Social Security

Social Security Bulletin

Vol. 69, No. 1, 2009

IN THIS ISSUE:

The *Social Security Bulletin* (ISSN 0037-7910) is published quarterly by the Social Security Administration, 500 E Street, SW, 8th Floor, Washington, DC 20254-0001. First-class and small package carrier postage is paid in Washington, DC, and additional mailing offices.

The *Bulletin* is prepared in the Office of Retirement and Disability Policy, Office of Research, Evaluation, and Statistics. Suggestions or comments concerning the *Bulletin* should be sent to the Office of Research, Evaluation, and Statistics at the above address. Comments may also be made by e-mail at ssb@ssa.gov or by phone at (202) 358-6267.

Paid subscriptions to the *Social Security Bulletin* are available from the Superintendent of Documents, U.S. Government Printing Office. The cost of a copy of the *Annual Statistical Supplement to the Social Security Bulletin* is included in the annual subscription price of the *Bulletin*. The subscription price is $56.00 domestic; $78.40 foreign. The single copy price is $13.00 domestic; $18.20 foreign. The price for single copies of the *Supplement* is $49.00 domestic; $68.60 foreign.

Internet: http://bookstore.gpo.gov
Phone: toll free (866) 512-1800;
DC area (202) 512-1800
E-mail: contactcenter@gpo.gov
Fax: (202) 512-2104
Mail: Stop IDCC, Washington, DC 20402

Postmaster: Send address changes to *Social Security Bulletin*, 500 E Street, SW, 8th Floor, Washington, DC 20254-0001.

Social Security Bulletin

Vol. 69, No. 1, 2009

Social Security Administration
Office of Retirement and Disability Policy
Office of Research, Evaluation, and Statistics

SOCIAL SECURITY BULLETIN

Volume 69 • Number 1 • 2009

Articles

Other

Earnings Sharing in Social Security: Projected Impacts of Alternative Proposals Using the MINT Model

by Howard M. Iams, Gayle L. Reznik, and Christopher R. Tamborini*

Changes in American family and work patterns over the past decades have prompted various policy proposals for changing the structure of Social Security benefits. In this article, we use the Social Security Administration's Modeling Income in the Near Term (MINT) microsimulation model to project how Social Security benefit amounts would change in response to incorporating earnings sharing into benefit calculations for the population aged 62 or older in 2030 under three hypothetical policy scenarios. The earnings sharing scenarios modeled in the article would reduce benefits for the majority of individuals, although there are important differences among married, divorced, and widowed individuals. Some groups of men and women would experience increases in Social Security benefits, while some would receive reduced benefits in comparison to current law, particularly widowed individuals. Allowing widows to inherit the earnings records of their deceased husbands would improve their outcomes.

Summary

This article provides policymakers and retirement analysts with insights into the potential distributional effects of incorporating earnings sharing in the calculation of Social Security benefits. Earnings sharing refers to a system whereby the earnings records of married individuals are combined and split equally for each year of marriage for the purpose of calculating each individual's Social Security benefit. Incorporating earnings sharing has been proposed as one way to adapt the Social Security program to socioeconomic and demographic changes over the last few decades, such as changes in women's work and marriage patterns.

Using the Social Security Administration's Modeling Income in the Near Term (MINT) microsimulation model, we estimate the impact of earnings sharing on Social Security benefits for the projected retirement population aged 62 or older in 2030 under three hypothetical policy proposals: earnings sharing with no auxiliary survivor or spousal benefits, earnings sharing with survivor benefits only, and earnings sharing with survivor and spousal benefits. We exclude any additional benefit enhancements from the three proposals to focus on the fundamental effects of basic earnings sharing on future retirees.

In evaluating the desirability of earnings sharing, it is important to consider how the policy would affect different segments of the retiree population. Overall, the earnings sharing scenarios analyzed in this article would lead to benefit decreases relative to current-law Social Security benefits for the majority of future retirees. Results differ, however, among married, divorced, and widowed individuals. For married individuals, over a third would receive Social Security benefit increases, and about half would receive benefit decreases under basic earnings sharing with no

Selected Abbreviations

CBO	Congressional Budget Office
HHS	Department of Health and Human Services
MINT	Modeling Income in the Near Term
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration

* *Howard M. Iams is a Senior Research Advisor to the Office of Research, Evaluation, and Statistics (ORES), Office of Retirement and Disability Policy (ORDP), Social Security Administration (SSA). Gayle L. Reznik and Christopher R. Tamborini are with the Office of Retirement Policy (ORP), ORDP, SSA.*

auxiliary benefits. The remaining married individuals would experience no change in benefits. Married individuals in one-earner couples would experience more widespread and greater benefit reductions than those in two-earner couples.

For divorced individuals, the majority of men and almost half of women would receive Social Security benefit decreases under earnings sharing with no auxiliary benefits. Only about a tenth of divorced men and two-fifths of divorced women would receive benefit increases. Among those receiving benefit decreases, divorced men would receive an average decrease of about 11 percent and divorced women about 22 percent. For widowed individuals, earnings sharing with no auxiliary benefits would lower the Social Security benefits of the vast majority of men and women. The reduction would average a quarter of the current-law benefits for widows and a fifth of the benefits for widowers.

The introduction of survivor benefits under basic earnings sharing would generate very modest changes, mainly in reducing the extent of benefit decreases for widows and divorced surviving spouses. Providing spousal benefits under an earnings sharing framework would have almost no additional impact. Allowing widows to inherit the earnings records of their deceased husbands would improve their outcomes.

Introduction and Background

Changes in the American family and work patterns over the past decades have prompted various policy proposals to change Social Security's auxiliary benefit system.[1] This article analyzes earnings sharing as an alternative to the current method of calculating Social Security benefits. Using the MINT model, we examine the potential distributional effects of incorporating earnings sharing into benefit calculations for the projected retirement population in 2030 under three hypothetical policy scenarios.

Under the current Social Security system, benefit eligibility is contingent on an individual's own earnings history and on his or her marital history and the earnings records of current and previous spouses. The current system bases retirement benefits on the worker's own earnings and provides auxiliary benefits to dependents and survivors of workers. Auxiliary benefits provide monthly payments to qualified spouses, ex-spouses, and survivors of insured workers. A spouse is entitled to up to half the benefit, and a survivor is entitled to as much as the full benefit, that is due the higher earning spouse (usually the husband).[2] Although gender-neutral, auxiliary benefits are especially important to women because women tend to have lower lifetime earnings, have fewer years in the workforce, and live longer than men in retirement (Sandell and Iams 1997; Tamborini and Whitman 2007; Weaver 1997, 2002).

Earnings sharing equally divides the combined Social Security earnings of married couples in order to calculate each spouse's benefit. In years when an individual is not married, the individual's own earnings record is used. The earnings sharing approach reflects the assumption that economic resources acquired during a marriage, including earnings, are shared equally regardless of the household division of labor. In the case of multiple marriages or divorce, the sharing would occur with different spouses over the lifetime during each period of marriage. In the most basic form of earnings sharing, a spouse would not be eligible for auxiliary benefits (see, for example, Forman 2006).

Although opponents of earnings sharing point to sharp benefit reductions among some vulnerable groups, and to the cost and difficulty of implementation, proponents often focus on earnings sharing as a means to address inequities in the current Social Security system. A prominent equity-related concern is the treatment of one-earner married couples relative to single persons and two-earner married couples (Favreault, Sammartino, and Steuerle 2002b; Steuerle and Bakija 1994). For example, a one-earner couple with the same total lifetime earnings as a two-earner couple receives higher total benefits[3] under the current auxiliary benefit system.[4]

To illustrate this point, Table 1 displays three stylized retired couples. Each couple has the same average lifetime monthly earnings of $1,000, but different intrahousehold earnings profiles. In Couple A, the wife did not work and the husband worked. In Couple B, both the wife and the husband worked, and the wife earned one quarter of her husband's average monthly earnings. In Couple C, the wife and the husband both worked, each with the same average monthly earnings. Although each of the three couples has the same average monthly combined earnings of $1000, one-earner Couple A receives a higher total-couple Social Security benefit ($1,128) than two-earner Couple B ($1,032) and two-earner Couple C ($900).[5] Couple A receives a higher total-couple benefit because the nonworking wife receives an auxiliary spousal benefit of half the working husband's retired-worker benefit of $752.

Earnings sharing has been suggested as a way to equalize benefits between one-earner and two-earner couples. In Table 1, if we assume that each couple was

Table 1.
Social Security benefits for married couples by intrahousehold earnings profile: current-law and earnings sharing benefits for three stylized retirement-age couples, 2009 (in dollars)

Stylized couples	Average lifetime monthly earnings	Benefits under current system			Benefits under earnings sharing
		Retired-worker benefit	Spouse benefit	Total benefit	
Couple A					
Husband	1,000	752	0	752	450
Wife	0	0	376	376	450
Total	1,000	…	…	1,128	900
Couple B					
Husband	800	688	0	688	450
Wife	200	180	164	344	450
Total	1,000	…	…	1,032	900
Couple C					
Husband	500	450	0	450	450
Wife	500	450	0	450	450
Total	1,000	…	…	900	900

SOURCE: Authors' calculations using the 2009 primary insurance amount (PIA) benefit formula.

NOTE: … = not applicable.

married for 35 years, both spouses are the same age, all earnings occurred during marriage, and all earnings were shared, then the benefits received by two-earner Couple C would equal the benefits received by one-earner Couple A and two-earner Couple B.[6] Under earnings sharing, couples with the same total lifetime earnings generally would receive the same benefits regardless of their individual earnings profiles, all things being equal.[7]

Earnings sharing proposals have also been driven by concerns about benefit adequacy, particularly for growing subpopulations such as divorced women who were married for fewer than 10 years.[8] Under earnings sharing, divorced women whose marriages were too short to qualify for divorced spouse or survivor benefits could see benefit increases if their ex-husbands' earnings were higher than their own during the period of marriage.[9]

Earnings sharing proposals received considerable attention from policymakers in the 1980s. At that time, a number of studies evaluated the effects of earnings sharing and the transition costs of moving to such a system. The Social Security Administration (SSA), then part of the Department of Health and Human Services (HHS), conducted a broad implementation study on a set of complex earnings sharing proposals debated during the early to mid-1980s.[10] That study modeled a generic version of earnings sharing in which each spouse was credited with half of a couple's combined covered (Social Security) earnings for each year of marriage. The generic model, however, included "offset reductions in benefits for survivors compared to present law;" that is, surviving spouses and surviving divorced spouses could "inherit the total amount of the deceased spouse's covered annual earnings for each year of marriage and…add this amount to his or her own earnings" (HHS 1985a, XIV). Thus survivors would be credited for combined earnings for each year they had been married, but spouses would only be credited for half of the combined earnings for each year of marriage to a still-living spouse. Overall, the study found mixed results. Benefit declines, for example, were documented among almost half of couples (especially one-earner couples), over two-fifths of widows, and over half of divorced men, while benefit increases were found among some individuals from a two-earner couple and around half of divorced women.[11]

Although receiving less attention in more recent years, earnings sharing continues to be cast as a policy alternative. Several recent studies, such as Favreault and Steuerle (2007) and Schwabish, Simpson, and Topoleski (2007), examine earnings sharing as part of a broader set of policy packages to address the changing retirement needs of American families. In these studies, as in others, earnings sharing is viewed as a way to address inequities between one-earner and two-earner married couples under the current Social Security program. Moreover, like the earnings sharing

proposals examined in the 1980s, the proposals often include auxiliary benefits and other enhancements, such as an increased minimum benefit or caregiving credits to offset benefit decreases overall and to protect groups such as widows who may otherwise experience benefit reductions under earnings sharing.[12] A consequence of including enhancements, however, is that it can make policy proposals very complex, and ascertaining the benefit increases and decreases attributable to earnings sharing is difficult (Fierst 1990).

This article reassesses how the Social Security benefits of future retirees would change in response to earnings sharing without enhancements in Social Security's benefit structure. Enhancements would make an earnings sharing plan more politically viable, but removing them for analytical purposes makes it easier for policymakers and advocates to ascertain the fundamental distributional effects of earnings sharing. Three hypothetical earnings sharing options are examined, with distributional effects projected for the population aged 62 or older in 2030. The article does not advocate or oppose the policy options examined herein. A brief description of the data and methodology follows. The subsequent section reports the results. The concluding section contains a summary of the findings and suggestions for possible future work.

Data and Methodology

To estimate the potential distributional effects of earnings sharing on future retiree populations, we use SSA's MINT model.[13] Developed by SSA's Office of Research, Evaluation, and Statistics with assistance from the Brookings Institution, the RAND Corporation, and the Urban Institute, MINT is a microsimulation model that uses observed and estimated population characteristics to project the demographic characteristics and economic status of future retirees. MINT is a powerful tool for evaluating future aged populations and permits distributional analyses of different policy changes across heterogeneous populations, accounting for socioeconomic and demographic changes among more recent cohorts.[14] The model is based on nationally representative microdata from the 1990–1993 and 1996 panels of the Census Bureau's Survey of Income and Program Participation (SIPP) matched to SSA administrative records.[15]

Using the matched data, MINT follows a series of sophisticated techniques that involve systematic modeling of income determinants to project future retirees' Social Security benefits and other retirement income, changes in workforce participation, longevity, and other factors such as date of retirement, marital status changes, and education patterns (Toder and others 2002, II-10). For a thorough description of MINT's methodology, readers should consult Butrica, Iams, Moore, and Waid (2001); Smith, Cashin, and Favreault (2005); and Toder and others (2002).

To date, MINT has not been used to evaluate the distributional consequences of earnings sharing. To calculate Social Security spousal and survivor benefit amounts, MINT identifies characteristics of current, former, and future spouses, and calculates shared earnings based on their lifetime projected earnings. For the purposes of this article, earnings sharing is defined as the combined Social Security earnings of a couple, which is evenly split between the spouses in each year of marriage to calculate Social Security benefits. A person retains his or her own earnings in each year he or she is unmarried.[16]

We simulate three policy proposals, all of which use earnings sharing to calculate Social Security benefits in place of the current-law benefit calculation. The first policy proposal (P1) eliminates all auxiliary benefits. This option adheres to the most basic form of earnings sharing, which "would eliminate the current system of benefits for workers and spouses (or surviving spouses) and instead credit each spouse with half of a couple's total covered earnings for each year of marriage" (HHS 1985a, XIII). The second policy proposal (P2) retains survivor benefits, but calculates such benefits under earnings sharing rather than current law. Under P2, the survivor benefit would raise the benefit of the survivor to the level of the earnings sharing benefit of the deceased spouse if the survivor's own earnings sharing benefit is lower than the deceased spouse's earnings sharing benefit. The third policy proposal (P3) keeps the current structure of spousal and survivor benefits intact, but again calculates those benefits under earnings sharing rather than using the individual earnings of the highest earner. Under P3, the spousal supplement would raise the earnings sharing benefit of the lower-earning spouse to the level of half the earnings sharing benefit of the higher-earning spouse.

Retaining spousal and survivor benefits adds a layer of protection for groups who may receive reduced benefits under earnings sharing. However, unlike much of the previous literature, this study bases auxiliary benefits on shared earnings, which provides a clear estimate of the distributional effect of an earnings sharing system, both with and without auxiliary benefits, and is more consistent with the concept of earnings

sharing than other types of enhancements. Since spousal and survivor benefits are calculated using earnings shared during years of marriage, auxiliary benefits could be lower than under the current system.

The simulations measure the impact of the three alternatives on average Social Security benefits for retirees aged 62 or older in 2030 (born 1926–1968). Age 62 is chosen since that is the age at which individuals are entitled to receive retired-worker benefits and also at which spouses of retired workers are eligible for benefits. Using the 62-or-older group in 2030 allows the analysis of the effects on a retiree population mainly consisting of members of the baby-boom generation, a cohort at the forefront of sharp demographic changes in the American population, such as women's increased labor force participation and downward marriage trends.[17] We focus on the impact of earnings sharing on benefits in 2030 rather than on lifetime benefits. A person's benefit can increase or decrease over time depending on changes in marital status and earnings, so the effect of a policy change on benefits in a single year can differ from the effect on lifetime benefits.

We assess the likelihood of receiving benefit increases and decreases for the entire population, married individuals, divorced men and women, and widowers and widows. We also distinguish between individuals in one-earner and two-earner married couples.[18] Individuals are identified as married, divorced, or widowed according to their current marital status in 2030.[19] Individuals in 2030 who were never married are excluded from the analysis since never-married individuals are not affected by earnings sharing. Individuals projected to be eligible for disabled-worker benefits are also excluded from the analysis because of the incomplete nature of their earnings histories. Our analysis assumes that all beneficiaries would have had the opportunity to share earnings over their entire working and married lifetimes. The results are weighted to be nationally representative.

Several limitations are worth noting. Because the MINT population is based on the SIPP survey panels, MINT projections contain sampling errors. More important is the uncertainty related to projection error, which reflects differences between MINT estimates and future trends. For these reasons, small differences in our results should be viewed with caution. Another noteworthy point is that this MINT analysis does not assume any type of behavioral response to policy changes. Finally, it is outside the article's scope to consider the effects of earnings sharing proposals on system financing and the transition or administrative costs involved in moving from the existing system to an earnings sharing system. At a time when the system faces long-term financial challenges, the implications of policy alternatives on Social Security's finances are an important consideration.

Results

Overall Population 62 or Older

Table 2 presents results for the overall population aged 62 or older in 2030. Note that "no change in benefits" is defined as having projected benefits change less than 1 percent from current law. Benefits must change by 1 percent or more from current law to be defined as increases or decreases. Benefit amounts are expressed in 2005 dollars. For divorced and widowed individuals, benefits are annual individual benefits. For married individuals, benefits are half the combined annual couple benefit. Only those eligible for benefits under current law are included in the tables. For married beneficiaries, the spouse must also be eligible for benefits under current law to be included in the tables.[20]

Overall, the three earnings sharing policies would reduce Social Security benefits for the majority of individual beneficiaries. P1 would reduce benefits by 8 percent, and P2 and P3 would each reduce benefits by 4 percent. Approximately 60 percent of individuals would receive benefit reductions, almost 30 percent would receive benefit increases, and 11 percent to 14 percent would experience no change in benefits. For individuals who receive benefit increases, benefits would increase, on average, by 8 percent. For individuals who experience benefit reductions, benefits would decrease, on average, by 11 percent to 17 percent.

Married Individuals

Table 3 presents the distributional effects of the earnings sharing proposals on couple benefits for individuals who are married in 2030. Since earnings sharing essentially redistributes earnings and benefits within couples, the effects of the proposals for married individuals are gauged from a couple perspective. The combined couple benefits are halved in Tables 3 and 4 to make the results for married individuals more easily comparable to the results for divorced and widowed individuals. We refer to this split couple benefit as the per capita benefit. Both the husband and wife must be eligible for benefits under current law to be included in the table.

Fourteen percent of married individuals would be unaffected by P1, 37 percent would receive increased

Table 2.
Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030

Benefits and affected population[a]	Earnings sharing proposals		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
Average current-law benefit ($)	14,787	14,787	14,787
Average benefit under policy ($)	13,581	14,154	14,177
Percent change in average benefit from current law	-8	-4	-4
Individuals with no change in benefits relative to current law[b]			
Percent of population	11	13	14
Average current-law benefit ($)	15,214	15,221	15,061
Individuals with increases in benefits relative to current law[c]			
Percent of population	28	29	29
Average current-law benefit ($)	14,400	14,357	14,334
Average benefit under policy ($)	15,519	15,455	15,432
Percent change in average benefit from current law	8	8	8
Individuals with decreases in benefits relative to current law[c]			
Percent of population	61	58	57
Average current-law benefit ($)	14,883	14,905	14,954
Average benefit under policy ($)	12,416	13,250	13,321
Percent change in average benefit from current law	-17	-11	-11
Total population (in thousands)	57,796	57,796	57,796

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

a. Includes only married, divorced, or widowed individuals aged 62 or older who are eligible for benefits under current law. Married individuals are included only if the spouse is eligible for benefits under current law. For divorced and widowed individuals, benefits are annual individual benefits. For married individuals, benefits shown are per capita (half the combined annual couple benefit). Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

benefits, and 49 percent would receive reduced benefits. The average annual current-law per-capita benefit in 2030 would be slightly higher for married individuals with increases ($15,221) than those with decreases ($13,589). The average increase would be 7 percent and the average reduction would be 8 percent of benefits. Thus, P1 slightly increases benefits for over a third of married individuals and slightly decreases benefits for about half of married individuals.

The addition of survivor benefits would have little effect on married individuals, so results for P2 are not shown. Auxiliary spousal benefits in earnings sharing proposal P3 would only slightly alter the impact on married individuals in terms of the percentage with increases and decreases, as well as the size of the average increase and decrease.[21]

One-earner versus two-earner married couples. As previously discussed, a major rationale for earnings sharing is to improve the equity of benefits between one-earner and two-earner couples. Under current law, a one-earner couple receives higher benefits than a two-earner couple with the same lifetime earnings. In the context of this study, we therefore might expect that one-earner couples would experience greater reductions in benefits than two-earner couples.

Table 4 illustrates the effects of the three earnings sharing proposals for married individuals in one-earner and two-earner couples, shedding light on the complex interactions between marriage patterns, earnings histories of spouses, and Social Security program rules.[22] Overall, the prevalence of benefit increases would be substantially lower among individuals in one-earner married couples. P1 would increase benefits for about a quarter of individuals in one-earner couples and for about two-fifths of individuals in two-earner couples.[23] Increases for one-earner couples could result when both spouses have low earnings and one spouse does

Table 3.
Married individuals: Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030

Benefits and affected population[a]	Earnings sharing proposals		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
Individuals with no change in benefits relative to current law[b]			
Percent of population	14	…	15
Average current-law benefit ($)	14,645	…	14,445
Individuals with increases in benefits relative to current law[c]			
Percent of population	37	…	37
Average current-law benefit ($)	15,221	…	15,182
Average benefit under policy ($)	16,279	…	16,236
Percent change in average benefit from current law	7	…	7
Individuals with decreases in benefits relative to current law[c]			
Percent of population	49	…	48
Average current-law benefit ($)	13,589	…	13,650
Average benefit under policy ($)	12,511	…	12,661
Percent change in average benefit from current law	-8	…	-7
Total population (in thousands)	32,775	…	32,775

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

NOTE: … = not applicable.

a. Married individuals are included only if the spouse is eligible for benefits under current law. Benefits shown are per capita (half the combined annual couple benefit). Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

not have enough earnings to qualify for retired-worker benefits. Under current law the latter spouse receives spousal benefits, but under P1, both spouses would qualify for retired-worker benefits, so the total benefits received by the couple could increase. The percentage with increases would be similar for individuals in both types of two-earner married couples (those in which both are eligible for retired-worker benefits and those in which one spouse is dually entitled and receives higher spousal benefits under current law).

