect, the passage of 1 or 2 years would make discovery and correction more likely to have occurred.

SEIE Statistics

The following sections present statistics on demographic characteristics of SSI recipients with SEIE, measures of SEIE use, and seasonal patterns in SEIE use. All statistics presented in the tables and charts are population estimates. For instance, numbers of SEIE recipients and aggregate SEIE amounts are sample totals multiplied by 10.

SSI Recipients with SEIE

There were about 26,000 SSI recipients with SEIE in each of the years 2004 and 2005. The tables in this section describe some of their demographic characteristics as well as several simple measures of SEIE use.

Some tables give statistics spanning an entire calendar year; in these tables, a person's age is defined as the age used in determining December SEIE eligibility.[8] "Numbers of SSI recipients aged 12–22" exclude all persons who, because of marital status or head of household status, would not have had SEIE amounts posted to their SSI records even had they been working students. The SEIE use rate is defined as the percentage of SSI recipients aged 12–22 who were SEIE recipients.

Table 1 shows that SEIE use started for a few persons prior to age 16, peaked—in terms of both number of recipients and use rate—around age 18 or 19 (at least for persons in the sample), and then fell off drastically well before the age-22 cutoff, possibly due to loss of student status upon completion of schooling. The majority of SEIE recipients in the sample were male, roughly in proportion with the gender distribution of SSI recipients in the relevant age bracket. Mental retardation was the most common diagnosis among SEIE recipients in the sample, followed by other mental disorders; together, all mental disorders accounted for nearly three-quarters of SEIE recipients' primary diagnoses, with nervous system disorders accounting for a large portion of the remainder. The nervous system disorders category includes, as a relatively small subset, the vast majority of persons who are eligible for SSI on the basis of blindness.

Differences across diagnosis groups in the estimated SEIE use rates may well derive, at least in part, from differences across age groups in the distribution of diagnoses. For example, SSI recipients with mental retardation outnumbered those with other mental disorders in the 18–21 age group, while the reverse was true for the 13–17 age group.[9] This, in combination with the low SEIE use rates up to age 16 and the higher use rates at ages 17 through 20 or 21, could help account for the relatively low estimated SEIE use rates for persons with "other mental" disorders.

Table 1 shows that mental retardation was the most common diagnosis for SEIE recipients in the sample overall. Charts 1a and 1b and Table 2 show that mental retardation was also the most common diagnosis at each age from 17 or 18 to 22, across which ages it accounted for a fairly constant share of diagnoses. Other mental disorders, forming the second most common diagnosis group for SEIE recipients overall, were the most common diagnoses among those aged 16 and younger but trended downward as a percentage of diagnoses with increasing age. In contrast, the percentage of SEIE recipients in the sample with nervous system disorders mostly trended upward with age.

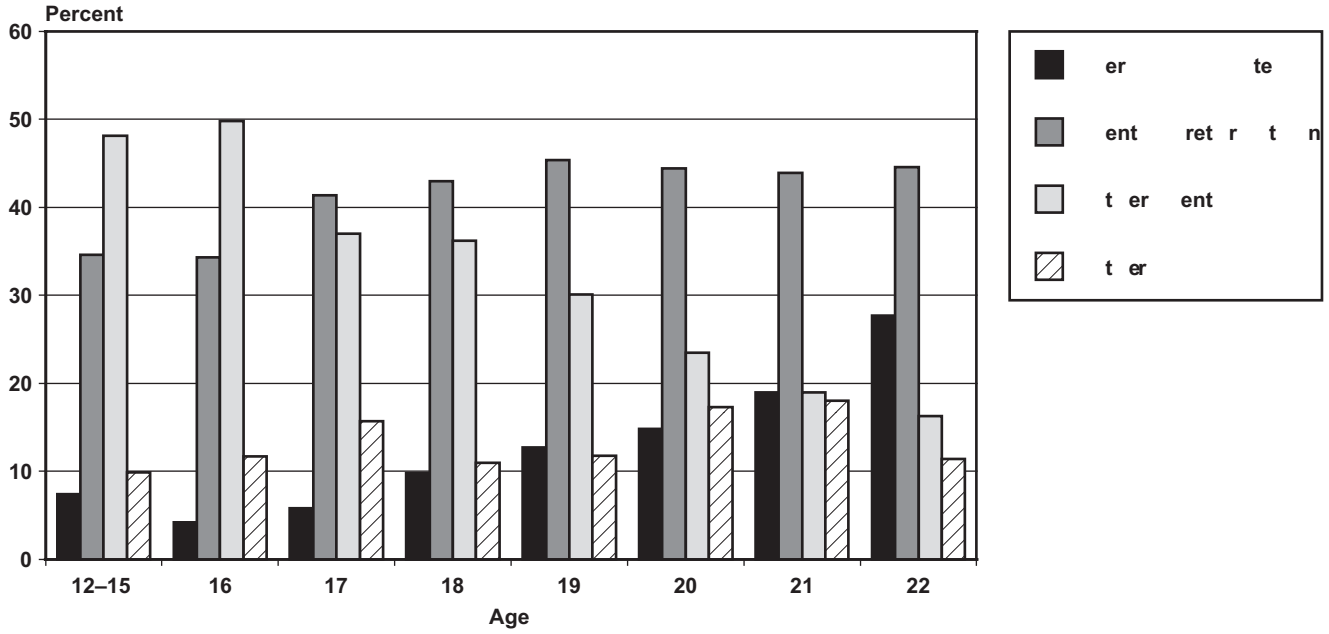
Table 1.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE amounts, number of SSI recipients aged 12–22, and SEIE use rate, by age, sex, and diagnosis group, 2004–2005 (population estimates)

Recipient characteristic	SSI recipients with SEIE	Percentage distribution of SEIE recipeints	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
			2004			
Overall	26,050	100.0	1,530	1,007	850,300	3.1
Age						
12–15	810	3.1	794	527	328,670	0.2
16	2,390	9.2	1,048	708	77,240	3.1
17	3,620	13.9	1,591	1,099	70,930	5.1
18	5,890	22.6	1,477	967	81,650	7.2
19	4,820	18.5	1,486	980	81,680	5.9
20	3,920	15.0	1,801	1,201	72,940	5.4
21	2,940	11.3	1,785	1,347	73,110	4.0
22	1,660	6.4	1,669	1,022	64,080	2.6
Sex						
Female	10,070	38.7	1,484	911	318,780	3.2
Male	15,980	61.3	1,558	1,050	531,520	3.0
Diagnosis group						
Nervous system disorders	3,140	12.1	1,714	1,196	87,790	3.6
Mental retardation	11,080	42.5	1,371	843	309,420	3.6
Other mental disorders	8,280	31.8	1,540	1,056	340,590	2.4
Other	3,550	13.6	1,838	1,287	112,500	3.2
			2005			
Overall	25,650	100.0	1,625	1,005	884,750	2.9
Age						
12–15	600	2.3	844	592	332,330	0.2
16	2,380	9.3	1,184	788	83,610	2.8
17	4,340	16.9	1,638	1,156	77,520	5.6
18	5,140	20.0	1,564	911	87,130	5.9
19	5,010	19.5	1,549	934	82,680	6.1
20	3,320	12.9	1,874	1,253	78,540	4.2
21	3,130	12.2	2,078	1,414	77,110	4.1
22	1,730	6.7	1,571	870	65,830	2.6
Sex						
Female	9,850	38.4	1,567	994	330,120	3.0
Male	15,800	61.6	1,661	1,020	554,630	2.8
Diagnosis group						
Nervous system disorders	2,990	11.7	1,831	1,199	88,400	3.4
Mental retardation	10,650	41.5	1,444	859	303,870	3.5
Other mental disorders	8,670	33.8	1,614	1,031	376,950	2.3
Other	3,340	13.0	2,046	1,408	115,530	2.9

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

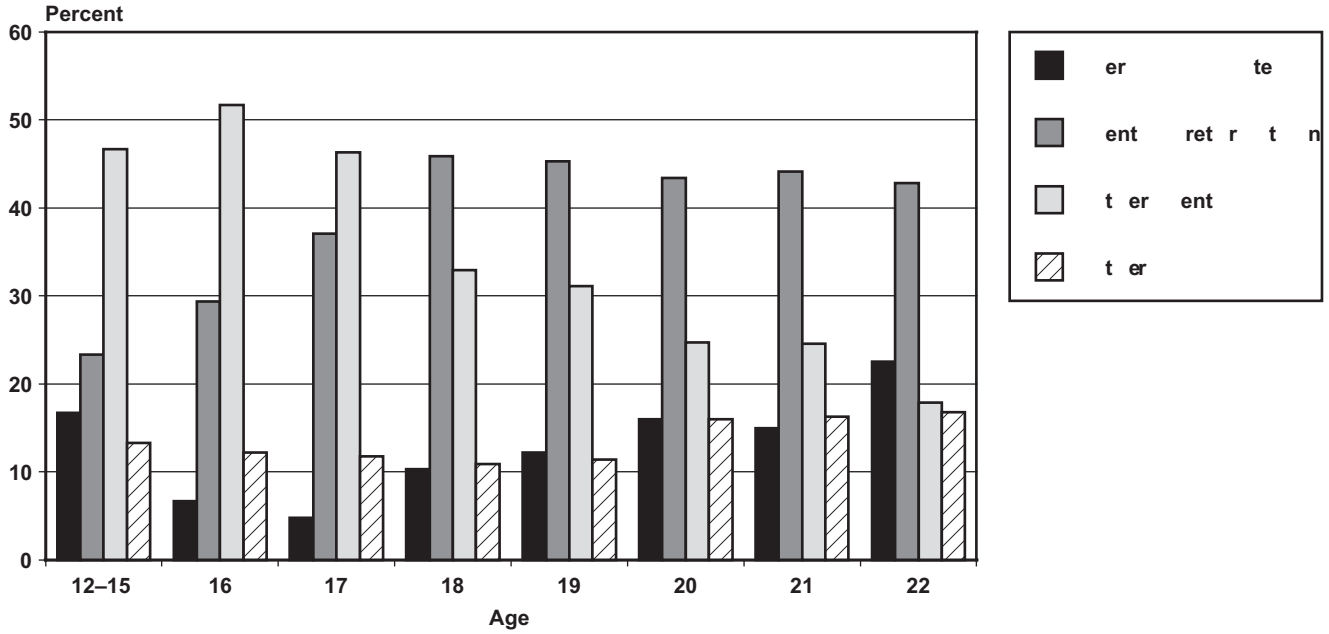
NOTE: Distribution totals do not necssarily equal 100.0 because of rounding.

Chart 1a.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by disability diagnosis group, by age, 2004



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 1b.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by disability diagnosis group, by age, 2005



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table 2.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by diagnosis group, by age, 2004–2005 (population estimates)

Diagnosis group	Age							
	12–15	16	17	18	19	20	21	22
				2004				
Nervous system disorders	7.4	4.2	5.8	9.8	12.7	14.8	19.0	27.7
Mental retardation	34.6	34.3	41.4	43.0	45.4	44.4	43.9	44.6
Other mental disorders	48.1	49.8	37.0	36.2	30.1	23.5	19.0	16.3
Other	9.9	11.7	15.7	11.0	11.8	17.3	18.0	11.4
				2005				
Nervous system disorders	16.7	6.7	4.8	10.3	12.2	16.0	15.0	22.5
Mental retardation	23.3	29.4	37.1	45.9	45.3	43.4	44.1	42.8
Other mental disorders	46.7	51.7	46.3	32.9	31.1	24.7	24.6	17.9
Other	13.3	12.2	11.8	10.9	11.4	16.0	16.3	16.8

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.
NOTE: Distribution totals do not necessarily equal 100.0 because of rounding.

Tables 3a and 3b show that California, Illinois, New York, Pennsylvania, and Ohio were among the states with the most SEIE recipients in the sample. States with the highest SEIE use rates included Iowa, Kansas, Minnesota, Montana, Nebraska, New Hampshire, North Dakota, Ohio, South Dakota, Vermont, and Wisconsin. Geographic variations seen here in SEIE use rates are similar to geographic variations in the percentage of SSI recipients who worked[10] and the percentage of SSI recipients who participated in Section 1619.[11]

SEIE Use

Tables 4a and 4b show two measures of SEIE use: (1) the amount of income excluded per year under the SEIE and (2) the number of months per year with income excluded under the SEIE. Table 5 gives estimates of the number of people reaching the annual SEIE limit each month.

In most cases, SEIE recipients' earned income was much lower than the calendar-year SEIE limit. In fact, almost one-third of SEIE recipients used less than 10 percent of the annual limit, and approximately half used less than 20 percent. The earnings distribution continued to tail off steadily after this point, with only about 2 percent of SEIE recipients using between 80 percent and 90 percent of the annual limit. Earned income translates roughly into SEIE amounts, and so the two quantities have basically the same distribution. Whereas the earnings distribution tailed off steadily, however, the SEIE distribution had a second mode because of SEIE recipients with earnings equal to or greater than the SEIE annual limit. Of the 6–7 percent of SEIE recipients in Tables 4a and 4b using more than 90 percent of the annual limit, most reached the limit (as can be seen by comparison with Table 5). For a discussion of the limitations of using SEIE amounts to quantify the impact of the SEIE, see Appendix A.

For each year, SEIE use in any number of months between 1 and 6 was fairly common, with each number accounting for about 10–13 percent of SEIE recipients in the sample. SEIE use in all 12 months was also common, accounting for about 10 percent of SEIE recipients. Use in any number of months from 7 to 11 was much less common among sample members.

Table 5 shows that in each year, approximately 4–5 percent of SSI recipients with SEIE reached the annual limit. Some reached the limit as early as May, and a few reached the limit each month thereafter through the end of the year. (Because of the monthly limit on the SEIE, it is impossible to reach the annual limit prior to May.)[12]

Charts 2a and 2b and Table 6 show the estimated relationship between age and months of SEIE use per year. In the 12–15 age group in the sample, 1–3 months of SEIE use per calendar year was by far most common, followed by 4–6 months of SEIE use. This ranking held at each age up to and including age 18, with the proportion of SEIE recipients in the 1–3 month category trending down with increasing

Table 3a.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE amounts, number of SSI recipients aged 12–22, and SEIE use rate, by state of residence, 2004 (population estimates)

State	Number of SSI recipients with SEIE	Percentage distribution of SEIE recipients	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Overall	26,050	100.0	1,530	1,007	850,300	3.1
Alabama	250	1.0	2,538	2,141	21,510	1.2
Alaska	10	0.0	a	a	1,070	0.9
Arizona	350	1.3	1,449	1,109	12,960	2.7
Arkansas	120	0.5	1,438	1,002	12,210	1.0
California	1,500	5.8	1,378	844	86,000	1.7
Colorado	210	0.8	1,868	1,360	6,380	3.3
Connecticut	310	1.2	1,670	780	6,420	4.8
Delaware	160	0.6	1,002	860	2,930	5.5
District of Columbia	40	0.2	942	a	3,450	1.2
Florida	900	3.5	2,282	1,655	62,100	1.4
Georgia	180	0.7	1,536	1,376	25,720	0.7
Hawaii	50	0.2	2,419	a	1,540	3.2
Idaho	90	0.3	718	340	3,820	2.4
Illinois	1,790	6.9	1,514	1,020	40,430	4.4
Indiana	610	2.3	1,221	670	15,880	3.8
Iowa	620	2.4	1,170	575	6,690	9.3
Kansas	310	1.2	1,555	784	6,210	5.0
Kentucky	240	0.9	1,600	1,238	20,330	1.2
Louisiana	240	0.9	1,737	1,651	24,240	1.0
Maine	110	0.4	1,039	892	3,710	3.0
Maryland	490	1.9	2,175	1,518	13,680	3.6
Massachusetts	940	3.6	1,960	1,483	16,890	5.6
Michigan	970	3.7	1,508	1,179	32,590	3.0
Minnesota	1,170	4.5	1,417	856	10,710	10.9
Mississippi	90	0.3	2,839	2,680	16,950	0.5
Missouri	680	2.6	1,450	845	17,150	4.0
Montana	160	0.6	909	663	1,750	9.1
Nebraska	200	0.8	1,253	806	3,520	5.7
Nevada	100	0.4	1,539	2,087	4,780	2.1
New Hampshire	250	1.0	1,138	573	2,300	10.9
New Jersey	750	2.9	1,439	1,020	17,330	4.3
New Mexico	230	0.9	1,791	1,084	6,410	3.6
New York	2,140	8.2	1,274	852	55,560	3.9
North Carolina	650	2.5	1,504	975	28,360	2.3
North Dakota	130	0.5	1,476	1,038	1,180	11.0
Ohio	2,200	8.4	1,513	1,122	36,360	6.1
Oklahoma	460	1.8	1,186	824	10,590	4.3
Oregon	190	0.7	1,117	543	7,380	2.6
Pennsylvania	1,850	7.1	1,411	912	47,540	3.9
Rhode Island	10	0.0	a	a	3,600	0.3

(Continued)

Table 3a.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE amounts, number of SSI recipients aged 12–22, and SEIE use rate, by state of residence, 2004 (population estimates)—*Continued*

State	Number of SSI recipients with SEIE	Percentage distribution of SEIE recipients	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
South Carolina	210	0.8	1,984	1,301	14,790	1.4
South Dakota	300	1.2	1,199	1,082	1,880	16.0
Tennessee	280	1.1	2,210	1,481	18,630	1.5
Texas	1,020	3.9	1,858	1,382	55,280	1.8
Utah	110	0.4	1,499	762	3,820	2.9
Vermont	190	0.7	1,343	990	1,920	9.9
Virginia	670	2.6	1,942	1,371	19,030	3.5
Washington	360	1.4	1,702	1,070	13,660	2.6
West Virginia	130	0.5	1,326	1,097	7,490	1.7
Wisconsin	970	3.7	1,169	759	14,490	6.7
Wyoming	60	0.2	1,007	1,101	900	6.7
Other/unknown	0	0.0	. . .	. . .	180	0.0

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: . . . = not applicable.

a. Suppressed to protect confidentiality.

Table 3b.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE amounts, number of SSI recipients aged 12–22, and SEIE use rate, by state of residence, 2005 (population estimates)

State	Number of SSI recipients with SEIE	Percentage distribution of SEIE recipients	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Overall	25,650	100.0	1,625	1,005	884,750	2.9
Alabama	260	1.0	2,309	1,123	21,560	1.2
Alaska	30	0.1	1,101	a	1,290	2.3
Arizona	280	1.1	1,666	913	13,510	2.1
Arkansas	130	0.5	998	702	12,850	1.0
California	1,560	6.1	1,536	904	89,450	1.7
Colorado	180	0.7	2,231	1,314	6,600	2.7
Connecticut	270	1.1	1,214	656	6,570	4.1
Delaware	130	0.5	1,444	1,436	3,020	4.3
District of Columbia	70	0.3	2,337	1,500	3,820	1.8
Florida	1,010	3.9	2,236	1,591	64,410	1.6
Georgia	140	0.5	2,342	1,867	26,540	0.5
Hawaii	40	0.2	2,129	a	1,520	2.6
Idaho	100	0.4	2,129	1,601	3,910	2.6
Illinois	1,650	6.4	1,681	1,000	40,560	4.1
Indiana	640	2.5	1,558	919	16,560	3.9
Iowa	530	2.1	1,425	500	6,980	7.6
Kansas	370	1.4	1,329	736	6,060	6.1
Kentucky	300	1.2	1,728	1,106	21,600	1.4
Louisiana	240	0.9	2,218	1,679	25,550	0.9
Maine	80	0.3	1,591	780	3,890	2.1

(Continued)

Table 3b.

Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE amounts, number of SSI recipients aged 12–22, and SEIE use rate, by state of residence, 2005 (population estimates)—*Continued*

State	Number of SSI recipients with SEIE	Percentage distribution of SEIE recipients	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Maryland	500	1.9	2,230	1,722	14,330	3.5
Massachusetts	830	3.2	1,807	1,053	17,830	4.7
Michigan	940	3.7	1,602	1,251	34,130	2.8
Minnesota	970	3.8	1,527	833	11,030	8.8
Mississippi	140	0.5	2,000	1,636	16,870	0.8
Missouri	640	2.5	1,585	1,032	17,350	3.7
Montana	150	0.6	709	237	1,890	7.9
Nebraska	180	0.7	1,368	793	3,420	5.3
Nevada	90	0.4	1,762	1,642	4,860	1.9
New Hampshire	140	0.5	1,394	733	2,480	5.6
New Jersey	790	3.1	1,266	893	18,120	4.4
New Mexico	190	0.7	1,871	1,133	6,840	2.8
New York	2,310	9.0	1,403	897	57,520	4.0
North Carolina	740	2.9	1,493	1,182	29,730	2.5
North Dakota	120	0.5	2,017	1,428	1,200	10.0
Ohio	2,130	8.3	1,687	1,020	37,270	5.7
Oklahoma	450	1.8	1,484	909	11,000	4.1
Oregon	180	0.7	1,193	736	7,620	2.4
Pennsylvania	2,070	8.1	1,510	1,086	50,880	4.1
Rhode Island	30	0.1	2,339	a	3,860	0.8
South Carolina	160	0.6	2,190	1,326	15,160	1.1
South Dakota	240	0.9	1,126	848	1,830	13.1
Tennessee	270	1.1	1,999	874	18,700	1.4
Texas	1,060	4.1	1,794	1,195	59,850	1.8
Utah	130	0.5	1,840	1,406	4,050	3.2
Vermont	220	0.9	1,584	1,083	2,120	10.4
Virginia	580	2.3	1,773	1,369	20,190	2.9
Washington	350	1.4	2,062	1,295	14,430	2.4
West Virginia	90	0.4	1,664	1,431	7,910	1.1
Wisconsin	920	3.6	1,181	621	15,030	6.1
Wyoming	30	0.1	1,257	a	810	3.7
Other/unknown	0	0.0	. . .	. . .	190	0.0

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTES: . . . = not applicable.

Totals do not necessarily equal the sum of rounded components.

a. Suppressed to protect confidentiality.

Table 4a.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), by annual SEIE amount and number of months with SEIE during year, 2004 (population estimates)

SEIE use	Number	Percentage distribution
Total	26,050	100.0
Annual SEIE amount ($) [a]		
1–552	8,160	31.3
553–1,104	5,670	21.8
1,105–1,656	3,540	13.6
1,657–2,208	2,590	9.9
2,209–2,760	1,680	6.4
2,761–3,312	930	3.6
3,313–3,864	740	2.8
3,865–4,416	690	2.6
4,417–4,968	510	2.0
4,969–5,520	1,540	5.9
Months with SEIE		
1	3,110	11.9
2	3,150	12.1
3	3,540	13.6
4	2,730	10.5
5	2,870	11.0
6	2,830	10.9
7	1,250	4.8
8	1,090	4.2
9	1,090	4.2
10	1,070	4.1
11	730	2.8
12	2,590	9.9

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: Distribution totals do not necssarily equal 100.0 because of rounding.

a. Brackets reflect 10 percent intervals of the 2004 annual limit of $5,520.