As expected, benefit reductions would be more widespread and greater for individuals in one-earner married couples than for those in two-earner married couples. About two-thirds of individuals in one-earner married couples would experience a reduction in benefits under P1, and their average benefit decrease would be 20 percent. In contrast, about two-fifths of individuals in two-earner married couples with only retired-worker benefits and about half of those with dual entitlement would experience decreases in their average benefits, with relatively small decreases of 5 percent and 7 percent, respectively.

The results for P2 would be the same as for P1 because the analysis is restricted to married individuals in their first marriage, and therefore survivor benefits do not apply to this subsample. Interestingly, proposal P3, which includes spousal benefits, would have little effect on couple benefits beyond that of P1. Adding spousal benefits has a fairly small effect because the spouse's benefits would be based on the higher earner's shared earnings (when married) and his or her own earnings (when not married), rather than solely on the higher earner's own earnings history, as calculated under current law.

Examining the results for married individuals by earner status suggests important differences between one-earner and two-earner married couples. Individuals in two-earner married couples would be more likely to experience benefit increases, and less likely to experience benefit decreases, than those in one-earner married couples. Under P3, the benefit reductions for individuals in one-earner married couples would still be much greater than those for individuals in two-earner married couples, even for the dually entitled.

Table 4.
Married individuals by earnings profile: Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030

Benefits and affected population [a]	Earnings sharing proposals		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
	One-earner married couple		
Individuals with no change in benefits relative to current law [b]			
Percent of population	6	…	7
Average current-law benefit ($)	9,881	…	9,653
Individuals with increases in benefits relative to current law [c]			
Percent of population	25	…	26
Average current-law benefit ($)	7,376	…	7,362
Average benefit under policy ($)	8,344	…	8,323
Percent change in average benefit from current law	13	…	13
Individuals with decreases in benefits relative to current law [c]			
Percent of population	68	…	67
Average current-law benefit ($)	10,046	…	10,090
Average benefit under policy ($)	8,038	…	8,164
Percent change in average benefit from current law	-20	…	-19
Total population (in thousands)	1,458	…	1,458
	Two-earner couple, both with retired-worker benefits only		
Individuals with no change in benefits relative to current law [b]			
Percent of population	19	…	19
Average current-law benefit ($)	14,630	…	14,630
Individuals with increases in benefits relative to current law [c]			
Percent of population	42	…	42
Average current-law benefit ($)	16,111	…	16,109
Average benefit under policy ($)	17,158	…	17,156
Percent change in average benefit from current law	6	…	6
Individuals with decreases in benefits relative to current law [c]			
Percent of population	40	…	40
Average current-law benefit ($)	13,998	…	14,000
Average benefit under policy ($)	13,276	…	13,278
Percent change in average benefit from current law	-5	…	-5
Total population (in thousands)	13,313	…	13,313

(Continued)

Divorced Individuals

The proposals produce important differences between divorced women and men (Table 5). P1 would increase benefits for a higher share of divorced women than men. Specifically, about 38 percent of divorced women would receive benefit increases averaging 13 percent, while 12 percent of divorced men would receive benefit increases averaging 9 percent.

However, P1 would produce more benefit reductions than increases for both women and men. P1 would reduce benefits for a greater share of divorced men, but women would face larger reductions: 77 percent of divorced men would experience reductions averaging 11 percent, compared with 45 percent of divorced women experiencing a reduction averaging 22 percent. These changes reflect the complex benefit calculation under the earnings sharing proposals, in which the final benefit reflects the divorced individual's own earnings when unmarried and shared earnings during marriage. Some divorced women could receive lower benefits under the earnings sharing proposals because they would no longer benefit from the postmarriage earnings of their often higher-earning ex-husband, as under current law. Divorced men would tend to

Table 4.
Married individuals by earnings profile: Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030—*Continued*

Benefits and affected population[a]	Earnings sharing proposals		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
	Two-earner couple, one spouse dually entitled		
Individuals with no change in benefits relative to current law[b]			
Percent of population	10	…	10
Average current-law benefit ($)	15,075	…	14,961
Individuals with increases in benefits relative to current law[c]			
Percent of population	39	…	39
Average current-law benefit ($)	15,455	…	15,432
Average benefit under policy ($)	16,531	…	16,505
Percent change in average benefit from current law	7	…	7
Individuals with decreases in benefits relative to current law[c]			
Percent of population	51	…	51
Average current-law benefit ($)	13,271	…	13,293
Average benefit under policy ($)	12,279	…	12,307
Percent change in average benefit from current law	-7	…	-7
Total population (in thousands)	6,406	…	6,406

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

NOTE: … = not applicable.

a. Married individuals are included only if the spouse is eligible for benefits under current law. Includes only individuals in their first marriages. Benefits shown are per capita (half the combined annual couple benefit). Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

receive benefit decreases more often than women, in part because, even though men's earnings are typically higher than the earnings of their wives, these earnings would be divided under earnings sharing during each year of marriage.

Providing auxiliary benefits under proposals P2 and P3 would only slightly change the distribution of increases and decreases among divorced women and men. However, providing survivor benefits would markedly reduce the relative decrease in benefits for divorced women, from 22 percent under P1 to 9 percent under P2, and would slightly reduce the decrease in benefits for currently divorced men, from 11 percent under P1 to 9 percent under P2. Thus, although similar proportions of divorced women would face benefit decreases under P2 and P1, the average decrease under P2 would be mitigated by the addition of survivor benefits. This is largely because survivor benefits received by the majority of eligible divorced women are based on the shared earnings records of their deceased ex-husbands, which tend to be higher than their own lifetime shared earnings records. Thus, the survivor benefit under P2 yields a higher benefit for many divorced women than the retired-worker benefit under P1; however, such a benefit is still lower than the current-law survivor benefit because the latter is calculated based on the deceased ex-husband's own lifetime earnings history without sharing in years of marriage, which is generally higher than his shared earnings history.

In sum, the majority of currently divorced men and almost half of currently divorced women would receive reduced benefits under the examined earnings sharing proposals. Only about a tenth of currently divorced men and two-fifths of currently divorced women would receive increased benefits.[24]

Widowed Individuals

Table 6 shows that the effect of the three earnings sharing proposals is very different for widowed individuals than for other subgroups of the elderly population.[25] Under P1, benefits would decrease for 93 percent of widows and 95 percent of widowers. Among those

Table 5.
Divorced individuals: Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030, by sex

Benefits and affected population[a]	Earnings sharing proposals		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
		Divorced women	
Individuals with no change in benefits relative to current law[b]			
Percent of population	17	19	19
Average current-law benefit ($)	17,225	16,901	16,836
Individuals with increases in benefits relative to current law[c]			
Percent of population	38	40	40
Average current-law benefit ($)	11,544	11,621	11,616
Average benefit under policy ($)	12,988	13,040	13,034
Percent change in average benefit from current law	13	12	12
Individuals with decreases in benefits relative to current law[c]			
Percent of population	45	41	41
Average current-law benefit ($)	15,704	15,815	15,850
Average benefit under policy ($)	12,321	14,425	14,476
Percent change in average benefit from current law	-22	-9	-9
Total population (in thousands)	7,217	7,217	7,217
		Divorced men	
Individuals with no change in benefits relative to current law[b]			
Percent of population	11	13	13
Average current-law benefit ($)	16,350	16,607	16,585
Individuals with increases in benefits relative to current law[c]			
Percent of population	12	15	15
Average current-law benefit ($)	11,584	12,287	12,269
Average benefit under policy ($)	12,675	13,324	13,303
Percent change in average benefit from current law	9	8	8
Individuals with decreases in benefits relative to current law[c]			
Percent of population	77	72	72
Average current-law benefit ($)	16,987	17,017	17,028
Average benefit under policy ($)	15,072	15,444	15,458
Percent change in average benefit from current law	-11	-9	-9
Total population (in thousands)	3,701	3,701	3,701

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

a. Includes only currently divorced individuals aged 62 or older who are eligible for benefits under current law. Benefits shown are annual individual benefits. Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

Table 6.
Widowed individuals: Projected Social Security benefit impacts of three alternative earnings sharing proposals for individuals aged 62 or older in 2030, by sex

Benefits and affected population[a]	Earnings sharing proposal		
	P1 No survivor or spousal benefits	P2 Survivor benefits, no spousal benefits	P3 Survivor and spousal benefits
		Widows	
Individuals with no change in benefits relative to current law[b]			
Percent of population	3	9	…
Average current-law benefit ($)	14,196	14,812	…
Individuals with increases in benefits relative to current law[c]			
Percent of population	5	9	…
Average current-law benefit ($)	13,047	12,966	…
Average benefit under policy ($)	13,955	13,776	…
Percent change in average benefit from current law	7	6	…
Individuals with decreases in benefits relative to current law[c]			
Percent of population	93	81	…
Average current-law benefit ($)	15,738	15,961	…
Average benefit under policy ($)	11,514	13,340	…
Percent change in average benefit from current law	-27	-16	…
Total population (in thousands)	12,136	12,136	…
		Widowers	
Individuals with no change in benefits relative to current law[b]			
Percent of population	2	7	…
Average current-law benefit ($)	16,356	15,621	…
Individuals with increases in benefits relative to current law[c]			
Percent of population	3	10	…
Average current-law benefit ($)	14,450	15,093	…
Average benefit under policy ($)	15,200	15,971	…
Percent change in average benefit from current law	5	6	…
Individuals with decreases in benefits relative to current law[c]			
Percent of population	95	83	…
Average current-law benefit ($)	16,294	16,426	…
Average benefit under policy ($)	13,155	13,990	…
Percent change in average benefit from current law	-19	-15	…
Total population (in thousands)	1,968	1,968	…

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

NOTE: … = not applicable.

a. Includes only widowed individuals aged 62 or older who are eligible for benefits under current law. Benefits shown are annual individual benefits. Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

who receive reduced benefits, average benefits would decrease by 27 percent for widows and by 19 percent for widowers. Only 5 percent of widows and 3 percent of widowers would receive small increases.

The dramatic reduction in benefits for widowed individuals under P1 is attributed to several factors. Under P1, a widow receives the same benefit before and after the death of her husband. In contrast, under current law, the death of a husband initiates a new survivor benefit based on up to 100 percent of the deceased husband's benefit. Assuming the husband was the higher earner in the couple, earnings sharing would reduce the earnings credited to the husband and increase the earnings credited to the wife. However, the credited earnings of each of the spouses under earnings sharing would be lower than the earnings credited to the husband under current law, thus the wife's benefit under earnings sharing would be lower than the current-law survivor benefit based on her deceased husband's benefit. Similarly, the benefit received by the widower under earnings sharing would be lower than the current-law benefit based on his own nonshared earnings.

The introduction of survivor benefits in proposal P2 would result in a slightly higher percentage of widowed individuals who would experience benefit increases under earnings sharing, and a corresponding slightly lower percentage who would receive benefit decreases. P2 would reduce the average decrease in benefits for those experiencing reductions by 11 percentage points for widows, but only by 4 percentage points for widowers. However, the vast majority of widows would still receive lower survivor benefits under P2 than the current system. This is because the shared earnings record of the deceased husband is often lower than his nonshared earnings record.

The results for P3 are not reported because they would be the same as the results for P2 as, in general, widows and widowers do not receive spousal benefits. Taken together, among the projected retirement-age population in 2030, widowed individuals would mainly experience benefit reductions under these earnings sharing proposals, even under P2, and this decrease would average between about one-sixth and one-quarter of benefits.

The dramatic estimated benefit decreases among widowed individuals has prompted the introduction of earnings sharing proposals with provisions aimed toward offsetting the benefit reductions for survivors, particularly for widows. Even though there is no clear or consistent approach to calculating benefits for survivors under earnings sharing, one plausible approach is to allow survivors to inherit the nonshared Social Security earnings record of their deceased spouses for each year of marriage. Table 7 compares the results for P1 with and without inheritance of earnings for widowed individuals.[26] The inheritance proposal reduces the percentage of widows receiving benefit decreases and raises the percentage of widows receiving benefit increases as compared to P1 without inheritance. However, even with the inheritance of earnings, about a third of widows would receive benefit decreases relative to current law.[27] This would occur if the deceased husband had higher earnings than the wife before their marriage. Such earnings contribute to the current-law survivor benefit but are omitted from the inherited survivor benefit under earnings sharing.

Conclusions

This article examines the impact of three earnings sharing scenarios on the retirement-age population in 2030 using a recent version of MINT, a microsimulation model that has not previously evaluated the distributional consequences of earnings sharing. The policy alternatives modeled in this article represent basic earnings sharing scenarios. This approach yields more straightforward results than much of the previous literature on earnings sharing, which added a Social Security benefit adjustment or enhancement such as an increased minimum benefit or caregiving credits, in large part to adjust for the sharp decreases that would otherwise be experienced by some groups, especially widows. Although it is understandable why previous analyses included these enhancements, doing so can make it difficult for policymakers and advocates to ascertain the distinct fundamental distributional effects of earnings sharing by changing the distribution of benefit increases and decreases. A more politically viable earnings sharing plan likely would base survivor benefits on the full earnings record of the deceased husband, rather than on shared earnings during periods of marriage.

Overall, these three earnings sharing proposals would lead to a reduction of current-law Social Security benefits for the majority of retirees in 2030. However, important differences exist between married, divorced, and widowed individuals. Nearly half of married individuals would receive lower benefits in 2030. Benefit reductions would be more widespread for married individuals in one-earner couples, and conversely, benefit increases would be more prevalent for those in two-earner couples. Among divorced and widowed individuals there are important differences,

Table 7.
Widowed Individuals: Projected Social Security benefit impacts of earnings sharing proposal P1 with and without provision allowing surviving spouse to inherit decedent's earnings record for individuals aged 62 or older in 2030, by sex

Benefits and affected population[a]	Earnings sharing proposal P1:	
	With inheritance provision	Without inheritance provision
	Widows	
Individuals with no change in benefits relative to current law[b]		
Percent of population	11	3
Average current-law benefit ($)	15,736	14,196
Individuals with increases in benefits relative to current law[c]		
Percent of population	55	5
Average current-law benefit ($)	14,412	13,047
Average benefit under policy ($)	16,587	13,955
Percent change in average benefit from current law	15	7
Individuals with decreases in benefits relative to current law[c]		
Percent of population	34	93
Average current-law benefit ($)	17,413	15,738
Average benefit under policy ($)	15,720	11,514
Percent change in average benefit from current law	-10	-27
Total population (in thousands)	12,136	12,136
	Widowers	
Individuals with no change in benefits relative to current law[b]		
Percent of population	17	2
Average current-law benefit ($)	17,938	16,356
Individuals with increases in benefits relative to current law[c]		
Percent of population	70	3
Average current-law benefit ($)	15,827	14,450
Average benefit under policy ($)	17,678	15,200
Percent change in average benefit from current law	12	5
Individuals with decreases in benefits relative to current law[c]		
Percent of population	13	95
Average current-law benefit ($)	16,174	16,294
Average benefit under policy ($)	14,624	13,155
Percent change in average benefit from current law	-10	-19
Total population (in thousands)	1,968	1,968

SOURCE: Authors' calculations using Modeling Income in the Near Term (MINT).

a. Includes only widowed individuals aged 62 or older who are eligible for benefits under current law. Benefits shown are annual individual benefits. Benefit amounts are expressed in 2005 dollars.

b. Change of less than 1 percent from current law.

c. Change of 1 percent or more from current law.

with some experiencing benefit increases, but many experiencing benefit decreases. The vast majority of widows and widowers would receive benefit reductions, with widows experiencing greater relative declines than widowers. Although the effect would be more mixed for divorced beneficiaries, the earnings sharing scenarios examined in this article would reduce the benefits of three-fourths of men and nearly one-half of women. Earnings sharing with survivor benefits based on shared earnings would moderately reduce the benefit decreases for widows and divorced surviving spouses. Adding spousal benefits would not substantially alter the distributional effects.

The analysis shows that the three earnings sharing scenarios improve benefit adequacy for some, while reducing it for many others. The results are consistent with prior research which showed that earnings sharing would not improve benefit adequacy for some of the most economically vulnerable groups; instead, many survivors of retired workers and divorced women would be financially worse off under an earnings sharing approach than under current law.

Future work could delve deeper into the extent to which earnings sharing may differentially affect retirees with different socioeconomic and demographic characteristics. There is the need, for example, to further examine the effect of earnings sharing on the progressivity of the Social Security system, namely by focusing on potential changes in benefits across educational and income subpopulations within different marital groups. Analyzing beneficiaries' income level and type of Social Security benefit received could help explain how complex interactions between marital and earnings histories cause certain groups to receive benefit increases and others to receive benefit decreases under earnings sharing. Additional research could also look at the effects of earnings sharing on poverty and lifetime benefits, or further explore the distributional impact of earnings sharing with inheritance. It would also be informative to focus attention on how nonworking spouses or secondary earners fare under earnings sharing, and to examine the cost effects of earnings sharing by separating them from the redistributive effects.

This article does not offer any policy recommendation, and it neither supports nor opposes earnings sharing. Rather, its purpose is to highlight some of the potential distributional effects to take into account when considering a range of Social Security policy alternatives.

Notes

Acknowledgments: The authors have equal responsibility for this work, and thank the reviewers whose comments have improved this article. Ben Bridges, Lee Cohen, and Dave Shoffner provided valuable suggestions on earlier versions of this article. The authors also wish to thank the editors for their comments.

[1] Some prominent examples are discussed in Favreault, Sammartino, and Steuerle (2002a); Favreault and Steuerle (2007); Flowers and Horowitz (1993); and HHS (1985a).

[2] The 1939 Social Security Amendments established a spousal benefit, equal to one-half of the retired-worker benefit of the present spouse, and a widow's benefit, equal to three-fourths of the deceased husband's worker benefit. The 1950 Amendments extended potential eligibility to divorced widows with children and dependent widowers. In 1965, divorced wives and surviving divorced spouses without children became eligible, provided they met a dependency requirement and had attained a 20-year length of marriage. In 1972, the dependency requirement for divorced spouses was removed, and in 1977, the length of marriage requirement was reduced to 10 years. DeWitt, Béland, and Berkowitz (2008) and Martin and Weaver (2005) provide valuable summaries of historical developments in the Social Security program.

[3] However, two couples with the same lifetime earnings but with different time paths of earnings may not pay the same amount of Social Security taxes.

[4] The current auxiliary benefit system was originally designed to protect women who had little or no earnings in an era when most women did not work and the support system of the extended family was disappearing (Berkowitz 2002; DeWitt, Béland, and Berkowitz 2008; HHS 1985a).

[5] The benefits in Table 1 are calculated using the 2009 primary insurance amount (PIA) formula. The PIA is the benefit amount paid if benefits are claimed at the normal retirement age. The PIA is equal to the sum of 90 percent of the first $744 of average lifetime monthly earnings, plus 32 percent of average lifetime monthly earnings over $744 and through $4,483, plus 15 percent of average lifetime monthly earnings over $4,483 (the dollar amounts in the formula are indexed each year to the national average wage).

For Couple A, the husband's benefit is equal to (0.90*$744) + (0.32*$256) = $752. The wife's benefit is equal to half the husband's benefit (0.50*$752 = $376). For Couple B, the husband's benefit is equal to (0.90*$744) + (0.32*$56) = $688. The wife has her own earnings, so she is dually entitled to her own benefit (0.90*$200 = $180) and an auxiliary benefit. Since her own benefit is less than the amount she is entitled to as a spouse (0.50*$688 = $344), her total benefit is increased from $180 to $344. For Couple C, the husband's benefit is equal to (0.90*$500) = $450. The

wife's benefit is also equal to (0.90*$500) = $450. See SSA (2007) for additional information on the PIA and Social Security benefits.

[6] Of course, the stylized example does not account for the complex earnings and marital histories of real individuals, so the effect of earnings sharing on one-earner and two-earner couples would be less clear in reality.

[7] The stylized example in Table 1 highlights what some analysts refer to as "horizontal inequity:" couples who have the same total lifetime earnings yet have different annual combined couple benefits because of their different earnings profiles (Steuerle and Bakija 1994, 1997). Thus, in our example, the one-earner couple receives higher annual combined benefits than the two-earner couples. That being said, there is not universal agreement that couples with the same lifetime earnings should receive the same benefits. One might argue that couples with the same total lifetime earnings should not be treated as equals and should not receive the same total-couple benefits because they differ in amounts of leisure and home production.

[8] Among younger cohorts, trends such as shorter marriages prior to divorce and lower marriage and remarriage rates will result in a modest decline in the share of women potentially eligible for spousal or widow benefits in future years (Butrica and Iams 2000; Harrington Meyer, Wolf, and Himes 2006; Tamborini 2007; Tamborini, Iams, and Whitman forthcoming). Ruggles (1997) provides a valuable historical overview of changing divorce patterns in the United States over the 20th century. See Blau, Ferber, and Winkler (2006) for a useful summary of trends in women's labor force attachment in the United States.

[9] An additional topic of discussion related to auxiliary benefits is the potential effect of spousal benefits on labor force participation of older workers (for example Blau 1997).

[10] The Social Security Amendments of 1983 directed the Secretary of HHS and the Congressional Budget Office (CBO) to examine the effects, costs, and feasibility of using earnings sharing to calculate Social Security benefits. The full report of the HHS Secretary (HHS 1985a) was published as a Committee Print by the House Ways and Means Committee, and is summarized in a *Social Security Bulletin* article (HHS 1985b). CBO's study was published separately (CBO 1986).

[11] See also CBO (1986); Fierst and Campbell (1988); Flowers and Horowitz (1993); and Zedlewski (1984).

[12] Examples of studies examining earnings sharing proposals in the 1980s include Fierst and Campbell (1988), HHS (1985a, 1985b), and CBO (1986). For a description of proposals analyzed in more recent studies see, for example, Favreault and Steuerle (2007).

[13] Version 3.0/4.0 of MINT (MINTEX) is used in the analysis.

[14] Examples of studies using MINT include Butrica, Iams, and Sandell (1999); Butrica and Iams (2000, 2003); Sarney (2008); and Biggs, Sarney, and Tamborini (2009).

[15] SIPP is a household survey of the U.S. civilian noninstitutionalized population. Interviews are conducted every 4 months for 28 to 48 months depending on the panel. The survey provides information on a wide variety of topics, including income and wealth, labor force participation, participation in government programs, marital histories, and other socioeconomic and demographic variables that allow measurement of the future costs and effectiveness of existing government programs. MINT uses respondents' actual Social Security earnings records for 1951–2001.

[16] The SIPP-reported marital history and the MINT marital history projections identify years of marriage.

[17] Typically, the baby-boom cohort is defined as persons born between 1946 and 1964. The baby-boom cohort makes up about 70 percent of the retiree population analyzed in the article. Individuals born before 1946 are also included in the analysis to allow for additional widows and widowers, a group greatly affected by earnings sharing.

[18] The couple's earner status is only defined for married individuals in their first marriage and according to the current-law benefit type of the husband and wife. If one spouse qualifies for a retired-worker benefit and the other qualifies for a spousal benefit, then they are a one-earner couple; that is, a couple in which only one spouse has a qualifying earnings history (at least 40 quarters of coverage). Two-earner couples are those in which each spouse independently qualifies to receive retired-worker benefits. Two-earner couples are further divided into those in which both spouses qualify for retired-worker benefits, and those in which one spouse qualifies for retired-worker benefits and the other is dually entitled. In dual entitlement, the lower-earning spouse receives his or her earned worker's benefit plus and an unearned supplement to reach the level of the auxiliary spouse benefit (about one-half of the higher earner's benefit).

[19] In some of the Social Security literature, an individual is defined as divorced or widowed based on the type of Social Security benefit received, which may not describe his or her current marital status.

[20] A small number of nonbeneficiaries under current law qualify for benefits under earnings sharing (less than one-half of 1 percent of the overall population). These new beneficiaries are not included in the tables.

[21] It is notable that our results for married couples are very similar to those reported in HHS (1985a). In both simulations, average benefits would slightly increase (7–8 percent) for about two-fifths of couples, and average benefits would slightly decrease (7–8 percent) for about half of couples (Table 3 of this article). Our study projects slightly smaller real benefit levels for couples in 2030 than were projected in 1985.

[22] For computational reasons, Table 4 is restricted to married individuals in their first marriage. Thus, Table 4 includes approximately 65 percent of the total population of Table 3.

[23] As in Table 3, couple benefits are halved to make benefit amounts for individuals in one-earner and two-earner married couples comparable to those for divorced and widowed individuals.

[24] The results for divorced women differ from those reported in HHS (1985a). In short, that study projects many more and much larger increases for divorced women under earnings sharing. The 1985 study also projects a somewhat larger proportion of divorced men with increases (22 percent, versus 12 percent under P1 in this analysis). A major source of the difference for divorced women would be that our P1 projections base benefits on the person's shared earnings. In contrast, the 1985 projections provide for women to inherit the earnings record a deceased ex-husband accumulated during the marriage. In terms of similarities, both this analysis and the 1985 study project that divorced men overwhelmingly will experience decreases, and both project about the same magnitude of average benefit decrease and increase.

[25] Consistent with the rest of the article, individuals are classified as widows or widowers according to their marital status as of 2030.

[26] Under the earnings sharing proposal with inheritance of earnings, survivors inherit the Social Security earnings records of all deceased spouses, including ex-spouses.

[27] These results for widows are similar to those reported in HHS (1985a). The 1985 study also allowed for widows to inherit the deceased husband's earnings, and found that almost half (44 percent) of widows would experience reduced benefits.

References

Berkowitz, Edward D. 2002. Family benefits in Social Security: A historical commentary. In *Social Security and the family: Addressing unmet needs in an underfunded system*, ed. Melissa M. Favreault, Frank J. Sammartino, and C. Eugene Steuerle, 19–46. Washington, DC: Urban Institute Press.

Biggs, Andrew G., Mark Sarney, and Christopher R. Tamborini. 2009. A progressivity index for Social Security. Issue Paper No. 2009-01. Available at: www.socialsecurity.gov/policy/docs/issuepapers/ip2009-01.pdf.

Blau, David M. 1997. Social Security and the labor supply of older married couples. *Labour Economics* 4(4): 373–418.

Blau, Francine D., Marianne Ferber, and Anne Winkler. 2006. *The economics of women, men and work*. 5th ed. Upper Saddle River, NJ: Pearson/Prentice Hall.

Butrica, Barbara A., and Howard M. Iams. 2000. Divorced women at retirement: Projections of economic well-being in the near future. *Social Security Bulletin* 63(3): 3–12.

———. 2003. The impact of minority group status on the projected retirement income of divorced women in the baby boom cohort. *Journal of Women & Aging* 15(2/3): 67–88.

Butrica, Barbara A., Howard M. Iams, James Moore, and Mikki Waid. 2001. Methods in Modeling Income in the Near Term (MINT). ORES Working Paper No. 93. Washington, DC: Social Security Administration, Office of Policy, Office of Research, Evaluation, and Statistics.

Butrica, Barbara A., Howard M. Iams, and Steven H. Sandell. 1999. Using data for couples to project the distributional effects of changes in Social Security policy. *Social Security Bulletin* 62(3): 20–27.

[CBO] Congressional Budget Office. 1986. Earnings sharing options for the Social Security system. Washington, DC: CBO.

[HHS] Department of Health and Human Services, Social Security Administration. 1985a. *Report on earnings sharing implementation study*. House Committee on Ways and Means Print No. 99-4. Washington, DC: Government Printing Office.

———. Office of Legislative and Regulatory Policy. 1985b. Report on the earnings sharing implementation study. *Social Security Bulletin* 48(3): 31–41.

DeWitt, Larry W., Daniel Béland, and Edward D. Berkowitz. 2008. *Social Security: A documentary history*. Washington, DC: Congressional Quarterly Press.

Favreault, Melissa M., and C. Eugene Steuerle. 2007. Social Security spouse and survivor benefits for the modern family. Retirement Project Discussion Paper No. 07-01. Washington, DC: Urban Institute.

Favreault, Melissa M., Frank J. Sammartino, and C. Eugene Steuerle, eds. 2002a. *Social Security and the family: Addressing unmet needs in an underfunded system*. Washington, DC: Urban Institute Press.

———. 2002b. Social Security benefits for spouses and survivors: Options for change. In *Social Security and the family: Addressing unmet needs in an underfunded system,* ed. Melissa M. Favreault, Frank J. Sammartino, and C. Eugene Steuerle, 177–227. Washington, DC: Urban Institute Press.

Fierst, Edith U. 1990. Social Security and women: Why reasonableness doesn't always work. *Of Current Interest from the Policy Center on Aging* (Brandeis University) 9(1): 1–8.

Fierst, Edith U., and Nancy Duff Campbell, eds. 1988. *Earnings sharing in Social Security: A model for reform: Report of the Technical Committee on Earnings Sharing.* Washington, DC: Center for Women Policy Studies.

Flowers, Marilyn R., and John B. Horowitz. 1993. Distributional implications of the Social Security spouse benefit. *Southern Economic Journal* 60(2): 490–494.

Forman, Jonathan Barry. 2006. *Making America work*. Washington, DC: Urban Institute Press.

Harrington Meyer, Madonna, Douglas A. Wolf, and Christine L. Himes. 2006. Declining eligibility for Social Security spouse and widow benefits in the United States? *Research on Aging* 28(2): 240–260.

Martin, Patricia, and David Weaver. 2005. Social Security: A program and policy history. *Social Security Bulletin* 66(1): 1–15.

Ruggles, Steven. 1997. The rise of divorce and separation in the United States, 1880–1990. *Demography* 34(4): 455–466.

Sandell, Steven H., and Howard M. Iams. 1997. Reducing women's poverty by shifting Social Security benefits from retired couples to widows. *Journal of Policy Analysis and Management* 16(2): 279–297.

Sarney, Mark. 2008. Distributional effects of increasing the benefit computation period. Policy Brief No. 2008-02. Available at www.socialsecurity.gov/policy/docs/policybriefs/pb2008-02.pdf.

Schwabish, Jonathan, Michael S. Simpson, and Julie Topoleski. 2007. Earnings sharing and Social Security solvency. Paper presented at the Fall Conference of the Association for Public Policy Analysis and Management, Washington, DC.

Smith, Karen E., David B. Cashin, and Melissa M. Favreault. 2005. Modeling Income in the Near Term 4. Final Report, SSA Contract No. 600-01-60123. Washington, DC: Urban Institute.

[SSA] Social Security Administration. 2007. *Online Social Security Handbook*. Available at www.socialsecurity.gov/OP_Home/handbook/ssa-hbk.htm.

Steuerle, C. Eugene, and Jon M. Bakija. 1994. *Retooling Social Security for the 21st century: Right and wrong approaches to reform*. Washington, DC: Urban Institute Press.

———. 1997. Retooling Social Security for the 21st century. *Social Security Bulletin*. 60(2): 37–60.

Tamborini, Christopher R. 2007. The never-married in old age: Projections and concerns for the near future. *Social Security Bulletin* 67(2): 25–40.

Tamborini, Christopher R., and Kevin Whitman. 2007. Women, marriage, and Social Security benefits revisited. *Social Security Bulletin* 67(4): 1–20.

Tamborini, Christopher R., Howard M. Iams, and Kevin Whitman. Forthcoming. Marital history, race, and Social Security spouse and widow benefit eligibility in the United States. *Research on Aging.*

Toder, Eric, Lawrence Thompson, Melissa Favreault, Richard Johnson, Kevin Perese, Caroline Ratcliffe, Karen Smith, Cori Uccello, Timothy Waidmann, Jillian Berk, Romina Woldermariam, Gary Burtless, Claudia Sahm, and Douglas Wolf. 2002. Modeling Income in the Near Term: Revised projections of retirement income through 2020 for the 1931–1960 birth cohorts. Final Report, SSA Contract No. 600-96-27332. Washington, DC: Urban Institute.

Weaver, David A. 1997. The economic well-being of Social Security beneficiaries, with an emphasis on divorced beneficiaries. *Social Security Bulletin* 60(4): 3–17.

———. 2002. The widow(er)'s limit provision of Social Security. *Social Security Bulletin* 64(1): 1–15.

Zedlewski, Sheila R. 1984. The distributional consequences of an earnings sharing proposal. Project Report No. 3344. Washington, DC: Urban Institute.

Examining Social Security Benefits as a Retirement Resource for Near-Retirees, by Race and Ethnicity, Nativity, and Disability Status

by Benjamin Bridges and Sharmila Choudhury*

This article analyzes Social Security benefits as a retirement resource for selected subgroups of recent cohorts of near-retirees. The analysis therein examines the distribution of benefits among subgroups by (1) race and ethnicity, (2) nativity, and (3) disability status. We use improved data (actual earnings histories) to produce more accurate measures of benefits. We look at how the average values of several benefit measures, such as Social Security wealth and earnings replacement rates, differ among the selected subgroups and discuss reasons for these differences. This study finds that substantial differences in earnings levels and/or mortality levels among these subgroups interact with Social Security program provisions to produce sizable differences in the values of our benefit measures.

Summary

This article provides an in-depth examination of one component of retirement resources, Social Security benefits, for specific subgroups of recent near-retirees. It examines the distribution of benefits among (1) several race/ethnic subgroups that include non-Hispanic whites, non-Hispanic blacks, Asians, and Hispanics; (2) the native-born and the foreign-born; and (3) disability-status subgroups. Our choices of subgroups are driven by the long-standing interest by policymakers in many of these subgroups as well by the need to address the conflicting or missing empirical evidence with regard to these subgroups.

This study considers benefits for people who turn age 61 during the 1993–2007 period. Age 61 is chosen because it is the last age before the age of first eligibility for Social Security retired-worker and spouse benefits, which is 62. We compute a variety of benefit measures (Social Security wealth (SSW), annualized benefit payouts, and earnings replacement rates), some of which have not been used in previous studies. We rely primarily on actual earnings history data in computing streams of benefits. The use of observed earnings histories allows us to capture the large variation in these histories, unlike methods that estimate earnings histories based on a single earnings equation. The study uses Modeling Income in the Near Term (MINT) data files, which include Social Security Administration (SSA) administrative earnings and benefit history records exact-matched to the 1990–1993 panels of the Census Bureau's Survey of Income and Program Participation (SIPP). Measuring benefits in innovative ways and using improved data, this analysis explores in detail the benefits of subgroups who command considerable interest.

What are the effects of various economic, demographic, and Social Security program factors on the differences in benefit measures of these subgroups?

Selected Abbreviations

AIME	average indexed monthly earnings
CPS	Current Population Survey
DI	Disability Insurance
MINT	Modeling Income in the Near Term
OASDI	Old-Age, Survivors, and Disability Insurance

* *Benjamin Bridges is an economist with the Division of Economic Research, Office of Research, Evaluation, and Statistics (ORES), Office of Retirement and Disability Policy (ORDP), Social Security Administration (SSA). When this article was written, Sharmila Choudhury was an economist with the Division of Policy Evaluation, ORES, ORDP, SSA. She is now with the Congressional Research Service.*

Selected Abbreviations—*Continued*

OASI	Old-Age and Survivors Insurance
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSW	Social Security wealth

Some of our results have been reported in the literature. For example, we report that whites receive the highest amounts of SSW and annualized payouts among race/ethnic subgroups, because of their higher indexed taxable earnings. Taxable earnings replacement rates are the lowest for whites and higher for minority race/ethnic subgroups because of the progressivity of the Social Security benefit formula. Immigrants in all race/ethnic subgroups, on average, receive lower SSW and annualized payouts than the native-born as a whole, primarily because of their lower indexed taxable earnings. Disabled near-retirees, as defined in this article, receive considerably less in median amounts of SSW than other near-retirees, because of their markedly shorter lives.

In addition, some other interesting findings emerge from our study of these subgroups. For example, comparing the youngest to the oldest near-retirees we find that the relative increases in SSW are considerably smaller for Hispanics than for any of the other race/ethnic subgroups. A key underlying variable is the growth in earnings. Median indexed taxable earnings increases are considerably smaller for Hispanics than for the other three race/ethnic subgroups. For immigrants, the taxable earnings replacement rate is not a very good measure of how effective Social Security is in replacing average career earnings; this is especially so for Asians who have the highest average age of entry into the United States. Immigrants who enter before age 23 have benefits similar to those of the native-born. We also find that compared with the other race/ethnic subgroups, a larger share of black beneficiaries receives disability benefits.

Introduction

Social Security benefits are the major retirement resource (wealth and income) for retirees in the United States. In 2004, 66 percent of aged beneficiary units (those aged 65 or older) received at least one-half of their income from Social Security benefits. These benefits accounted for at least 90 percent of income for 34 percent of these units. These benefits were especially important for low earners and for certain population subgroups such as race/ethnic minorities. Moreover, benefits are now almost universal. The proportion of the aged units receiving Social Security benefits rose from 69 percent in 1962 to 89 percent in 2004.[1]

This article analyzes Social Security benefits as a retirement resource for selected subgroups of interest among the population of near-retirees. The subgroups that are considered to be vulnerable when studying the economic well-being of the older population have, in many instances, been racial and ethnic minorities, immigrants, and disabled persons. How they fare under Social Security is of interest to policymakers and researchers who seek to understand the well-being of the elderly. Also, the benefit outcomes for these subgroups acquire additional importance when the program is projected to become financially insolvent. Change and reform to current law in response to the long-term solvency outlook or other considerations should gain from understanding the benefit outlook for these at-risk subgroups under current Social Security law.

This study examines the distribution of benefits for near-retirees among (1) several race/ethnic subgroups that include non-Hispanic whites, non-Hispanic blacks, Asians, and Hispanics; (2) the native-born and the foreign-born; and (3) disability-status subgroups.[2] The article examines benefits for recent cohorts of near-retirees. The near-retirees in this study are people who turn age 61 during the 1993–2007 period. We choose age 61 because it is the last age before the age of first eligibility for Social Security retired-worker and spouse benefits, which is 62. The analysis examines how the average values of several benefit measures (SSW, annualized benefit payouts, and earnings replacement rates) differ among the selected subgroups. These measures include only benefits received by persons when they are aged 62 or older. We look at some reasons for these differences and discuss the effects of various economic, demographic, and Social Security program factors on these benefit measures.

The Social Security program provides monthly benefits to qualified retired and disabled workers and to their dependents and survivors. To qualify for benefits, a worker must have at least a specified amount of work in covered employment. (The worker pays payroll taxes on these earnings.) For those who qualify for benefits, the benefit amount increases, but less than proportionally, with lifetime taxable earnings

in covered employment. In other words, the benefit formula is progressive. Benefit payments to near-retirees usually continue until these beneficiaries die. Although under Social Security law a person's benefits do not depend on his or her race, ethnicity, nativity, or sex, substantial differences in earnings levels and/or mortality levels by these characteristics can produce sizable differences in Social Security benefit levels among these subgroups.

Our choices of subgroups are driven by the long-standing interest by the policymaking community in these subgroups. They are also driven by our desire to address the conflicting claims made with regard to some subgroups—as with race/ethnic minorities, as well as by the lack of sufficient empirical evidence for other subgroups—as with immigrants. We briefly provide some information about our chosen subgroups.

With regard to race/ethnic subgroups, a common theme in distributional analyses is that Social Security benefits are important to most race/ethnic minorities. For example, according to a report based on a Census Bureau survey in 2004, about half of black and Hispanic aged beneficiary units received 90 percent or more of their income from Social Security.[3] Studies have shown that these particular race/ethnic subgroups tend to have lower earnings, on average, and thus are helped by the progressivity of the Social Security benefit formula. Some minority subgroups, for example blacks, participate to a greater extent than other race/ethnic subgroups in Social Security's Disability Insurance (DI) program. Yet, it has been pointed out that blacks, on average, have shorter life spans, thus meaning fewer years of benefit receipt.

Another issue is how the foreign-born fare under Social Security when compared with the native-born. Little research has been done on this issue. A worker's Social Security benefit depends on the worker's lifetime taxable earnings in employment covered by Social Security. In computing an immigrant's lifetime taxable earnings, the work years spent outside the United States are treated under Social Security law, in the great majority of cases, as years in noncovered employment and hence as years of zero taxable earnings. Because many immigrants have considerable earnings outside the United States, this program feature lowers the benefits of the immigrant subgroup relative to those of the native-born subgroup. However, the progressivity of the benefit formula partially offsets the effect of this zero-earnings feature. The importance of this feature depends on the age at which immigrants enter the country. This issue is particularly relevant for the large Hispanic minority and the smaller Asian minority, both of which have substantial shares of foreign-born persons.

Social Security provides benefits to distinct beneficiary categories. Among adults, the program provides benefits to disabled workers, retired workers, spouses of these workers, and surviving spouses of these workers. How disabled people fare in their retirement years has been of increasing concern as policymakers advocate reforming the current Social Security program.

The focus here is the availability of Social Security benefits to various subgroups as a retirement resource and not on issues related to money's worth, which concerns the relationship of benefits received to taxes paid. This article builds on our previous work that focused on intercohort differences in Social Security benefits of near-retirees, but which did not disaggregate results for the subgroups described above.[4] The benefit measures used here are affected primarily by lifetime earnings, marital histories, mortality, and benefit rules. Because many of the differences in Social Security benefit outcomes for the selected subgroups are associated with these underlying factors, an attempt will be made to assess the role that these factors play in driving these differences. The sizeable overlaps among these various subgroups are considered in the analysis.

This article attempts to provide clear and comprehensive answers regarding only one component of retirement resources, that is, Social Security benefits. We compute a variety of benefit measures, some of which have not been used in previous studies. We rely primarily on actual earnings history data in computing streams of benefits. The use of observed earnings histories allows us to capture the large variation in these histories, unlike methods that estimate earnings histories based on a single earnings equation. The study uses MINT data files, which include SSA administrative earnings and benefit history records exact-matched to the 1990–1993 panels of the Census Bureau's SIPP. Because of the extensive content of this data set, we are able to use fewer imputations and projections than have a number of other studies. Any imputations and projections that were required were done by MINT modelers using sophisticated analytical methods. Measuring benefits in innovative ways and using improved data, this study is able to explore in detail the benefits for specific subgroups of recent near-retirees who command considerable interest.

The article is arranged as follows. The next section discusses the data and is then followed by an explanation of the various benefit measures that are used here. In the next three sections, we present empirical analyses for the selected subgroups. Our concluding observations are given in the last section.

Data

We use data from the MINT project,[5] a large-scale effort that has been underway since the late 1990s. Much of the developmental work was done for SSA by analysts at the Urban Institute, RAND Corporation, and Brookings Institution. The starting sample is from the 1990, 1991, 1992, and 1993 panels of the Census Bureau's SIPP. In this survey of the noninstitutionalized population, interviews were conducted once every 4 months for 28–36 months. The initial SIPP interviews were conducted in 1990–1993, and almost all of the final SIPP interviews were conducted during the 1992–1995 period. The SIPP collected information on income and wealth components, mortality, marital histories, institutionalization, immigration, various demographic and socioeconomic factors (for example, race, ethnicity, nativity, and education), and many other variables.

As part of the MINT project, SSA administrative records were exact-matched to SIPP data for sample members born during the 1926–1965 period. These administrative records include earnings histories, benefit histories, and death information through 1999.[6] The records also include information on sex and date of birth. Exact-matches were made for about 92 percent of these persons, and administrative records were imputed by MINT modelers for the remaining 8 percent. Thus, we have SIPP data from 1992 through 1995 and SSA administrative data through 1999. For years subsequent to this time period, the MINT model projects institutionalizations, marital histories, dates of death, earnings histories, and benefit histories, using information from both SSA administrative records and the SIPP. In addition, persons are projected to enter the sample by means of immigration. These various projections were designed to be generally consistent with the intermediate assumptions of the 2002 Old-Age, Survivors, and Disability Insurance (OASDI) Trustees Report.[7] Additional information about MINT imputations and projections is given in Appendix A of Bridges and Choudhury (2005). For a detailed description and evaluation of the MINT3 model and its data, see Toder and others (2002). Also see Panis and Lillard (1999) for a detailed description and evaluation of the MINT projections of marital histories, disability status, and mortality.

The data set used in this study has notable strengths. We use the subset of the MINT sample members born during the 1932–1946 period. First, longitudinal administrative data are available through 1999. Thus, actual earnings history data are available through age 53 for the youngest birth cohort analyzed (those born in 1946) and through age 67 for the oldest birth cohort (born in 1932). Actual benefit record information is available for the great majority of members of the three oldest cohorts (born 1932–1934) and for many members of the next three cohorts (born 1935–1937). Second, the combined SIPP panels provide a large sample. Each of our single-year birth cohorts is represented by a sample of more than 1,000 persons. Studies of retirement resources of near-retirees typically use much smaller samples.

Definitions of Empirical Constructs

This section discusses the empirical constructs of the study: the definitions of cohorts of near-retirees, the benefit measures (SSW, annualized payout, and earnings replacement rates), and Social Security taxpayers and beneficiaries.

Cohorts of Near-Retirees

The unit of analysis is the *person* and not some larger unit such as a marital unit or family. In studies that use longitudinal data, the person is often the unit of analysis. The composition of the larger units changes over time. For example, the marital status of most persons changes one or more times during their adult lifetime.

This analysis looks at 15 single-year cohorts, that is, those persons attaining age 61 during the period from calendar year 1993 through calendar year 2007. Each single-year cohort consists of all persons who reach age 61 during that year and are members of the noninstitutionalized population at the end of that year, that is, at the beginning of the year most of them can first receive Social Security retirement benefits. Each of the four SIPP panels (1990–1993) includes persons from each of our 15 single-year cohorts.