Table 4b.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), by annual SEIE amount and number of months with SEIE during year, 2005 (population estimates)

SEIE use	Number	Percentage distribution
Total	25,650	100.0
Annual SEIE amount ($) [a]		
1–567	8,000	31.2
568–1,134	5,830	22.7
1,135–1,701	3,100	12.1
1,702–2,268	2,050	8.0
2,269–2,835	1,720	6.7
2,836–3,402	1,080	4.2
3,403–3,969	830	3.2
3,970–4,536	750	2.9
4,537–5,103	510	2.0
5,104–5,670	1,780	6.9
Months with SEIE		
1	2,980	11.6
2	3,380	13.2
3	3,060	11.9
4	2,420	9.4
5	2,740	10.7
6	2,580	10.1
7	1,150	4.5
8	1,460	5.7
9	1,160	4.5
10	1,200	4.7
11	820	3.2
12	2,700	10.5

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: Distribution totals do not necssarily equal 100.0 because of rounding.

a. Brackets reflect 10 percent intervals of the 2005 annual limit of $5,670.

age and the proportion in the 4–6 month category trending up. The two proportions were approximately equal by age 19. The proportion of SEIE recipients in the 10–12 month category in the sample also generally trended upward with age, surpassing the proportion in the 7–9 month category at age 19 and approximately matching the proportions in the 1–3 month and 4–6 month categories at age 20. Thus, it appears that older SEIE recipients tended to have more months of SEIE use per calendar year than did younger SEIE recipients. However, at age 22, the increasing trend for the 10–12 month category and the declining trend for the 1–3 month category both reverse. This naturally results from the loss of eligibility for SEIE that occurs in the month after attainment of age 22.

Seasonality

There appeared to be seasonality both in monthly numbers of SSI recipients with SEIE and in monthly average and aggregate SEIE amounts. Contrary to intuitive notions about students, school vacations, and summer jobs, the number of SEIE recipients in the sample reached its annual trough around July.

Table 5.
Number and percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by annual SEIE limit status, with month in which limit was reached, 2004–2005 (population estimates)

Annual limit status	Number	Percent
	2004	
SSI recipients with SEIE	26,050	100.0
SEIE under the annual limit	25,010	96.0
SEIE equal to the annual limit	1,040	4.0
Annual limit reached in—		
May	90	0.3
June	120	0.5
July	80	0.3
August	110	0.4
September	160	0.6
October	160	0.6
November	170	0.7
December	150	0.6
	2005	
SSI recipients with SEIE	25,650	100.0
SEIE under the annual limit	24,430	95.2
SEIE equal to the annual limit	1,220	4.8
Annual limit reached in—		
May	40	0.2
June	70	0.3
July	60	0.2
August	250	1.0
September	210	0.8
October	130	0.5
November	230	0.9
December	230	0.9

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Aggregate, mean, and median SEIE amounts, in contrast, all peaked near July. Charts 3–6 plot the estimated monthly numbers of SSI recipients with SEIE and estimated monthly aggregate, mean, and median SEIE amounts; Table 7 presents the numeric values.

The number of SEIE recipients in December actually exceeded the number of participants in each of three other SSI work incentives—Plan for Achieving Self Support (PASS), Impairment Related Work Expenses (IRWE), and Blind Work Expenses (BWE)—even though none of these three incentives is, like the SEIE, age-limited.[13]

Increases and Decreases in the Number of SSI Recipients with SEIE

Chart 7 breaks down the monthly changes in the count of SSI recipients with SEIE according to the factors causing gain or loss of SEIE status. Anyone gaining or losing SEIE status from one month to the next is classified into one of five nonoverlapping categories, and Chart 7 displays, for each month, the net change attributable to each category. The categories correspond to changes in the following combinations of factors: (1) SSI eligibility alone; (2) earnings, alone or concurrently with SSI eligibility; (3) student status, alone or concurrently with earnings or SSI eligibility; (4) annual limit status, alone or concurrently with student status, earnings, or SSI eligibility; and (5) age status, alone or concurrently with any other factors.

The categories are hierarchical. Category assignment for a loss of SEIE, for instance, would proceed as follows: First, check whether age 22 was attained. If so, assign category 5 and stop. Second, check whether the annual limit was met. If so, assign category 4 and stop. Third, check whether school attendance ceased. If so, assign category 3 and stop. Fourth, check whether earnings ceased. If so, assign category 2 and stop. Fifth, the only remaining possibility is that SSI eligibility was suspended. Assign category 1.

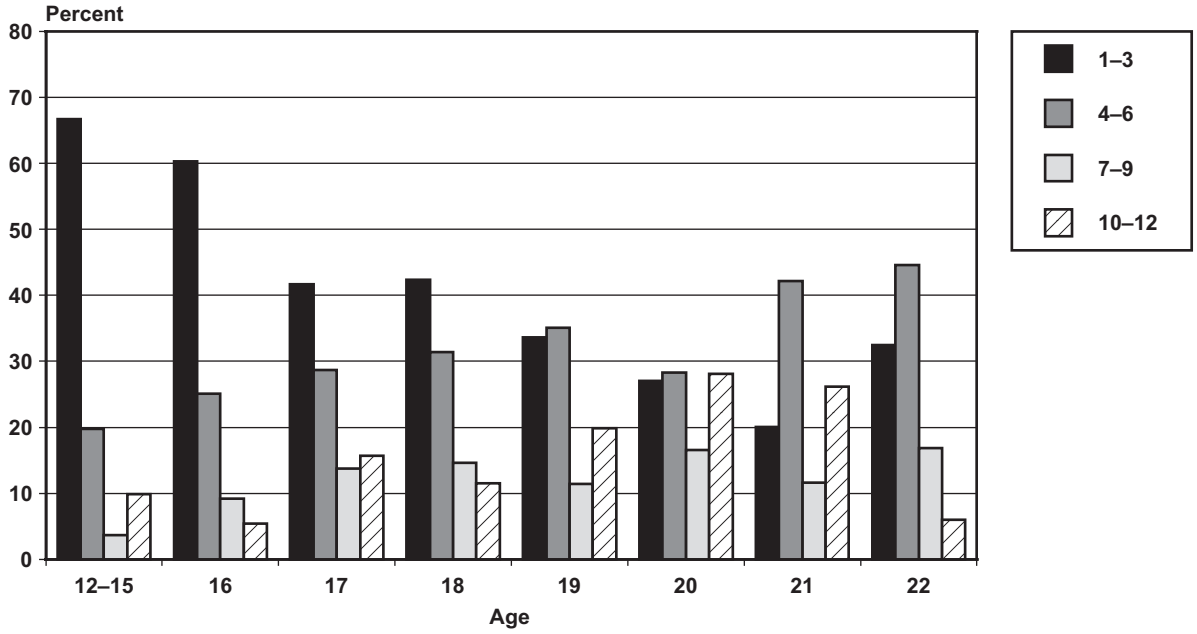
For further information on the categories, see Appendix D.

Chart 7 suggests that relatively few SSI recipients remain eligible for the SEIE long enough to lose it upon attaining age 22; far more people lose SEIE eligibility upon leaving school prior to age 22.

Changes in student status appeared to drive the summer decrease in the count of SEIE recipients. For purposes of the SEIE, a person retains student status during school vacations provided he or she plans to (and does) return to school when classes resume; thus, most individuals should not lose their student status at the beginning of summer vacations only to regain it at the end. High school graduation, however, could account for numerous losses of student status (and hence of SEIE status) in June and July.[14]

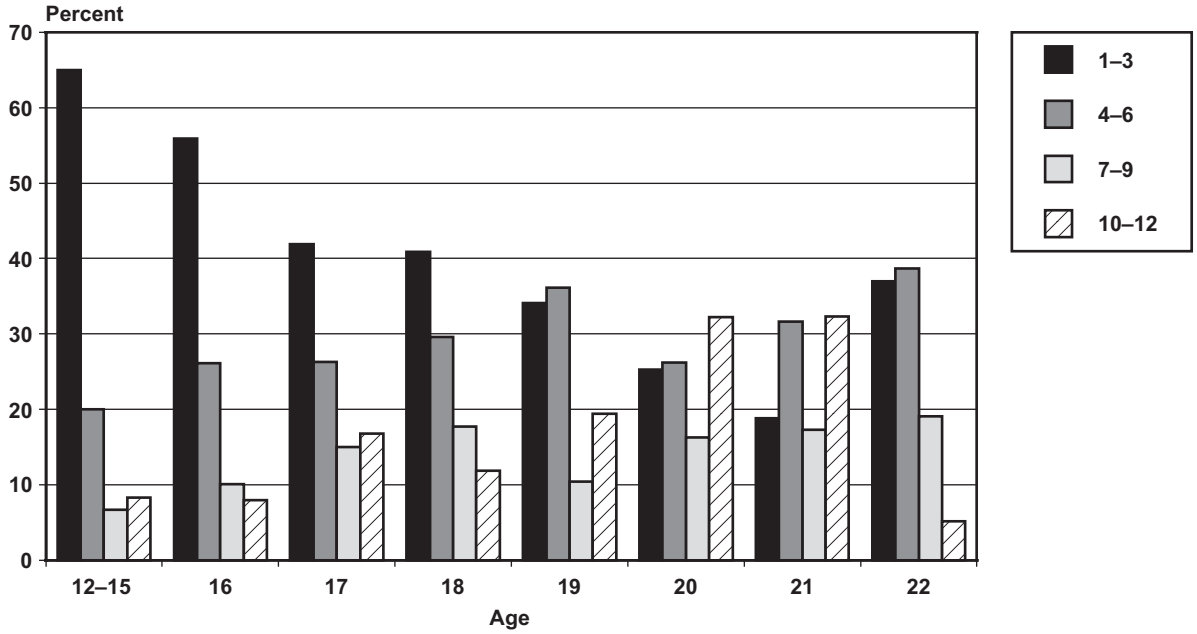
The calendar-year limit on the SEIE also contributed to seasonality in the monthly numbers of SEIE recipients. In particular, some SEIE recipients reached the annual limit each month from June through December; then, in January, most of them regained SEIE status.

Chart 2a.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by number of months with SEIE during 2004, by age



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 2b.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by number of months with SEIE during 2005, by age



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

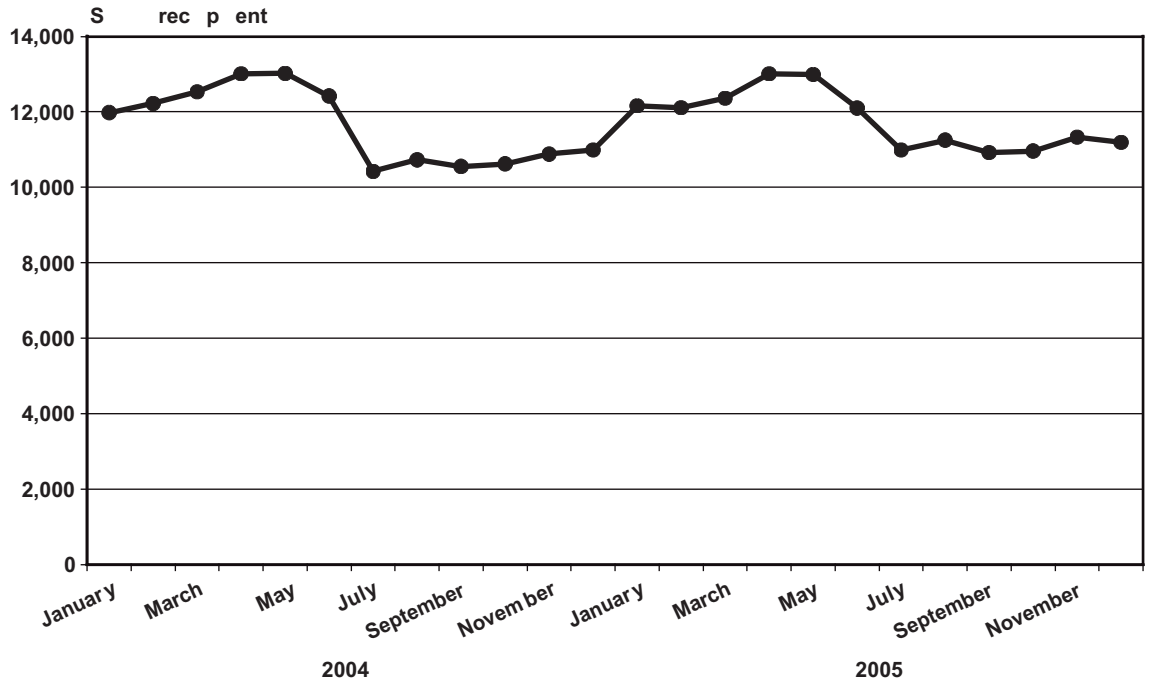
Table 6.
Percentage distribution of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) by number of months with SEIE during the calendar year, by age, 2004–2005 (population estimates)

Number of months	Age							
	12–15	16	17	18	19	20	21	22
				2004				
1–3	66.7	60.3	41.7	42.4	33.6	27.0	20.1	32.5
4–6	19.8	25.1	28.7	31.4	35.1	28.3	42.2	44.6
7–9	3.7	9.2	13.8	14.6	11.4	16.6	11.6	16.9
10–12	9.9	5.4	15.7	11.5	19.9	28.1	26.2	6.0
				2005				
1–3	65.0	55.9	41.9	40.9	34.1	25.3	18.8	37.0
4–6	20.0	26.1	26.3	29.6	36.1	26.2	31.6	38.7
7–9	6.7	10.1	15.0	17.7	10.4	16.3	17.3	19.1
10–12	8.3	8.0	16.8	11.9	19.4	32.2	32.3	5.2

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

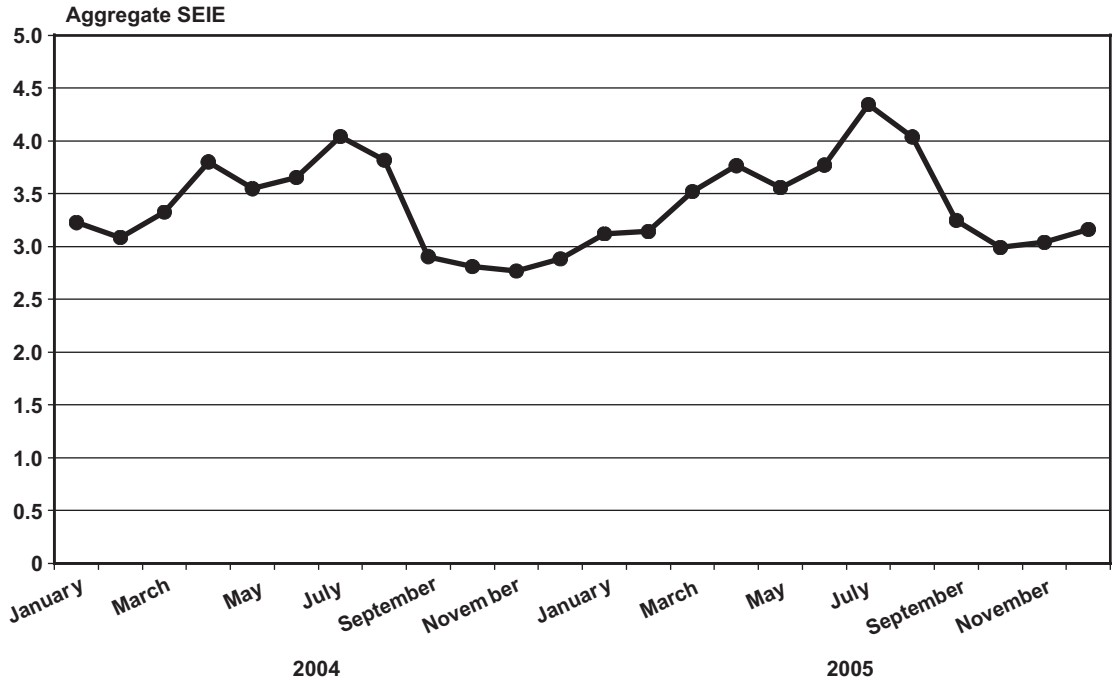
NOTE: Distribution totals do not necssarily equal 100.0 because of rounding.

Chart 3.
Number of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), monthly 2004–2005 (population estimates)



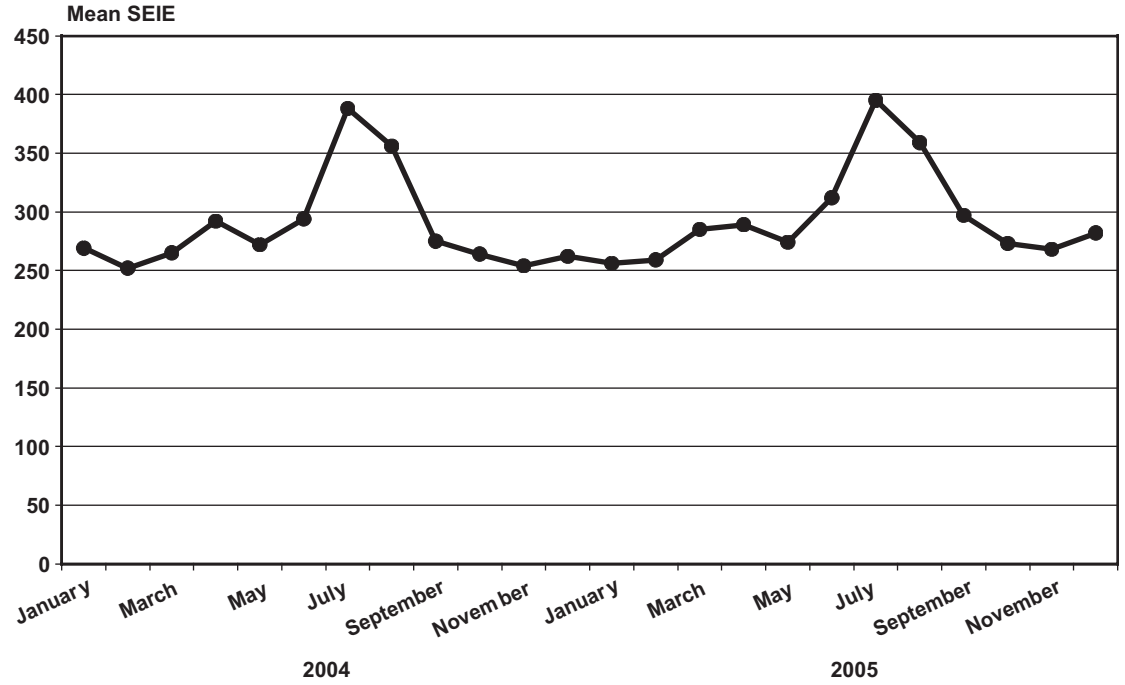
SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 4.
Aggregate Student Earned Income Exclusion (SEIE), all Supplemental Security Income (SSI) recipients, monthly 2004–2005 (millions of dollars; population estimates)



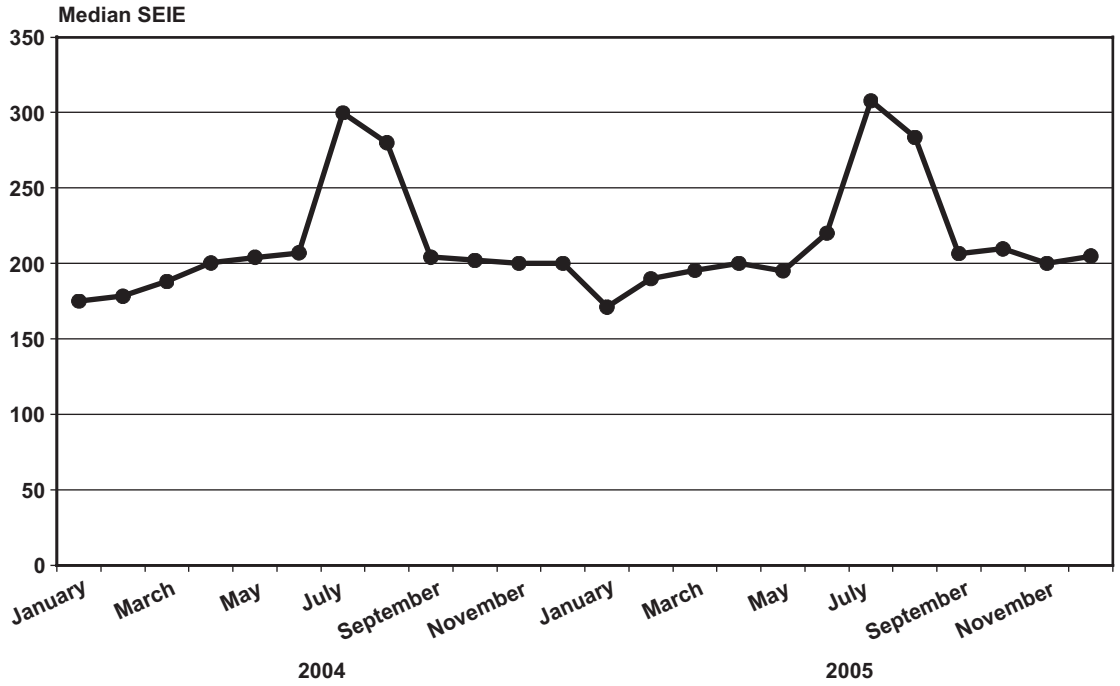
SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 5.
Mean Student Earned Income Exclusion (SEIE) among Supplemental Security Income (SSI) recipients with SEIE, monthly 2004–2005 (in dollars)



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 6.
Median Student Earned Income Exclusion (SEIE) among Supplemental Security Income (SSI) recipients with SEIE, monthly 2004–2005 (in dollars)



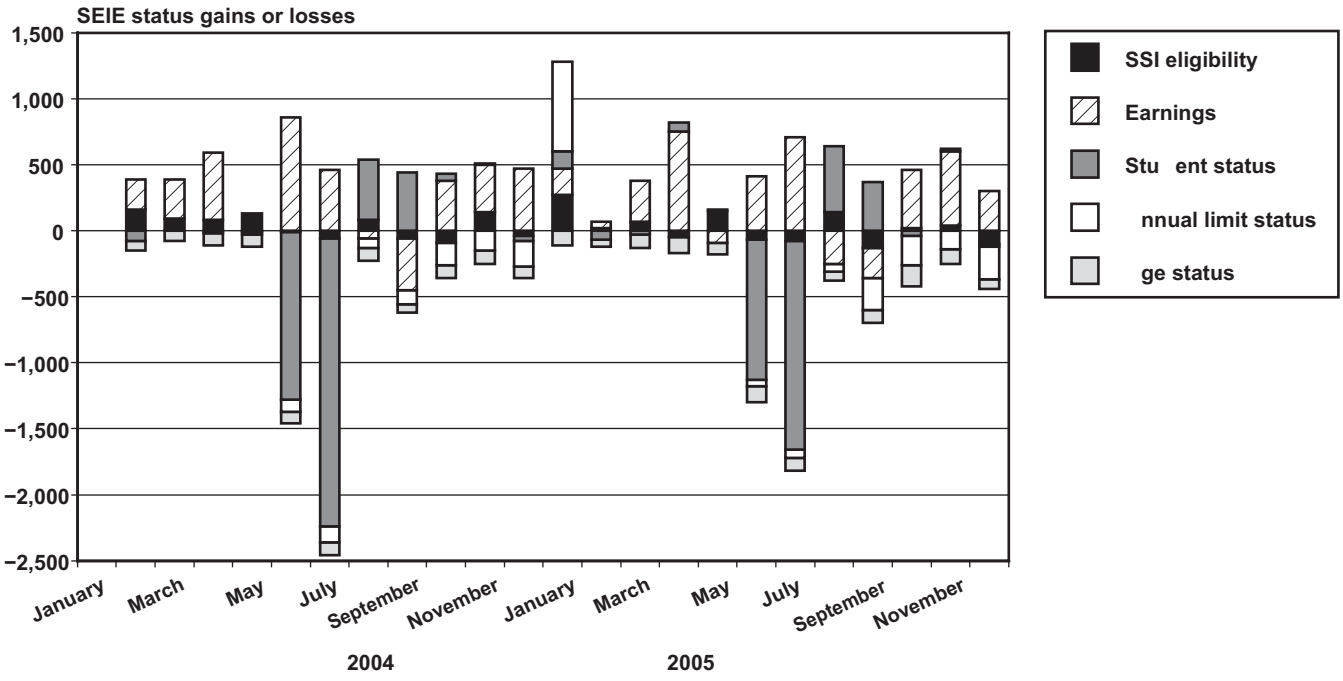
SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table 7.
Number of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE), mean and median SEIE among SEIE recipients, and aggregate SEIE in millions of dollars, by month, 2004–2005 (population estimates)

	Number of SSI recipients with SEIE		Mean SEIE among SEIE recipients ($)		Median SEIE among SEIE recipients ($)		Aggregate SEIE (millions of dollars)	
Month	2004	2005	2004	2005	2004	2005	2004	2005
January	11,980	12,160	269	256	175	171	3.226	3.118
February	12,220	12,110	252	259	178	190	3.084	3.140
March	12,530	12,360	265	285	188	195	3.324	3.519
April	13,010	13,010	292	289	200	200	3.799	3.764
May	13,020	12,990	272	274	204	195	3.546	3.556
June	12,420	12,100	294	312	207	220	3.652	3.769
July	10,420	10,990	388	395	300	308	4.040	4.343
August	10,730	11,250	356	359	280	284	3.816	4.035
September	10,550	10,920	275	297	204	207	2.903	3.246
October	10,620	10,960	264	273	202	210	2.808	2.989
November	10,880	11,330	254	268	200	200	2.766	3.038
December	10,990	11,190	262	282	200	205	2.881	3.160

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Chart 7.
Monthly gains and losses in number of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) attributable to each of five combinations of eligibility factors, 2004–2005 (population estimates)



SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

The bar segments in Chart 7, like the combinations of factors to which they correspond, are nonoverlapping. The first bar represents changes from January 2004 to February 2004; using 24 months' SEIE data, only 23 month-to-month changes could be calculated.