To facilitate the presentation of results and to avoid small sample sizes for certain subgroups, the 15 single-year cohorts are combined into three groups of five single-year cohorts. The first and oldest cohort of near-retirees, the 1993 cohort, combines the five single-year cohorts of persons who reach age 61 during the 1993–1997 period. The 1998 cohort combines

the persons who reach 61 during the 1998–2002 period, and the last cohort, the 2003 cohort, consists of the persons reaching age 61 during the 2003–2007 period. *From this point forward, the term cohort refers to these 5-year groups. When we refer to single-year cohorts we will use the term single-year cohort*. Benefits of cohort members are evaluated as of January 1 of the year these persons reach age 62.[8] To increase comparability among subgroups within a cohort and among cohorts, benefits of all members of a particular cohort are evaluated as of the year these persons reach a given age (62) rather than as of a given year (for example, 1993). All measures are in 2002 constant dollars.

Benefit Measures

In our study all benefit amounts are those payable under actually enacted Social Security law. In our benefit calculations we assume that the program provisions in effect in future years are those scheduled under current law. The most recent significant change in Social Security law, a change in the earnings test, was enacted in 2000.

Our benefit concept is *shared benefits*. For each year a person is married, the person's shared benefit equals half the benefits received by the couple. It is our view that shared benefit is superior to individual benefit received as a measure of the income support the person receives from the OASDI program. The individual benefits of husband and wife often are quite different. However, most married couples share their incomes.[9] For each year a person is not married, the person's shared benefit equals the benefits received by the person.[10]

Our benefit measures, such as SSW, include benefits received in the year the person attains age 62 and in all later years. Our measures do not include any benefits received before the year the person attains age 62. We focus on the support provided by Social Security to persons during the post-age-61 years. For those who receive benefits earlier than age 62 (for example, many DI beneficiaries), we do not attempt to measure the support provided over a person's lifetime. Our measures include the benefits paid from the Old-Age and Survivors Insurance (OASI) and DI Trust Funds to a worker, spouse, divorced spouse, surviving spouse, or surviving divorced spouse.

Social Security Wealth. For each person with benefits, we compute SSW as the present value of shared benefits evaluated as of January 1 of the year the person reaches age 62. Real SSW is expressed in January 1, 2002, dollars.[11] Our annual discount rate series consists of the rates of return on OASI Trust Fund assets.[12] Projected values of the Consumer Price Index for Urban Wage Earners and Clerical Workers and trust fund interest rates are based on the intermediate assumptions of the 2002 Trustees Report.

SSW is a measure of the total support provided by Social Security to a person over the period from the year the person attains age 62 until his or her actual or projected death. The value of a person's SSW depends importantly on the person's longevity and past and future (projected) marital history.[13]

Annualized SSW Payout. For each person with benefits, we compute an annualized SSW payout, which is equal to the constant real annual payment over all the person's potential benefit years that has a present value equal to the person's SSW. In other words, the person's SSW is converted into a stream of constant real annual payments. As with SSW, annualized payout is expressed in January 1, 2002, dollars. All years from the year the person reaches age 62 through the last year before the year of death are potential benefit years.[14,15] The person's number of potential benefit years is the maximum number of years (starting with the year the person reaches age 62) that he or she could receive benefits. After 1999, the year of death is the one projected by the MINT model.

Annualized payout is a useful measure of the average *annual support* provided by Social Security after age 61.[16] It is less affected by differences within cohorts or increases over cohorts in longevity than is the SSW measure.[17] We use annualized payout as the numerator of our earnings replacement rates.

Earnings and Earnings Replacement Rates. There are a number of possible replacement rate measures. For example, replacement rates have been defined as the percent of average earnings for the last few years before benefit receipt that is replaced by benefits. Instead, our replacement rates measure the extent to which average *career* earnings are replaced by benefits. Before we go on to describe our two earnings replacement rates, we discuss how we arrive at our two career-earnings measures—average wage-indexed shared taxable earnings and average wage-indexed shared less-censored earnings.

The annual taxable earnings (wages and self-employment income) of a worker is that part of the worker's total earnings from employment covered by Social Security, which is at or below the legislated taxable maximum (the maximum amount of annual

earnings that is subject to Social Security payroll tax and is included in the calculation of benefits). For each year after 1981, the legislated taxable maximum has been indexed by SSA's U.S. average annual wage series. Therefore, since 1983 the ratio of the legislated taxable maximum to the average annual wage has been roughly constant at about 2.3 to 2.5. The ratio was 2.3 to 2.4 during the 1983–1989 period and 2.4 to 2.5 during the 1990s. Before 1983, this ratio was always below 2.3 and varied substantially. The ratio was 1.0 to 1.7 during the 1951–1978 period and 2.0 to 2.2 during the 1979–1982 period.[18]

We also compute a measure of earnings that is less censored than taxable earnings and that unlike taxable earnings has censoring limits that are a constant percentage of average annual wage series amounts. The annual less-censored earnings of a worker is the part of the worker's total earnings from employment covered by Social Security that is estimated to be at or below a hypothetical taxable maximum, which for each year was set at about 2.45 times the average annual wage. The SSA earnings records included in our MINT data file contain annual amounts of taxable earnings, but not amounts of total covered earnings. For years before 1990, the MINT model estimates covered earnings in excess of the legislated taxable maximums using SSA administrative data on quarters of coverage and Current Population Survey (CPS) wage data.[19] The 1951–1989 hypothetical maximums are then applied to these estimated earnings to get less-censored earnings. For years after 1989, less-censored earnings are simply set equal to taxable earnings; for these years the legislated taxable maximums were 2.4–2.5 times the average annual wage. For each year of the 1951–1989 period, the hypothetical maximum exceeds the legislated maximum, and less-censored earnings are less censored than taxable earnings. We believe that less-censored earnings are superior to taxable earnings in approximating relative differences in total earnings both within cohorts among subgroups and across cohorts.

We compute average wage-indexed shared taxable earnings as follows. For each person, shared taxable earnings for every year of the computation period are indexed, using the average wage series, to the wage level at the beginning of the year the person reaches age 62. For each year a person is married, his or her shared earnings equals one-half the earnings of the couple. For each year a person is not married, shared earnings equals his or her own earnings. The indexed earnings are then averaged over the person's computation period. Finally, this average is expressed in January 1, 2002, dollars, to obtain our measure of average wage-indexed shared taxable earnings.[20] *For average wage-indexed shared taxable earnings, we often will use the term indexed taxable earnings*. The computation period for these indexed taxable earnings begins with 1951 or the year the person reaches age 22, whichever comes later, and ends with the year the person reaches age 61.[21] In the computation of indexed taxable earnings for immigrants who enter the United States after 1950 and after they reach age 22, all years before the year of immigration are treated as years of zero earnings. Projected average annual wages in the MINT data file are based on the intermediate assumptions of the 2002 Trustees Report.

Average wage-indexed shared less-censored earnings are computed in a somewhat analogous way.[22] *For average wage-indexed shared less-censored earnings, we often will use the term indexed less-censored earnings*. Indexed shared less-censored earnings differs from indexed taxable earnings in two respects: (1) the annual earnings measure used (less-censored instead of taxable), and (2) the computation period used. The computation period for indexed less-censored earnings begins with 1951, or the year the person reaches age 22, or the year the person immigrates to the United States, whichever comes later; it ends with the year the person reaches age 61. Thus, except for immigrants who enter the United States after 1950 and after the year they reach age 22, the computation periods for indexed less-censored earnings are the same as those for indexed taxable earnings. For such immigrants, the computation periods for indexed less-censored earnings are shorter than those for indexed taxable earnings.

For each person with some shared earnings, we calculate two earnings replacement rates—one for average wage-indexed shared taxable earnings and another for average wage-indexed shared less-censored earnings. *For these replacement rates, we will use the terms taxable earnings replacement rate and less-censored earnings replacement rate*. Given that the numerator of our earnings replacement rates, annualized payout, is a shared benefit measure, we need shared earnings measures for the denominators of these replacement rates. A reason for selecting measures of average wage-indexed career earnings for the replacement rate measures is because one goal of the Social Security program is to provide benefits that replace a portion of a measure of average wage-indexed career earnings. In addition, for a

given single-year cohort, average wage-indexed career earnings provides a useful indicator of a worker's average position over their career in the economy's earnings distribution. We present results for the taxable earnings replacement rate because this rate and the replacement rate measure implicit in OASDI law have some similar features (discussed below). The less-censored earnings replacement rate is our proxy for a total earnings replacement rate; it is superior to the taxable earnings replacement rate as a measure of the adequacy of Social Security benefits because its denominator is a better proxy for the person's average preretirement standard of living.

A person's taxable earnings replacement rate is the person's annualized payout expressed as a percent of the person's indexed taxable earnings. The following features are common to our taxable earnings replacement rate and the replacement rate measure implicit in Social Security (or OASDI) law. Under that law, a person's initial benefit is determined as a percent of his or her average indexed monthly earnings (AIME), and over time the person's initial benefit is kept constant in real terms. The numerator of the taxable earnings replacement rate is the annualized payout, which is a constant real benefit and is related to the price-indexed OASDI initial benefit. The denominator of the taxable earnings replacement rate is average indexed taxable earnings from age 22 through age 61. Indexed taxable earnings and OASDI's AIME have some similar features, but differ in several ways. Both are indexed using the SSA average annual wage series, and their averaging periods are similar.[23] The same AIME computation procedure applies to all of our cohorts of near-retirees.

The less-censored earnings replacement rate is the percentage of indexed less-censored earnings replaced by Social Security benefits and is our proxy for a total earnings replacement rate; it is superior to the taxable earnings replacement rate as a measure of the adequacy of Social Security benefits. For both foreign-born and native-born persons, the denominator of this earnings replacement rate—indexed less-censored earnings—is a better proxy for the person's average standard of living over their work career because it includes earnings up to a constant relative taxable maximum and is less censored than indexed taxable earnings. In addition, for immigrants the average less-censored measure has the advantage that its computation period does not include any years before the year of immigration, which are treated as years of zero earnings. Bear in mind, however, that indexed less-censored earnings of immigrants who enter the United States at quite different ages cover quite different portions of these immigrants' work lives.

Both the taxable and less-censored earnings replacement rates are age-62 replacement rates, that is, they give the percentages of a person's earnings wage-indexed to January 1 of the year the person reaches age 62 that are replaced by the person's constant real annualized payout. As average real economy-wide earnings increase in the years after age 61, the person's annualized payout declines relative to average economy-wide earnings.

Social Security Taxpayers and Beneficiaries

In this article, Social Security taxpayers are near-retirees with some shared earnings (that is, with positive indexed taxable earnings), and those with no shared earnings are nontaxpayers. Social Security beneficiaries are those with both shared indexed earnings *and* shared benefits (that is, with positive SSW and annualized payouts). For each of the three cohorts, 95.2 percent to 95.6 percent of Social Security taxpayers are beneficiaries. The very small group of nontaxpayers (about 1 percent of our sample) is excluded entirely from this analysis. In our results for race/ethnic subgroups and for the foreign- and native-born, we include Social Security taxpayers regardless of whether they have shared benefits, that is, our tables include taxpayers who have taxable earnings but receive no benefits—nearly always because of employment histories that are not strong enough to qualify them for benefits or because they die before claiming benefits. On the other hand, the tables for persons classified by disability status provide data for beneficiaries only; Social Security taxpayers with no shared benefits are excluded from these tables.

Findings by Race/Ethnic Subgroups

We present results for selected race/ethnic subgroups and are able to classify near-retirees into a larger number of race/ethnic subgroups than is typically available. Of particular note is our inclusion of a category for Asians. Hispanics, who may be of any race, are a separate category. Thus, our subgroups are: (1) whites (non-Hispanic whites); (2) blacks (non-Hispanic blacks); (3) Asians (non-Hispanic Asians and Pacific Islanders); (4) Hispanics; and (5) others (non-Hispanic American Indians, Eskimos, and Aleuts).

This section's tables present data for Social Security taxpayers. This article's analysis deals only with persons who live to at least age 61 and only with the

shared benefits they receive after the year they reach age 61.

We briefly examine a few demographic characteristics of our near-retiree sample (Table 1). Whites account for 79–81 percent of near-retirees (81 percent of the 1993 cohort, 81 percent of the 1998 cohort, and 79 percent of the 2003 cohort). Blacks, Asians, Hispanics, and "others" account for 9 percent, 3–4 percent, 7–8 percent, and less than 1 percent, respectively. In our tables, the "other" subgroup is not shown separately, but is included in calculating numbers for the totals that combine all subgroups.

Looking into characteristics by race/ethnicity, we see that the percentage of men is lowest for blacks (42–44 percent) and a bit higher for whites, Asians, and Hispanics at 48–49 percent, 48–53 percent, and 48–50 percent, respectively (Table 1). The percentages married at age 62 are higher for Asians (76–86 percent) and whites (73–76 percent) than for Hispanics (70–73 percent) and blacks (58–61 percent). As expected, large percentages of Asians (77–79 percent) and Hispanics (41–48 percent) immigrated to the United States—most of them as adults; the comparable percentages for whites (5–6 percent) and blacks (5–7 percent) are much smaller.[24,25] We will discuss the impact of these subgroup differences in immigration on our results.

The percentage of taxpayers who are beneficiaries, although quite high for all groups, is highest among whites and lowest among Asians and Hispanics, as seen in Table 1. The latter two groups have larger shares of immigrants who have employment histories that are not strong enough to qualify them for benefits.

Social Security Wealth

SSW is the present value at age 62 of Social Security benefits received from age 62 until death. For the 1993, 1998, and 2003 cohorts, projected deaths account for 94 percent, nearly 100 percent, and 100 percent, respectively, of all deaths. Thus, SSW depends importantly on projected longevity. Among the variables used in projecting MINT mortality beyond 1999 are sex, earnings, education, marital status, disability benefit status, and race (white and black). The Hispanic

Table 1.
Selected characteristics of near-retirees, by race/ethnicity and cohort

Characteristic and cohort	All	White	Black	Asian	Hispanic
Men (%)					
1993	48	49	42	51	49
1998	48	48	42	53	50
2003	48	49	44	48	48
Foreign-born (%)					
1993	10	6	5	77	41
1998	10	5	7	79	48
2003	12	6	7	77	48
Entered United States at age 23 or older (%)					
1993	7	3	4	68	30
1998	6	2	5	67	34
2003	8	3	4	66	34
Married at age 62 (%)					
1993	74	76	58	83	70
1998	73	74	61	86	73
2003	71	73	59	76	71
Beneficiary (%)					
1993	96	96	94	92	92
1998	95	96	93	83	92
2003	96	96	95	91	91
Total number of near-retirees (thousands)					
1993	10,033	8,123	898	268	674
1998	11,115	9,032	960	296	752
2003	13,911	11,030	1,250	521	1,045

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

and other race/ethnic (mostly Asian) classifications are used only in projecting deaths before age 65. Thus, MINT-based estimates of longevity and of SSW may not be as accurate for Hispanics and Asians as for whites and blacks.[26]

Median SSW is highest for whites primarily because they have the highest median indexed taxable earnings (Table 2).[27] For example, the wealth levels of blacks are 72–74 percent of those for whites. In addition, whites live longer than blacks. High indexed taxable earnings produce high annual benefits. Longer lives result in more years of benefit receipt. The other two subgroups have median indexed taxable earnings equal to 51–71 percent of those for whites. Among the minority subgroups for the two youngest cohorts, Hispanics have the lowest indexed taxable earnings and blacks have the highest. Blacks have mean numbers of potential benefit years equal to 84–89 percent of those for whites.[28]

Other things being equal, subgroups with higher proportions of immigrants will have lower median indexed taxable earnings for beneficiaries and higher proportions of Social Security taxpayers who are nonbeneficiaries. Table 1 shows that the Asian and Hispanic subgroups contain very high proportions of immigrants. For each cohort, the median indexed taxable earnings of foreign-born Asians and Hispanics are substantially lower (for the 2003 cohort,

Table 2.
Social Security benefit measures and related measures for near-retirees, by race/ethnicity and cohort

Measure and cohort	All	White	Black	Asian	Hispanic
Social Security wealth (median, 2002 $)					
1993	122,258	129,451	93,772	92,589	90,689
1998	147,003	156,568	116,291	116,134	99,231
2003	164,961	178,168	129,261	126,076	99,980
Annualized payout (median, 2002 $)					
1993	6,338	6,463	5,756	5,020	5,456
1998	7,487	7,676	6,712	5,504	5,778
2003	8,292	8,588	7,578	6,019	5,959
Taxable earnings replacement rate (median, %)					
1993	33.9	33.2	41.0	35.6	38.4
1998	32.2	31.4	37.0	32.4	38.6
2003	31.0	30.0	37.3	34.3	38.0
Less-censored earnings replacement rate (median, %)					
1993	30.6	29.7	38.9	24.3	35.2
1998	30.0	29.5	35.7	23.6	33.4
2003	29.5	28.8	36.3	25.6	34.9
Taxable earnings (median, 2002 $)					
1993	18,454	19,676	13,032	13,519	13,919
1998	22,915	24,305	17,084	15,970	14,178
2003	26,198	28,534	18,913	17,433	14,578
Less-censored earnings (median, 2002 $)					
1993	20,276	21,743	13,645	19,313	14,657
1998	24,437	25,997	17,555	20,482	15,799
2003	27,237	29,581	19,631	21,985	16,426
Benefit receipt years (mean)					
1993	20.2	20.8	17.9	17.9	17.6
1998	20.6	21.2	18.0	18.9	17.8
2003	21.0	21.7	18.2	19.8	17.6
Potential benefit years (mean)					
1993	21.5	21.9	19.4	20.8	19.3
1998	22.0	22.4	19.7	22.7	20.0
2003	22.3	22.9	19.3	22.9	19.9

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

about one-third lower for each subgroup) than those of native-born Asians and Hispanics. A reason that immigrants have lower median indexed taxable earnings than the native-born is that for many immigrants, their computation periods for indexed taxable earnings begin before they immigrate; in the computation of indexed taxable earnings, all such years before the year of immigration are treated as years of zero earnings. The computation period for indexed taxable earnings begins with the later of either 1951 or the year the person reaches age 22. For example, immigrants who entered the United States in 1989 at age 35 will have their earnings for ages 22–34 set to zero. These 13 years of zero earnings are included in computing their average lifetime indexed taxable earnings. The majority of immigrants (62–66 percent) enter the United States after the year they reach age 22.

When we look at changes from the 1993 cohort to the 2003 cohort, the percentage increase in median SSW is much smaller for Hispanics than the increases for the other three racial/ethnic subgroups. A key underlying variable shows similarly large differences. The percentage increase in median indexed taxable earnings for Hispanics is much smaller than the increases for the other subgroups.[29] The growth of taxable earnings is relatively slow for both native- and foreign-born Hispanics. Among the native-born, the growth rate of indexed taxable earnings of Hispanics is lower than those of the other three subgroups. In addition, among immigrants, the growth rate of indexed taxable earnings of Hispanics is lower than that of Asians, the other subgroup with a high proportion of foreign-born. We also find that for each cohort, the proportions of foreign-born Asian and Hispanic taxpayers who are nonbeneficiaries are markedly higher than those for native-born Asians and Hispanics.

Annualized SSW Payout

Our annualized payout is a measure of the average annual support in real dollars provided by Social Security over the post-age-61 years. It is computed by spreading SSW over all potential benefit years. The effects of errors in the mortality projections for Hispanics and Asians on estimates of annualized payout for these subgroups should be relatively small because errors in SSW should be largely offset by errors in the number of potential benefit years.

Again, as with SSW, the median annualized payout is highest for whites, driven primarily by their higher indexed taxable earnings. For the remaining subgroups, annualized payouts are 69–89 percent of those for whites. Blacks have the second highest annualized payouts (87–89 percent of those for whites), and Hispanics and Asians have the lowest. From the 1993 cohort to the 2003 cohort, the increase in median annualized payout is much smaller for Hispanics than for whites and blacks, as shown in Table 2.[30]

Taxable Earnings Replacement Rate

Our taxable earnings replacement rate measures the extent to which annualized payout replaces average indexed taxable earnings. As explained earlier, the rate is somewhat similar to the replacement rate measure implicit in OASDI law.[31]

Median taxable earnings replacement rates are lowest for whites, and those for the other subgroups are 103–127 percent of those for whites (Table 2).[32] Asians have the second lowest taxable earnings replacement rates, and blacks and Hispanics have the highest. Note that median indexed taxable earnings of whites are much higher than those of the other subgroups. Differences in median indexed taxable earnings among the other subgroups are usually not large. Thus, the progressivity of the Social Security benefit formula is an important reason why the taxable earnings replacement rates of whites are lower than those of the other subgroups.[33,34]

From the 1993 cohort to the 2003 cohort, median taxable earnings replacement rates of whites and blacks decline considerably, by 10 percent and 9 percent, respectively; rates are almost unchanged for Hispanics.[35] We have seen that over this period the percentage increase in median indexed taxable earnings for Hispanics is much smaller than the increases for the other race/ethnic subgroups. This differential earnings growth interacted with Social Security's progressive benefit formula to produce much of the above difference in intercohort movement of earnings replacement rates.

Less-Censored Earnings Replacement Rate

Our measure of less-censored earnings replacement rates tells us the extent to which annualized payout replaces average indexed less-censored earnings, our proxy for total earnings. Median less-censored replacement rates are lowest for Asians, ranging from 24–26 percent (Table 2). They are second lowest for whites, ranging from 29–30 percent. Thus, less-censored earnings replacement rates of Asians are 80–89 percent of those for whites; those of blacks

and Hispanics are higher at 121–131 percent and 113–121 percent of those for whites.[36]

Why are less-censored earnings replacement rates for Asians low relative to those of the other race/ethnic subgroups? One can look at how less-censored earnings replacement rates compare with taxable earnings replacement rates. The ratio of less-censored earnings replacement rate to taxable earnings replacement rate is only .68 to .75 for Asians compared with .87 to .97 for the other three subgroups. That is, the two earnings replacement rates are quite different from each other for Asians. This is driven by the relatively large difference between their indexed less-censored earnings and indexed taxable earnings. The ratio of median indexed less-censored earnings to median indexed taxable earnings is much higher for Asians (1.26 to 1.43) than for the other three subgroups (1.03 to 1.11). Immigrating after age 22 is a key reason why indexed less-censored earnings are greater than indexed taxable earnings; the computation of indexed less-censored earnings does not include years before immigration. About two-thirds of Asian near-retirees are *adult* immigrants. Only 2–5 percent of whites and blacks are *adult* immigrants. Of Hispanic near-retirees, about a third are *adult* immigrants. Therefore, for Asians in particular, because of the wedge between their indexed less-censored and indexed taxable earnings, the taxable earnings replacement rate measure is not a very good measure of how effective Social Security is in replacing average career earnings.[37]

Section Summary

We find that because of their higher indexed taxable earnings, whites, as a subgroup, receive more SSW and annualized payout than other race/ethnic subgroups. The lower indexed taxable earnings of Asians and Hispanics are due, in large part, to the fact that many of them immigrate to the United States as adults; program rules assign zero earnings to years before immigration. In addition, whites have more years of benefit receipt than blacks because they live longer on average. Certain aspects of the Social Security program, such as the progressive benefit formula, advantage those with lower lifetime earnings. Thus, blacks, Hispanics, and Asians have higher taxable earnings replacement rates than whites because those groups have lower lifetime taxable earnings than whites. For Asians (a group with a very high proportion of immigrants), this taxable earnings replacement rate measure is not a very good measure of how effective Social Security is in replacing average career total earnings. This is because the indexed taxable earnings of Asians are particularly low relative to their indexed less-censored earnings—our proxy for indexed total earnings—because of the large number of years with earnings before entering the United States that are treated as years of zero taxable earnings. Other race/ethnic subgroups do not exhibit such large differences between the two earnings replacement rates as do Asians.