Table 8 shows the numeric values underlying Chart 7 and provides a more complete breakdown of the month-to-month changes in the count of SSI recipients with SEIE. It shows the number of gains, the number of losses, and the net change attributable to each category for each month. The table shows, for instance, that earnings were much more volatile than student status, in the sense that relatively small monthly net gains of SEIE status in the "earnings" category usually resulted from large numbers of mostly offsetting gains and losses.[15]

Summary

This article takes a preliminary descriptive look at SSI recipients with SEIE, attempting to answer the following questions: To what extent are SSI recipients using the SEIE? What are the characteristics of SEIE recipients? How intensively is the SEIE used by those who do use it? Which of the limitations on the SEIE—dollar maximums, age restrictions, and so on—are most often actually limiting? What seasonal patterns does SEIE receipt follow?

Regarding extent of SEIE use, there were about 26,000 SSI recipients with SEIE in each of the years 2004 and 2005; this represented about 3 percent of SSI recipients between the ages of 12 and 22 (Table 1). According to December counts (Table 7), the number of SEIE recipients exceeded the number of participants in PASS (Plan for Achieving Self Support), IRWE (Impairment Related Work Expenses), or BWE (Blind Work Expenses), even though none of the latter three provisions is age-limited (SSA 2005b, 2006). Working while attending school, at least among SSI recipients under age 22, is nearly tantamount to SEIE receipt; a person need not know about the SEIE to benefit from it, because the SEIE applies automatically when a student reports earned income—and income reporting is obligatory for SSI recipients. Nevertheless, even among SSI recipients who would presumably be high school

Table 8.
Monthly gains and losses in number of Supplemental Security Income (SSI) recipients with Student Earned Income Exclusion (SEIE) attributable to each of five combinations of eligibility factors, 2004–2005 (population estimates)

	Age	Annual limit		Student status			Earnings status			SSI eligibility		
Month	Losses	Gains	Losses	Gains	Losses	Net change	Gains	Losses	Net change	Gains	Losses	Net change
2004												
February	70	0	0	40	120	-80	1,040	810	230	290	130	160
March	80	0	0	30	30	0	960	660	300	180	90	90
April	90	0	0	60	80	-20	1,150	640	510	320	240	80
May	90	0	0	50	70	-20	930	940	-10	340	210	130
June	90	0	90	110	1,380	-1,270	1,880	1,020	860	160	170	-10
July	100	0	120	100	2,280	-2,180	2,120	1,660	460	210	270	-60
August	100	0	70	530	70	460	1,020	1,080	-60	180	100	80
September	60	0	110	490	50	440	1,750	2,140	-390	120	180	-60
October	100	0	170	150	100	50	1,840	1,460	380	190	280	-90
November	100	0	150	80	70	10	1,120	760	360	270	130	140
December	90	0	190	20	60	-40	1,010	540	470	190	230	-40
2005												
January	110	680	0	240	110	130	1,500	1,300	200	380	110	270
February	50	0	0	50	120	-70	1,010	960	50	150	130	20
March	100	0	0	60	90	-30	990	680	310	190	120	70
April	120	0	0	120	50	70	1,470	720	750	250	300	-50
May	90	0	0	50	40	10	870	960	-90	340	190	150
June	120	0	50	130	1,190	-1,060	1,550	1,140	410	130	200	-70
July	100	0	60	130	1,710	-1,580	2,350	1,640	710	150	230	-80
August	70	0	60	550	50	500	890	1,140	-250	280	140	140
September	100	0	240	460	90	370	1,940	2,170	-230	130	260	-130
October	160	0	220	80	120	-40	1,780	1,340	440	200	180	20
November	110	0	140	70	50	20	1,320	760	560	240	200	40
December	70	0	250	10	30	-20	920	620	300	200	300	-100

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

students—those aged around 18 or 19 years—the SEIE use rate (and hence the proportion of working students on SSI) was under 8 percent each year (Table 1). A visual inspection of state-by-state SEIE use rates does suggest possible wide variation (Tables 3a and 3b), similar geographically to that in state-by-state rates of work and Section 1619 participation (SSA 2005b, 2006). Also, the estimated SEIE use rate appeared a bit higher for persons diagnosed with nervous system disorders or mental retardation and a bit lower for persons diagnosed with other mental disorders (Table 1); this could have derived in part from variations by age in the prevalence of different disability diagnoses. The SEIE could potentially help an SSI recipient stay in school by making tuition more affordable or by defraying other costs of continued school attendance. Indeed, about 4 percent of SSI recipients were still working students (and SEIE recipients) as they approached the age-22 SEIE cutoff (Table 1). The question of how much the SEIE affected such individuals' decision to work and continue attending school remains open.

What are the characteristics of SEIE recipients? SSI recipients with SEIE were, roughly like SSI recipients in the 12–22 age group overall, predominantly male (about 60 percent) and overwhelmingly diagnosed with mental disabilities (about 75 percent). They were mostly 16–21 years old, with the highest concentration near ages 18 and 19 (Table 1).

How intensively is the SEIE used by those SSI recipients who do use it? Many SEIE recipients had only a few hundred dollars of earned income per year subject to the SEIE (Tables 4a and 4b) and thus technically received SEIE even though other earned income exclusions were redundant. Almost one-third of SEIE

recipients used less than 10 percent of the annual SEIE limit, and approximately half used less than 20 percent of the annual limit. Fewer and fewer SEIE recipients fell into each successive percentage-of-limit bracket, except for the highest bracket, which includes recipients with earnings equal to or greater than the SEIE limit; each year, about 4–5 percent of SSI recipients with SEIE reached the calendar-year SEIE limit (Table 5)—a few each month from May to December. The median annual SEIE amount was around $1,000, less than one-fifth of the limit (Tables 1, 3a, and 3b). About 70 percent of SSI recipients with SEIE received SEIE for 6 or fewer months; about 10 percent received SEIE continuously through the calendar year (Tables 4a and 4b).

Which of the limitations on the SEIE—dollar maximums, age restrictions, and so forth—are most often actually limiting? Most entries to the group of SEIE recipients occurred when an SSI recipient, already attending school, began working (Chart 7 and Table 8); most exits from the group of SEIE recipients occurred when an SEIE recipient ceased to attend school (almost always in June or July). The SEIE calendar-year limit did cause a smaller number of people to cycle out of the group of SEIE recipients and then back in the following January, and the proportion of SEIE recipients ceasing to qualify for SEIE because of the age constraint was similar to that affected by the annual limit—about 4–5 percent (Chart 7 and Table 8). This latter number excludes SSI recipients who did not actually receive SEIE in the month before reaching the age limit.

What seasonal patterns are evident? Apparently due to the large number of exits around what we might think of as the end of the spring school semester, the monthly number of SEIE recipients actually appeared to reach its annual trough in summer (Chart 3); aggregate SEIE amounts seemed to peak in the summer, however, as did average SEIE amounts, suggesting increased work activity during school vacations (Charts 4–6). Seasonal patterns observed in several charts in this article, particularly those involving exit and subsequent reentry caused by the SEIE annual limit (Chart 7), suggest that any future analyses of the SEIE should at least consider using full-year data rather than one monthly cross-section.

Appendix A: Effect of the SEIE on Total Income

How large is the financial effect of the SEIE? For SSI recipients with small amounts of earned income (up to $65 or even $85 per month, depending on unearned income), the SEIE is redundant with other income exclusions and thus has, arguably, no effect on its recipients' total income. For higher earners, it can have a great impact. For instance, in 2004, someone with no countable unearned income and monthly earned income equal to the monthly SEIE limit of $1,370 would typically receive no SSI payment if not eligible for the SEIE; with the SEIE, this person would receive the maximum monthly federal SSI payment of $564. A person with no countable unearned income and monthly earned income equal to one-twelfth of the annual SEIE limit, or $460, would receive an SSI payment of $376.50 without the SEIE or $564 with the SEIE, a difference of $187.50 per month. Depending on its type, unearned income in excess of $20 often reduces the federal SSI payment dollar for dollar, so typically the higher a person's unearned income, the more limited the potential impact of the SEIE.

Even people with the *same* total amounts of earned income, unearned income, and SEIE within a given calendar year theoretically could, simply due to the timing of the receipt of that income, receive substantially different SSI payments. This is a caveat for interpreting the amount of income excluded under SEIE as a measure of SEIE use, as it is not perfectly correlated with the monetary value of the SEIE to the recipient.

As an example, consider two SSI recipients who reach the annual limit near the middle of the year. Suppose one of them receives substantial unearned income in the months prior to reaching the annual limit and much less in subsequent months; this person will receive less total SSI during the year than the other, who has the same pattern of earnings and SEIE use but receives the bulk of the unearned income after reaching the annual limit rather than before. Table A-1 presents a hypothetical example, with values somewhat contrived so as to emphasize the disparity.

This example ignores certain technicalities related to deciding which month's countable income determines a given month's SSI payment amount, but if, for instance, we assume that neither person is due an SSI payment in December of the preceding year, then the scenario shown in the table is accurate except for a $100 understatement of the total calendar-year SSI amount for Person A.

Table A-1.
Hypothetical example of disparate effects of Student Earned Income Exclusion (SEIE) on total SSI payments (in dollars)

	Person A		Person B	
Payment computation step	January through June	July through December	January through June	July through December
Monthly unearned income	400	0	0	400
$20 general exclusion	(20)			(20)
Countable unearned income	380	0	0	380
Monthly earned income	945	945	945	945
SEIE	(945)	0	(945)	0
Remaining general exclusion		(20)		0
$65-plus-half-remainder exclusion		(495)		(505)
Countable earned income	0	430	0	440
Total countable income	380	430	0	820
Monthly SSI payment	199	149	579	0
Total annual SSI payments	2,088		3,474	

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Appendix B: Notes on Sample Selection and the Definition of "SEIE Recipients"

Several practical issues affected sample selection. The data selection necessarily excluded persons for whom explicit SEIE amounts were unavailable, most notably SEIE recipients who were ineligible for SSI (such as deemors and ineligible children—see note 5) and SEIE recipients who were members of eligible couples (that is, couples with both spouses eligible for SSI). Because of changes in the law that took effect in April 2005, eligible couples and deemors qualified for the SEIE only during the last 9 of the 24 months covered by the data; in this sense, their exclusion keeps the selection criteria for the data set more consistent over time. In some other cases, SEIE recipients may not have been identifiable as such from the available data, but such instances are probably rare. Of the 3,999 SEIE recipients originally selected, 9 were dropped because of difficulties parsing their records' data.

Even after everyone for whom complete SEIE data were available had been identified, definitional choices arose; the definition of "SEIE recipient" in this article is but one of several reasonable alternatives. Two principles guided its choice. The first principle was to focus on "cash SSI recipients"—disregarding, for example, SEIE amounts posted to the not-yet-terminated SSI record of someone who no longer met the SSI disability criteria. The second principle was to focus on people whose SSI eligibility or payment amount was actually affected by the SEIE.

These principles led to decisions to eliminate from the analysis any SEIE amounts posted during a long period of Section 1619(b) status or during a series of nonpayment months long enough that a new SSI application would be needed before SSI payments could resume. The decision to eliminate SEIE amounts posted during shorter periods of nonpayment months interspersed with months when SSI payment was due was more difficult: The two principles conflict here, as such SEIE amounts can interact with the calendar-year SEIE limit to affect subsequent SEIE receipt. However, elimination criteria involving nonpayment status or absence of SEIE "continuing through the end of the calendar year" would have serious drawbacks. Even though such criteria would perhaps be the most obvious way of keeping SEIE amounts that might affect subsequent ones while discarding others, they could bias the results by eliminating months occurring later in the calendar year more often than those occurring earlier. Consequently, all nonpayment months were eliminated, restricting the definition of "SEIE recipients" to those persons who were due an SSI payment in a month when the SEIE applied.

This definition yields a group that is mostly inclusive of, but somewhat larger than, the second principle's group of persons actually affected by the SEIE. In particular, SEIE amounts were counted for some months that would have been months of SSI eligibility even had the SEIE not applied; such SEIE amounts only sometimes increase the SSI payment amount as compared with the counterfactual situation involving no SEIE. Because of redundant exclusions (if earnings are $65 or less per month, then the "$65 plus half remainder" earned income exclusion will reduce a nonstudent's countable income as much as the SEIE would a student's), SEIE amounts associated with monthly earned income of $65 or less can never affect SSI eligibility or payment amount. Yet person-months with earned income under $65 were included in the analysis. Focusing on the group of "persons whose SSI eligibility or payment amount was affected by the SEIE" would have required hypothetical calculations of what SSI payment amounts would have been had the SEIE not been involved, and not all the data required for such calculations were obtained. Instead, the slightly more inclusive definition of the population of interest, given above, was chosen.

One final point deserves mention. Some states provide supplementary payments to SSI recipients, and it is possible for countable income to be too high for federal SSI payment in a particular month yet low enough for a state supplementary payment to be made. In this article, for states where SSA administers the supplementary payments, such months are counted as months of SSI receipt. This may make counts of SEIE recipients slightly higher than they would have been in the absence of federally-administered state supplementation; from another point of view, it creates some state-to-state variation in the maximum amount of income that a person can have and still be counted in this article as having received SSI and the SEIE.

Appendix C: Sampling Variability

The numbers presented in this article are subject to sampling variability; they are only estimates of numbers for the full population of SSI recipients with SEIE. Differences between the statistics for 2004 and those for 2005, if small relative to their standard errors, may have resulted from sampling variability rather than from actual differences in the full population of SEIE recipients. This also applies to differences

between statistics (such as estimated mean SEIE amounts) across different groups of SEIE recipients.

The 10 percent sample file is the most complete source of longitudinal SEIE data readily available for statistical purposes. It is drawn from the Supplemental Security Record (SSR)—a database of all persons who have ever filed for SSI or were converted from state assistance payments to SSI in January 1974—based on the last two digits of SSI recipients' Social Security numbers (SSNs). Because any particular person's SSN is very nearly equally likely to end in any of the 100 possible pairs of digits 00 through 99, the 10 percent sample file can be regarded as a simple random sample.

Standard errors for median SEIE amounts were calculated by bootstrap. Standard errors for total numbers and percents of persons and for mean SEIE amounts were calculated according to the basic formulas for simple random samples or domains (subpopulations) thereof.[16] Calculations were based on the original sample size of about 700,000 SSI recipients, not the much smaller intersection of that sample with the set of SEIE recipients. The sampling fraction for SSI recipients was assumed to be exactly 10 percent (which should be very close to true), and the formulas all involved a finite population correction. In cases where the SAS SURVEYMEANS procedure was used (for

Table C-1a.
Estimated standard errors for numbers of SSI recipients with SEIE, 2004

Estimated number of SSI recipients with SEIE	Estimated standard error	Estimated number of SSI recipients with SEIE	Estimated standard error
26	15	3,387	175
52	22	3,647	181
78	26	3,908	187
104	31	4,168	194
130	34	4,429	200
195	42	4,689	205
261	48	4,950	211
326	54	5,210	216
391	59	5,731	227
456	64	6,252	237
521	68	6,773	247
586	73	7,294	256
651	77	7,815	265
716	80	8,336	274
782	84	8,857	282
912	91	9,378	290
1,042	97	9,899	298
1,172	103	10,420	306
1,303	108	11,723	325
1,433	114	13,025	342
1,563	119	14,328	359
1,693	123	15,630	375
1,824	128	16,933	390
1,954	133	18,235	405
2,084	137	19,538	419
2,214	141	20,840	432
2,345	145	22,143	446
2,475	149	23,445	459
2,605	153	24,748	471
2,866	161	26,050	483
3,126	168		

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-1b.
Estimated standard errors for numbers of SSI recipients with SEIE, 2005

Estimated number of SSI recipients with SEIE	Estimated standard error	Estimated number of SSI recipients with SEIE	Estimated standard error
26	15	3,335	173
51	21	3,591	180
77	26	3,848	186
103	30	4,104	192
128	34	4,361	198
192	42	4,617	204
257	48	4,874	209
321	54	5,130	215
385	59	5,643	225
449	64	6,156	235
513	68	6,669	245
577	72	7,182	254
641	76	7,695	263
705	80	8,208	272
770	83	8,721	280
898	90	9,234	288
1,026	96	9,747	296
1,154	102	10,260	304
1,283	107	11,543	322
1,411	113	12,825	339
1,539	118	14,108	356
1,667	122	15,390	372
1,796	127	16,673	387
1,924	132	17,955	401
2,052	136	19,238	416
2,180	140	20,520	429
2,309	144	21,803	442
2,437	148	23,085	455
2,565	152	24,368	467
2,822	159	25,650	480
3,078	166		

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

example, for standard errors of mean SEIE amounts), the Taylor series linearization formulas implemented by this procedure simplify to the basic simple random sample formulas. The statistics in Table 8 are differences between pairs of estimated population totals; the standard error estimates (see Table C-7) include an estimated covariance term.

Tables C-1a and C-1b provide standard errors for estimated total numbers of SSI recipients with SEIE. Tables C-1c and C-1d provide standard errors for estimated proportions of all SSI recipients with SEIE. This presentation format is possible because, given the sample size and sampling fraction (and for the proportions, also the total number of SSI recipients with SEIE in the sample), these standard errors depend only on the value of the statistic itself. Subsequent Appendix C tables correspond to specific tables found in the main article and give standard errors for quantities, such as estimated mean SEIE amounts, estimated proportions of subpopulations of SEIE recipients, and net changes in numbers of SSI recipients with SEIE, that are not amenable to the presentation format of Tables C-1a through C-1d. If a table from the main article does not have a corresponding Appendix C table, the reader may conclude that the standard errors in Tables C-1a through C-1d are applicable.

Table C-1c.
Estimated standard errors for percentages that have the total number of SEIE recipients (26,050 in 2004) as the denominator

Estimated percentage	Estimated standard error	Estimated percentage	Estimated standard error
0.10	0.06	13.00	0.63
0.20	0.08	14.00	0.64
0.30	0.10	15.00	0.66
0.40	0.12	16.00	0.68
0.50	0.13	17.00	0.70
0.75	0.16	18.00	0.71
1.00	0.18	19.00	0.73
1.25	0.21	20.00	0.74
1.50	0.23	22.00	0.77
1.75	0.24	24.00	0.79
2.00	0.26	26.00	0.82
2.25	0.28	28.00	0.83
2.50	0.29	30.00	0.85
2.75	0.30	32.00	0.87
3.00	0.32	34.00	0.88
3.50	0.34	36.00	0.89
4.00	0.36	38.00	0.90
4.50	0.39	40.00	0.91
5.00	0.41	45.00	0.92
5.50	0.42	50.00	0.93
6.00	0.44	55.00	0.92
6.50	0.46	60.00	0.91
7.00	0.47	65.00	0.89
7.50	0.49	70.00	0.85
8.00	0.50	75.00	0.80
8.50	0.52	80.00	0.74
9.00	0.53	85.00	0.66
9.50	0.55	90.00	0.56
10.00	0.56	95.00	0.41
11.00	0.58	100.00	0.00
12.00	0.60		

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-1d.
Estimated standard errors for percentages that have the total number of SEIE recipients (25,650 in 2005) as the denominator

Estimated percentage	Estimated standard error	Estimated percentage	Estimated standard error
0.10	0.06	13.00	0.63
0.20	0.08	14.00	0.65
0.30	0.10	15.00	0.67
0.40	0.12	16.00	0.69
0.50	0.13	17.00	0.70
0.75	0.16	18.00	0.72
1.00	0.19	19.00	0.73
1.25	0.21	20.00	0.75
1.50	0.23	22.00	0.78
1.75	0.25	24.00	0.80
2.00	0.26	26.00	0.82
2.25	0.28	28.00	0.84
2.50	0.29	30.00	0.86
2.75	0.31	32.00	0.87
3.00	0.32	34.00	0.89
3.50	0.34	36.00	0.90
4.00	0.37	38.00	0.91
4.50	0.39	40.00	0.92
5.00	0.41	45.00	0.93
5.50	0.43	50.00	0.94
6.00	0.44	55.00	0.93
6.50	0.46	60.00	0.92
7.00	0.48	65.00	0.89
7.50	0.49	70.00	0.86
8.00	0.51	75.00	0.81
8.50	0.52	80.00	0.75
9.00	0.54	85.00	0.67
9.50	0.55	90.00	0.56
10.00	0.56	95.00	0.41
11.00	0.59	100.00	0.00
12.00	0.61		

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-2.
Estimated standard errors for Table 1

Recipient characteristic	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
		2004		
Overall	27.46	28.03	2,601	0.05
Age				
12–15	82.05	78.17	1,679	0.02
16	60.04	70.11	829	0.18
17	75.95	86.11	795	0.24
18	57.78	55.44	854	0.27
19	61.37	69.93	856	0.24
20	77.58	96.25	812	0.25
21	84.34	110.42	817	0.21
22	120.12	165.71	767	0.18
Sex				
Female	43.12	48.30	1,665	0.09
Male	35.55	32.98	2,106	0.07
Diagnosis group				
Nervous system disorders	83.13	133.16	886	0.18
Mental retardation	39.47	35.33	1,637	0.10
Other mental disorders	48.11	40.70	1,713	0.07
Other	83.07	88.90	1,003	0.15
		2005		
Overall	29.72	29.71	2,638	0.05
Age				
12–15	105.25	105.90	1,688	0.02
16	72.89	75.72	862	0.17
17	67.70	69.35	831	0.24
18	64.65	80.22	880	0.23
19	65.82	50.18	858	0.24
20	87.53	117.94	836	0.21
21	99.80	135.21	829	0.21
22	121.17	109.16	769	0.18
Sex				
Female	46.16	45.72	1,684	0.08
Male	38.70	40.09	2,144	0.06
Diagnosis group				
Nervous system disorders	92.90	99.40	886	0.18
Mental retardation	42.80	39.20	1,618	0.10
Other mental disorders	50.64	54.59	1,792	0.07
Other	91.63	110.27	1,012	0.14

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-3.
Estimated standard errors for Table 2

Year and diagnosis group	Age							
	12–15	16	17	18	19	20	21	22
				2004				
Nervous system disorders	2.76	1.23	1.17	1.17	1.44	1.70	2.17	3.30
Mental retardation	5.01	2.91	2.46	1.94	2.15	2.38	2.75	3.66
Other mental disorders	5.27	3.07	2.41	1.88	1.98	2.03	2.17	2.72
Other	3.15	1.97	1.82	1.22	1.39	1.82	2.13	2.35
				2005				
Nervous system disorders	4.56	1.54	0.98	1.27	1.39	1.91	1.92	3.01
Mental retardation	5.18	2.80	2.20	2.09	2.11	2.58	2.66	3.57
Other mental disorders	6.11	3.07	2.27	1.97	1.96	2.25	2.31	2.77
Other	4.16	2.01	1.47	1.30	1.35	1.91	1.98	2.69

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-4a.
Estimated standard errors for Table 3a

State	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Alabama	334.20	371.99	442	0.21
Alaska	a	a	99	0.88
Arizona	229.92	203.07	343	0.42
Arkansas	361.06	432.65	334	0.26
California	106.46	60.68	877	0.13
Colorado	340.08	333.84	240	0.67
Connecticut	298.10	338.83	241	0.80
Delaware	181.99	147.05	163	1.26
District of Columbia	266.98	a	176	0.54
Florida	176.79	250.94	746	0.14
Georgia	317.66	408.22	482	0.15
Hawaii	770.41	a	118	1.35
Idaho	221.04	339.88	186	0.73
Illinois	100.55	145.68	603	0.30
Indiana	163.98	124.02	379	0.45
Iowa	159.65	107.28	247	1.06
Kansas	299.97	396.16	237	0.82
Kentucky	269.37	355.65	433	0.22
Louisiana	279.48	264.45	468	0.19
Maine	305.32	364.97	183	0.83
Maryland	255.81	476.02	351	0.47
Massachusetts	159.42	250.42	390	0.52
Michigan	129.61	169.91	542	0.28
Minnesota	129.88	127.13	311	0.90
Mississippi	616.36	1,099.65	392	0.16
Missouri	159.91	179.87	394	0.44
Montana	244.13	199.56	126	2.07
Nebraska	275.29	325.47	178	1.17
Nevada	302.38	748.43	208	0.62
New Hampshire	212.98	234.99	144	1.95

(Continued)

Table C-4a.
Estimated standard errors for Table 3a—*Continued*

State	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
New Jersey	139.44	161.63	395	0.46
New Mexico	355.71	408.09	242	0.69
New York	83.40	95.80	706	0.24
North Carolina	166.82	222.70	506	0.26
North Dakota	398.68	397.63	103	2.74
Ohio	89.50	111.53	573	0.37
Oklahoma	161.54	232.80	311	0.59
Oregon	286.32	190.06	258	0.55
Pennsylvania	95.50	98.91	654	0.26
Rhode Island	a	a	181	0.26
South Carolina	366.94	507.01	365	0.29
South Dakota	199.14	278.91	130	2.54
Tennessee	344.78	695.44	412	0.26
Texas	147.72	151.50	705	0.17
Utah	455.47	561.49	186	0.81
Vermont	183.79	365.04	132	2.04
Virginia	192.31	455.05	414	0.40
Washington	246.01	266.80	351	0.41
West Virginia	311.03	473.26	262	0.45
Wisconsin	125.65	98.95	362	0.62
Wyoming	233.94	427.82	90	2.50
Other/unknown	…	…	40	…

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: . . . = not applicable.

a. Not applicable for suppressed value.

Table C-4b.
Estimated standard errors for Table 3b

State	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Alabama	390.72	737.09	440	0.22
Alaska	478.58	a	108	1.26
Arizona	272.98	408.15	348	0.36
Arkansas	279.42	223.31	340	0.26
California	121.99	78.54	892	0.13
Colorado	399.22	667.67	244	0.60
Connecticut	267.62	129.19	243	0.73
Delaware	276.12	419.94	165	1.10
District of Columbia	611.03	975.74	185	0.65
Florida	167.45	264.20	758	0.14
Georgia	419.43	722.04	488	0.13
Hawaii	606.29	a	117	1.23
Idaho	579.25	860.80	188	0.75
Illinois	120.82	137.06	603	0.29
Indiana	184.05	219.37	386	0.44

(Continued)

Table C-4b.
Estimated standard errors for Table 3b—*Continued*

State	Mean SEIE among SEIE recipients ($)	Median SEIE among SEIE recipients ($)	Number of SSI recipients aged 12–22	SEIE use rate (%)
Iowa	233.46	93.89	251	0.95
Kansas	200.63	264.77	233	0.92
Kentucky	272.16	528.32	440	0.23
Louisiana	372.67	456.44	479	0.18
Maine	596.43	763.59	188	0.68
Maryland	232.14	410.99	359	0.46
Massachusetts	179.13	235.94	400	0.47
Michigan	132.36	153.62	553	0.26
Minnesota	168.00	137.78	315	0.80
Mississippi	407.07	433.70	389	0.20
Missouri	184.08	250.11	395	0.42
Montana	332.57	138.09	130	1.87
Nebraska	329.88	312.33	175	1.14
Nevada	404.29	680.57	209	0.58
New Hampshire	328.53	455.44	149	1.39
New Jersey	131.56	159.13	403	0.45
New Mexico	372.13	311.30	248	0.59
New York	89.27	57.65	717	0.24
North Carolina	152.20	195.70	516	0.27
North Dakota	518.15	763.43	104	2.60
Ohio	107.18	126.20	578	0.36
Oklahoma	225.28	125.82	315	0.56
Oregon	275.83	172.55	262	0.52
Pennsylvania	90.20	143.23	674	0.26
Rhode Island	931.27	a	186	0.42
South Carolina	492.92	861.68	369	0.24
South Dakota	223.08	246.14	128	2.37
Tennessee	363.75	476.11	410	0.26
Texas	137.74	248.21	731	0.16
Utah	441.17	425.40	191	0.83
Vermont	251.72	588.34	138	1.99
Virginia	181.28	206.08	426	0.35
Washington	327.56	440.13	360	0.38
West Virginia	416.32	550.43	267	0.35
Wisconsin	133.63	150.37	367	0.58
Wyoming	316.55	a	85	2.00
Other/unknown	…	…	41	…

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: . . . = not applicable.

a. Not applicable for suppressed value.

Table C-5.
Estimated standard errors for Table 6

Number of months	Age							
	12–15	16	17	18	19	20	21	22
				2004				
1–3	4.97	3.00	2.46	1.93	2.04	2.13	2.22	3.45
4–6	4.20	2.66	2.26	1.81	2.06	2.16	2.73	3.66
7–9	1.99	1.77	1.72	1.38	1.37	1.78	1.77	2.76
10–12	3.15	1.39	1.82	1.25	1.73	2.15	2.43	1.75
				2005				
1–3	5.84	3.05	2.25	2.06	2.01	2.26	2.10	3.48
4–6	4.90	2.70	2.00	1.91	2.04	2.29	2.49	3.51
7–9	3.06	1.85	1.63	1.60	1.29	1.92	2.03	2.83
10–12	3.39	1.67	1.70	1.35	1.67	2.43	2.51	1.60

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-6.
Estimated standard errors for Table 7

Month	Mean SEIE among SEIE recipients ($)		Median SEIE among SEIE recipients ($)		Aggregate SEIE (thousands of dollars)	
	2004	2005	2004	2005	2004	2005
January	7.37	6.84	9.17	9.84	125	119
February	6.55	6.49	7.84	7.50	116	116
March	6.81	7.21	8.68	6.51	123	130
April	7.32	7.09	7.46	6.78	138	135
May	6.28	6.38	7.19	7.02	124	125
June	7.26	7.91	10.40	9.85	133	140
July	9.38	9.70	9.95	11.44	154	164
August	8.47	8.48	10.72	11.19	143	149
September	7.27	7.78	7.89	10.21	114	126
October	6.59	6.88	7.48	6.67	108	114
November	6.23	6.58	6.15	5.46	104	114
December	6.52	7.26	7.59	7.04	109	121

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

Table C-7.
Estimated standard errors for Table 8

Month	Net change in— Student status	Earnings status	SSI eligibility
2004			
February	38	102	129
March	23	94	121
April	35	105	127
May	33	95	130
June	116	171	162
July	146	199	184
August	73	99	137
September	70	127	187
October	47	132	172
November	37	103	130
December	27	98	118
2005			
January	56	120	159
February	39	101	133
March	37	99	123
April	39	117	140
May	28	90	128
June	109	157	156
July	129	191	189
August	73	92	135
September	70	135	192
October	42	131	168
November	33	111	137
December	19	92	118

SOURCE: Author's calculations based on Social Security Administration's Supplemental Security Record (custom extract), 10 percent data.

NOTE: Standard errors for the other statistics presented in Table 8 are available in Tables C-1a and C-1b.

Appendix D: Notes on Chart 7 and Table 8 Categories

Chart 7 and Table 8 break down the monthly changes in the count of SSI recipients with SEIE according to the factors causing gain or loss of SEIE status. The analysis classifies persons gaining SEIE status only according to the *last* criteria to be met and persons losing SEIE only according to the *first* criteria they cease to meet. In other words, it classifies persons according to the factors that most proximately bring about the gain or loss of SEIE.

Although a gain or loss of SSI-with-SEIE status can result from a change in any 1 of 15 or more eligibility factor combinations, this analysis lumps these combinations of factors into just five categories both to ease visual interpretation and to keep standard errors in check.[17] The following principles guided the creation of the categories:

1. Materiality. Combinations of factors that account for only a small number of gains or losses should be lumped together to the greatest extent reasonable. Losses of SEIE involving attainment of age 22 are all lumped together, no matter what other criteria concurrently cease to be met, partly for this reason. Similar reasoning applies to gains and losses involving the annual limit, since relatively few people reach the annual limit each month. Except when attainment of age 22 is involved, losses of SEIE due to any combination of factors involving the annual limit are all lumped together.
2. Permanence. If a change in one eligibility factor is more "permanent" than a change in others, then any combinations involving this relatively permanent factor should be lumped together. For example, attainment of age 22 causes permanent loss of SEIE, affording yet another reason for lumping into a single category all losses of SEIE involving attainment of age 22. The annual limit has a secondary degree of permanence, in that once someone reaches the annual limit, SEIE cannot resume until the next calendar year. This provides a second reason for lumping together all SEIE gains and losses that involve the annual limit but not attainment of age 22.
3. Seasonality. If seasonal patterns in one eligibility factor seem to drive seasonal patterns in the gains and losses of SEIE resulting from several combinations of factors, then these combinations should be isolated in their own category, separate from other combinations of factors that do not exhibit the same seasonal behavior. For example, concurrent changes in student status and earnings were put into the "student status" category because a visual inspection suggested that the seasonal pattern of the concurrent changes is more similar to that of student status than to that of earnings. The same reasoning was applied to concurrent changes in SSI eligibility and earnings or student status, which appeared to follow the latter two factors' seasonal patterns.
4. Causality. If a change in one eligibility factor causes a change in some combination of factors, then this combination can't be categorized separately from the causative factor. According to the SSI definition, student status is lost upon attainment of age 22; thus among persons turning 22,

those who cease to attend school are, from the data used for this article, indistinguishable from those who continue to attend. This makes the lumping of concurrent age and student status changes into the "age" category the only viable option.

Five nonoverlapping categories result: (1) SSI eligibility alone; (2) earnings, alone or concurrently with SSI eligibility; (3) student status, alone or concurrently with earnings or SSI eligibility; (4) annual limit status, alone or concurrently with student status, earnings, or SSI eligibility; and (5) age status, alone or concurrently with any other factors.

A change in category (1), the "SSI eligibility" category, represents either a first month with SSI payment due on a newly filed SSI claim or a subsequent suspension or reinstatement of SSI payments. Persons who were already working and attending school and gained SEIE upon becoming newly eligible for SSI should fall into this category. An SEIE amount can be posted to an SSI record regardless of whether SSI payment is due for the month in question; however, this article focuses on just those person-months with SSI payment due as well as SEIE posted. Consequently, Chart 7 registers a loss in category (1) for each person whose SSI payments are suspended and a gain in category (1) for each person whose SSI payments are reinstated, provided they meet the earnings, student status, annual limit status, and age criteria for receipt of SEIE both before and after the suspension or reinstatement.

Changes in category (5), the "age" category, by definition involve attainment of age 22 and as such always result in loss of SEIE status. Changes in category (4), the "annual limit" category, between June and December necessarily result in loss of SEIE, while those in January necessarily result in gain of SEIE. Changes in category (4) cannot occur between February and May because the monthly limit makes reaching the annual limit prior to May impossible. Changes in category (2), the "earnings" category, refer to a gain of SEIE status due to commencement of positive earnings or a loss of SEIE due to cessation of earnings. Changes in categories (1), (2), or (3) (the "SSI eligibility," "earnings," and "student status" categories) can be gains or losses; for each of these categories, the chart shows the net change, that is, gains attributable to that category minus losses attributable. Gains in category (3), the "student status" category, could involve persons entering grade 7 (the lowest grade that confers student status for SSI purposes) or persons returning to school after a gap in attendance (other than a regular school vacation). If, prior to April 2005, someone lost or gained SEIE recipiency because of child status (that is, head of household or marital status), then the change would appear in category (3), the "student status" category. (The portion of student status changes attributable to child status, however, is negligible.)

Notes

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[1] The concept of a floor on "total income" can only roughly describe the role of the SSI program, however. The SSI payment calculation takes into account food and shelter received "in kind" as well as certain family members' incomes; these items complicate the concept of SSI recipients' "total income." Also, individuals may receive assistance from other programs—such as food stamps—without their SSI payments being affected.

[2] An SSI recipient is considered "under age 22" through the month when age 22 is attained. Under Social Security Administration (SSA) rules, age 22 is attained on the day preceding the 22nd birthday.

[3] For purposes of the SSI program, "aged" means 65 or older. Because of SEIE's age-22 cutoff, those who qualify necessarily fall in the "disabled" and "blind" categories. The SSI program defines "disabled" as having a medically determinable physical or mental impairment that is expected either to last at least 12 consecutive months from the date of onset or to result in death and that (1) for persons under age 18, results in marked and severe functional limitations or (2) for persons age 18 or older, prevents any substantial gainful activity (SGA). (For a discussion of SGA, see note 7.) The SSI program defines "blind" as having central visual acuity of 20/200 or less in the better eye with the use of a correcting lens, or tunnel vision of 20 degrees or less. These are the basic definitions; several additional complexities arise in their application.

[4] The SSI payment computation summarized here is relevant for most (if not all) of the SEIE participants for whom data were collected for this article but omits some complexities (for instance state supplementation rules, which vary from state to state). For more information on SSI, see SSA (2007, 1–11). For detailed information on the SEIE, including examples of SEIE computations, see SSA (2009b).

[5] Potential SEIE recipients include not only persons who are eligible for SSI but also deemors and ineligible children of deemors. For a discussion of deeming, see SSA (2007, 5–6) or, for more detail, see SSA (2009c). For a discussion of ineligible children and the SEIE, see SSA (2002).

[6] For specifics on the definition of "regular school attendance," see SSA (2009a).

[7] SGA is integral to the initial disability determination for SSI. Inability to engage in SGA is an important part of the definition of disability for adult claimants, and a child claimant is found not disabled if actually engaging in SGA. Once initial eligibility for SSI has been established, performance of SGA does not, by itself, cause SSI to terminate. SSI can be terminated on the basis of "medical improvement," however, and performance of SGA can trigger a continuing disability review (a review of the medical evidence to determine whether medical improvement has occurred). The dollar amount of earnings serves as a rough indicator of whether certain work activity qualifies as SGA, although for persons claiming SSI on the basis of blindness, there is no SGA limit.

[8] Under the definition of "age in a given calendar year" chosen for this article, a person is 22 years old in the year containing the first month in which he or she is, due to attainment of age 22, no longer eligible for the SEIE. Consequently, in tables and charts that show measures of SEIE use broken down by age, any declines in SEIE use among persons classified as 21 cannot be attributed to the age-22 cutoff.

[9] See Table 25 in SSA (2005a) and Table 23 in SSA (2007).

[10] See Chart 2 and Table 2 in SSA (2005b, 2006).

[11] See Chart 6 and Table 9 in SSA (2005b, 2006).

[12] In reality, SEIE amounts applied during months when someone is ineligible for SSI do count toward the SEIE annual limit. However, Table 5, like most of this article, counts only those SEIE amounts that applied to income earned in a month when an SSI payment was due. Consequently, the number of persons counted as having reached the annual limit between May and November in Table 5 is somewhat smaller than the actual number of persons who were ineligible for SEIE in December because of the annual limit.

[13] See Table 15 in SSA (2005b, 2006) for December statistics on PASS, IRWE, and BWE participation.

[14] The administrative data do not indicate the type of school attended (for example, high school, college, or vocational school) or the type of work done (for example, competitive labor market, school-related employment program, or sheltered workshop) by the SEIE recipient.

[15] Reaching the calendar-year SEIE limit in May in Table 5 corresponds to losing the SEIE in June in Chart 7 and Table 8. Reaching the calendar-year SEIE limit in December in Table 5 does not itself result in loss of SEIE because eligibility resumes the following month with the start of a new calendar year.

In some months, the number of losses of SEIE in the "annual limit" category in Chart 7 and Table 8 is slightly smaller than the corresponding number of persons shown reaching the annual limit in Table 5. In other months, it is slightly larger.

The first type of discrepancy arises because, in Chart 7 and Table 8, a person who ceased to receive SEIE upon attaining age 22 and reaching the annual limit in the same month is assigned to the "age" category rather than the "annual limit" category.

The second type of discrepancy arises because for Chart 7 and Table 8, an SEIE amount counts toward the annual limit even if it applied to income earned in a month when no SSI payment was due. This departure from the approach taken in Table 5 (see note 12) and elsewhere in this article was necessary to make overall net month-to-month changes in the number of SSI recipients with SEIE come out the same whether calculated from the numbers in Table 7 or Table 8. Table 7 shows the monthly number of persons having SEIE posted *and* SSI payment due. Even though it does not reflect SEIE amounts posted in months with no SSI due, Table 7 does reflect nonreceipt of SEIE by persons who, counting such months' SEIE amounts, have reached the annual limit.

[16] See, for example, Cochran (1963).

[17] Splitting up categories that don't account for many gains or losses of SSI-with-SEIE status could cause the sampling variability to obscure the true seasonal patterns. This is a statistical point; splitting up an estimated total into many subtotals—rather than just a few—tends to make the standard errors of the subtotals larger relative to the subtotals themselves.

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RESEARCH SUMMARY

Using Matched Survey and Administrative Data to Estimate Eligibility for the Medicare Part D Low-Income Subsidy Program

by Erik Meijer, Lynn A. Karoly, and Pierre-Carl Michaud*

This article uses matched survey and administrative data to estimate, as of 2006, the size of the population eligible for the Low-Income Subsidy (LIS), which was designed to provide "extra help" with premiums, deductibles, and copayments for Medicare Part D beneficiaries with low income and limited assets. We employ individual-level data from the Survey of Income and Program Participation and the Health and Retirement Study to cover the potentially LIS-eligible noninstitutionalized and institutionalized populations of all ages. The survey data are matched to Social Security administrative data to improve on potentially error-ridden survey measures of income and program participation. Our baseline estimate, based on the matched data, is that about 12 million individuals were potentially eligible for the LIS as of 2006. A sensitivity analysis indicates that the use of administrative data has a relatively small effect on the estimates, but does suggest that measurement error is important to account for.

Introduction

The 2003 Medicare Prescription Drug Improvement and Modernization Act added a new prescription drug benefit to the Medicare program known as Part D (prescription drug coverage) as well as the Low-Income Subsidy (LIS) program to provide "extra help" with premiums, deductibles, and copayments for Medicare Part D beneficiaries with low income and limited assets. Although Medicare Part D is administered by the Centers for Medicare and Medicaid Services (CMS), the Social Security Administration (SSA) is responsible for administering the LIS, including outreach, processing applications, determining eligibility, and adjudicating appeals.

As part of a study conducted for SSA, reported more fully in Meijer, Karoly, and Michaud (2009), we aimed to estimate the size of the LIS-eligible population as of 2006.[1] Such an estimate can be used to determine an upper bound on the number of program participants and to estimate take-up rates based on actual participation. In this article, our estimation approach is featured, which employs survey data matched to administrative data in order to provide the best available estimate. One of the goals of this article, relative to the larger study on which it is based, is to highlight the ability to use matched survey/administrative data for this type of analysis and to report the sensitivity of our results compared with using only survey data.