From the 1993 cohort to the 2003 cohort, the increases in SSW and annualized payouts are much smaller for Hispanics than for the other race/ethnic subgroups. On the other hand, over this period the taxable earnings replacement rates of whites and blacks decline considerably, but are almost unchanged for Hispanics.

Findings by Immigrant Status

In this section, we consider the following: How do immigrants fare under Social Security compared with the native-born? How do Social Security outcomes for immigrants differ among race/ethnic subgroups? How does age at time of immigration affect Social Security outcomes for immigrants?[38]

The starting MINT sample is from the 1990, 1991, 1992, and 1993 panels of the SIPP. Members of this starting sample were asked their year of immigration and source country. In addition, persons are projected to enter the MINT sample by means of immigration in the years *after* the end of the SIPP interview. Imputed immigrants account for roughly 3 percent of immigrants in the 1993 cohort of near-retirees, 9 percent in the 1998 cohort, and 15 percent in the 2003 cohort.[39] We believe that our sample of immigrant near-retirees consists almost entirely of persons with legal permanent residence status.[40]

This section's tables show results for Social Security taxpayers. Nontaxpayers (near-retirees with no shared taxable earnings) account for less than 0.5 percent of the native-born, but for 6–10 percent of immigrants. Immigrants account for 10–12 percent of all Social Security taxpayers.

Among immigrants, about 50 percent are Asian or Hispanic whereas these subgroups comprise only about 5 percent of our native-born population (Table 3). Correspondingly, among immigrants about 39–47 percent are white and 5–6 percent are black compared with about 85 percent and 9 percent among the native-born. The compositions by sex of the immigrant and native-born subgroups are quite similar.

Table 3.
Selected characteristics of near-retirees, by nativity and cohort

Characteristic	Immigrant			Native-born		
	1993	1998	2003	1993	1998	2003
Men (%)	48	50	49	48	47	48
Married at age 62 (%)	77	79	76	74	73	71
Race/ethnicity (%)						
White	47	42	39	85	86	85
Black	5	6	5	9	9	9
Asian	21	20	25	1	1	1
Hispanic	27	31	31	4	4	4
Education (%)						
Dropout	36	32	29	24	17	13
High school graduate	40	42	44	58	62	59
College graduate	24	26	28	19	21	27
Age at U.S. entry (%)						
Up to 23	34	38	35	100	100	100
23–32	27	25	26	0	0	0
33–42	21	17	19	0	0	0
43–52	12	12	13	0	0	0
52–61	5	9	7	0	0	0
Beneficiary (%)	91	89	89	96	96	96
Total number of near-retirees (thousands)	996	1,151	1,610	9,037	9,964	12,301

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

For immigrants, the proportions married are slightly higher and the proportions divorced are lower. Relative to the native-born, a larger share of immigrants are high school dropouts or college graduates. This means that a smaller share of immigrants are in the middle category of being only high school graduates. In other words, immigrants have several characteristics that are distinct from those in the general native-born population.

A little over a third of immigrants enter the United States before they reach age 23. Less than 10 percent enter the country after age 53. Table 3 shows that the majority of immigrants in our cohorts enter the United States during their prime working years. The percentage of Social Security taxpayers who are beneficiaries is somewhat smaller for immigrants than it is for the native-born.

Social Security Wealth

Immigrants have much lower median indexed taxable earnings than the native-born, resulting in median SSW of immigrants falling short of that of the native-born (Table 4).[41] The relative shortfall has increased over time.[42] For the 1993, 1998, and 2003 cohorts, median indexed taxable earnings of immigrants are 20 percent, 33 percent, and 44 percent lower than those of the native-born. We have seen that one reason immigrants have lower indexed taxable earnings is that for many immigrants their computation periods for indexed taxable earnings begin before they immigrate.[43] We have seen that relatively more immigrants have employment histories that are insufficiently strong to qualify them for benefits.

Among immigrants, whites have greater median SSW than the other subgroups (Table 5). It is highest for whites because they have the highest median indexed taxable earnings and because they live longer on average than most other race/ethnic subgroups. The other subgroups have median indexed taxable earnings equal to 48–80 percent of those for whites. Median SSW of white immigrants falls a bit short of that of the native-born (all race/ethnic subgroups combined).

From the 1993 cohort to the 1998 cohort, median SSW of immigrants increases substantially for whites and Asians, but is virtually unchanged for Hispanics. For the 1993–2003 period, the percentage increases in median SSW are larger for whites and Asians than for Hispanics.[44]

Table 4.
Social Security benefit measures and related measures for near-retirees, by nativity and cohort

Measure	Immigrant			Native-born		
	1993	1998	2003	1993	1998	2003
Social Security wealth (median, 2002 $)	99,838	109,737	108,101	125,681	151,789	172,338
Annualized payout (median, 2002 $)	5,456	6,018	5,849	6,403	7,601	8,478
Taxable earnings replacement rate (median, %)	34.8	33.9	33.9	33.8	32.1	30.7
Less-censored earnings replacement rate (median, %)	27.0	26.0	27.2	31.2	30.4	29.7
Taxable earnings (median, 2002 $)	14,981	15,757	15,274	18,802	23,596	27,723
Less-censored earnings (median, 2002 $)	19,064	19,937	19,420	20,394	24,859	28,294
Benefit receipt years (mean)	18.6	18.4	18.7	20.4	20.9	21.3
Potential benefit years (mean)	21.2	21.4	21.6	21.5	22.0	22.4

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

Among immigrants, median SSW declines markedly as age at entry into the United States increases (Table 6).[45] For example, median SSW is zero for the subgroup with age at entry of 53–61, indicating that *at least* 50 percent of this subgroup have no SSW. Median indexed taxable earnings decreases as age at entry increases.[46] As age at entry increases there is a corresponding increase in the number of years in the computation period for indexed taxable earnings that are treated as years of zero earnings. The share of Social Security taxpayers with some shared benefits falls from 95–98 percent for those who enter before age 33, to 39–44 percent for those who enter at ages 53–61. Note that median SSW of immigrants who enter the United States before age 23 is similar to that of the native-born.

Annualized SSW Payout

Just as with SSW, the lower median indexed taxable earnings of immigrants causes the median annualized payout of immigrants to fall short of that for the native-born (Table 4). This relative gap has also increased over time. For the 1993, 1998, and 2003 cohorts, median annualized payouts of immigrants are 15 percent, 21 percent, and 31 percent lower than those of the native-born. For these cohorts, median indexed taxable earnings of immigrants are 20 percent, 33 percent, and 44 percent lower than those of the native-born.

Among immigrants, whites have the highest median indexed taxable earnings and correspondingly receive the largest median annualized payouts (Table 5). Payouts of the other race/ethnic subgroups are 65–77 percent of those of whites. When comparing white immigrants with the native-born, we find that median annualized payouts of immigrants are less than those of the native-born population (all race/ethnic subgroups combined) by 3–12 percent. Across time, from the 1993 cohort to the 2003 cohort, the percentage increases in median annualized payouts are larger for white and Asian immigrants than for Hispanic immigrants.

The importance of the age at entry into the United States is highlighted in Table 6. Among immigrants, median annualized payouts decline markedly as age at entry increases. For those who immigrate before age 23, annualized payouts are similar to those of the native-born.

Taxable Earnings Replacement Rate

Median taxable earnings replacement rates of immigrants slightly exceed those of the native-born, and the relative difference has increased a bit over time (Table 4). For the 1993, 1998, and 2003 cohorts, median replacement rates for immigrants are 3 percent, 6 percent, and 12 percent higher than for the native-born.[47,48] We have seen that the median indexed taxable earnings of immigrants are less than those of the native-born, and that this relative difference has increased over time. These differences in indexed taxable earnings operate through the progressive benefit formula to produce higher taxable earnings replacement rates for immigrants.

Table 5.
Social Security benefit measures and related measures for near-retiree immigrants, by race/ethnicity and cohort

Measure and cohort	White	Black	Asian	Hispanic
Social Security wealth (median, 2002 $)				
1993	118,566	85,235	84,424	71,664
1998	140,795	72,433	104,593	70,876
2003	143,061	70,801	113,717	76,649
Annualized payout (median, 2002 $)				
1993	6,178	4,578	4,437	4,476
1998	7,202	5,311	5,105	4,850
2003	7,430	5,702	5,294	4,805
Taxable earnings replacement rate (median, %)				
1993	34.1	31.6	34.1	36.9
1998	31.1	37.8	34.2	42.5
2003	30.5	32.0	36.2	40.6
Less-censored earnings replacement rate (median, %)				
1993	27.5	24.5	23.0	29.9
1998	25.8	24.7	23.1	29.5
2003	26.1	26.5	24.8	31.8
Taxable earnings (median, 2002 $)				
1993	18,294	14,576	11,423	11,495
1998	21,824	12,207	12,672	10,965
2003	22,297	13,581	14,579	10,768
Less-censored earnings (median, 2002 $)				
1993	22,536	18,395	18,879	13,778
1998	26,003	19,674	19,483	13,849
2003	26,066	19,639	20,558	14,407
Benefit receipt years (mean)				
1993	20.2	17.1	17.5	16.9
1998	20.3	17.5	18.6	15.9
2003	21.0	15.7	19.2	15.8
Potential benefit years (mean)				
1993	22.3	20.3	21.1	19.6
1998	22.7	20.4	22.8	19.0
2003	23.4	17.8	22.9	18.9

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

We stated earlier that relatively more immigrants than the native-born have U.S. employment histories that are insufficient to qualify them for benefits. Generally, a person needs at least 10 years of U.S. earnings to establish eligibility for retirement benefits for one's self or for one's spouse. The ratios of beneficiaries to program participants (those with some shared indexed taxable earnings) are 96 percent for the native-born and 89–91 percent for immigrants.[49]

Table 5 shows that when we focus on immigrants alone, the 1998 and 2003 cohorts' median taxable earnings replacement rates are lowest for whites (31 percent) and highest for Hispanics (41–43 percent). The primary reason for this pattern is the progressivity of the Social Security benefit formula. For these two cohorts, median indexed taxable earnings of Hispanics are 48–50 percent of those for whites.

Among immigrants, median taxable earnings replacement rates generally increase as age at entry increases from "under 23" to "43–52" (Table 6). A primary reason for this pattern is the progressivity of the benefit formula. Median indexed taxable earnings decrease as age at entry increases over this age-at-entry range.

Table 6.
Social Security benefit measures and related measures for near-retiree immigrants, by age at U.S. entry and cohort

Measure and cohort	Age at U.S. entry				
	Under 23	23–32	33–42	43–52	53–61
Social Security wealth (median, 2002 $)					
1993	129,171	108,507	101,214	39,473	0
1998	158,459	120,244	116,599	40,502	0
2003	159,154	134,555	88,070	38,236	0
Annualized payout (median, 2002 $)					
1993	6,608	5,769	5,368	3,078	0
1998	7,411	6,709	5,208	2,881	0
2003	7,747	7,241	4,709	2,326	0
Taxable earnings replacement rate (median, %)					
1993	36.0	33.1	35.9	36.3	0
1998	32.9	35.0	38.4	45.8	0
2003	32.7	33.6	39.1	40.8	0
Less-censored earnings replacement rate (median, %)					
1993	32.3	27.5	23.6	22.6	0
1998	31.1	30.4	24.1	19.2	0
2003	31.9	29.2	26.7	19.8	0
Taxable earnings (median, 2002 $)					
1993	19,250	17,376	13,409	7,199	1,052
1998	23,553	19,103	12,981	5,401	999
2003	23,165	20,518	11,477	4,658	1,020
Less-censored earnings (median, 2002 $)					
1993	20,678	20,691	19,313	11,476	4,876
1998	24,636	21,330	19,937	13,618	5,782
2003	23,757	24,154	16,755	12,210	5,857
Benefit receipt years (mean)					
1993	21.1	18.9	19.2	14.7	7.8
1998	20.8	20.1	20.1	13.6	6.2
2003	21.6	20.8	17.6	14.5	6.7
Potential benefit years (mean)					
1993	22.1	20.9	21.0	19.7	22.1
1998	22.1	21.3	22.1	19.9	19.7
2003	22.5	22.1	20.3	20.9	20.2

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

Less-Censored Earnings Replacement Rate

Median less-censored earnings replacement rates of immigrants fall short of those of the native-born (Table 4).[50] The shortfall is 8–14 percent. How do our two earnings replacement rates compare between the native-born and immigrants? We find that for the native-born, their less-censored earnings replacement rates are 3–8 percent lower than taxable earnings replacement rates because their indexed less-censored earnings are larger than their indexed taxable earnings. The less-censored maximums often exceed the legislated taxable maximums. Thus, some earnings that are above the legislated maximums are below the less-censored maximums. For immigrants, their less-censored earnings replacement rates are considerably lower (20–23 percent) than their taxable earnings replacement rates primarily because their indexed less-censored earnings are far greater than their indexed taxable earnings, more so than for the native-born. This is because their computation periods for indexed less-censored earnings are often shorter than those for indexed taxable earnings.

Table 5 shows that among immigrants, median less-censored earnings replacement rates are lowest

for Asians (23–25 percent) and highest for Hispanics (30–32 percent). This pattern differs from that for taxable earnings replacement rates where whites had the lowest replacement rates. This is because our subgroups vary in how their indexed taxable earnings compare with their indexed less-censored earnings. Note that in the calculation of the earnings replacement rates, the denominators of the taxable earnings replacement rate and the less-censored earnings replacement rate are indexed taxable earnings and indexed less-censored earnings, respectively; but both replacement rates have the same numerator, namely, annualized payout. The differences in the two earnings replacement rates arise because of differences in the denominator. Asians have a relatively low ratio of indexed taxable earnings to indexed less-censored earnings, in part because they have the highest average age at entry; late entry tends to reduce median indexed taxable earnings, relative to median indexed less-censored earnings.

Among immigrants, median less-censored earnings replacement rates *decrease* as age at entry increases from "under 23" to "43–52" (Table 6). Taxable earnings replacement rates generally *increase* over this age-at-entry range. This difference results because as age at entry increases over this range, median indexed taxable earnings decline markedly relative to median indexed less-censored earnings.

Section Summary

Primarily because of their lower indexed taxable earnings, immigrants of every race/ethnic subgroup, on average, receive lower SSW and annualized payouts than the native-born (all race/ethnic subgroups combined). Despite having some earnings, a larger share of immigrants, compared with the native-born, have earnings histories that are insufficient to qualify them for any benefits. Age at entry plays a very important role in determining benefit levels, with our results showing a strong negative association between immigrants' benefit levels and age at entry into the country. The importance of age at entry is strengthened by our finding that immigrants who enter before age 23 have benefits that are similar to those of the native-born.

However, immigrants as a whole have somewhat higher taxable earnings replacement rates than the native-born. Note the relatively high taxable earnings replacement rates for Hispanic and Asian immigrants, especially for Hispanic immigrants. On the other hand, for certain immigrants, particularly Asians, the taxable earnings replacement rate measure is not a very good measure of Social Security benefits as a percentage of an immigrant's average standard of living over their work career. Because only earnings after immigrating to the United States are used in the computation of indexed less-censored earnings, for this purpose and for immigrants in particular, the less-censored earnings replacement rate measure is better. We find that less-censored earnings replacement rates for immigrants as a whole are somewhat lower than those of the native-born.

Findings by Disability Status

How do near-retirees affected by disability fare under Social Security compared with other beneficiaries? How are these differences associated with sex? In this section, we present results by disability status and discuss some reasons for these differences.

We classify beneficiaries, that is, Social Security taxpayers with post-age-61 shared benefits, into disability-status subgroups: the disability-affected and other beneficiaries. Our disability-affected subgroup is composed of persons for whom disability benefits constitute a major part of their shared post-age-61 benefits. Because this article focuses on shared benefits, our classification by disability status depends on the types of benefits received by the person and his or her spouse. In determining the type of benefit, we do not convert disabled-worker beneficiaries to retired-worker beneficiaries at the full retirement age. Later in our discussion, we describe more fully how the definition of our subgroup of disability-affected near-retirees differs from typical definitions of the disabled population.

The two disability-status categories are classified as follows. First, for each year of benefit receipt after the year the person reaches age 61 until the person's death, we determine the benefit type of the person and the benefit type of his or her spouse. Second, using the yearly benefit type information, we determine the longest-held benefit type from age 62 until death of the person and of his or her spouse. Third, using the longest-held benefit types of the person and of his or her spouse, we determine the person's disability-status subgroup.

This article's benefit measures include worker, spouse, divorced spouse, surviving spouse, and surviving divorced spouse benefits paid from the OASI and DI Trust Funds. We classify these benefits into four broad benefit types: retired-worker only, disabled-worker only, spouse (spouse and divorced spouse), and survivor (surviving spouse and surviving divorced spouse). Note that for years after 1999, benefit types are projected by the MINT model.

A person's benefit type for a given year is the type of their own benefit for that year; the person's spouse may receive a different type of benefit. A dually entitled beneficiary is one who is entitled to a worker benefit and to a larger spouse or survivor benefit. Here we treat the dually entitled as spouse or survivor beneficiaries.[51] For a person who is a disabled-worker beneficiary (worker only or dually entitled) in the year just before the year he or she reaches the full retirement age, we treat any worker-only benefit that the person receives in a later year as a disabled-worker benefit.

We determine the benefit type of the person and the benefit type of the person's spouse for each year of benefit receipt after the year the person reaches age 61 until his or her death. Because many beneficiaries change benefit types during their retirement years, we decided it would be useful to determine a longest-held benefit type for each person and for his or her spouse. A person's longest-held benefit type is their most common yearly benefit type for the period that starts with the year the person reaches age 62 and ends with his or her death.[52]

Because this analysis focuses on shared benefits, we use both the person's benefit-type code and the spouse's benefit-type code in determining a person's disability status. The disability-affected are disabled-worker beneficiaries or those having spouses who are disabled-worker beneficiaries. The disability-affected categories consist of the following three groups of persons:

1. All persons whose longest-held benefit type is disabled-worker only (65–67 percent),[53]
2. All persons whose longest-held benefit type is spouse or survivor and whose spouse's longest-held benefit type is disabled-worker only (19–24 percent);[54] and
3. Some persons whose longest-held benefit type is retired-worker only and whose spouse's longest-held benefit type is disabled-worker only. With regard to this third category, we only include such persons as disability-affected if the person's number of years of receiving retired-worker-only benefits is less than or equal to the spouse's number of years of receiving disabled-worker only benefits (11–15 percent).[55]

In considering our results in this section it is important to keep in mind the following facts about the subgroup we call disability-affected. First, our disability-affected subgroup includes not only disabled workers, but also persons with spouses who are disabled workers. Second, persons for whom disability benefits constitute only a minor part of their post-age-61 shared benefits are not part of our disability-affected subgroup. Third, in determining a person's longest-held benefit type, we do not convert disabled-worker beneficiaries to retired-worker beneficiaries when they reach the full retirement age. Fourth, members of our disability-affected subgroup all live to at least age 61. This is important to note given that many disability beneficiaries die before reaching age 61. Fifth, in determining disability status we do not consider the person's shared benefits received before age 62. Sixth, on average, our disability-affected subgroup first receive disability benefits when in their mid-to-late fifties. For all disability beneficiaries, the average age of first receipt of benefits is well below the midfifties. Thus, it is clear that our subgroup of disability-affected near-retirees differs in a number of ways from typical disability populations.

As stated above, we find that those whose own longest-held benefit type is disabled-worker only account for about 65–67 percent of these shared-record disability-affected subgroup members (Table 7). The remaining 33–35 percent of our disability-affected are persons who do not receive disabled-worker-only benefits themselves but have a spouse who receives such benefits. Shared-record disability-affected persons account for 14–15 percent of all beneficiaries, 16–18 percent of male beneficiaries, and 12–13 percent of female beneficiaries. The 4–5 percent of Social Security taxpayers with no shared benefits are not dealt with in this section.

Looking at the demographics of our subgroup of disability-affected near-retirees, we find some 54–57 percent of the disability-affected are men compared with 46–47 percent of other beneficiaries (Table 7). Most disability-affected men (86–89 percent) are persons whose person-record longest-held benefit type is disabled-worker only. In contrast, most disability-affected women (57–68 percent) are persons whose own longest-held benefit type is not disabled-worker only, but who have a spouse with a longest-held benefit type of disabled-worker only.

The shares of blacks and Hispanics in our disability-affected subgroup are larger than their shares in the population of other beneficiaries. About 21–24 percent of the disability-affected are blacks and Hispanics compared with 14–15 percent of other beneficiaries. The disability-affected subgroup includes a larger share of black beneficiaries (22–25 percent) than of any other race/ethnic subgroup.

Table 7.
Selected characteristics of near-retiree beneficiaries, by disability status and cohort

Characteristic	Disability-affected			Other beneficiaries		
	1993	1998	2003	1993	1998	2003
Reason for disability-affected status (%)						
Both person and spouse are disabled workers	7	5	5	0	0	0
Only person is a disabled worker	58	60	61	0	0	0
Only spouse is a disabled worker	35	34	34	0	0	0
Neither is a disabled worker	0	0	0	100	100	100
Men (%)	57	54	55	46	46	47
Foreign-born (%)	9	9	10	10	10	11
Married at age 62 (%)	82	79	78	74	73	71
Race/ethnicity (%)						
White	77	77	72	82	83	81
Black	12	14	16	8	7	8
Asian	1	1	3	3	3	4
Hispanic	9	7	8	6	6	7
Total number of beneficiaries (thousands)	1,463	1,582	1,846	8,119	9,003	11,447

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

NOTE: Disability status determination is based on an individual's and spouse's benefit types. For details, see the "Findings by Disability Status" section of the text.

Immigrants account for 9–10 percent of the disabled and 10–11 percent of other beneficiaries. The percentages married at age 62 are higher for the disabled (78–82 percent) than for other beneficiaries (71–74 percent).

We discuss in the sections below empirical estimates of SSW and of annualized payouts by disability status, but not any replacement rate estimates. Because many of the disability-affected near-retirees start to receive benefits a number of years before they reach age 62, our standard replacement rate measures may not be appropriate for this subgroup.[56]

Social Security Wealth

Our measure of SSW focuses on benefits for near-retirees and therefore does not include benefits received before the year the person reaches age 62. Yet, the great majority of the near-retiree disability-affected subgroup start to receive disability benefits before reaching age 62.