As shown in Chart 1, as of 2006 when the Medicare Part D program went into effect, eligibility for the LIS first required enrollment in Medicare Part D. However,

Selected Abbreviations

CMS	Centers for Medicare and Medicaid Services
CPS	Current Population Survey
DI	Disability Insurance
HRS	Health and Retirement Study
LIS	Low-Income Subsidy
MBR	Master Beneficiary Record

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Selected Abbreviations—*Continued*

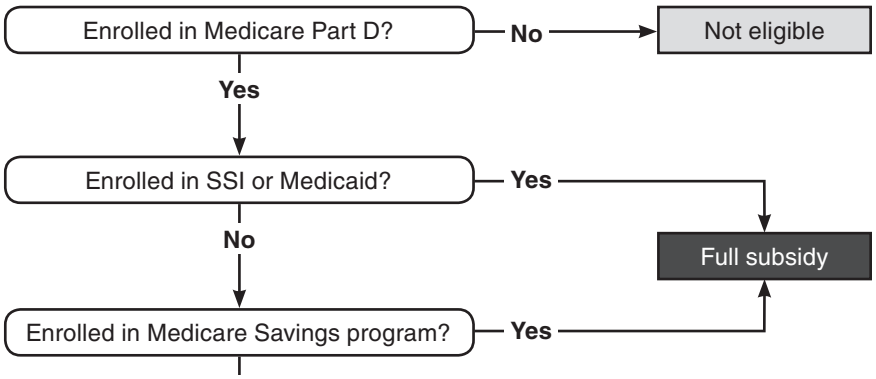
MEF	Master Earnings File
OASI	Old-Age and Survivors Insurance
PHUS	Payment History Update System
SCF	Survey of Consumer Finances
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSI	Supplemental Security Income
SSR	Supplemental Security Record

we focus on generating an estimate that captures the *potentially* LIS-eligible population because we count as eligible those individuals who are not enrolled in Medicare Part D, but are otherwise eligible for the LIS, even though Part D enrollment is a prerequisite to LIS eligibility. In addition, consistent with the eligibility rules shown in Chart 1, we distinguish between (1) *automatic eligibility* for the LIS, which affects those persons who are potentially eligible for the full LIS because they are enrolled in the Supplemental Security Income (SSI) program, in Medicaid (dual-eligibles), or in a Medicare Savings program and (2) *nonautomatic eligibility* for the LIS, which affects those persons who qualify for a full or partial subsidy based only on meeting income and resource (asset) criteria (known as *direct eligibility*).

To achieve our objective, the ideal data source would provide information on the Medicare population, which includes the noninstitutionalized and institutionalized populations (the latter includes those in nursing homes) and includes both those eligible because they are aged 65 or older as well as those younger than age 65 who are eligible for Medicare because they have a qualifying disability. The data source would have information on participation in the programs that confer automatic eligibility (for example, SSI, Medicaid, Medicare Savings programs) as well as information to determine direct eligibility (measures of income and resources that match those used in the eligibility determination process). As might be expected, this ideal data source does not exist, either in the form of survey or administrative data.

Instead, we employ individual-level survey data from the Survey of Income and Program Participation (SIPP) and the Health and Retirement Study (HRS)

Chart 1.
Eligibility for the LIS under Medicare Part D, as of 2006



		Income criterion (% of poverty)		
Direct eligibility ($)		Less than 135	135–150	Greater than 150
Resource criterion for single/couple	Less than 6K/9K	Full	Partial	Not eligible
	6K/9K–10K/20K	Partial	Partial	
	Greater than 10K/20K	Not eligible		

SOURCE: Authors' illustration.

to cover the potentially LIS-eligible noninstitutionalized and institutionalized populations of all ages. The survey data are matched to Social Security administrative data to improve on potentially error-ridden survey measures of income components (for example, earnings, recipient payments from SSI, and benefits from the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) programs) and program participation (for example, in SSI, Medicare, or Medicaid/Medicare Savings). The administrative data include the Master Beneficiary Record (MBR), the Payment History Update System (PHUS), the Master Earnings File (MEF), and the Supplemental Security Record (SSR). The survey data are the source of information on asset components as well as the income components (for example, private pensions) not covered in the administrative data.

Although this approach can largely support our data needs, other methodological challenges are introduced as a result. For example, because the SIPP and HRS are longitudinal data sources, selective attrition over time may lead to an unrepresentative sample. Likewise, there may be selective attrition in the sample because of nonmatches between the survey and administrative data. Finally, some of the survey data on income or assets that do not have a counterpart in administrative data may be measured with error, and the available income measures may not exactly replicate the constructs used by SSA for eligibility determination.

As shown in Table 1, several other estimates of the size of the LIS-eligible population are available, starting with an estimate of 14.2 million eligibles among Medicare Part B enrollees as of 2006, according to preliminary estimates provided by the Congressional Budget Office (2004) and concluding with an estimate of 12.5 million eligibles as of 2008, according to CMS (2008). The estimates that pertain to 2006 range from 14.2 million to 11.6 million. Table 1 shows that these estimates have largely relied on the SIPP—sometimes matched with administrative data. The studies differ in whether the estimates apply to the entire eligible population or only the noninstitutionalized population (that is, those in nursing homes and other institutional settings are not counted, as is the case with the SIPP sample frame). None of the studies accounted for attrition or selective matching, and they differ in the extent to which they account for the final LIS eligibility rules.

Table 1.
Methodology and results for studies estimating the size of the LIS-eligible population

	Methodology					Results: Estimated LIS-eligible population	
Study	Survey data source(s)	Administrative data source(s)	Population covered	Account for attrition or selective matching	Final LIS eligibility rules applied	Number, in millions (year)	Percent
Congressional Budget Office (2004)	SIPP (2001 panel, waves unknown)	Medicaid, MCBS	Noninstitutionalized and institutionalized Medicare Part B enrollees [a]	No	No	14.2 (2006)	35.5
McClellan (2006) and CMS (2007, 2008)	SIPP (panel unknown) CPS (year unknown)	None	Noninstitutionalized and institutionalized	No	Yes	13.2 (2006) 13.2 (2007) 12.5 (2008)	--
Rice and Desmond (2005, 2006)	SIPP (2001 panel, waves 4–6)	None	Noninstitutionalized only	No	Yes, but resource measure appears to be incomplete	11.6 (2006)	29.6

SOURCE: Authors' tabulations from cited studies.

NOTES: MCBS = Medicare Current Beneficiary Survey; -- = data not available.

a. About 94 percent of Medicare beneficiaries were enrolled in Part B.

The estimates we generate advance those previously available in the following ways, by—

- employing both the SIPP and HRS to cover the noninstitutionalized and institutionalized populations of all ages potentially eligible for the LIS;
- adjusting sample weights to account for panel data attrition and selective matching of survey and administrative data;
- using matched administrative data to improve on potentially error-ridden survey measures of income and program participation; and
- constructing measures of income and resources that replicate as closely as possible the constructs used to determine LIS eligibility.

In addition, we perform a sensitivity analysis to determine how robust results are to variation in the methodology.

In the next section, we begin by providing detail on the sources of survey and administrative data on which we rely. In the third section, we discuss our approach for attaining the methodological advances highlighted earlier. Our findings are detailed in the fourth section. The baseline estimate, based on the matched data, is that about 12 million individuals were potentially eligible for the LIS as of 2006. A sensitivity analysis indicates that the use of administrative data has a relatively small effect on the estimates, but does suggest that measurement error is important to account for. The estimate of the size of the LIS-eligible population is more sensitive to the relative weight placed on the two survey data sources, rather than the choice of methods applied to either data source. The final section concludes the article.

Sources of Survey and Administrative Data

As noted in the previous section, no single source of survey or administrative data provides the information needed to estimate the LIS-eligible population accounting for both the noninstitutionalized and institutionalized populations. Administrative data sources do not include the full range of income, asset, and living arrangements information required to determine eligibility for the LIS.[2] No single survey data source covers the eligible population of interest, and these data contain potentially error-ridden measures of the required income, assets, and program participation information. By using two survey data sources—the SIPP and HRS—we cover the relevant population of interest with survey measures that can potentially be used to determine LIS eligibility. By matching the SIPP and HRS to administrative data sources, we can use the administrative measures of income components and program participation that are arguably error free in place of the equivalent survey measures.

Table 2 summarizes the two sources of survey data and the four sources of administrative data used in the analysis, the universe covered by each source, the key variables used, any remarks about the data, and the particular usage in the analysis methodology (detailed in the next section). For the SIPP, we rely on data from the 2004 SIPP panel, waves 1–10, which provides data through the end of 2006. The SIPP consists of a continuous series of nonoverlapping nationally representative panels with survey waves that are 4 months apart and a total duration that has typically been 3–4 years (Westat 2001). It is a multistage, stratified sample of the U.S. civilian noninstitutionalized population. Because the SIPP includes individuals aged 15 or older, it contains information about those who are eligible for Medicare through disability, but are younger than the youngest HRS-sampled individuals (who were age 53 in 2006). On the other hand, the SIPP sample does not contain information about individuals in nursing homes. The 2004 SIPP panel included a total of 46,500 households in the initial wave. However, starting with wave 9, the SIPP sample size was reduced by about half because of budget cuts. This sample-size reduction affects the monthly data we have for calendar year 2006. In addition to data from the core, we also rely on several topical modules, including wealth information collected in wave 3 (administered October 2004–January 2005) and wave 6 (administered October 2005–January 2006).

The HRS is a multipurpose, longitudinal household survey providing extraordinarily rich data that are representative of the U.S. population older than age 50 (National Institute on Aging 2007). It consists of a national area probability sample of U.S. households, with supplemental samples of Mexican Americans, African Americans, and Floridians. At baseline, respondents were selected from the community-dwelling population (including retirement homes, but not nursing homes). However, in subsequent waves, respondents were followed even if they entered an institution. The initial HRS wave took place in 1992 and sampled individuals born in the 1931–1941 period and their spouses (of any age). Over time, additional cohorts have been added so that by 1998, the HRS was representative of the U.S. population older than age 50. Respondents in each cohort have been

Table 2.
Main data sources and usage

Data source	Universe	Key variables	Remarks	Usage and year of data
		Survey data		
2004 SIPP	Civilian, noninstitutionalized	Program participation (Medicare, Medicaid, SSI), earnings, benefits, assets, and liabilities	Oversamples low incomes to obtain a better picture of program participation	• Attrition modeling/correction (various waves) • Determining eligibility (2006)
HRS	Civilian (including those in retirement homes), aged 50 or older	Program participation (Medicare, Medicaid, SSI), earnings, benefits, assets, and liabilities	Follows individuals into nursing homes	• Attrition modeling/correction (various waves) • Measurement-error modeling, especially for Medicaid participation (2002) • Determining eligibility (2006)
		Administrative data		
LIS application and decision files	LIS applicants (excludes those automatically enrolled)	Income (various categories), resources (various categories), expectation to use funds for funeral/burial	None	• Information about expectation to use funds for funeral/burial • Evidence of tendency to spend down assets
MBR/PHUS	OASI and DI applicants/ beneficiaries	Benefits, disability, Medicare beneficiary, and Medicaid/Medicare Savings beneficiary	None	• Modeling (2002, with HRS) • Eligibility (2006, with SIPP)
SSR	SSI applicants	SSI recipient and SSI income	None	• Eligibility (2006, with SIPP)
MEF	All W-2 forms, 1040 Schedule SE	Detailed earnings data	None	• Eligibility (2006, with SIPP)

SOURCE: Authors' tabulations from documentation of the various data sources.

interviewed every 2 years. Note that, unlike the SIPP, the HRS sample does not include individuals who are eligible for Medicare because of disability, but who are younger than age 53. On the other hand, because the HRS follows respondents when they enter institutions, the HRS covers individuals in nursing homes quite well.[3]

We use the HRS public-use files created by RAND, a user-friendly version of a large subset of the HRS variables (St. Clair and others 2008) and base our analysis on the 2006 wave, which included about 18,000 respondents, of whom 11,000 were aged 65 or older. One of the virtues of the HRS is the high quality of the data on income (for the previous calendar year) and assets (current), both collected through questions that ascertain amounts for disaggregated categories. The level of quality is due largely to the design of the questionnaire, in which unfolding brackets are used (a feature not employed in the SIPP), which allow respondents to give interval answers if they are not willing or able to give exact amounts. This leads to much lower item nonresponse rates. Moreover, because of these brackets, imputations are much more precise (Juster and Smith (1997); Hurd, Juster, and Smith (2003)). For this study, we rely on the high-quality imputations of income and wealth, based on the unfolding brackets, made available in the RAND HRS files.

As shown in Table 2, in addition to the SIPP and HRS, we rely on four primary sources of

administrative data, which include the following key information:[4]

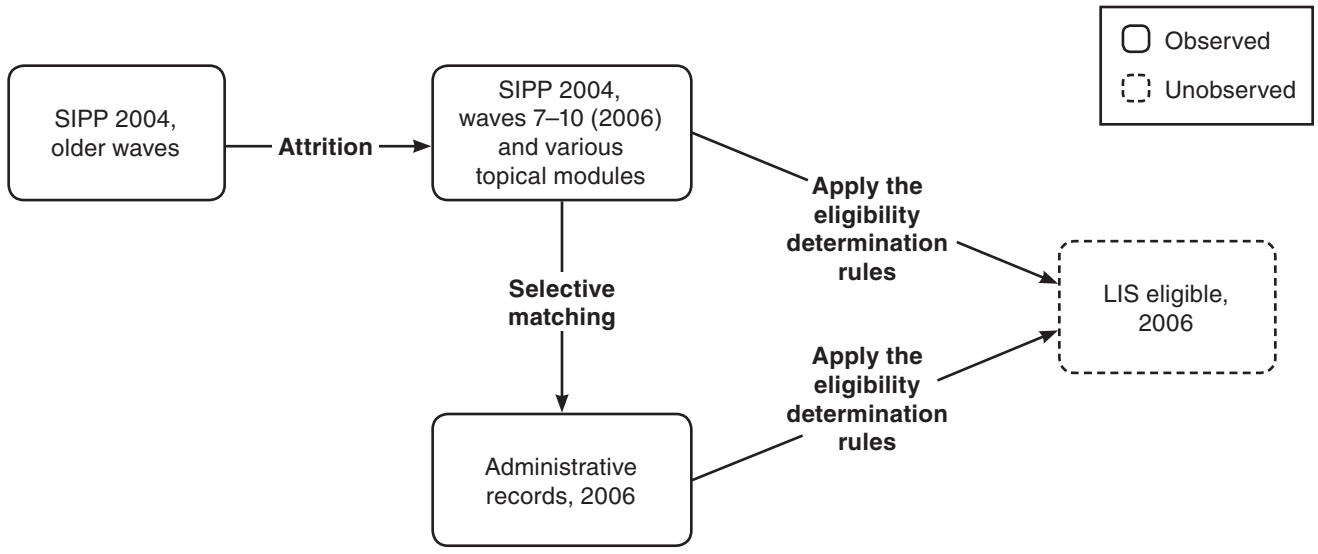
- **LIS application and decision files.** Include data from the LIS application forms (that is, responses regarding income and assets required for eligibility determination) and the corresponding decisions about whether the subsidy was awarded. These data are our primary source of information about whether individuals expect to use some of their assets for funeral or burial expenses because this information is not in the SIPP or HRS.
- **MBR and PHUS.** Provide information on OASI/DI applicants and beneficiaries, including dollar amounts received and whether Medicare premiums are paid by a state agency.
- **SSR.** Covers SSI applicants and recipients with data on dollar amounts received, including federal and state supplements.
- **MEF.** Provides information on wages and salaries (from W-2s) and self-employment income (from 1040 Schedule SEs).

In the case of the SIPP, as SSA contractors with Census Bureau special sworn status, we had access at a secure SSA facility to administrative data that had been matched to the 2004 SIPP panel. For the HRS, under an agreement between SSA and HRS officials, with respondent permissions obtained in the 2004 HRS and a data protection plan to safeguard against disclosure of sensitive information, we had access at our premises to the restricted HRS data that had been matched to administrative data through 2003.

Methods

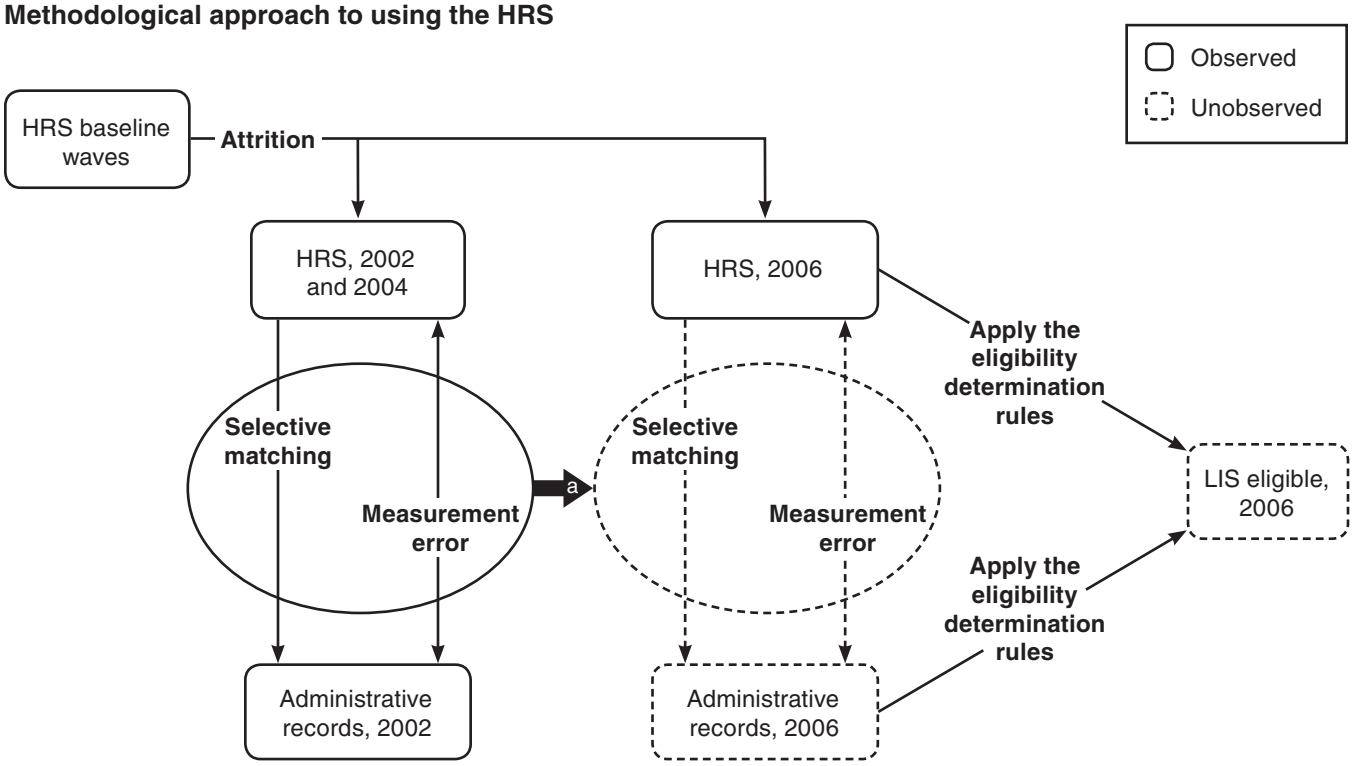
Estimating the size of the LIS-eligible population presents a number of methodological challenges that need to be addressed. First, possible biases that result from using later waves of the 2004 SIPP and HRS panel data need to be accounted for, where nonrandom attrition may mean the sample is no longer representative of the population covered in the survey frame. In addition, because not all observations will be successfully matched between the survey and administrative data, potential distortions in the representativeness of the matched sample need to be accounted for. Second, we need to account for possible measurement error in the survey data on income, assets, and program participation—the key determinants of LIS eligibility. Third, an algorithm is needed to replicate the LIS eligibility determination rules based on the available survey and administrative data, which do not contain the full set of information used by SSA to determine eligibility. We describe our approach to addressing these three issues in the remainder of this section. As a supplement to the discussion, Charts 2 and 3 provide schematic representations for our approach to using the SIPP and HRS, which vary because of the differences in the nature of the available survey and administrative data.

Chart 2.
Methodological approach to using the SIPP



SOURCE: Authors' illustration.

Chart 3.
Methodological approach to using the HRS



SOURCE: Authors' illustration.

a. Assume the same conditional relationship between administrative records and survey data in the 2006 data as in the 2002 and 2004 data.

Reweighting to Account for Panel Data Attrition and Data Matching

Our SIPP analytic survey sample, from waves covering calendar year 2006, consists of only 29 percent of eligible respondents based on the baseline sample. A large part of the drop in sample size is due to the reduction of the sample by about 50 percent in 2006 because of a budget cut. The remainder of the sample loss results from panel attrition. About 87 percent of the respondents in the analytic survey sample are then available in our matched survey/administrative sample.[5] For the HRS, the panel attrition rate was about 18 percent in 2006 (so 82 percent of eligible respondents are in the sample). We use 2002 matched administrative/HRS data for modeling; in this data set, the attrition rate is 25 percent, and the match rate is 54 percent. The relatively low match rate is largely the result of a low percentage of respondents giving permission to match their records. Thus, in both data sources, our analytic samples—based on data from later waves of the two longitudinal studies and matched survey/administrative data—are much smaller than the original samples, and there is considerable scope for biases that are due to selective attrition and matching.

Problems that are the result of attrition and selection introduced by matching administrative records to survey data can be conceptualized using the missing-data framework (Little and Rubin 2002). In the case of attrition, we observe data collected from a respondent when he or she participates in a given wave of the survey. Data of interest are missing when the respondent does not answer. Similarly, if it is not possible to link the survey data for some respondents to administrative records, data from those respondents are missing. The key issue is that the sample of respondents with non-missing data may have different characteristics from those of the relevant population of interest, thereby biasing any estimates based on the available sample.

Our general approach, following Kapteyn and others (2006), is to develop weights to correct for selective panel attrition based on baseline observables, which relax the potentially restrictive assumptions underlying the survey-provided weights. In particular, we estimate probability models of survey participation

as a function of baseline characteristics and adjust survey weights accordingly. Because the baseline characteristics used are more comprehensive than just race, ethnicity, age, and sex—as used in survey weights—they allow us to weight respondents with unfavorable characteristics (from the viewpoint of survey participation) more heavily than those with favorable characteristics. We refer to these weights as inverse probability weights (IPWs).

In particular, for the 2004 SIPP panel, we rely on data from waves 1–4 and 7–10, which cover the calendar months of 2004 and 2006 (full data from waves 2 and 3 and partial data from waves 1 and 4 cover 2004, and full data from waves 8 and 9 and partial data from waves 7 and 10 cover 2006). For the SIPP, we also use supplementary data from topical modules (TMs) administered with waves 3–7, which provide information on assets and liabilities (TM3 and TM6), annual income and taxes (TM4 and TM7), and health status (TM3, TM5, and TM6). For the HRS, we use the 2002, 2004, and 2006 waves. As detailed in Meijer, Karoly, and Michaud (2009), we find that the differences induced by selection on observables in both the SIPP and HRS are minor and that weighting based on IPWs and survey weights tend to give very similar results. For the HRS, the attrition-corrected weights have the advantage of providing sampling weights for those persons in nursing homes as of 2004 and 2006 (based on their baseline weights and the IPWs) because weights are otherwise not available in the HRS for those who transition to nursing homes.

Our approach for correcting for selective matching is similar to that followed for selective attrition. Thus, we estimate models of the probability of a nonmatch and use the models to generate IPWs that correct for selectivity in the sample with matched data. In the case of the HRS, the match is possible for those respondents who provided permission as part of the 2004 HRS wave. However, not all respondents gave permission to the HRS to match their records to administrative data. Furthermore, some respondents gave permission, but provided a wrong Social Security number or no number at all, or the match failed for another reason (typically unknown). For the SIPP, only a very small percentage of respondents refused to give permission for matching, so, essentially, a failure to match will arise only for other reasons.

In the case of the HRS, as discussed more fully in Meijer, Karoly, and Michaud (2009), our results are consistent with those of previous studies on the match available for the 1992 wave, which showed little bias (see, for example, Olson (1999) and Haider and Solon (2000)). Although some characteristics, such as education, wealth, and labor force experience, differ in matched and unmatched samples, the effects are too small to generate large problems in analyzing data in the matched samples. A similar finding holds for the SIPP. Although the potential bias from selective attrition and matching appears to be small, we use the attrition- and matching-corrected weights constructed to generate our preferred estimates of the LIS-eligible population.

After comparing preliminary results from the attrition analyses with population statistics from the Census Bureau, we were concerned that the SIPP does not adequately record mortality and nursing home entry of respondents when they are not found in later waves. Hence, some respondents who are no longer in the SIPP sample frame are misclassified as attritors, whereas, in fact, they are no longer in the target population of the SIPP. The result of this is an overestimation of the population size in the SIPP when the attrition-corrected weights are used. To correct for this, we performed a final reweighting of the SIPP toward demographic distributions that were obtained from the January 2006 Current Population Survey (CPS). For consistency, we performed a similar reweighting of the HRS, using the CPS for the non-institutionalized population and a combination of the 2004 wave of the National Nursing Home Survey and distributions for 2006 as published by CMS for nursing home residents.

Correcting for Measurement Error in Survey Data

It is well known that survey data, especially measures of income, wealth, and program participation, tend to be subject to systematic measurement error (see, for example, Bound, Brown, and Mathiowetz (2001); Czajka, Jacobson, and Cody (2003); Card, Hildreth, and Shore-Sheppard (2004); and Davern, Klerman, and Ziegenfussi (2007)). The expected underreporting of income and wealth would lead to overestimation of the number of individuals eligible for the LIS. Likewise, the expected underreporting of Medicaid enrollment and enrollment in other programs that ensure eligibility for LIS would lead to underestimation of the number of LIS-eligibles or, more importantly (given that these individuals would quite likely have low incomes and resources), misclassification as being nonautomatically eligible for the LIS instead of being deemed automatically eligible.

Administrative records are typically assumed to be without measurement error. Matching the survey data with administrative records then serves multiple purposes. First, if the administrative data pertain to the time period of interest, these data can replace (partly) the survey data and be used directly in determining eligibility. Second, in case the administrative data are available only for a different time period or only for a nonrepresentative subset of the surveyed individuals, eligibility estimates for this different universe, computed from the administrative data, can be compared with corresponding estimates from the survey data. Because that universe differs from the universe of interest, neither of these estimates is then of interest by itself, but the extent to which the two sets of estimates differ gives an indication of the consequences of measurement error if only survey data were used to compute estimates. Third, if the result of this comparison exercise is that measurement error leads to unacceptable distortions, then the observed relationships between survey and administrative data can be used to estimate the conditional distribution of the true values, given the survey data.

We call this a measurement-error model because the typical case is to estimate the distribution of the true value of a certain characteristic (for example, earnings) given an error-ridden survey value of the same characteristic, but the principle applies more generally to the distribution of a variable T that is in the administrative data conditional on the values of survey variables, collected in the vector S, which are observed in the survey data. Note that the direction of the model is reversed from the typical measurement-error model as, for example, discussed extensively in Wansbeek and Meijer (2000) and that we do not assume causality, but are interested only in the conditional distribution. Once the parameters of such a conditional distribution are estimated, eligibility estimates for the universe of interest can be obtained by simulating (imputing) from this conditional distribution. With this framework, we address three potential types of measurement error in our data.

Mismeasured Medicaid beneficiary status. Because Medicaid (and Medicare Savings) beneficiary status makes one automatically eligible for the full LIS subsidy, measurement error in this area will have a noticeable impact on the eligibility estimates, especially on the categorization into automatic eligibility and nonautomatic eligibility. The impact on the total number of eligibles is likely to be considerably less because most of the beneficiaries involved will otherwise be eligible according to their incomes and resources. Notably, Medicaid beneficiary status is known to be severely underreported in the SIPP and other surveys, such as the CPS (Card, Hildreth, and Shore-Sheppard (2004); Davern, Klerman, and Ziegenfussi (2007)).

The use of matched Social Security administrative data addresses this issue directly. In both the administrative data matched to the HRS and the administrative data matched to the SIPP, there is a variable indicating whether the state Medicaid agency pays for the Medicare Part B premiums. This payment is made whenever an individual is both a Medicare Part B beneficiary and a Medicaid or Medicare Savings beneficiary. Almost all Medicare beneficiaries have both Part A and Part B coverage, and, among Medicaid or Medicare Savings beneficiaries, this coverage must be essentially 100 percent because the Part B premiums are paid by Medicaid. Hence, the variable also identifies whether an individual is a Medicaid or Medicare Savings beneficiary, provided that he or she is even eligible for Medicare—the population that is potentially eligible for the LIS. This method has been applied previously by the General Accounting Office (2004).

For the SIPP-based analyses, administrative data for 2006 are employed, so we can simply use the administrative variable in place of the survey variable. For the HRS-based analyses, the same approach cannot be used because we have administrative data only up to 2003. However, preliminary estimates showed that the estimates of the percentage automatically eligible for the LIS for the common subpopulations were considerably lower in the HRS compared with the SIPP. We viewed this as evidence of misreporting of Medicaid/Medicare Savings beneficiary status in the HRS. Therefore, we have estimated a model (using 2002 data) that predicts true (administrative) Medicaid/Medicare Savings beneficiary status as a function of the corresponding survey variable and other explanatory variables from the HRS, such as sociodemographics, income, and resources.[6] We then use the model to impute Medicaid/Medicare Savings beneficiary status in the 2006 HRS data. Counter to our expectation, Medicaid/Medicare Savings beneficiary status tended to be *overreported* in the HRS according to the model as well as in the 2002 data on which it is based.

To assess the impact of the Medicaid undercount in the SIPP or HRS, we can then compare estimates of the number of LIS-eligibles based on survey data with those based on administrative data for the same year and population. Given the matched records, we can even isolate the effect of the Medicaid undercount by

comparing estimates using the administrative Medicaid variable with estimates using the corresponding survey variable, keeping all other variables the same. The results are reported in the next section as part of the sensitivity analysis.

Measurement error in income measures. Aside from the Medicaid undercount, income-measurement error is another stylized fact of survey data. Several income components are measured in the administrative data: earnings and income from Social Security (Old-Age, Survivors, and Disability Insurance (OASDI)) and SSI. In the case of the SIPP data, these administrative measures are available for 2006 so, again, we use the administrative measures in place of the survey data. For the HRS, however, as with Medicaid status, we only have administrative data for these income measures as of 2003. Thus, we put some effort into estimating measurement-error models for the HRS for these three income components (for example, earnings measurement-error models along the lines of that in Brownstone and Valletta (1996)), but our efforts did not lead to satisfactory models. Moreover, preliminary comparisons of pseudo-eligibles in the 2002 HRS (that is, estimating who would have been eligible if the LIS had existed in 2002, adjusting the 2006 income and resource thresholds backward in time to account for inflation) with and without matching administrative data to the survey showed small differences. Given that this did not appear to be an important source of bias, we did not pursue measurement-error corrections in the HRS.[7]

For the income components for which we do not have administrative data, for example, pension income and rental income, we cannot assess whether there is measurement error and whether it has a noticeable impact on the eligibility estimates. There appears to be no alternative for assuming that these income components are measured without error. This holds for both the HRS and SIPP.

Measurement error in wealth measures in the SIPP. Czajka, Jacobson, and Cody (2003) have done an extensive study of measurement error in wealth measures in the SIPP. Because detailed administrative data on wealth components are not available, this analysis was done primarily by comparing the distributions of SIPP wealth measures with the corresponding distributions in the Survey of Consumer Finances (SCF), which is generally considered the best source of wealth data in the United States. Czajka and colleagues conclude that the SIPP measure of aggregate wealth is only half of the SCF measure of aggregate wealth (p. 24). This is a huge difference and a potential source of large upward biases in the estimates of the number of LIS-eligibles. However, it is not immediately clear whether the authors' conclusions regarding a late wave of the 1996 panel carry over to the waves of the 2004 panel that we use, as a number of wealth components not available in the 1996 panel were included in the 2004 panel. Moreover, the mismeasurement of wealth in the SIPP pertains largely to the top of the distribution (for example, families with net worth greater than $2 million). Clearly, such families would not be eligible for the LIS, so measurement error in wealth in this segment of the distribution is less of a concern.

A recent analysis by Scholz and Seshadri (2008) suggests, however, that there is more cause for concern about measurement error in the SIPP wealth data at the lower tail of the distribution. Their study provided detailed comparisons of asset distributions between the SCF (multiple waves) and the SIPP (multiple panels and waves). Most importantly for our purposes, they find that, in the SIPP (in 2003), a much lower percentage of individuals in the bottom income quintile have positive financial assets than do those in the SCF and, among those with nonzero amounts, the median financial assets are substantially lower in the SIPP than in the SCF.

There are a few wealth components in the SIPP that are not measured well and that could influence our estimates: interest-earning assets besides those held at financial institutions, other real estate, business equity, and rental property. We have done limited sensitivity analyses including and excluding some of these components from the HRS resource amounts, where wealth estimates are considered to be more accurate. Including the other real estate (net value) component increases the number of individuals who are ineligible for the LIS because of their resources by about 2.6 percent compared with completely excluding it; including the business property (net value) component increases the number by 1.1 percent; and including both resource components together increases the number by 3.7 percent. These are upper bounds because measurement error will not reduce these components to zero for all respondents. Moreover, a sizable fraction of the individuals who cross the threshold in this way may not be eligible according to their income anyway, thereby further diminishing the potential impact of measurement error in these wealth components in the SIPP. This issue is considered again in the sensitivity analysis reported in the next section.

Implementing the LIS Eligibility Determination Rules

For purposes of estimating the potentially LIS-eligible population, we implement a computer algorithm that replicates, as closely as possible, the eligibility determination rules, shown schematically in Chart 1, that correspond to the LIS regulations (see Meijer, Karoly, and Michaud (2009) for more detail). Some of the details of the eligibility determination rules—such as who in the household is counted for purposes of determining family size and what income and resource components are included or excluded—are complex. For example, the income concept uses a simplified SSI methodology, which includes only the income of the Medicare beneficiary and his or her spouse and is based on annual income. As of 2006, income disregards (that is, income amounts that are deducted from the measure of countable income) included the first $240 of income plus the first $780 of earned income and half of all remaining earned income. Other income components that are not counted include food stamp benefits; home energy, housing, or disaster assistance; Earned Income Tax Credit payments; victim's compensation; and scholarships and educational grants. The family size count may include other family members beyond the beneficiary and his or her spouse, if the other family members receive more than half of their support from the beneficiary.

In the case of assets, resources that do count toward the threshold include real estate other than the primary residence; cash and bank accounts; stocks, bonds, and mutual funds; and individual retirement accounts (IRAs). The measure of resources does not include the primary residence, personal possessions, vehicles, property needed for self-support, resources up to $1,500 of the cash value of life insurance policies for each individual, and resources up to $1,500 (single) or $3,000 (couple) expected to be used for funeral or burial expenses.

The algorithm establishes Medicare beneficiary status, Medicaid/Medicare Savings beneficiary status, and SSI receipt and computes estimates of countable income and countable resources. In particular, the eligibility algorithm first computes eligibility indicators for different criteria separately and then combines them in an overall eligibility indicator. For all criteria, individuals who are not Medicare beneficiaries (Part A or B) are ineligible, so the eligibility criteria indicators are restricted to Medicare beneficiaries. The first two indicators show automatic eligibility because of being either an SSI recipient or a Medicaid/Medicare Savings beneficiary. These indicators are simply equivalent to the SSI and Medicaid/Medicare Savings indicators, given the Medicare beneficiary status. The next two indicators express how income and resources relate to the respective criteria for direct eligibility for a full or partial subsidy (see Chart 1). In this way, not only is the total number of eligibles computed, but so is the source of eligibility (that is, automatic versus direct) and the extent of the subsidy (that is, full versus partial).

In some cases, the data required to match the constructs specified in the regulations are not available in either the SIPP or HRS. Thus, we either adopt methods to approximate those constructs or consider sensitivity analyses to different assumptions. For example, neither the SIPP nor HRS contain a measure of the amount of resources the respondent plans to use for funeral and burial expenses. Thus, in computing the resource indicator, the $1,500 (singles)/$3,000 (couples) exclusion for funeral and burial expenses is subtracted from the measure of countable resources before deductions, assuming that everyone expects to need at least this amount for his or her own funeral and/or burial.[8]

Baseline Results and Sensitivity Analyses

Using the eligibility algorithm, we determine the potential eligibility for the LIS of each individual in either the HRS or SIPP sample. The number of potentially eligible individuals is then a weighted sum of the indicator variable that is 1 if the individual is classified as eligible and 0 otherwise, using the sampling weights that we have constructed that adjust for panel attrition and selective matching. Analogously, we can estimate the number of individuals who are automatically eligible for the full subsidy, the number of individuals who are nonautomatically eligible for the full subsidy, and the number of individuals who are eligible for a partial subsidy only, by using indicator variables for these categories instead of the overall eligibility indicator variable.

Table 3 shows how we use the SIPP and HRS to generate an estimate for the population of interest, stratified by age (three groups) and institutionalization status (two groups). As shown in the table, our approach combines estimates from the SIPP and HRS, in some cases relying on only one data source or the other. For example, the SIPP is the only source of information on the noninstitutionalized population aged 52 or younger (one cell). The HRS is the only source of information on the nursing home population aged 53 or older (two cells). Both data sources cover the noninstitutionalized

Table 3.
Data sources used for obtaining estimates of LIS-eligible population, by age group and institutionalization status

Population group	Age group			Total
	0–52	53–64	65 or older	
Noninstitutionalized population	SIPP	SIPP/HRS average	SIPP/HRS average	Sum across age groups
Nursing home population	--	HRS	HRS	Sum across age groups
Total population	SIPP	Sum within age group	Sum within age group	Sum within total

SOURCE: Authors' analysis.

NOTE: -- = data not available.

population aged 53 or older (two cells). Neither data source provides information on the nursing home population under age 53 (one cell).[9] For those cells for which both data sources are available, the results we present for the baseline estimate are based on the average of the separate estimates for each data source. The estimates for the marginal totals by age group or by institutionalization status and the grand total are based on summing within columns or across rows.

In the results that follow, we report robust linearization standard errors (computed in Stata) for the point estimates that take into account sampling error that arises from the complex survey designs in the SIPP and HRS (that is, stratification, clustering, and oversampling of some demographic groups).[10] Presented next are our baseline results as well as a sensitivity analysis that assess the implications of using the matched survey/administrative data.

Baseline Estimates

Table 4 reports results, stratified by age group, for the baseline estimated number of Medicare beneficiaries, with a breakdown by those estimated not to be LIS-eligible and those estimated to be LIS-eligible.[11] We further disaggregate those estimated to be eligible for the LIS by the eligibility pathway and degree of subsidy. Panel A reports outcomes as numbers (in millions); panel B reports outcomes as percentage distributions. Estimated standard errors are reported for the absolute figures. In panel B, we also disaggregate the group that is estimated to be ineligible for the LIS by whether income only is too high, resources only are too high, or both income and resources are too high.

According to these estimates, as of January 2006, there were 42.0 million Medicare beneficiaries. This is consistent with administrative data from CMS indicating a Medicare beneficiary population of 41.9 million in 2006. Of that total, we estimate that 12.2 million Medicare beneficiaries (or 29 percent) were potentially eligible for the LIS. The estimated standard error is about 0.43 million, so the approximate error bands would be plus or minus 860,000 persons. Of the total number of potentially LIS-eligible persons, most are eligible for a full subsidy, either through automatic eligibility (6.9 million) or by qualifying based on low income and resources (3.8 million). The remaining 1.5 million persons would be eligible for a partial subsidy. The estimate of 6.9 million individuals automatically eligible for the LIS is below the CMS estimate of 7.3 million as of May 2006, a figure based on the CMS Management Information Integrated Repository (CMS 2006). The benchmark of 7.3 million is within the error band of the estimate given in Table 4, however.

Overall, of those persons who are not eligible, most have both income and resources too high (47 percent of the 71 percent of ineligible Medicare beneficiaries). The remainder have either income only too high (15 percent) or resources only too high (9 percent). The disaggregation by age group shows a higher rate of eligibility among Medicare beneficiaries for younger age groups. This is to be expected because those younger than age 65 who are eligible for Medicare qualify as a result of a work-limiting disability, which increases their likelihood of having low income and resources compared with the population aged 65 or older, who qualify for Medicare because of age.

The baseline estimates in Table 4 weight the SIPP and HRS equally for those cells in Table 3 where both data sources are available. For the noninstitutionalized population aged 53 or older—for which an estimate can be obtained using either the SIPP or HRS—Meijer, Karoly, and Michaud (2009) show that the HRS provides a higher estimate of the number of LIS-eligibles in the subgroup aged 53–64 compared with

Table 4.
Baseline estimate of potentially LIS-eligible population in 2006, by age group

Measure	Age group			Total
	0–52	53–64	65 or older	
		Panel A: Number (millions)		
Total Medicare beneficiaries	3.465	3.271	35.297	42.033
	(0.255)	(0.165)	(0.835)	(0.998)
Not eligible for LIS	0.697	1.692	27.406	29.795
	(0.088)	(0.122)	(0.693)	(0.737)
Eligible for LIS	2.768	1.580	7.891	12.238
	(0.228)	(0.115)	(0.269)	(0.425)
Automatically eligible, full subsidy	2.035	0.910	3.972	6.917
	(0.191)	(0.084)	(0.174)	(0.290)
Other eligible, full subsidy	0.560	0.541	2.720	3.821
	(0.093)	(0.066)	(0.126)	(0.185)
Other eligible, partial subsidy	0.173	0.129	1.199	1.500
	(0.045)	(0.056)	(0.082)	(0.108)
		Panel B: Percentage distribution		
Total Medicare beneficiaries	100.0	100.0	100.0	100.0
Not eligible for LIS	20.1	51.7	77.6	70.9
Income only too high	5.7	17.9	15.8	15.1
Resources only too high	5.5	7.2	9.8	9.3
Income and resources too high	8.9	26.6	52.1	46.5
Eligible for LIS	79.9	48.3	22.4	29.1
Automatically eligible, full subsidy	58.7	27.8	11.3	16.5
Other eligible, full subsidy	16.2	16.5	7.7	9.1
Other eligible, partial subsidy	5.0	3.9	3.4	3.6

SOURCE: Authors' calculations using SIPP, HRS, and Social Security administrative data.

NOTES: The sample sizes are 26,354 persons for the SIPP, 4,727 of whom are Medicare beneficiaries and 16,060 persons for the HRS, 10,725 of whom are Medicare beneficiaries.

Standard errors are in parentheses.

the SIPP (1.6 million versus 1.3 million), whereas the SIPP provides a higher estimate than does the HRS for those aged 65 or older (8.7 million versus 6.1 million).

Given the differences between the SIPP and HRS in the estimate of LIS eligibility for the noninstitutionalized population, we have calculated two alternative baseline estimates of LIS eligibility for the total population. The baseline estimates in Table 4 average the HRS and SIPP estimates when both data sources are available for the same subpopulation (as shown in Table 3). One alternative is to give preference to the SIPP estimates when both data sources are available and use the HRS only when it is the sole source of information for a given subpopulation (that is, the institutionalized population aged 53 or older). The other alternative is to give preference to the HRS when both data sources are available and use the SIPP only for those subpopulations for which it is the only source of information (that is, the noninstitutionalized population younger than age 53). These two extremes will bound the estimates that we reported in Table 4 where we averaged the two data sources.

The results for the total number of LIS-eligibles that use the three weighting schemes are plotted in Chart 4. The first bar is based on giving equal weight to the SIPP and HRS when they are both available (consistent with Table 4). The second bar shows the result when the SIPP is given preference, and the third bar shows the result when the HRS is given preference. When the SIPP is treated as the preferred data

source, the estimated LIS-eligible population is higher by about 2.3 million persons than when the HRS is treated as the preferred data source, a total of 13.4 million versus 11.1 million. When the standard errors for these estimated figures are used to create 95 percent confidence intervals, the estimates range from a lower bound of 10.3 million LIS-eligibles based on the HRS, to an upper bound of 14.6 million eligibles based on the SIPP, a relatively wide range.