Our disability-affected subgroup has fewer years of benefit receipt because, on average, they die younger. Therefore, it is not surprising that median SSW of this subgroup is considerably less than for other beneficiaries (Table 8). For the disability-affected, median SSW is 28–31 percent lower and mean number of years of benefit receipt is 25–29 percent lower than for other beneficiaries.

When men and women are looked at separately, we find that median SSW is 35–43 percent lower for disability-affected men than for men of other beneficiary types, and the mean number of benefit receipt years is 30–35 percent lower; the corresponding figures for women are 8–29 percent and 15–24 percent.[57]

As with other beneficiaries, median SSW is considerably larger for women than for men among the disability-affected. The main causes of this difference are (1) that women have much higher average number of years of benefit receipt, and (2) our use of a shared concept of wealth rather than an individual concept. Most married women receive smaller annual benefits (auxiliary or worker) than their husbands. Thus, shared benefit is greater than individual benefit for most married women and less than individual benefit for most married men.[58]

Table 9 gives estimates of SSW for (1) disabled workers, and (2) nondisabled persons with disabled spouses. The median SSW of disabled workers is only 49–55 percent of that of nondisabled persons with disabled spouses. Disabled workers have only 56–59 percent as many years of benefit receipt because they die younger.[59]

Table 8.
Social Security benefit measures for near-retiree beneficiaries, by disability status, sex, and cohort

Measure and cohort	Disability-affected			Other beneficiaries		
	All	Women	Men	All	Women	Men
Social Security wealth (median, 2002 $)						
1993	95,618	140,001	63,381	133,132	152,434	111,799
1998	111,277	133,575	87,438	162,297	187,398	134,116
2003	125,316	163,731	96,001	179,414	208,788	152,080
Annualized payout (median, 2002 $)						
1993	6,967	6,890	7,111	6,341	6,476	6,213
1998	8,012	7,746	8,250	7,552	7,609	7,493
2003	8,713	8,689	8,741	8,395	8,426	8,364
Benefit receipt years (mean)						
1993	16.4	21.0	12.2	22.0	24.8	18.8
1998	16.1	22.0	13.0	22.6	25.8	18.9
2003	16.7	20.0	13.3	22.9	26.2	19.1
Potential benefit years (mean)						
1993	16.5	22.1	12.3	23.0	25.7	19.9
1998	16.3	20.1	13.2	23.6	26.6	20.1
2003	16.9	21.0	13.6	23.8	27.0	20.3

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

NOTE: Disability status determination is based on an individual's and spouse's benefit types. For details, see the "Findings by Disability Status" section of the text.

Table 9.
Social Security benefit measures for disability-affected near-retiree beneficiaries, by unit type, sex, and cohort

Measure and cohort	Person is a disabled worker			Only spouse is a disabled worker		
	All	Women	Men	All	Women	Men
Social Security wealth (median, 2002 $)						
1993	72,123	102,877	64,214	147,186	158,356	80,281
1998	85,789	90,517	85,395	156,610	160,296	152,035
2003	96,001	118,700	86,680	176,422	186,013	154,966
Annualized payout (median, 2002 $)						
1993	6,944	6,741	7,034	6,818	6,860	6,524
1998	7,910	6,693	8,223	8,001	7,991	8,215
2003	8,717	8,705	8,737	8,638	8,638	8,705
Benefit receipt years (mean)						
1993	13.0	17.5	11.9	22.9	24.4	15.7
1998	13.0	15.5	12.2	22.4	22.8	20.3
2003	13.5	16.5	12.3	23.0	24.2	19.1
Potential benefit years (mean)						
1993	13.1	17.6	12.0	23.0	24.5	16.1
1998	13.2	15.6	12.3	22.6	23.0	20.9
2003	13.7	16.7	12.6	23.3	24.4	19.8

SOURCE: Authors' calculations using data from Modeling Income in the Near Term (MINT3).

NOTE: Disability status determination is based on an individual's and spouse's benefit types. For details, see the "Findings by Disability Status" section of the text.

Annualized SSW Payout

Annualized payouts of the disability-affected exceed those of other beneficiaries by 4–10 percent. For men and women, these amounts are higher by 5–14 percent and 2–6 percent.[60]

This small difference in annualized payouts is the result of the following offsetting factors.

1. A factor that markedly increases annualized payouts of the disability-affected relative to other beneficiaries is that non-DI benefits are reduced for early benefit receipt, that is, early retirement. For a full retirement age of 66, these reductions can be as large as 25 percent for retired-worker benefits, 30 percent for spouse benefits, and 19 percent for surviving spouse benefits. There are no comparable reductions for DI benefits.
2. A factor that decreases annualized payouts of the disability-affected relative to those of other beneficiaries is the difference in the indexing of retired-worker benefits and disabled-worker benefits. Retired-worker benefits are based on earnings that are wage-indexed to wage levels as of the year the beneficiary reaches age 60. Cost-of-living adjustments (that is, price-indexing) to these retirement benefits begin at the end of the year the person reaches age 62. By contrast, disabled-worker benefits are based on earnings that are wage-indexed to wage levels of the year that is 2 years before the year of first receipt of disability benefits. The cost-of-living adjustments to disability benefits start at the end of the year of first disability benefit receipt. For near-retiree disabled-worker-only beneficiaries, the median age of first receipt of disability benefits is 57 or 58.

   Because the average wage measure usually increases at a faster percentage rate than the price index, these differences in indexing usually cause the annualized payouts of the disability-affected to decrease relative to the payouts of other beneficiaries. For the 1998 cohort, this indexing difference decreases annualized payouts of disabled-worker-only beneficiaries by about 10 percent relative to those of retired-worker-only beneficiaries.
3. Even if disabled-worker and retired-worker benefits were wage-indexed to the same age and price-indexed from the same age, disabled-worker benefits would tend to be lower because the earnings of disabled workers, averaged over their relatively shorter computation periods, tend to be lower than those of retired workers.

   We checked this by calculating average relative earnings (earnings relative to SSA average annual wages).[61,62] Our estimates of the median average relative earnings of disabled-worker-only beneficiaries are 9–14 percent less than those of retired-worker-only beneficiaries.[63]

Differences by sex in median annualized payouts are quite small. The ratios of median annualized payouts for women to those for men are .94 to .99 for the disability-affected and 1.01 to 1.04 for other beneficiaries.[64]

The median annualized payouts of disabled workers are very similar to those of nondisabled persons with disabled spouses (Table 9). This is also generally true for both women and men.[65]

Section Summary

Our definition of the disabled is somewhat different from the definition of disabled workers used by SSA. It is an expanded definition in one sense because in determining who is disability-affected, we take into account the disability status of one's spouse. On the other hand, because our focus is on near-retirees, all our disability-affected live to at least age 61, and we measure their post-age-61 shared benefits. About two-thirds receive disabled-worker benefits themselves and the remaining one-third have spouses who receive such benefits. On average, they do not start receiving disability benefits until their mid-to-late fifties. In determining a person's longest-held benefit type, we do not convert disabled-worker benefits to retired-worker benefits at the full retirement age.

Our near-retiree disability-affected are, as expected, different from other near-retirees. Men account for a larger proportion, and blacks and Hispanics, especially blacks, make up a larger share of our specific definition of the disabled.

By one measure, namely SSW, we find that because our disability-affected subgroup die sooner, they receive considerably less in median amounts than other beneficiaries. These differences in SSW exist for both men and women, although, women receive more than men. However, it is very important to note that had we considered all benefits that our disability-affected subgroup received before the year they reached age 62, the nature of these differences may have been quite different. But because the focus of this study is near-retirees, including disability-affected near-retirees, we examine Social Security benefits only from the year they reach age 62.

Using another measure of benefits, namely annualized payouts, we find that median amounts for the disability-affected are slightly higher than amounts for other beneficiaries. This small excess is the result of a number of offsetting factors:

1. Old-age benefits are reduced for early retirement; there are no comparable reductions for disability benefits.
2. Wage-indexing for disability benefits usually stops before a person reaches age 60, which serves to reduce benefits of the disability-affected relative to the benefits of other beneficiaries.
3. The average relative earnings of disabled-worker beneficiaries over their computation periods appear to be less than those of retired-worker beneficiaries over their longer computation periods. For both benefit types, earnings are measured relative to SSA average annual wages. This lower amount of earnings for disabled workers reduces annualized payouts of the disability-affected relative to the payouts of other beneficiaries, even if both types of benefits were indexed in the same way.

Annualized payouts for the disability-affected are a bit larger than payouts for other beneficiaries for both women and men, with no appreciable differences by sex in payout amounts.

Concluding Remarks

Our results provide substantial empirical evidence on Social Security benefits as a retirement resource for select subgroups of near-retirees, namely race/ethnic subgroups, immigrants and the native-born, and disability-status subgroups. It is important to study how particular subgroups fare, especially if they are considered economically vulnerable and/or may be subject to program changes. A major strength of the results lies in their being based on mostly actual earnings histories, an advantage shared by very few studies on the subject.

Some of our results for near-retirees may be unsurprising. For example, we report that among race/ethnic subgroups, because of their higher indexed taxable earnings, whites receive the highest amounts of SSW and annualized payouts. Taxable earnings replacement rates, on the other hand, are the lowest for whites and higher for minority race/ethnic subgroups, which is due to the progressivity of the Social Security benefit formula. Immigrants of all race/ethnic subgroups, on average, receive lower SSW and annualized payouts than the native-born as a whole primarily because of their lower indexed taxable earnings. Our disability-affected near-retirees, as defined in this article, receive considerably less in median amounts of SSW than other beneficiaries because of markedly shorter lives and the fact that we consider Social Security benefits only if received after age 61.

We are also able to point to other interesting findings from our study of these subgroups. For example, over time Hispanics have very slow growth in SSW compared with that of the other race/ethnic subgroups. A key underlying variable is the growth in earnings. Median indexed taxable earnings increases are considerably smaller for Hispanics than for the other three race/ethnic subgroups. For immigrants, the taxable earnings replacement rate is not a very good measure of how effective Social Security is in replacing average career total earnings; this is especially so for Asians whose indexed taxable earnings are particularly low relative to their indexed less-censored earnings (our proxy for indexed total earnings). This is in considerable part because Asians have the highest average age at entry into the United States. Age at entry into the country is an important variable. Immigrants who enter before age 23 have benefits similar to those of the native-born.

Under Social Security law, a person's benefits do not depend on his or her race, ethnicity, nativity, or sex. That notwithstanding, this article has highlighted the fact that substantial differences in earnings levels and/or mortality levels by these characteristics produce sizable differences in Social Security benefit levels among these subgroups of near-retirees.

Notes

Acknowledgments: The authors thank Robert Gesumaria for programming assistance and Paul Davies, Manuel de la Puente, Linda Del Bene, Ed DeMarco, Susan Grad, Howard Iams, Dean Leimer, Michael Leonesio, Joyce Manchester, Linda Maxfield, and Mark Sarney for constructive comments.

[1] SSA (2006).

[2] Bridges and Choudhury (2007a) examine the distribution of benefits among type of benefit subgroups, namely, worker, spouse, and survivor beneficiaries.

[3] According to SSA (2006), 2004 poverty rates for persons aged 65 or older are much higher for blacks (23.5 percent) and Hispanics (18.7 percent) than for whites (8.3 percent).

[4] See Bridges and Choudhury (2005, 2007b) for more information on previous work.

[5] We use MINT3 data files created in April 2003.

[6] The administrative records contain amounts of annual taxable earnings beginning with 1951.

[7] Two key economic assumptions of trustees reports are those with regard to inflation and the growth of average earnings. The Board of Trustees (2002) report uses actual historical data on average wages through calendar year 2000 and on consumer price levels through early 2002.

[8] In our benefit calculations, earnings after age 61 can affect benefit amounts.

[9] To some extent the incomes of the members of a couple are a product of joint decision-making.

[10] Given the content of the MINT data file, the sharing of benefit income within a larger unit, such as the family, could not be considered.

[11] Through the price index of January 1, 2002, the price index for January 1 of a given year is the average of the published price index for January of that year and the published price index for December of the previous year. For years after 2002, the price index value for January 1 of a given year is the average of the projected price index for that year and the projected price index for the previous year.

[12] From the perspective of Social Security beneficiaries, the trust fund interest rate can be viewed as a proxy for a U.S. government bond rate series because the trust fund interest rate is based on marketable Treasury obligations. From the perspective of the Social Security program, the trust fund interest rate is the rate at which the trust fund is able to transform funds over time.

One can argue for using an interest rate lower or higher than the trust fund rate. Using a lower or higher interest rate would of course change the levels of the estimated SSW for subgroups, but within a cohort this would be expected to usually leave unchanged the rankings of the subgroups in terms of the size of SSW; for example, SSW of whites is greater than that of blacks.

[13] As stated above, we calculate SSW using realized longevity, that is, using actual or projected date of death. Sometimes SSW is calculated using forward-looking survival probabilities, for example, looking forward from age 62. For individual persons, these two approaches can produce quite different estimates of SSW. However, for subgroup averages (for example, median SSW for blacks) the results of the two approaches are much less different.

[14] The number of potential benefit years equals 0 for persons who die in the year they reach age 62, equals 1 for persons who die in the year they reach age 63, and so on.

[15] For the year of a person's death, the MINT benefit calculator does not credit the person with any individual or shared benefits. For example, in the case of a beneficiary who dies in July 2000, the MINT calculator does not credit the person with any benefits for calendar year 2000. For the year the person begins to receive benefits, the benefit calculator credits the person with 12 months of benefits unless that is the year in which the person dies.

[16] A similar measure is used in Smith, Toder, and Iams (2003/2004). See their "Overall Approach" section. One could develop alternative measures of such annual support.

[17] The cohort or cohort subgroup with greater average longevity than another such group can be said to have additional potential benefit years—most of which will also be years in which the beneficiaries receive real annual benefits that are at least as large as those received in their earlier years. These additional benefits result in additional SSW. To compute annualized payout of this longer-lived group, its greater SSW is spread over a larger number of potential benefit years. Thus, increased longevity usually causes a smaller percentage increase in annualized payout than in SSW.

[18] The proportion of all workers (of any age) in covered employment with covered earnings at or above the legislated taxable maximums was 6 percent during the 1983–1989 period and 5–6 percent during the 1990s. Corresponding figures for the 1951–1978 and 1979–1982 periods were 15–36 percent and 7–10 percent, respectively.

[19] For each year of the 1951–1977 period, the MINT model uses information from SSA administrative records on the quarter in which the person's earnings reached the legislated taxable maximum to assign a person to a covered-earnings interval. Means for each interval were derived from the earnings data collected by the Census Bureau's CPS. Each person is assigned the mean earnings for their interval.

For the 1978–1989 period, the administrative records do not contain information on the quarter in which an individual's earnings reached the legislated taxable maximum. For this later period, covered earnings above the legislated taxable maximum were set at the CPS average of earnings above the legislated taxable maximum for each year.

See Butrica and others (2001) for additional information on the MINT estimation method for less-censored earnings. MINT modelers coined the phrase "less-censored earnings."

[20] Because the numerator of the replacement rate, annualized payout, is expressed in January 1, 2002, dollars, we need to express the denominator of the replacement rate, indexed taxable earnings, in January 1, 2002, dollars.

P_{2002} is the Consumer Price Index (CPI) as of January 1, 2002, and P_T is the CPI as of January 1 of year T (the year the person reaches age 62). AE_T is average wage-indexed shared taxable earnings, indexed to the average wage level prevailing as of January 1 of year T, and TX-EARN is indexed taxable earnings in January 1, 2002, dollars.

$$\text{TX-EARN} = (P_{2002} / P_T)\, AE_T$$

[21] As stated earlier, earnings after age 61 can affect our calculated benefit amounts.

[22] SSW is evaluated as of January 1 of the year the person reaches age 62. Annualized payout, the numerator of our replacement rates, is derived from SSW. Thus, we want to wage-index less-censored earnings—the denominator of the less-censored earnings replacement rate—to the wage level at the beginning of the year the person reaches age 62. Making the timing of its numerator and denominator consistent makes the less-censored earnings replacement rate a better measure of the adequacy of Social Security benefits. We chose to wage-index taxable earnings to the same date as that used for wage-indexing less-censored earnings.

[23] For purposes of determining retired-worker benefits, the worker's AIME is determined as follows. Annual taxable earnings through age 60 are indexed, using the average wage series, to wage levels of the year the worker reaches age 60; annual earnings after age 60 are not wage-indexed. The sum of the 35 highest annual earnings amounts is divided by 420 (35 x 12) to get the AIME. For disabled workers, the calculation of AIME usually employs a shorter computation period (less than 35 years). Given that we use a shared benefit measure, annualized payout, we needed a shared earnings measure. For various conceptual and data reasons, we could not compute a shared AIME measure.

[24] Persons are projected to enter the MINT sample by means of immigration in the years after the end of the SIPP interviews. A hot-deck imputation procedure is used for this purpose.

[25] Some 66–68 percent of Asians and 30–34 percent of Hispanics enter the United States after the year they reach age 22; the comparable figures for whites and blacks are 2–3 percent and 4–5 percent, respectively.

[26] There is considerable evidence that, other things being equal, mortality rates for Hispanics are lower than those for non-Hispanic whites (Franzini, Ribble, and Keddie 2001; Liao and others 1998). Thus the MINT-based estimates of Hispanic longevity and SSW are likely to be too low. There is some evidence that mortality rates for Asians, other things being equal, may be lower than those for non-Hispanic whites (Rogers and others 1996).

[27] Haveman and others (2006), Wolff (2002), and Liu and Rettenmaier (2003) are three recent studies that present some estimates of SSW by race/ethnic subgroups. Their data sets differ from each other and from our data set. The focus of each of these studies is rather different from the focus of our study. Each study uses only two race/ethnic subgroups.

Haveman and others (2006) use samples from the New Beneficiary Survey and from the Health and Retirement Study to examine the overall retirement income adequacy of persons who retired in the early 1980s and in the mid-1990s. One of their findings is that the average SSW of whites exceeds that of nonwhites.

Wolff (2002) uses samples from three Surveys of Consumer Finances to estimate the overall retirement income adequacy of persons aged 59–64 in 1983, 1989, and 1998. One of his findings is that the average SSW of non-Hispanic whites exceeds that of the combined group of blacks and Hispanics.

Liu and Rettenmaier (2003) use a set of hypothetical workers in their study of the money's worth of Social Security for workers born from 1935 through 1980. One of their findings is that the average SSW of whites exceeds that of blacks.

We see that the findings of these three studies are generally consistent with ours.

[28] The preceding general patterns also hold for each sex; for example, among women and among men. SSW is highest for whites. The tables in this section do not present data on benefit measures by sex. In addition, we find that for each race/ethnic subgroup, SSW is greater for women than for men because (1) women have many more years of benefit receipt, and (2) we use a shared concept of wealth. We also find that the ratio of SSW of women to that of men is highest for Hispanics.

[29] Our tables somewhat overstate the growth rates for SSW, annualized payouts, indexed taxable earnings, and indexed less-censored earnings. This overstatement resulted because we use projections of the SSA annual average wage series from the 2002 Trustees Report, which overstated the growth of this series over the 2000–2004 period.

[30] We find that these general patterns hold for both women and men. For race/ethnic subgroups, we find that the annualized payouts of women and men are similar.

[31] The replacement rate measures are modestly sensitive to how earnings are averaged for persons who are disabled-worker beneficiaries. Under OASDI law for disabled-worker beneficiaries, the year they become disabled and later years are usually disregarded in determining the AIME. In determining indexed taxable earnings (and indexed less-censored earnings), we include such years if they are earlier than the year the worker attains age 62. Many of the near-retirees who receive disability benefits start receiving them before reaching age 62. For our near-retirees, the median age of first receipt of disability benefits is 57 or 58. Approximately 15 percent of Social Security taxpayers receive shared disability benefits. Including such post-disability years in the computation of indexed taxable earnings and indexed less-censored earnings for disability beneficiaries causes modest increases in taxable earnings replacement rates and less-censored earnings replacement rates for the race/ethnic subgroups and for immigrant-status subgroups.

[32] The impact of the lack of precision of mortality projections on estimates of taxable earnings replacement rates and less-censored earnings replacement rates should be relatively small for Hispanics and Asians aged 65 or older. This is because in estimates of the annualized payouts (the numerators of the replacement rates), the errors in

SSW should be largely offset by errors in the numbers of potential benefit years.

[33] We find that taxable earnings replacement rates for whites, blacks, and Hispanics are considerably higher for women than for men.

[34] For beneficiaries only (those with positive SSW), replacement rates are lowest for whites, and those of the other subgroups are 110–133 percent of those for whites.

[35] The overstatement of the 2000–2004 growth of the average annual wage (referred to in note 29) should have only small effects on our estimates of median taxable earnings replacement rates and less-censored earnings replacement rates. This overstatement of wage growth causes offsetting overstatements of the numerator and denominators of our replacement rates.

[36] For beneficiaries only, earnings replacement rates of Asians are 85–94 percent of those for whites; those of blacks and Hispanics are higher at 123–135 percent and 116–123 percent of those for whites.

[37] We find that the general patterns of race/ethnic differences in less-censored earnings replacement rates also hold for each sex. For example, among women and men, less-censored earnings replacement rates are lowest for Asians and second lowest for whites.

[38] An analysis that deals with immigrants and Social Security in a somewhat different way is Cohen and Iams (2007).

[39] A hot-deck imputation procedure is used in selecting post-interview immigrants from a donor pool of immigrants from the SIPP sample. The imputation is done so as to approximate estimated control totals of immigrants by time period, sex, age at immigration, and source region. The records of the selected donors are then updated to the year of projected immigration. All imputed immigrants enter the United States as adults. Berk and Smith (2003) believe their immigrant projections could contain considerable error.

[40] The SIPP panels contain to an unknown degree, undocumented or illegal immigrants; the SIPP interviewers do not attempt to determine the legal status of immigrants. We believe that our sample of immigrant near-retirees does not contain more than a small number of undocumented immigrants. The SIPP coverage rate for the undocumented is probably quite low relative to those of legal immigrants and of the native-born. The estimated control totals for immigrant imputations do not include the undocumented. For our analysis, MINT's treatment of the undocumented causes very little problem; most of the undocumented enter the United States before age 35, and most of them stay in the country less than 10 years. See the discussion in Duleep and Dowhan (2008).

[41] Gustman and Steinmeier (1998) use the Health and Retirement Study sample to examine Social Security's treatment of natives and immigrants born from 1931 through 1941. One of their findings is that the average SSW of the native-born exceeds that of immigrants.

[42] There is some evidence that, other things including race/ethnicity being the same, mortality rates may be lower for immigrants than for the native-born; for example, see Rogers and others (1996).

[43] For the small minority of immigrants whose benefits are based on totalization agreements, their benefits are not computed under the usual OASDI rules. In 2004, about 100,000 immigrants, emigrants, and others received some U.S. OASDI benefits under totalization agreements.

[44] Blacks account for only 5–6 percent of immigrants.

[45] Gustman and Steinmeier (1998) find that the average SSW of immigrants generally is lower the later the year of immigration.

[46] For beneficiaries only (those with positive SSW), median SSW and median indexed taxable earnings also generally decrease as age at entry increases.

[47] For beneficiaries only, median taxable earnings replacement rates for immigrants for the 1993, 1998, and 2003 cohorts are 5 percent, 14 percent, and 20 percent higher than those for the native-born.

[48] Gustman and Steinmeier (1998) also find that immigrants have relatively high replacement rates for taxable earnings.

[49] The number of legal permanent residents of the United States who leave the country to reside elsewhere is about 25 percent as many as the number admitted each year with legal permanent resident status. Many immigrants enter the United States at young ages, work in covered jobs while in the country, but leave after fairly short times, often earning no rights to later benefits, or never filing to receive benefits for which they might have become entitled. This behavior of immigrants also tends to offset the effect on the trust fund balance of the relatively "good deal" that immigrant beneficiaries get because of the progressivity of the benefit formula.

[50] For beneficiaries only, median less-censored earnings replacement rates for immigrants are 2–12 percent lower.

[51] Weaver (1997) presents estimates of average benefit amounts by type of benefit. In defining benefit types, he treats dual beneficiaries as auxiliary beneficiaries, as we do. However, his estimates are for individual benefits and are thus not comparable to our estimates of shared benefits.

[52] The person's and spouse's longest-held benefit types are for the same time period, namely, the period that starts with the year the person reaches age 62 and ends with the person's death.

[53] The spouses of these disabled workers have the following longest–held benefit types: (a) disabled-worker only (5–7 percent of the disability-affected), (b) retired-worker only (18–23 percent of the disability-affected), (c) spouse (14–15 percent of the disability-affected), and (d) no benefit

type; either there is no spouse or the spouse received no benefits (23–25 percent of the disability-affected). For more than 99 percent of the persons in category (b) the person's number of years of receiving disabled-worker-only benefits is greater than or equal to the spouse's number of years of receiving retired-worker-only benefits. In other words, almost all the persons in category (b) are persons for whom disability benefits constitute a major part of the person's shared benefits.

[54] Persons who are spouse beneficiaries account for 11–15 percent of the disability-affected; survivor beneficiaries account for 11–13 percent. Survivor beneficiaries whose benefits are based on the earnings of a disabled worker are not classified as disability-affected in cases in which the disabled worker dies before the survivor beneficiary reaches age 62; survivor beneficiaries who are classified as disability-affected outnumber such cases about 10 to 1.

[55] This article's definition of the disability-affected differs from the definition of disabled in Bridges and Choudhury (2007a).

[56] See note 31.

[57] For whites, blacks, and Hispanics, SSW of the disability-affected is considerably less than that of other beneficiaries. The tables in this section do not present data on benefit measures by race and ethnicity.

[58] Again, as with those not affected by disability, SSW for the disability-affected is larger for whites than for the group of minorities in part because whites have higher average number of years of benefit receipt.

[59] Among nondisabled persons with disabled spouses, median SSW of retired-worker beneficiaries is a bit lower than that of auxiliary beneficiaries. These retired-worker beneficiaries have only 81–84 percent as many years of benefit receipt.

[60] For whites, blacks, and Hispanics, these amounts for the disability-affected are higher by 4–11 percent, 7–12 percent, and 15–20 percent, respectively.

[61] Under Social Security law, the determination of AIME computation periods for disabled-worker benefits differs from that for retired-worker benefits. In our calculations of average relative individual taxable earnings of disabled- and retired-worker beneficiaries, we approximate computation periods as follows. For both types of benefits, our computation period starts with 1951 or the year the person reaches age 22, whichever comes later. For retired-worker benefits, the period ends with the year the person reaches age 61. For disabled-worker benefits, the computation period ends with the year before the year of first receipt of disability benefits.

[62] This measure (average relative individual taxable earnings) is not used anywhere else in this article.

[63] Disabled workers who survive to age 61 have higher average earnings than those who die before age 61.

[64] Among the disability-affected, race/ethnic differences in median annualized payouts are a bit larger than are differences by sex. For both the disability-affected and other beneficiaries, annualized payouts of blacks and Hispanics are less than those of whites.

[65] Among nondisabled persons with disabled spouses, the median annualized payouts of retired-worker beneficiaries are a bit higher than those of auxiliary beneficiaries.

References

Berk, Jillian, and Karen Smith. 2003. *Task 1. Add immigrants to MINT.* Letter report to Leslie Muller of the Social Security Administration. Washington, DC: Urban Institute (March 18).

Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. 2002. *2002 OASDI trustees report*. Washington, DC: Government Printing Office.

Bridges, Benjamin, and Sharmila Choudhury. 2005. Social Security as a retirement resource for near-retirees. ORES Working Paper Series No. 106. Washington, DC: Social Security Administration, Office of Policy, Office of Research, Evaluation, and Statistics.

———— 2007a. Social Security as a retirement resource for near-retirees, by race and ethnicity, nativity, benefit type, and disability status. ORES Working Paper Series No. 109. Washington, DC: Social Security Administration, Office of Policy, Office of Research, Evaluation, and Statistics.

———— 2007b. Social Security benefits as a retirement resource for U.S. near-retirees. *Review of Income and Wealth* 53(3): 538–567.

Butrica, Barbara, Howard M. Iams, James Moore, and Mikki D. Waid. 2001. Methods in Modeling Income in the Near Term (MINT I). ORES Working Paper Series No. 91. Washington, DC: Social Security Administration, Office of Policy, Office of Research, Evaluation, and Statistics.

Cohen, Lee, and Howard Iams. 2007. Income adequacy and Social Security differences between the foreign-born and U.S. born. *International Migration Review* 41(3): 555–578.

Duleep, Harriet Orcutt, and Daniel J. Dowhan. 2008. Incorporating immigrant flows into microsimulation models. *Social Security Bulletin* 68(1): 67–76.

Franzini, Luisa, John C. Ribble, and Arlene M. Keddie. 2001. Understanding the Hispanic paradox. *Ethnicity and Disease* 11(3): 496–518.

Gustman, Alan L., and Thomas L. Steinmeier. 1998. Social Security benefits of immigrants and U.S. born. NBER Working Paper No. W6478. Cambridge, MA: National Bureau of Economic Research (March).

Haveman, Robert, Karen Holden, Barbara Wolfe, and Andrei Romanov. 2006. The sufficiency of retirement savings: Comparing cohorts at the time of retirement. Pension Research Council Working Paper No. 14. Philadelphia, PA: University of Pennsylvania (September).

Liao, Youlian, Richard S. Cooper, Guichan Cao, Ramon Durazo-Arvizu, Jay S. Kaufman, Amy Luke, and Daniel L. McGee. 1998. Mortality patterns among adult Hispanics: Findings from the NHIS, 1986 to 1990. *American Journal of Public Health* 88 (2): 227–232.

Liu, Liqun, and Andrew J. Rettenmaier. 2003. Social Security outcomes by racial and education groups. *Southern Economic Journal* 69(4): 842–864.

Panis, Constantijn, and Lee Lillard. 1999. Near-term model development. Draft final report, SSA Contact No. 600-96-27355. Santa Monica, CA: RAND Corporation.

Rogers, Richard G., Robert A. Hummer, Charles B. Nam, and Kimberley Peters. 1996. Demographic, socioeconomic, and behavioral factors affecting ethnic mortality by cause. *Social Forces* 74(4): 1419–1438.

Smith, Karen, Eric Toder, and Howard Iams. 2003/2004. Lifetime distributional effects of Social Security retirement benefits. *Social Security Bulletin* 65(1): 33–61.

[SSA] Social Security Administration. 2006. *Income of the Population 55 or Older, 2004*. Washington, DC: Office of Policy, Office of Research, Evaluation, and Statistics.

Toder, Eric, Lawrence Thompson, Melissa Favreault, Richard Johnson, Kevin Perese, Caroline Ratcliffe, Cori Uccello, Timothy Waidmann, Jillian Berk, Romina Woldermariam, Gary Burtless, Claudia Sahm, and Douglas Wolf. 2002. *Modeling Income in the Near Term: Revised projections of retirement income through 2020 for the 1931–1960 birth cohorts*. Report, SSA contract No. 600-96-27332. Washington, DC: Urban Institute and Brookings Institution (June).

Weaver, David A. 1997. The economic well-being of Social Security beneficiaries, with an emphasis on divorced beneficiaries. *Social Security Bulletin* 60(4): 3–17.

Wolff, Edward N. 2002 *Retirement insecurity: The income shortfalls awaiting the soon-to-retire*. Washington, DC: Economic Policy Institute.

Elderly Poverty and Supplemental Security Income

by Joyce Nicholas and Michael Wiseman*

In the United States, poverty is generally assessed on the basis of income, as reported in the Current Population Survey's (CPS's) Annual Social and Economic Supplement (ASEC), using an official poverty standard established in the 1960s. The prevalence of receipt of means-tested transfers is underreported in the CPS, with uncertain consequences for the measurement of poverty rates by both the official standard and by using alternative "relative" measures linked to the contemporaneous income distribution. The article reports results estimating the prevalence of poverty in 2002. We complete this effort by using a version of the 2003 CPS/ASEC for which a substantial majority (76 percent) of respondents have individual records matching administrative data from the Social Security Administration on earnings and receipt of income from the Old-Age, Survivors, and Disability Insurance and Supplemental Security Income (SSI) programs. Adjustment of the CPS income data with administrative data substantially improves coverage of SSI receipt. The consequence for general poverty is sensitive to the merge procedures employed, but under both sets of merge procedures considered, the estimated poverty rate among all elderly persons and among elderly SSI recipients is substantially less than rates estimated using the unadjusted CPS. The effect of the administrative adjustment is less significant for perception of relative poverty than for absolute poverty. We emphasize the effect of these adjustments on perception of poverty among the elderly in general and elderly SSI recipients in particular.

Introduction

The decline in the elderly poverty rate is often cited as a major accomplishment of national poverty policy. From 1966 through 2006, the official poverty rate for persons 65 or older declined from 28.5 percent to 9.4 percent. In 1966, elderly poverty exceeded that of adults aged 18–65 by 18 percentage points. By 1993, parity with the poverty rate of other adults was achieved, and since that year, the elderly poverty rate has generally been over a percentage-point lower than that registered for adults of "working age" (DeNavas-Walt, Proctor, and Smith 2007, 50).

Supplemental Security Income (SSI)—the nation's safety net for the aged, blind, and disabled—presumably played some role in this decline and serves to ameliorate the consequences of poverty for those who remain poor. However, assessing the contribution of SSI payments to the reduction of elderly poverty raises three issues. First, receipt of SSI is significantly underreported, so any evaluation using standard sources—notably the Current Population Survey's (CPS's) Annual Social and Economic Supplement (ASEC)—is likely unreliable (Roemer 2000; Weinberg 2006). Second, the federal SSI payment is not alone sufficient to move recipients out of poverty, so the SSI effect, if present, must occur in combination with other family resources. Third, as is widely appreciated, the poverty standard itself is controversial, and its modest empirical basis is outdated (Citro and Michael 1995; Weinberg 2006; Blank 2008).

This article addresses these measurement, context, and standards issues. On the measurement side, we investigate the consequences for perception of

Selected Abbreviations

ASEC	Annual Social and Economic Supplement
CPS	Current Population Survey
DER	Detailed Earnings Record
DI	Disability Insurance
FBR	federal benefit rate
FICA	Federal Insurance Contributions Act

* *Joyce Nicholas is a social science research analyst in the Office of Program Development and Research within the Office of Retirement and Disability Policy, Social Security Administration. Michael Wiseman is a professor at George Washington University.*

Selected Abbreviations—*Continued*

MEF	Master Earnings File
NRC	National Research Council
OASDI	Old-Age, Survivors, and Disability Insurance
PHUS	Payment History Update System
SECA	Self-Employment Contributions Act
SER	Summary Earnings Record
SGA	substantial gainful activity
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSI	Supplemental Security Income
SSN	Social Security number
SSR	Supplemental Security Record

poverty among the elderly of using administrative information from the Social Security Administration (SSA) on earnings and income from the Old-Age, Survivors, and Disability Insurance (OASDI) and SSI programs to adjust CPS/ASEC data for underreporting. We consider the consequence of adjustment of income for all family members, not the elderly alone. On the standards side, we compare results using the official "absolute" poverty measure that is based on a threshold fixed in real terms with outcomes when poverty is assessed using a "relative" measure, that is, with reference to the general income distribution. Our investigation is limited to the 2003 CPS/ASEC (covering incomes in calendar year 2002); it is our intention to create a template for duplication of this analysis for subsequent years in a companion article.

This work is informed by a substantial amount of earlier work by SSA analysts on procedures for merging administrative and survey data and for using the resulting hybrids to study the prevalence of poverty and dependence on OASDI and SSI benefits (see, for example, Sears and Rupp (2003); Koenig (2003); Koenig and Rupp (2004); and Fisher (2005)). We also refer to the labor economics literature on use of administrative data versus survey-derived information in analysis of earnings (Pedace and Bates 2000; Bound, Brown, and Mathiowetz 2001; Abowd and Stinson 2005; Dahl, DeLeire, and Schwabish 2008) and on the burgeoning Census Bureau (2007) work on the consequences of using alternative resource measures and poverty standards.

Combining census and administrative data is not simple, and results are sensitive to several important decisions concerning where credence should rest. The credence issue is particularly important in working with earnings data; our approach is to develop two adjusted measures of income, one largely restricted to administrative amounts and the other more inclusive of survey responses. Reality, we argue, probably lies somewhere between the two. We find that incorporation of administrative data under both the restrictive and inclusive adjustment procedures has substantial consequences for perception of the prevalence of poverty by either absolute or relative standards. Our adjustments reduce the estimated aggregate official poverty rate in 2002 for all persons from 12.1 percent to 9.3–11.8 percent; the estimated poverty rate among elderly SSI recipients is reduced from 48 percent to 38.6–39.9 percent. Estimated relative poverty among SSI recipients also declines, but the effect of our adjustments on inferences about the relative poverty of the elderly is less significant than the effect on the official poverty measure. We argue these results present a challenge to those who would rely on unadjusted data for inferences about the prevalence of poverty or program take-up. We suggest that further experimentation with combining administrative data with CPS data be given high priority. Such investigations should cover more years and incorporate administrative data on other sources of income.

To reach these conclusions, we take the following route. The next section presents a brief overview of the SSI program. The CPS and pertinent SSA administrative data are then reviewed. For a variety of reasons including their own choice, not all persons in households interviewed for the CPS can be matched to SSA administrative records. Next, we discuss procedures for data preparation and the prevalence of successful match. Our strategy for merging the CPS and administrative data is then outlined. We discuss three alternatives for handling the shortfall of our incomplete match. The section that follows reports the consequences for estimating the prevalence of poverty in 2002 and of incorporating administrative data using the official poverty standard. The effect of our adjustments on estimates of the total population of SSI recipients is also discussed in this section. We then repeat the analysis using a relative poverty measure. The last section presents our conclusions and suggestions for future research.

SSI: An Overview

Although our focus is on the elderly, we include rules pertinent to children and nonelderly adults because our data adjustments involve all persons. In general, the data we cite are for 2002, the focal year for our subsequent calculations.

The SSI program provides a basic monthly national income guarantee, called the federal benefit rate (FBR) to children and adults with disabilities (including the blind) as well as to persons aged 65 or older. The FBR is adjusted annually for inflation. In 2002, the FBR was $545 per month ($6,540 per year) for a single individual and $817 ($9,804 per year) for a couple (SSA 2003). SSI is intended to be a program of last resort. Accordingly, payments are reduced if an individual or a couple has earnings or other income or receives "in-kind support and maintenance" (ISM), and the amount depends as well on a person's living arrangement. In all states[1] except one, the federal SSI payment is augmented for at least some SSI recipients by a state supplemental payment (SSA 2004). In most states, SSI recipients are also immediately eligible for Medicaid, and if they live alone they are categorically eligible for food stamps (except in California, where the food stamp benefit is incorporated into the state supplement).

To be eligible, SSI nonelderly (younger than age 65) applicants must pass a disability test. Both elderly and nonelderly individuals must meet the same income and resource requirements.

For persons aged 18 or older, financial eligibility requires that countable income (whether from work or other sources) be less than the current FBR plus, where available, any state supplement. Certain income exclusions are applied to the calculation of net income. SSI program rules exclude the first $20 of income from all sources, $65 of earned income (for a total exclusion from earnings of $85 if the applicant or recipient does not have any unearned income), and half of any additional earnings beyond $65. The FBR is reduced by one-third for applicants or recipients receiving food and shelter—ISM—in another's household and not contributing to those expenses. Generally, resources cannot exceed $2,000 for an individual and $3,000 for a couple, but one's home and automobile as well as certain other resources are not counted.

As for children less than 18 years of age, the financial eligibility requirements generally pertain to the parents, whose income from sources other than public assistance is partially deemed to the child. Before any income is deemed to the child recipient, certain exclusions are applied to account for needs of other family members. The disability test for children is that the child must have a medically determinable impairment (or a combination of impairments) resulting in "marked and severe functional limitations."

For persons aged 65 or older, only the financial test for SSI eligibility applies. The disability test for nonelderly adults is the same test used for Social Security Disability Insurance (DI) and is quite stringent. It requires that the applicant be either blind or have a physical or mental impairment that prevents him or her from engaging in any substantial gainful activity (SGA) and that has lasted or is expected to last for a continuous period of at least 12 months or to result in death. SGA is generally defined in terms of specific earnings thresholds. In 2002 the SGA standard was $780 or more per month, so applicants judged capable of earning this much anywhere in the economy were ineligible for SSI. The threshold of SGA is automatically adjusted each year for changes in the average wage.

Once eligibility is established, the monthly SSI payment is simply the FBR (plus the applicable state supplement), less any countable income. Because eligibility is not determined by total household or even family income, a substantial number of SSI recipients living with persons other than their spouse are not poor, although by official standards anyone living on the FBR alone is. In 2002, the official poverty standard was $9,359 for a nonelderly single person and $8,628 if aged 65 or older; the standard was $12,047 for a couple (again, nonelderly) and $10,874 if the "householder" was aged 65 or older. The annualized FBR—$6,450 per year for a single individual and $9,804 per year for a couple—was therefore less than even the poverty standard applied to elderly persons. Despite this shortfall, it is possible for SSI payments, when considered in combination with the income of other family members, to lift persons, including the elderly, out of poverty as officially measured. For others, SSI fills at least a portion of the shortfall between income and the poverty threshold and moves them upward in the general income distribution.

The FBR is indexed so that the benefit stays constant in real terms.[2] However, the assets limits and various income exclusions were fixed in nominal terms before the interval studied here and hence declined in real terms by 25 percent from 1993 through 2002. This has presumably reduced access to SSI.

The Data

We work with 2002 data from the 2003 CPS/ASEC and contemporaneous administrative files.

The CPS

The CPS is a monthly survey of approximately 60,000 households conducted by the Census Bureau and the Bureau of Labor Statistics.[3] This survey is the main source of information about employment characteristics of the civilian noninstitutionalized American population. The Bureau of Labor Statistics gathers information about the employment status of each member of an interviewed household, who is at least 15 years of age. 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 (and some others) on various family characteristics in addition to income received in the previous year (Census Bureau 2003).

The unweighted 2003 CPS/ASEC data set (covering income in calendar year 2002) consists of 216,424 person and 78,310 household observations. We exclude 564 children younger than 15 years of age who are unrelated to the reference person for their household or anyone else in the unit. This adjustment is required because no income data are collected for such persons; the same exclusion is applied by the Census Bureau in its poverty calculations. The exclusion reduces the sample to 215,860 members and the estimated size of the sampled population by about 0.2 percent, to 285,317,346 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 a person with identical (on certain dimensions) demographic characteristics encountered earlier in the data adjustment process. It is possible for top- or bottom-coded amounts to be used in such imputations, depending on the data processing sequence.

SSA Administrative Files

Social Security's administrative files of interest here include records of individual earnings in employment covered by the OASDI programs, OASDI benefits paid, and payments made from the SSI program. The data sources for these programs are the Summary Earnings Record (SER) and the Detailed Earnings Record (DER) for earnings, the Payment History Update System (PHUS) for OASDI, and the Supplemental Security Record (SSR) for SSI.

Summary Earnings Record. These data 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.

Detailed Earnings Record. This type of record is an extract from the MEF that includes data on total earnings from all sources, including wages and salaries and income from self-employment, which is 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 the amounts are not capped.[4] These data include deferred wages such as contributions to 401(k) retirement plans.[5] 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 wage and salary income, income from self-employment, and deferred income. The data aggregation was performed by SSA's Office of Research, Evaluation, and Statistics following a protocol established by the agency.

Payment History Update System (PHUS). These data record OASDI (or 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 2001 but does not actually receive a check for the amount until February 2002, the payment will be recorded for 2002. This corresponds to income received as reported in the CPS/ASEC.[6]

Supplemental Security Record. This record provides 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 SSA makes the payment on the state's behalf. Thirty-four states, by 2002, had chosen to administer some or all of the supplementation themselves (SSA 2004, 7). Payments made in state-administered SSI supplement programs are not included in the SSR. For the most part, state supplements are small, and some of the largest (California, Massachusetts, and New York, for example) are federally administered (SSA 2004, 7). However, benefits in Alaska, Connecticut, Wisconsin, Minnesota, and a few other states are substantial and state administered. By far the largest state-administered state 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 2004, 13).

We do not have administrative data on sources of income other than wages and salaries, self-employment, OASDI, and SSI. For these other categories of income we must rely on the CPS.

The Match

The data we employ are the result of collaboration between SSA and the Census Bureau. The sources employed in the CPS/administrative data match are detailed in Appendix A.

The Procedure

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 SSA's administrative files for it using names, birth dates, and addresses. 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. Eventually a public-use data set is released that is the source of most official Census Bureau publications, including annual poverty estimates. The public-use data set includes unique numeric identifiers constructed by the Census Bureau for each household, and for each person within the household a unique person identifier is included in the data set. These identifiers relate to file structure only and convey no information useful for determining the actual identity of CPS respondents.

At the time of release of the public-use CPS data, a special encrypted file is provided to SSA. This "crosswalk" file provides the SSN for each person in the CPS for whom an SSN has been reported, identified by the household sequence number and person identifier. At SSA, only one person has access to the crosswalk file. This person 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. We employ these extracts for calendar year 2002 in the following analysis. On the CPS side, we are working with the public-use CPS data sets available to all researchers.

The Outcome

Table 1 provides the first tabulation of the extent of match between the SER and our 2003 CPS/ASEC data. The analysis is based on age at the time of the March 2003 CPS/ASEC interview, so in some instances a person's age category will be one year greater than their age during all or part of 2002, when the earnings data are accumulated. Here and elsewhere we report separate tabulations for children (persons 0–17 years old), "working-age" adults (18–64 years old), the elderly (at least 65 years old), and various combinations.