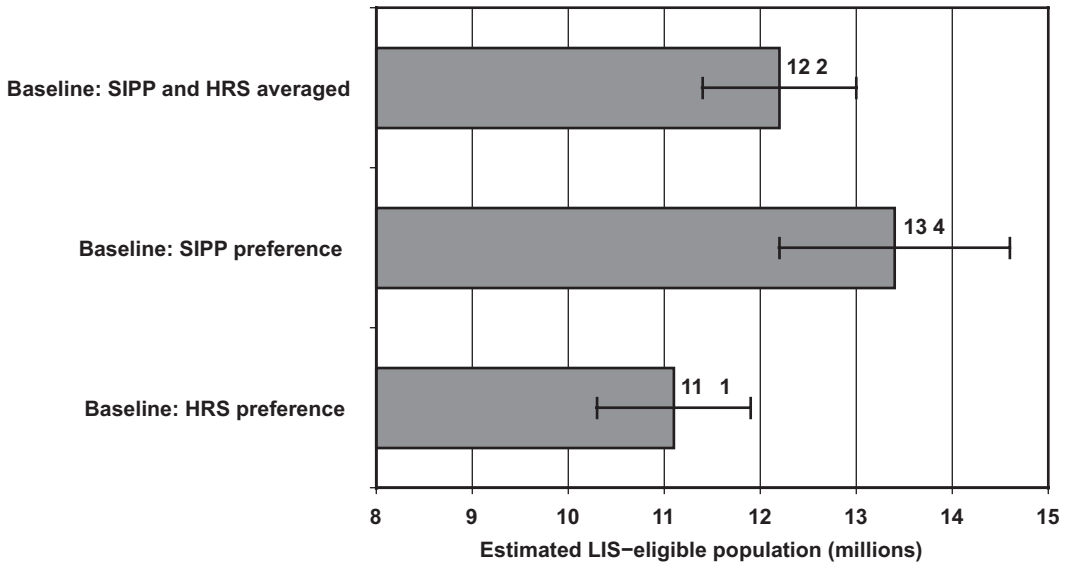
Sensitivity Analysis

Given the differences in the estimates of LIS-eligibles based on the SIPP and HRS, we explore two possible sources of those differential estimates through a sensitivity analysis.[12] We first consider the implications of using administrative data versus survey data because the SIPP estimate is based on administrative data for 2006, whereas the HRS estimate is based on a model-based imputation using earlier administrative data for Medicaid/Medicare Savings coverage and self-reported data on SSI recipient status. The consequences of differential wealth distributions between the SIPP and HRS for our estimates are then considered.

Administrative versus survey data. The differences in the SIPP and HRS estimates may result from the differential use of administrative data in the sources. To assess the sensitivity in using administrative data, we compute alternative estimates based only on survey data, separately for the SIPP and HRS, as part of a sensitivity analysis shown in Table 5. Note that the SIPP estimates in panel A pertain to the noninstitutionalized population, and the HRS estimates in panel B apply to the noninstitutionalized and institutionalized populations aged 53 or older. Thus, the results are not comparable across the panels because they are for different populations. However, within each panel, we can examine the robustness of results to variation in methods and assumptions for that data source. Those results include estimates of the number of Medicare beneficiaries and the number of LIS-eligible persons versus those not eligible. Among those eligible, we show estimates disaggregated by the pathway and degree of subsidy. For each alternative estimate, we show results in absolute numbers (in millions) and as percentages of the Medicare-eligible population.

For the SIPP analysis, we show LIS eligibility estimates using survey data alone (S1) to contrast with those from the baseline (S0) using the matched survey/administrative data. (The (S2) result is based on another sensitivity analysis discussed at the end of this section.) Large discrepancies between these estimates would point to a sizable impact of measurement error (presumably in the survey data), whereas

Chart 4.
Point estimates and confidence intervals for baseline estimate of potentially LIS-eligible population in 2006, with alternative weighting given to SIPP and HRS estimates



SOURCE: Authors' calculations using SIPP, HRS, and Social Security administrative data.

NOTE: Error bars show approximate 95 percent confidence intervals, accounting for sampling variability.

Table 5.
Sensitivity analysis for the estimated LIS-eligible population in 2006, based on the SIPP and HRS

Estimate	Medicare beneficiaries	LIS eligibility status		LIS eligibility by type		
		Not eligible	Eligible	Automatic, full subsidy	Other eligible, full subsidy	Other eligible, partial subsidy
Panel A: SIPP, noninstitutionalized population						
S0: 2006, SIPP and Social Security administrative data, CPS reweight						
Number (millions)	40.614	27.829	12.785	7.253	3.994	1.538
Percent	100.0	68.5	31.5	17.9	9.8	3.8
S1: S0 with no Social Security administrative data						
Number (millions)	40.395	27.835	12.560	7.476	3.689	1.396
Percent	100.0	68.9	31.1	18.5	9.1	3.5
S2: S0 with median wealth correction to HRS distribution						
Number (millions)	40.614	29.215	11.398	7.253	3.246	0.900
Percent	100.0	71.9	28.1	17.9	8.0	2.2
Panel B: HRS, population aged 53 or older						
H0: 2006, Medicaid/Medicare Savings imputation, CPS reweight						
Number (millions)	38.756	30.445	8.312	4.180	2.932	1.199
Percent	100.0	78.6	21.4	10.8	7.6	3.1
H1: H0 with no Medicaid/Medicare Savings imputation						
Number (millions)	38.756	30.350	8.406	4.053	3.087	1.267
Percent	100.0	78.3	21.7	10.5	8.0	3.3

SOURCE: Authors' calculations using the SIPP, HRS, and Social Security administrative data.

NOTES: Percentages are for the Medicare-eligible population. The sample sizes for the SIPP are 26,354 persons for the SIPP/SSA matched data (S0, S2)—4,727 of whom are Medicare beneficiaries and 30,271 persons for the SIPP survey data only (S1)—5,180 of whom are Medicare beneficiaries. The sample size for the HRS is 16,060 persons—10,725 of whom are Medicare beneficiaries.

small discrepancies would suggest that measurement error is not an important problem. In addition to being informative about the potential measurement errors in the income components and other variables that are present in the administrative data, this analysis could be considered tentative evidence of the overall quality of the data and thus give more or less confidence in the survey variables that have no administrative counterparts and, by implication, more or less confidence in the eligibility estimates. For the HRS, we can compare eligibility estimates using administrative or survey data for the same year only for 2002. But a similar exercise can be conducted that is restricted to the Medicaid/Medicare Savings variable for 2006, by comparing the results obtained using only survey data (H1) with results obtained by imputing Medicaid/Medicare Savings beneficiary status as done in the baseline (H0).[13]

The use of administrative data has a relatively small effect on the estimates, but does suggest that measurement error is important to account for (Table 5). Alternatives S1 and H1 produce the estimates that would result if administrative data were not available to replace error-ridden income components and program participation, in the case of the SIPP, and to impute Medicaid/Medicare Savings program eligibility, in the case of the HRS.[14] In both cases, the comparison with the baseline estimates show little change, representing about 1–2 percent in the estimated absolute number eligible for the LIS and an equally modest change in the LIS eligibility rate. The S1 estimate of the number eligible for the LIS is lower than the S0 estimate, and a slightly higher fraction are automatically eligible; the reverse holds for H1 versus H0. This suggests that the self-reported income variables in the SIPP overstate countable income, and the program participation

variables in the SIPP overstate Medicaid or SSI participation. As noted earlier, the self-reports of Medicaid eligibility in the HRS overstate Medicaid eligibility in the 2002 data (for the original HRS cohort). Hence, we would expect that the estimated number of eligibles, particularly automatically eligible, would be higher when using only the survey data, without Medicaid imputation. We see a higher total number of eligibles, but for the automatically eligible, we see the opposite. This implies that there is differential under- and over-reporting among subgroups.

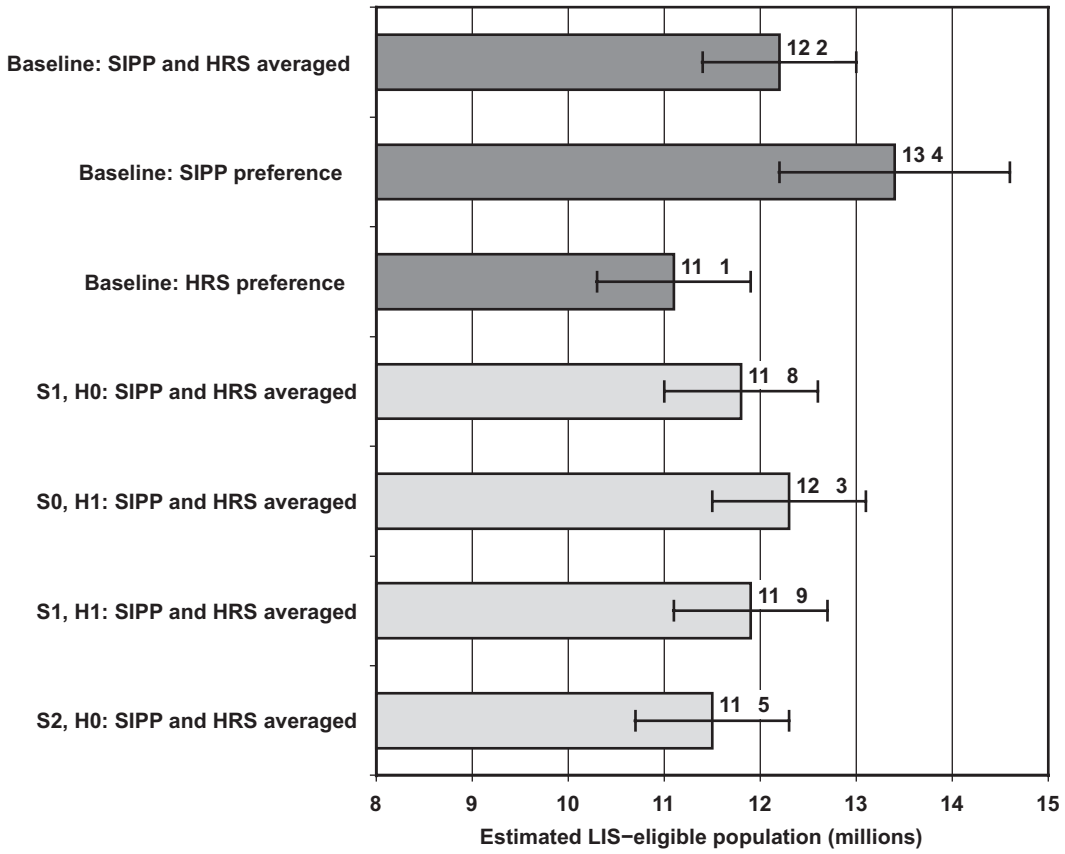
Because the estimates in Table 5 pertain to the specific populations covered by the SIPP and HRS, respectively, they do not indicate how our estimate of the total LIS-eligible population would change if we used alternative methods. In Chart 5, we reproduce the baseline estimates shown in Chart 4 (dark gray bars) and add three additional estimates (light gray bars) based on using survey data only for the SIPP (S1, H0), only for the HRS (S0, H1), or for both sources (S1, H1). (The fourth additional estimate (last light gray bar) will be discussed at the end of this section.) In each case, the total estimate is based on averaging the SIPP and HRS estimates when the subpopulations overlap. As with Chart 4, we continue to show the estimated 95 percent confidence intervals accounting for sampling error. The three additional estimates based on the use of survey data in place of administrative data show a range of 11.8 million (S1, H0) to 12.3 million (S0, H1). This difference of about 0.5 million is roughly one-fourth the variation compared with changing the weight placed on the two data sources (as shown in the range between the second and third dark gray bars of about 2.3 million) and within the error bands of the baseline estimate when the SIPP and HRS are weighted equally (first dark gray bar).

Differential wealth distributions. Although the use of administrative data corrects for potential measurement error in income components and program participation, the bias appears to be relatively modest. Thus, the differences in the estimates for the SIPP and HRS cannot be explained by differential availability of matched administrative data. Another potential source of difference is in the quality of the wealth data for which there is no administrative data counterpart. In both surveys, we must rely on the self-reported survey data. Meijer, Karoly, and Michaud (2009) report striking differences in the distribution of countable resources in the SIPP versus the HRS.[15] Notably, the 10th, 25th, and 50th percentiles are two to four times higher in the HRS than in the SIPP. Overall, the HRS resource distribution is shifted to the right of the SIPP distribution for both married and single Medicare beneficiaries such that the underlying distributional differences between the SIPP and HRS explain much of the differential estimates of LIS eligibility.

In the absence of administrative data with which to assess potential error in the measurement of countable resources, we must rely on other information about the quality of the survey data. The HRS has long been viewed as collecting high-quality data on wealth (and income) both because the survey instrument asks about a more disaggregated set of wealth components and because of the use of unfolding brackets to bound responses regarding each wealth component into specific ranges when a respondent is unwilling or unable to provide a specific figure (Juster and Smith 1997). Other recent innovations in the collection of income data in the HRS, along with the long-standing use of unfolding brackets, have been demonstrated to improve the quality of both the income and asset measures (Hurd, Juster, and Smith 2003). In contrast, the recent analysis of asset distributions in the SIPP by Scholz and Seshadri (2008) suggests that the SIPP underestimates assets, especially for individuals at the bottom of the income distribution. On the other hand, Sierminska, Michaud, and Rohwedder (2008) show that the HRS wealth distribution matches the SCF wealth distribution relatively well, particularly at the bottom of the distribution (below the 25th percentile). This suggests placing relatively more weight on the HRS estimates of LIS eligibility (that is, weighting toward the bottom bar in Chart 4) or, at most, weighting the two data sources equally as we do in our baseline estimate (top bar).

As an alternative to reweighting the contribution of the SIPP and HRS data to the estimate of LIS-eligibles, we perform an additional sensitivity analysis. In particular, alternative S2 in Table 5 is based on rescaling the SIPP wealth distribution for the entire SIPP population using a scaling factor that matches the median of the SIPP distribution to the median of the HRS distribution for the population where they overlap (that is, the noninstitutionalized population aged 53 or older). The resulting upward shift in the SIPP wealth distribution leads to a large reduction in the estimated LIS-eligible population shown in panel A—a decline of about 1.4 million (or 11 percent) over S0 and a 3.4 percentage-point reduction in the eligibility rate. The last light gray bar in Chart 5 shows the result when S2 and H0 are combined to generate an overall estimate of LIS-eligibles where,

Chart 5.
Point estimates and confidence intervals for baseline estimate of potentially LIS-eligible population in 2006, with selected sensitivity analyses



SOURCE: Authors' calculations using the SIPP, HRS, and Social Security administrative data.

NOTES: Error bars show approximate 95 percent confidence intervals, accounting for sampling variability.

S0 = SIPP baseline estimates; S1 = SIPP estimates obtained using survey data alone; S2 = SIPP estimates based on a scaling factor for wealth consistent with the HRS distribution; H0 = HRS baseline estimates; H1 = HRS estimates obtained using survey data alone.

like the baseline, we continue to use equal weights for the SIPP and HRS where the populations overlap. The estimate of 11.5 million is close to the estimate of 11.1 million when the HRS is given preference (third dark gray bar), which would be justified if the HRS wealth distribution was closer to the true distribution compared with the SIPP.

Conclusions

The objective of this study was to generate an estimate of the LIS-eligible population as of January 2006, using the best available data. Our reliance on survey data from the SIPP and HRS, combined with matched administrative data from SSA, represents an advance over previous estimates in using administrative data where possible to substitute for potentially error-ridden survey measures of income and program participation. In addition, we have addressed several other methodological challenges including the need to cover the population of interest, to correct for potential bias from selective panel attrition and data matching, and to replicate the LIS eligibility rules as closely as possible. The use of sensitivity analyses allows us to consider the robustness of our results to the use of survey versus administrative data and to consider the sensitivity of our estimates to other methodological choices.

The baseline methodology we use to derive estimates for 2006 combines results from the SIPP and HRS with equal weights for the overlapping population (noninstitutionalized persons aged 53 or older) and otherwise uses estimates from either the SIPP or HRS for the other population subgroups.

The baseline estimates use the matched SIPP/Social Security administrative data and impute Medicaid/Medicare Savings participation for the HRS. We also use attrition-adjusted and matching-adjusted (SIPP only) weights and rescale the weights to match known marginal distributions for the population. Based on this approach, we estimate that 12.2 million Medicare beneficiaries (or 29 percent) were potentially eligible for the LIS in 2006. Accounting for sampling error, the 95 percent confidence interval is from 11.4 million to 13.1 million. The error band would be wider if we also accounted for modeling uncertainty.

The sensitivity analysis shows that the baseline estimate is most sensitive to the weight placed on the estimates derived from the SIPP versus the HRS. Our baseline method gives those data sources equal weight. If we instead give preference to the SIPP-based estimates and use the HRS only when it is the sole source of data for a subpopulation, the estimated number of LIS-eligibles increases from the baseline of 12.2 million to 13.4 million. If we alternatively give preference to HRS-based estimates, the estimate falls to 11.1 million. Accounting for sampling error alone, the confidence intervals around these three estimates range from a lower bound (based on the HRS-preference result) of 10.3 million LIS-eligibles to an upper bound (based on the SIPP-preference result) of 14.6 million eligibles.

When the results are compared with and without the matched administrative data, we find modest differences in the estimate of the number of LIS-eligibles with the populations covered by the SIPP and the HRS—differences representing 1–2 percent. The estimates indicate that self-reported income and program participation variables in the SIPP overstate countable income and Medicaid or SSI participation. In the HRS, the self-reports of Medicaid eligibility overstate Medicaid eligibility in the 2002 data (for the original HRS cohort), but applying the resulting imputation model to the 2006 data shows that there is differential over- and underreporting among different subgroups. This suggests that measurement error in the survey measures of income and program participation is important to account for. Nevertheless, when the estimates from the two data sources are combined to generate an overall population estimate of LIS-eligibles, based on survey data alone in either or both of the data sources, the estimates range from 11.8 to 12.3 million—about one-fourth the variation compared with changing the weight placed on the two data sources using matched data.

Differences in the wealth distributions in the SIPP and HRS, for which there is no comparable administrative data, is another important source of variation in the estimates between the two data sources. If we adjust the SIPP wealth distribution based on a scaling factor consistent with the HRS distribution, the resulting estimate of LIS-eligibles is close to that obtained when the HRS is given preference. A number of other studies suggest that the HRS wealth distribution is more accurate, thereby lending support for giving greater weight to the HRS, either in how the estimates are combined or through adjusting the SIPP wealth distribution.

Given the issues with the quality and representativeness of the SIPP and HRS data identified in this article and the larger study on which it is based, future estimates of the LIS-eligible population would benefit from further analyses regarding the validity of the income, wealth, and program participation measures in the two data sources as well as the representativeness of the survey samples, especially for the low-income population. Such analyses can take advantage of the ability to match survey and administrative data using these two important sources of longitudinal data.

Notes

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[1] Other objectives of the larger study included examining the characteristics of the LIS-eligible population and projecting the size of the eligible population for 2008. See Meijer, Karoly, and Michaud (2009) for those results.

[2] Administrative data also typically lack the full range of individual or family characteristics (for example, marital status, education level, health status) that might be of interest in examining the characteristics of the eligible and noneligible populations.

[3] Only individuals who were in the target age groups but already in nursing homes at the time of sampling are missed. The numbers of such individuals are negligible for

the HRS, War Baby (WB), and Early Baby Boomer (EBB) cohorts. For the Assets and Health Dynamics Among the Oldest Old (AHEAD) and Children of the Depression Age (CODA) cohorts, however, this is a nonnegligible bias at the time of sampling. But the selectivity bias tends to disappear very quickly. For example, Adams and others (2003) found that mortality rates between waves 1 (1993) and 2 (1995) in the AHEAD were substantially below the life tables, but this difference had vanished almost completely between waves 2 and 3 (1998).

[4] As discussed in the next section, we also use data from the January 2006 Current Population Survey (CPS) and the 2004 National Nursing Home Survey (NNHS) to reweight the SIPP and HRS data, after correcting the weights to account for selective attrition and matching, in order to match the known demographic distribution of the population.

[5] The match rate for individual records is slightly higher, but for determining LIS eligibility, we need spousal information; therefore, the respondents who are successfully matched, but whose spouses are not, are not in our matched sample.

[6] The model results are available in Meijer, Karoly, and Michaud (2009). See Davern, Klerman, and Ziegenfussi (2007) for a similar model for the CPS.

[7] Using the SIPP, we can also compare survey measures with administrative measures at the individual level using 2006 data, or we can compare their marginal or joint distributions. Most relevant for our purposes is comparing the fraction of individuals whose countable incomes exceed the threshold for LIS eligibility, depending on whether survey or administrative income data are used. As discussed in Meijer, Karoly, and Michaud (2009), this comparison shows differences of less than 2 percentage points, which is fairly small and supports our decision not to incorporate measurement-error corrections in the HRS.

[8] The LIS administrative data allow us to assess the reasonableness of this assumption. Meijer, Karoly, and Michaud (2009) show that upward of 70–80 percent of LIS applicants with resources near the eligibility threshold (that is, those below the threshold, measured as 80–100 percent of the threshold, and those above the threshold, measured as 100–120 percent of the threshold) claimed the exclusion of expenses for a funeral and/or burial. Thus, our assumption of 100 percent exclusion is not unreasonable and provides a lower bound on countable resources.

[9] From the combined CMS/NNHS data, we estimate the size of this population to have been about 75,000 in 2006. Hence, the underestimation of the number of LIS-eligibles because of this omission is relatively small.

[10] See Meijer, Karoly, and Michaud (2009) for additional detail. The standard errors do not take uncertainty about the eligibility variables into account—uncertainty that results, for example, from imputing Medicaid/Medicare Savings beneficiary status in the HRS.

[11] See Meijer, Karoly, and Michaud (2009) for results separately by institutionalization status and by data source.

[12] In addition to the sensitivity analysis reported here, Meijer, Karoly, and Michaud (2009) also consider the sensitivity of the estimates to other variations in the methodology such as assumptions about funeral/burial expenses, household composition, whether 401(k) balances are included in countable resources, and the method of reweighting the attrition- and match-adjusted weights to match CPS marginals.

[13] The estimates shown in Table 5 for S1 and H1 correspond to those reported in Meijer, Karoly, and Michaud (2009) as S3 and H3. The alternative S2, discussed later in this section, corresponds to S6 in the full study.

[14] Note that this means that the SIPP sample will include cases that do not have a match with administrative data and that both sources will use weights that adjust only for panel attrition and reweight to the CPS.

[15] Differences in countable income are considerably smaller.

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Remembering Robert J. Myers

Robert J. Myers.
SSA History Archives.

Robert J. Myers died on February 13, 2010, at age 97. He devoted his life to Social Security and made an indelible mark on the program.

After receiving a Masters Degree in Actuarial Science from the University of Iowa in 1934, Robert Myers began his career as a junior actuary with the Committee on Economic Security—which he described as being a matter of great good luck—simply being in the right place at the right time. In this position, he helped shape the Social Security program that was enacted into legislation one year later in 1935. One of his tasks was to figure out a fundamental detail of the program—the age at which people should become eligible to stop working and start drawing benefits, while still allowing the program to pay for itself. The result was the age-65 retirement age.

Myers was among the early employees of the Social Security Board (the precursor to the Social Security Administration), becoming a permanent Social Security actuary in the summer of 1936. By 1947, he became the Chief Actuary of Social Security. He was the longest-serving Chief Actuary, serving for 23 years from 1947 to 1970. During this period, he played an instrumental role in several pieces of major legislation, including the expansion of coverage in 1950, enactment of disability insurance in 1956, and enactment of Medicare in 1965. Also, as Chief Actuary, he introduced the 75-year long-range projection of the actuarial balance of the trust fund. This projection was not widely used in other countries, but is a hallmark of our annual Trustees Reports.

To assist with efforts to deal with the financing crisis, Myers returned to the Social Security Administration in 1981 for about a year as the Deputy Commissioner for Programs. Long after leaving the Social Security Administration, he continued his involvement in the Social Security program. He served on numerous commissions and Congressional panels. Notably, in 1983, he was named the executive director of the National Commission on Social Security Reform (also known as the Greenspan Commission), which succeeded in developing a consensus recommendation that became the 1983 Amendments to the Social Security Act. He was a prolific writer, with more than 900 articles and several books to his name and held a record for having testified before Congress 175 times. Myers was also a leader in the broader fields of social insurance and actuarial science. He was a founding member of the National Academy of Social Insurance, serving on its Board of Directors from 1986–87. In 1994, the American Academy of Actuaries created the Robert J. Myers Public Service Award to honor actuaries who have made an exceptional contribution to the common good. He also served as the president of both the Society of Actuaries and the American Academy of Actuaries.

Myers' work, although esoteric, touched the lives of millions of Americans. Stephen Goss, the Chief Actuary at the Social Security Administration since 2001, says Myers was singularly responsible for the strength and principles now cherished and guarded at the office he formed." The former Senator Daniel Patrick Moynihan once described him as "a national treasure."

OASDI and SSI Snapshot and SSI Monthly Statistics

Each month, the Social Security Administration's Office of Retirement and Disability Policy posts key statistics about various aspects of the Supplemental Security Income (SSI) program at http://www.socialsecurity.gov/policy. The statistics include the number of people who receive benefits, eligibility category, and average monthly payment. This issue presents SSI data for March 2009–March 2010.

The Monthly Statistical Snapshot summarizes information about Social Security and the SSI programs and provides a summary table on the trust funds. Data for March 2010 are given on pages 86–87. Trust Fund data for March 2010 are given on page 87. The more detailed SSI tables begin on page 88. Persons wanting detailed monthly OASDI information should visit the Office of the Actuary's Web site at http://www.socialsecurity.gov/OACT/ProgData/beniesQuery.html.

Monthly Statistical Snapshot

The most current edition of Tables 1–3 will always be available at http://www.socialsecurity.gov/policy/docs/quickfacts/stat_snapshot. The most current data for the trust funds (Table 4) are available at http://www.socialsecurity.gov/OACT/ProgData/funds.html.

Table 1.
Number of people receiving Social Security, Supplemental Security Income, or both, March 2010 (in thousands)

Type of beneficiary	Total	Social Security only	SSI only	Both Social Security and SSI
All beneficiaries	58,148	50,371	5,098	2,679
Aged 65 or older	37,715	35,681	891	1,143
Disabled, under age 65 [a]	12,850	7,108	4,207	1,536
Other [b]	7,582	7,582	. . .	. . .

SOURCE: Social Security Administration, Master Beneficiary Record, 100 percent data. Social Security Administration, Supplemental Security Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only Social Security beneficiaries in current-payment status are included.

. . . = not applicable.

a. Includes children receiving SSI on the basis of their own disability.

b. Social Security beneficiaries who are neither aged nor disabled (for example, early retirees, young survivors).

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Social Security benefits, March 2010

Type of beneficiary	Beneficiaries		Total monthly benefits (millions of dollars)	Average monthly benefit (dollars)
	Number (thousands)	Percent		
All beneficiaries	53,050	100.0	56,600	1,066.90
Old-Age Insurance				
Retired workers	33,882	63.9	39,568	1,167.80
Spouses	2,336	4.4	1,345	575.80
Children	578	1.1	332	573.40
Survivors Insurance				
Widow(er)s and parents [a]	4,306	8.1	4,746	1,102.20
Widowed mothers and fathers [b]	152	0.3	127	832.50
Children	1,951	3.7	1,463	749.80
Disability Insurance				
Disabled workers	7,893	14.9	8,403	1,064.60
Spouses	158	0.3	45	286.20
Children	1,792	3.4	571	318.60

SOURCE: Social Security Administration, Master Beneficiary Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only beneficiaries in current-payment status are included.

Some Social Security beneficiaries are entitled to more than one type of benefit. In most cases, they are dually entitled to a worker benefit and a higher spouse or widow(er) benefit. If both benefits are financed from the same trust fund, the beneficiary is usually counted only once in the statistics, as a retired-worker or a disabled-worker beneficiary, and the benefit amount recorded is the larger amount associated with the auxiliary benefit. If the benefits are paid from different trust funds the beneficiary is counted twice, and the respective benefit amounts are recorded for each type of benefit.

a. Includes nondisabled widow(er)s aged 60 or older, disabled widow(er)s aged 50 or older, and dependent parents of deceased workers aged 62 or older.

b. A widow(er) or surviving divorced parent caring for the entitled child of a deceased worker who is under age 16 or is disabled.

CONTACT: Hazel P. Jenkins (410) 965-0164 or oasdi.monthly@ssa.gov for further information.

Table 3.
Supplemental Security Income recipients, March 2010

Age	Recipients		Total payments [a] (millions of dollars)	Average monthly payment [b] (dollars)
	Number (thousands)	Percent		
All recipients	7,777	100.0	4,275	498.30
Under 18	1,215	15.6	778	596.60
18–64	4,527	58.2	2,670	514.70
65 or older	2,034	26.2	826	403.20

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Operations of the Old-Age and Survivors Insurance and Disability Insurance Trust Funds, March 2010 (in millions of dollars)

Component	OASI	DI	Combined OASI and DI
		Receipts	
Total	$44,062	$7,488	$51,549
Net contributions	43,973	7,466	51,439
Income from taxation of benefits	13	0	13
Net interest	76	21	97
Payments from the general fund	0	0	0
		Expenditures	
Total	47,926	10,369	58,296
Benefit payments	47,626	10,123	57,749
Administrative expenses	300	247	547
Transfers to Railroad Retirement	0	0	0
		Assets	
At start of month	2,345,793	200,144	2,545,936
Net increase during month	-3,865	-2,882	-6,746
At end of month	2,341,928	197,262	2,539,190

SOURCE: Data on the trust funds were accessed on April 29, 2010, on the Social Security Administration's Office of the Actuary's web site: http://www.socialsecurity.gov/OACT/ProgData/funds.html.

NOTE: Totals may not equal the sum of the components because of rounding.

The SSI Monthly Statistics are also available at http://www.socialsecurity.gov/policy/docs/statcomps/ssi_monthly/index.html.

SSI Federally Administered Payments

Awards of SSI Federally Administered Payments

Table 1.
Recipients (by type of payment), total payments, and average monthly payment, March 2009–March 2010

Month	Number of recipients				Total payments [a] (thousands of dollars)	Average monthly payment [b] (dollars)
	Total	Federal payment only	Federal payment and state supplementation	State supplementation only		
2009						
March	7,599,464	5,243,129	2,063,657	292,678	4,162,308	503.70
April	7,607,994	5,248,781	2,066,071	293,142	4,126,381	505.10
May	7,596,745	5,253,853	2,067,978	274,914	4,077,881	500.80
June	7,638,836	5,287,256	2,076,756	274,824	4,157,154	500.20
July	7,618,848	5,281,432	2,074,422	262,994	4,049,965	497.80
August	7,651,360	5,307,020	2,081,537	262,803	4,098,660	498.50
September	7,691,602	5,337,606	2,090,610	263,386	4,182,914	497.50
October	7,682,338	5,330,233	2,088,580	263,525	4,113,205	499.40
November	7,721,905	5,368,216	2,099,323	254,366	4,170,583	498.10
December	7,676,686	5,337,340	2,085,539	253,807	4,120,127	498.80
2010						
January	7,705,071	5,358,655	2,092,282	254,134	4,085,073	498.70
February	7,739,526	5,386,683	2,098,273	254,570	4,128,360	496.70
March	7,776,667	5,417,319	2,105,179	254,169	4,274,831	498.30

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Recipients, by eligibility category and age, March 2009–March 2010

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2009						
March	7,599,464	1,204,671	6,394,793	1,172,224	4,388,753	2,038,487
April	7,607,994	1,205,349	6,402,645	1,173,714	4,393,945	2,040,335
May	7,596,745	1,199,665	6,397,080	1,173,700	4,389,985	2,033,060
June	7,638,836	1,200,922	6,437,914	1,185,753	4,416,687	2,036,396
July	7,618,848	1,196,190	6,422,658	1,178,932	4,408,897	2,031,019
August	7,651,360	1,198,038	6,453,322	1,189,283	4,426,845	2,035,232
September	7,691,602	1,199,576	6,492,026	1,195,708	4,457,046	2,038,848
October	7,682,338	1,199,260	6,483,078	1,189,467	4,453,509	2,039,362
November	7,721,905	1,196,845	6,525,060	1,204,089	4,479,991	2,037,825
December	7,676,686	1,185,959	6,490,727	1,199,788	4,451,288	2,025,610
2010						
January	7,705,071	1,190,266	6,514,805	1,199,296	4,472,499	2,033,276
February	7,739,526	1,190,016	6,549,510	1,209,641	4,494,957	2,034,928
March	7,776,667	1,188,361	6,588,306	1,215,280	4,527,056	2,034,331

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 3.
Recipients of federal payment only, by eligibility category and age, March 2009–March 2010

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2009						
March	5,243,129	603,315	4,639,814	936,012	3,182,658	1,124,459
April	5,248,781	603,076	4,645,705	937,186	3,186,808	1,124,787
May	5,253,853	602,826	4,651,027	937,302	3,191,392	1,125,159
June	5,287,256	603,148	4,684,108	947,230	3,213,216	1,126,810
July	5,281,432	602,563	4,678,869	941,735	3,212,379	1,127,318
August	5,307,020	603,370	4,703,650	950,076	3,227,252	1,129,692
September	5,337,606	603,879	4,733,727	954,863	3,251,286	1,131,457
October	5,330,233	603,483	4,726,750	949,858	3,248,892	1,131,483
November	5,368,216	604,365	4,763,851	961,696	3,272,730	1,133,790
December	5,337,340	598,193	4,739,147	958,456	3,252,098	1,126,786
2010						
January	5,358,655	601,117	4,757,538	957,892	3,268,823	1,131,940
February	5,386,683	600,988	4,785,695	966,712	3,287,084	1,132,887
March	5,417,319	599,878	4,817,441	971,340	3,313,675	1,132,304

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Recipients of federal payment and state supplementation, by eligibility category and age, March 2009–March 2010

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2009						
March	2,063,657	501,483	1,562,174	234,221	1,060,209	769,227
April	2,066,071	502,230	1,563,841	234,559	1,061,010	770,502
May	2,067,978	502,842	1,565,136	234,659	1,061,666	771,653
June	2,076,756	503,900	1,572,856	236,848	1,066,521	773,387
July	2,074,422	503,892	1,570,530	235,596	1,065,209	773,617
August	2,081,537	504,927	1,576,610	237,710	1,068,414	775,413
September	2,090,610	505,832	1,584,778	239,266	1,074,273	777,071
October	2,088,580	506,003	1,582,577	238,030	1,072,970	777,580
November	2,099,323	507,214	1,592,109	240,914	1,078,682	779,727
December	2,085,539	502,433	1,583,106	239,746	1,071,361	774,432
2010						
January	2,092,282	504,173	1,588,109	239,873	1,075,186	777,223
February	2,098,273	504,005	1,594,268	241,413	1,079,151	777,709
March	2,105,179	503,752	1,601,427	242,466	1,084,747	777,966

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 5.
Recipients of state supplementation only, by eligibility category and age, March 2009–March 2010

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2009						
March	292,678	99,873	192,805	1,991	145,886	144,801
April	293,142	100,043	193,099	1,969	146,127	145,046
May	274,914	93,997	180,917	1,739	136,927	136,248
June	274,824	93,874	180,950	1,675	136,950	136,199
July	262,994	89,735	173,259	1,601	131,309	130,084
August	262,803	89,741	173,062	1,497	131,179	130,127
September	263,386	89,865	173,521	1,579	131,487	130,320
October	263,525	89,774	173,751	1,579	131,647	130,299
November	254,366	85,266	169,100	1,479	128,579	124,308
December	253,807	85,333	168,474	1,586	127,829	124,392
2010						
January	254,134	84,976	169,158	1,531	128,490	124,113
February	254,570	85,023	169,547	1,516	128,722	124,332
March	254,169	84,731	169,438	1,474	128,634	124,061

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 6.
Total payments, by eligibility category, age, and source of payment, March 2009–March 2010
(in thousands of dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2009						
March	4,162,308	499,779	3,662,529	747,164	2,563,702	851,443
April	4,126,381	500,346	3,626,035	741,838	2,531,720	852,824
May	4,077,881	488,153	3,589,728	738,370	2,504,478	835,033
June	4,157,154	490,264	3,666,889	752,909	2,565,843	838,401
July	4,049,965	481,411	3,568,554	734,333	2,489,436	826,197
August	4,098,660	482,682	3,615,978	747,253	2,522,549	828,858
September	4,182,914	483,759	3,699,155	756,658	2,595,105	831,151
October	4,113,205	482,769	3,630,436	746,096	2,537,059	830,051
November	4,170,583	478,621	3,691,962	761,639	2,584,118	824,826
December	4,120,127	475,505	3,644,622	749,310	2,548,839	821,978
2010						
January	4,085,073	475,166	3,609,906	747,254	2,515,751	822,067
February	4,128,360	474,541	3,653,819	753,953	2,552,017	822,389
March	4,274,831	476,647	3,798,184	778,186	2,670,430	826,215
			Federal payments			
2009						
March	3,775,713	394,882	3,380,831	727,912	2,355,990	691,811
April	3,741,381	395,105	3,346,276	722,880	2,325,840	692,660
May	3,735,175	394,849	3,340,327	723,168	2,319,309	692,698
June	3,810,543	396,524	3,414,018	737,431	2,377,672	695,440
July	3,730,693	394,870	3,335,823	720,964	2,315,836	693,893
August	3,777,800	395,886	3,381,914	733,759	2,347,927	696,114
September	3,857,447	396,737	3,460,709	742,811	2,416,630	698,005
October	3,791,682	395,942	3,395,740	732,647	2,361,874	697,160
November	3,859,618	397,861	3,461,757	748,119	2,411,145	700,355
December	3,812,757	395,498	3,417,259	736,024	2,378,352	698,381
2010						
January	3,778,554	395,121	3,383,433	734,090	2,346,108	698,357
February	3,819,297	394,452	3,424,845	740,633	2,380,203	698,461
March	3,960,039	396,317	3,563,722	764,484	2,493,708	701,847

(Continued)

Table 6.
Total payments, by eligibility category, age, and source of payment, March 2009–March 2010 (in thousands of dollars)—Continued

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2009						
March	386,595	104,897	281,698	19,252	207,711	159,632
April	385,001	105,242	279,759	18,958	205,879	160,163
May	342,706	93,305	249,401	15,202	185,169	142,335
June	346,611	93,740	252,871	15,478	188,172	142,961
July	319,272	86,541	232,731	13,369	173,600	132,303
August	320,860	86,796	234,064	13,494	174,622	132,744
September	325,467	87,022	238,445	13,847	178,474	133,146
October	321,524	86,827	234,697	13,448	175,185	132,891
November	310,965	80,760	230,205	13,520	172,973	124,471
December	307,370	80,008	227,363	13,286	170,488	123,597
2010						
January	306,519	80,045	226,474	13,165	169,643	123,710
February	309,062	80,089	228,974	13,320	171,815	123,928
March	314,792	80,330	234,462	13,703	176,722	124,368

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and include retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, March 2009–March 2010 (in dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2009						
March	503.70	411.60	521.00	599.40	519.40	414.70
April	505.10	412.20	522.60	605.40	520.10	415.30
May	500.80	404.80	518.80	601.40	516.60	408.70
June	500.20	405.10	517.90	598.10	516.00	408.90
July	497.80	400.80	515.90	596.20	514.20	405.20
August	498.50	400.90	516.60	598.10	514.60	405.30
September	497.50	401.10	515.30	592.50	514.20	405.40
October	499.40	401.30	517.50	600.70	515.30	405.60
November	498.10	397.70	516.50	597.80	514.70	402.60
December	498.80	399.10	517.00	593.10	516.50	404.00
2010						
January	498.70	397.90	517.10	599.90	515.10	403.00
February	496.70	396.80	514.80	592.90	513.40	402.10
March	498.30	398.20	516.40	596.60	514.70	403.20
			Federal payments			
2009						
March	473.50	354.80	494.70	585.10	492.10	362.90
April	475.00	355.20	496.30	591.20	492.80	363.40
May	474.80	355.40	496.10	590.20	492.80	363.60
June	474.20	355.60	495.30	587.00	492.20	363.80
July	474.00	355.50	495.10	586.50	492.20	363.70
August	474.80	355.60	495.90	588.40	492.70	363.90
September	473.80	355.80	494.60	582.70	492.30	363.90
October	475.70	355.90	496.80	591.00	493.40	364.10
November	475.60	356.20	496.50	588.20	493.40	364.30
December	476.30	357.90	497.00	583.60	495.30	365.80
2010						
January	476.30	356.50	497.20	590.40	494.00	364.80
February	474.40	355.40	494.90	583.40	492.40	363.90
March	476.10	356.70	496.60	587.20	493.70	365.00

(Continued)

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, March 2009–March 2010 (in dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2009						
March	155.90	172.30	150.20	75.80	158.80	172.60
April	155.90	172.40	150.20	75.80	158.80	172.70
May	139.50	154.80	134.30	59.80	143.40	155.20
June	139.40	154.70	134.10	59.70	143.20	155.10
July	130.40	144.50	125.60	52.30	134.80	145.10
August	130.30	144.50	125.50	52.30	134.80	145.10
September	130.20	144.40	125.40	52.30	134.60	145.10
October	130.30	144.50	125.50	52.30	134.70	145.10
November	124.90	134.80	121.60	51.30	131.30	136.20
December	125.00	135.00	121.60	51.30	131.30	136.30
2010						
January	124.80	134.80	121.50	51.20	131.10	136.10
February	124.60	134.60	121.20	51.10	130.90	136.00
March	124.70	134.70	121.30	51.10	130.90	136.10

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and exclude retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 8.
All awards, by eligibility category and age of awardee, March 2009–March 2010

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2009						
March	93,218	9,425	83,793	18,985	64,651	9,582
April	80,706	9,748	70,958	15,728	55,101	9,877
May	83,702	9,158	74,544	15,863	58,530	9,309
June	91,533	8,362	83,171	18,824	64,212	8,497
July	80,922	8,933	71,989	16,259	55,607	9,056
August	81,089	8,977	72,112	15,960	56,026	9,103
September	97,650	9,128	88,522	19,059	69,326	9,265
October	79,584	8,969	70,615	15,177	55,332	9,075
November	93,329	8,918	84,411	18,226	66,030	9,073
December	77,868	7,941	69,927	15,163	54,632	8,073
2010						
January	70,930	7,739	63,191	13,687	49,383	7,860
February [a]	78,942	8,237	70,705	15,139	55,419	8,384
March [a]	101,945	8,429	93,516	20,551	72,807	8,587

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for all awards made during the specified month.

a. Preliminary data. In the first 2 months after their release, numbers may be adjusted to reflect returned checks.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Perspectives—Paper Submission Guidelines

The *Social Security Bulletin* is the quarterly research journal of the Social Security Administration. It has a diverse readership of policymakers, government officials, academics, graduate and undergraduate students, business people, and other interested parties.

To promote the discussion of research questions and policy issues related to Social Security and the economic well being of the aged, the *Bulletin* welcomes submissions from researchers and analysts outside the agency for publication in its Perspectives section.

We are particularly interested in papers that:

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- evaluate changing economic, demographic, health, and social factors affecting work/retirement decisions and retirement savings;
- consider the uncertainties that individuals and households face in preparing for and during retirement and the tools available to manage such uncertainties; and
- measure the changing characteristics and economic circumstances of SSI beneficiaries.

Papers should be factual and analytical, not polemical. Technical or mathematical exposition is welcome, if relevant, but findings and conclusions must be written in an accessible, nontechnical style. In addition, the relevance of the paper's conclusions to public policy should be explicitly stated.

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Authors should submit papers for consideration via e-mail to Michael V. Leonesio, Perspectives Editor, at perspectives@ssa.gov. To send your paper via regular mail, address it to:

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Formatting Guidelines

To facilitate the editorial process, papers submitted for publication must be prepared in Microsoft Word (**except for tables and charts—see below**) and be formatted as outlined below.

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- **Text**—Papers should average 10,000 words, including the text, the notes, and the references (but excluding the tables and charts). Text is double-spaced, except notes and references, which are double spaced only after each entry. **Do not embed tables or charts into the text. Create separate files (in the formats outlined in "Tables/Charts" below) for the text and statistical material**. Tables should be in one file, with one table per page. Include charts in a separate file, with one chart per page.
- **End Notes**—Number notes consecutively in the text using superscripts. Only use notes for brief substantive comments, not citations. (See the *Chicago Manual of Style* for guidance on the use of citations.) All notes should be grouped together and start on a new page at the end of the paper.
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For specific questions on formatting, use the *Chicago Manual of Style* as a guide for notes, citations, references, and table presentation.

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Questions regarding the mechanics of submitting a paper should be sent to our editorial staff via e-mail at ssb@ssa.gov. For other questions regarding submissions, please contact Michael V. Leonesio, Perspectives Editor, at perspectives@ssa.gov.

OASDI and SSI Program Rates and Limits, 2010

Old-Age, Survivors, and Disability Insurance

Tax Rates for Employers and Employees, Each [a] (percent)	
Social Security	
Old-Age and Survivors Insurance	5.30
Disability Insurance	0.90
Subtotal, Social Security	6.20
Medicare (Hospital Insurance)	1.45
Total	7.65
Maximum Taxable Earnings (dollars)	
Social Security	106,800
Medicare (Hospital Insurance)	No limit
Earnings Required for Work Credits (dollars)	
One Work Credit (One Quarter of Coverage)	1,120
Maximum of Four Credits a Year	4,480
Earnings Test Annual Exempt Amount (dollars)	
Under Full Retirement Age for Entire Year	14,160
For Months Before Reaching Full Retirement Age in Given Year	37,680
Beginning with Month Reaching Full Retirement Age	No limit
Maximum Monthly Social Security Benefit for Workers Retiring at Full Retirement Age (dollars)	2,346
Full Retirement Age	66
Cost-of-Living Adjustment (percent)	0.0

a. Self-employed persons pay a total of 15.3 percent—10.6 percent for OASI, 1.8 percent for DI, and 2.9 percent for Medicare.

Supplemental Security Income

Monthly Federal Payment Standard (dollars)	
Individual	674
Couple	1,011
Cost-of-Living Adjustment (percent)	0.0
Resource Limits (dollars)	
Individual	2,000
Couple	3,000
Monthly Income Exclusions (dollars)	
Earned Income [a]	65
Unearned Income	20
Substantial Gainful Activity (SGA) Level for the Nonblind Disabled (dollars)	1,000

a. The earned income exclusion consists of the first $65 of monthly earnings, plus one-half of remaining earnings.

Social Security Administration
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