The unweighted 2003 CPS/SER overall observation match rate is 76.5 percent.[7] We do not have data to tell how much of the residual is attributable to failure to report an SSN versus reporting an SSN for which no records exist. In the material that follows, we concentrate on adults (persons at least 18 years old). For this group, the match rate is 71.6 percent. Matched observations tend to have slightly lower weights than unmatched ones, so the weighted match rate for adults (persons aged 18 or older) is 68.3 percent.

The match rates reported in Table 1 are based only on finding records in the SER with the same SSN as is reported by a respondent in the CPS or derived for children from administrative data. It is possible that the match for some individuals is false because of misreporting of the SSN in the CPS interview or because of multiple users of the same SSN in the SER. Some information on the quality of the match

Table 1.
The CPS/SER match: 2003 CPS/ASEC, by age group

Age group [a]	Total CPS records	Total CPS records with an SER match	Percent
0–17 [b]	66,016	57,763	87.5
18–64	129,460	93,472	72.2
At least 65	20,384	13,804	67.7
At least 18	149,844	107,276	71.6
All groups	215,860	165,039	76.5

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

a. Age at time of CPS/ASEC interview.

b. Sample excludes children younger than age 15 who are unrelated to others in their household. This exclusion is applied in all CPS poverty tabulations.

is provided by comparing age as reported in the CPS to age as computed from SSA records. To do this, we limited our comparisons to those persons whose age at the time of the interview, as recorded in the SER, was 74 or younger because the CPS top-codes age at 80. The results (available from the authors) are consistent with a good fit: Almost 99 percent of the adults in our matched group have a CPS age that differs from age recorded in SSA data by no more than a year. Interestingly, the fit is asymmetric. Almost all of the discrepancies are the result of a lower age report in the CPS than in SSA's data. We have also compared CPS and SSA data by sex, and the discrepancy for all three age groups is less than 1 percent. In the remainder of the analysis, we accept the entire CPS/SER match as valid, foregoing to another day the development of procedures for identifying and excluding erroneous matches (Herzog, Sheuren, and Winkler 2007).

The Merge

We turn now to procedures for merging the CPS data with SSA administrative records. The term "adjusted data" is used for any CPS-reported values that have been replaced with administrative data. Alteration in earnings records is discussed first, and then we detail reports of OASDI and SSI receipt. Many conflicts between income as reported in the CPS and recorded in administrative data are found; particularly with regard to components of earnings, there is little basis for choosing between the two. Therefore, we created "restrictive" and "inclusive" income-adjusted data sets using different assumptions about the relationship between reported earnings and self-employment income in the CPS and administrative records. For this procedural summary, unmatched CPS respondents in the data set are retained, but later in the article we report outcomes for a sample restricted to persons in families with at least one person with a CPS/SER match. The data is then reweighted to adjust for variation in match rates across types of individuals. The CPS collects data on 17 types of income, from alimony to veterans' benefits to wages and salaries. Our adjustments involve only earnings—wage and salary and self-employment income. For all other sources the CPS amounts, including imputations and top-coded values, are retained.

The Strategy

The baseline for our calculations is income as reported in the public-use CPS/ASEC. We distinguish between our restrictive and inclusive assumptions at each step in the material that follows. Our procedural protocol is summarized in Appendix A. 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 exceed amounts recorded in our administrative sources. Our procedure incorporates three important choices: (1) when we compare CPS data with income reported in the DER, we generally work with total earnings—the sum of wages and salaries and self-employment income—rather than distinguish between wages and salaries and income from self-employment; (2) we work with the DER, but accept CPS earnings reports in the absence of DER amounts; and (3) we rely wholly on SSA administrative sources for income from OASDI and SSI.

Aggregate Earnings. Roemer (2002, 12) argues that people report as wages or salaries in the CPS (and the Survey of Income and Program Participation (SIPP)) some income that is identified as "self-employment" income by their employers. Table 2 reproduces Roemer's example for the 2003 CPS/ASEC and presents the average distribution for 1990, 1993, and 1996 combined, based on his data. All the data here are for persons for whom a matched DER is available and who have reported wage and salary in the CPS. As the table indicates, Roemer, like us, finds substantial numbers of observations with wage and salary income in the CPS, but no wage and salary or self-employment income in the DER. He suggests these cases reflect the "underground" economy, where income is not

Table 2.
Number and percentage distribution of 2003 CPS/ASEC observations reporting wage and/or salary earnings in 2002, by presence of wages or self-employment income in the DER

DER earnings record group	2003 CPS/ASEC		Average for 1991, 1994, 1997—March CPS [a]
	Number	Percent	Percent
Wage and salary earnings reported in the DER; no self-employment income reported.	66,582	89.2	89.5
Wage and salary earnings reported in the DER along with self-employment income.	3,596	4.8	3.5
No DER wages and salary or self-employment present ("CPS underground").	2,872	3.8	5.2
No DER wages and salary present, but self-employment present ("CPS misclassification").	1,591	2.1	1.8
Total	74,641	100.0	100.0

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTES: Sample is comprised of adult 2003 CPS/ASEC observations with matching SER data and positive reported wage and salary or self-employment income in the CPS.

a. From Roemer (2002, 12).

reported to the Internal Revenue Service. However, a significant number of persons with wage and salary income in the CPS have only self-employment income in the DER. Roemer denotes these cases as "CPS misclassification." The prevalence of such cases is of the same order of magnitude in both Roemer's and our data.

As indicated in Appendix A, we work around the problem of misclassification by focusing on total earnings as denoted by Roemer for relevant cases in which no component of CPS self-employment income has been imputed. Aside from such cases, the general rule applied is that for the restrictive adjustment, the DER self-employment income amount is used except in cases in which the DER self-employment income total is zero and the CPS indicates income loss. In these cases the negative CPS amount is used. For our inclusive alternative, CPS-reported income is used when the reported amounts are greater than what is recorded in the DER or, again, in cases of income loss not contradicted by the DER.

The DER. Beyond possible confusion between self-employment and wage and salary income, for many individuals there is considerable discrepancy between total earnings as reported in the DER and in the CPS. Table 3 sorts the 107,276 CPS adults with an SER match (see Table 1) on the basis of earnings as reported in the DER. Nearly 3 percent (3,096) of these adults had no matching DER record at all; we treat their DER earnings as zero. For each of the 11 DER earnings categories, we compare the CPS report for total earnings with what is recorded in the DER. Several features of the data are important both for our reconstruction of the income distribution and interpretation of the results. First, a quarter of the matched respondents—26,589—have no DER earnings report at all. However, of this group a substantial number (3,986; see the bottom line of data in Table 3) have positive matching CPS records. Second, the four earnings categories covering the range $1–$39,999 account for over half (55 percent) of these adults. Within this range the overlap of the CPS and DER earnings distributions is reasonably good, generally with identical amounts reported in the CPS and the DER for median workers in each DER category and about half of all CPS reports falling within 25 percent or more of the corresponding DER total. Nevertheless, there is a lot of variance in the difference between the CPS and DER totals. The lowest earnings categories include significant numbers of self-employed persons reporting income losses; for such cases the CPS value is always lower than reported DER earnings. Despite these income-loss cases, on average, reports of adults with lower-range DER earnings have higher earnings in the CPS than are indicated in the DER.

Table 3.
Distribution of CPS earnings reports relative to DER values

DER earnings category ($)	Earnings distribution		Observations with CPS earnings values less than or equal to 0		DER/CPS earnings ratio from .75 to 1.25		Median difference in DER-CPS earnings ($)	Mean difference in DER-CPS earnings ($)	Standard deviation of difference ($)	CPS value imputed	
	Number	Percent	Less than 0	Equal to 0	Number	Percent				Number	Percent
Missing or zero [a]	26,589	24.8	193	22,410	. . .	. . .	0	-3,561	18,132	3,143	11.8
1–9,999	19,704	18.4	128	4,212	5,338	27.1	0	-4,581	19,272	4,616	23.4
10,000–19,999	14,965	13.9	45	695	7,825	52.3	-179	-4,218	21,295	3,718	24.8
20,000–29,999	13,563	12.6	15	267	9,205	67.9	0	-2,893	23,989	3,079	22.7
30,000–39,999	10,580	9.9	5	143	7,688	72.7	160	-1,894	25,411	2,310	21.8
40,000–49,999	6,860	6.4	8	76	5,110	74.5	521	-739	29,521	1,386	20.2
50,000–59,999	4,561	4.3	6	40	3,325	72.9	1,219	1,025	30,205	923	20.2
60,000–69,999	2,992	2.8	3	27	2,125	71.0	1,328	792	38,103	641	21.4
70,000–84,899	2,663	2.5	3	24	1,876	70.4	2,553	3,735	38,271	544	20.4
84,900–199,999	3,998	3.7	5	42	2,477	62.0	7,654	13,231	59,105	905	22.6
200,000 or more	801	0.7	0	6	185	23.1	100,724	153,881	403,502	241	30.1
Total	107,276	100.0	411	27,942	45,154	42.1	0	-1,125	45,364	21,506	20.0
Zero DER; [a] CPS greater than 0	3,986	3.7	. . .	. . .	. . .	. . .	-14,000	-23,755	41,396	1,677	42.1

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTES: This table consists of unweighted adult CPS respondents with an SER match.

. . . = not applicable.

a. Includes adults with no DER match.

At earnings levels above $50,000 there is a reversal of pattern. In this range the DER earnings totals on average are higher than amounts reported in the CPS, with the most dramatic differences occurring at the highest levels. Interpretation of these outcomes is complicated by the high incidence of imputations; overall, one out of five of the matched adult observations has some element of earnings imputed. These imputations add substantially to both the mean and variance of the difference between CPS and DER earnings reports.

Clearly more investigative work could be done, but developing alternative imputation approaches for the CPS is beyond the scope of this article. Instead, we fall back to development of the two alternatives. For the restrictive estimates, we distinguish between observations with zero and positive DER values. In cases with a positive DER amount, we use the DER report minus any self-employment income loss reported in the CPS. For cases with an SER match and no DER earnings (as well as all adults without a match), we opt to accept the CPS amount. We do this largely on the basis of suspicion that the CPS captures unreported income and concern that disregarding the Census Bureau report altogether is too restrictive in instances in which evidence (from the CPS interview) exists that work has occurred. Our inclusive estimate is generally the greater of the CPS and DER amounts unless no earnings are reported in the DER, and the CPS includes a self-employment income loss. For these individuals the CPS value is employed. One implication is that our inclusive estimate includes some cases in which a CPS imputation or top-coded amount is used in place of a lesser DER value.[8]

Administrative Data on Benefits. For OASDI and SSI, we rely on SSA administrative data for both our restrictive and inclusive income adjustments. Incorporation of OASDI and SSI administrative data is complicated by the absence of administrative information on state-administered SSI supplements and evidence

that CPS respondents sometimes confuse SSI payments with OASDI benefits. This confusion problem is illustrated by the tabulation reported in Table 4.

We have 2,800 CPS/ASEC adult observations in the CPS that are known from the SSR match to have received SSI payments in 2002. Table 4 divides these observations between those for whom SSI was also reported in the CPS and those for whom the CPS indicates no SSI receipt. Note the following: For individuals reported to the CPS interviewer to be SSI recipients, the average amount ($4,671) is quite similar to the average amount recorded in the SSR ($4,592). Moreover, the average SSI payment recorded in the SSR is on the same order of magnitude for adults with and without positive CPS SSI records. As would be expected given that state-administered SSI supplements are not captured by the SSR, the average benefit reported in the CPS exceeds the average benefit recorded in the SSR for the same adults.

The last two columns in Table 4 show average OASDI amounts from the CPS and the PHUS for the adults with a CPS/SSR match and positive benefit values from the CPS and/or PHUS's OASDI records. In general the CPS totals are greater. As anticipated, the differential between the CPS and the PHUS's OASDI reports is larger for people identified as SSI recipients by the SSR, but for whom no SSI payments are recorded in the CPS. However, the offset is not complete. The average SSI *plus* OASDI benefit for those reporting SSI and OASDI in the CPS is $4,671 + $5,892 = $10,563. For those not reporting SSI (but known to have received it), reported OASDI is substantially larger ($7,382 versus $5,892), but the amount falls short of the combined SSI ($4,400) and OASDI ($5,431) averages ($9,831) from the administrative data. Given state supplementation, the combined CPS amount should exceed, not fall short of, this amount.

We have confirmed what was already well known—receipt of SSI is substantially underreported in the CPS.[9] It is possible that some CPS respondents are confusing SSI with OASDI. It would be easy to do so because both programs are administered by SSA and individuals may apply for SSI and OASDI benefits at the same office. Both programs fall under the jurisdiction of SSA and may be easily confused. If such confusion does in fact exist, we should expect to see greater reported OASDI in the CPS among known SSI recipients who fail to report SSI than is the case for individuals who correctly report SSI receipt. We do find this to be true. However, such evidence is not definitive without additional control; it is possible that underreporting of SSI increases with the size of one's Social Security entitlement, and hence those failing to report SSI might be expected to have larger OASDI income. Nevertheless, we conclude that both underreporting and misreporting are present in the data.[10]

Given the misreporting problem, our income adjustment is focused on the combined SSI and OASDI payment. Again, we distinguish between individuals with and without an SER match. For individuals without an SER match, we utilize the sum of SSI and OASDI amounts as reported in the CPS and accept positive-reported SSI income as indeed indicating SSI receipt. For persons with an SER match, the following rules are applied to both our restrictive and inclusive calculations. In this case, we take SSA administrative data from the PHUS and SSR as truth and make adjustments only in instances in which state supplements are

Table 4.
Average reported SSI and OASDI benefits, by SSI reporting status: CPS/SSR matched adult sample, 2002

CPS SSI benefit category	Observation counts	SSI		OASDI	
		In CPS	In SSR	In CPS	In PHUS
		Number of positive values			
Reports of positive SSI receipt	1,681	1,681	1,681	719	744
Reports of negative SSI receipt	1,119	0	1,119	658	531
Total	2,800	1,681	2,800	1,377	1,275
		Average benefit values of observations with positive values ($)			
Reports of positive SSI receipt	1,681	4,671	4,592	5,892	5,039
Reports of negative SSI receipt	1,119	0	4,400	7,382	5,431

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

not included in these sources. If the person resides in a state with no universal state supplement or in which the state supplement is federally administered, we utilize the sum of the SSI amount reported in the SSR and the OASDI amount reported in the PHUS. If there is no SSR and/or PHUS match, SSI and/or OASDI are recorded as zero. By "universal" we mean a supplement paid to all or virtually all SSI recipients. This adjustment applies to both the restrictive and inclusive calculations. If the person resides in a state with a universal *state*-administered SSI supplement, we again utilize the sum of the SSI amount reported in the SSR and the OASDI amount reported in the PHUS. To this we add an estimate of the state-administered supplement.[11] The restrictive and inclusive estimates differ only on the basis of the number of months out of the year in which the person receives assistance; among most persons with positive SSR SSI records, the amounts are identical. Detail on federally and state-administered SSI supplements and the imputation procedures we follow appear in Appendix B.

The Outcome

Table 5 presents the outcome of these income adjustments, differentiating observations by their CPS/SER match status and whether their earnings or SSI/OASDI totals were changed. The table has two panels, one incorporating the restrictive adjustments and the other incorporating the inclusive adjustments. To get a sense of the total impact, it is necessary to sum the individuals for whom total SSI and OASDI payments were adjusted (the totals for rows 1 and 3) with the individuals with earnings changes but no alteration in SSI plus OASDI income (the amounts in the two earnings alteration columns in row 2). Given restrictive adjustments, this is 8,815 + 12,865 + 32,745 + 45,404 = 99,829—46 percent of all persons in the CPS and 61 percent of all CPS/SER matched observations. The inclusive calculation retains CPS values for earnings and SSI/OASDI benefits more frequently; in this case 31 percent of all persons in the CPS and 41 percent of all CPS/SER matched observations have incomes adjusted. Clearly, under both approaches the incidence of alteration is high, but because these numbers count every adjustment, no matter how small, it is possible that they do not matter much.[12] The obvious question is whether the size and distribution of these adjustments have significant effect on our perception of poverty for the elderly and for individuals and families in general.

We now have two versions of the CPS/ASEC. The first is the standard public-use sample, the basis for national poverty statistics such as those cited at the beginning of this article. The second is an adjusted data set, containing the same individuals, households, and families but with incomes adjusted using the procedures outlined above to incorporate, where available, information from administrative files. For each person we have two income figures, one computed using the restrictive adjustments and the other using the inclusive alternative. Because overall, 23.5 percent of the individuals were not matched to administrative data, the second version is an amalgam that contains many respondents for whom only survey data are available. To address this missing match problem, we have experimented with creating a third version based only on families and individuals for whom some administrative match exists.

Adjusting for Unmatched Observations

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). Adjustment of data for nonresponse then requires some specification of 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 θ of responding. The response rate for the survey then provides an estimate $\hat{\theta}$ 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, $1/\hat{\theta}$. However, even the simplest tabulation (as in Table 1) indicates that the match rate is not independent of demographic characteristics. Hence without adjustment, the subset of observations for which match is 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 find them. Both poverty and income distribution statistics are based on families and single individuals. Given that poverty assessment requires family income for persons living in families, it would be convenient if every individual in a family had a successful SER match. In practice,

Table 5.
Incidence of SSI, OASDI, and earnings adjustment: 2002 CPS/administrative matched estimates

Adjustment category	No CPS/SER match [a]		CPS/SER match, but no CPS/DER match [a]		CPS earnings adjustments						Total	
					CPS earnings total replaced with a lesser adjusted CPS earnings total		CPS earnings total remained unchanged		CPS earnings total replaced with a greater adjusted CPS earnings total			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Restrictive income adjustment												
CPS combined SSI and OASDI amount replaced with lesser combined administrative SSI and OASDI amount	0	0	986	0.5	697	0	5,619	2.6	1,513	0.7	8,815	4.1
CPS combined SSI and OASDI amount remained unchanged	50,821	23.5	47,722	22.1	32,745	15.2	17,488	8.1	45,404	21.0	194,180	90.0
CPS combined SSI and OASDI amount replaced with greater combined administrative SSI and OASDI amount	0	0	3,193	1.5	950	0	6,929	3.2	1,793	0.8	12,865	6.0
Total	50,821	23.5	51,901	24.0	34,392	15.9	30,036	13.9	48,710	22.6	215,860	100.0
Inclusive income adjustment												
CPS combined SSI and OASDI amount replaced with lesser combined administrative SSI and OASDI amount	0	0	986	0.5	0	0	6,315	2.9	1,512	0.7	8,813	4.1
CPS combined SSI and OASDI amount remained unchanged	50,821	23.5	47,722	22.1	0	0	50,233	23.3	45,404	21.0	194,180	90.0
CPS combined SSI and OASDI amount replaced with greater combined administrative SSI and OASDI amount	0	0	3,193	1.5	0	0	7,880	3.7	1,794	0.8	12,867	6.0
Total	50,821	23.5	51,901	24.0	0	0	64,428	29.8	48,710	22.6	215,860	100.0

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

a. CPS earnings totals applied.

this is not the case. In the 2003 CPS/ASEC, nearly 66 percent of persons lived in families in which everyone was matched to the SER ("families" here include single individuals living alone or with unrelated persons), so slightly more than a third did not have a successful SER match (these are unweighted counts). However, only 14.2 percent of sample persons lived in families in which no one was matched. This presents a choice. We can focus on (a) those individuals who live in families in which someone in the family is matched, but not necessarily themselves; (b) those individuals who themselves are matched, but this is not necessarily true for all family members; or (c) those individuals who live in families in which everyone, including themselves, is matched. Unweighted sample counts for each alternative are presented in Table 6. Criterion (a) is obviously the least restrictive.

The difference between groups (a) and (b) is 20,245 persons for whom we have no SER match but who live in families with others for whom we do. About one-third are children, and 31 percent are the "reference" persons at the top of the survey register for the household. The remainder are other adults, commonly the reference person's spouse. Given that children are unlikely to be contributing to income, and the remaining group of persons for whom we will be forced to rely on Census income is small, for our third CPS-based sample, we choose to work with group (a)—those individuals who live in families in which someone in the family is matched, but not necessarily themselves.[13]

Table 6.
Observation counts and match rates, by sample restriction criteria, 2003 CPS/ASEC

Match criterion	Count	Match rate (%)
Person observations in original CPS sample	215,860	100.0
Person observations with at least one family member with matching SER record	185,284	85.8
Person observations with self matched with SER record	165,039	76.5
Person observations with all family members matched with SER records	141,937	65.8

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

Given this subsample restriction, we next compute the parameters of a logistic regression for the log odds of being matched in this sense for each of the 215,860 persons in our sample, as shown in Table 1 (Folsom 1991; Iannacchione 1999). We estimate separate functions for persons in each of the three age groups; all three logits are reported in Appendix C. We use this function to calculate θ_i and an adjusted weight $w_i/\hat{\theta}_i$ for each individual observation.

These calculations produce a third 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.

The Results: Absolute Poverty and the Prevalence of SSI Receipt

We begin by examining the consequence of these income adjustments for estimated rates of poverty using the poverty thresholds applied in Census Bureau publications. As previously 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 was $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 nonelderly persons in the same circumstance.

Prevalence of "Official" Poverty

The results are shown in Table 7—which is divided between (1) results for the total U.S. population as covered by official poverty statistics, and (2) results for SSI recipients, a subgroup of the total. For both groups we present results (a) as published by the Census Bureau, (b) based on our "intermediate" CPS data that include income adjustments for persons for whom an SER match was obtained, and (c) for our "final" reweighted matched sample that is restricted to persons living in families with at least one SER match. Within each estimate group, we present results for children ages 0–17, for adults aged 18–64, and for adults aged 65 or older.

Tabulations 1(a) and 2(a) are based on the same CPS data (n = 215,860) used by the Census Bureau to generate official poverty estimates. (Our estimates differ very 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 measures appear for reference at the top of the columns for both the restrictive and inclusive computations. We are particularly interested in poverty rates for the elderly and among SSI recipients. In the national data, the poverty rates for working-age and elderly populations are 10.6 percent and 10.4 percent, respectively. As anticipated, poverty rates for persons in all age groups that are identified as SSI recipients are much higher than rates estimated for the age groups as a whole.

Tabulations 1(b) and 2(b) report the results of applying only our restrictive and inclusive income-adjustment protocols. The entire CPS sample is retained (n = 215,860), 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 adjustment decreases the estimated aggregate poverty rate from 12.1 percent to 11.8 percent; the estimated

Table 7.
Poverty rates across age and SSI recipient groups, 2002: Before and after income adjustment using administrative data

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	Number of person records
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	66,016
18–64	178,387,747	18,859,737	10.6	18,859,737	10.6	129,460
65 or older	34,233,824	3,576,169	10.4	3,576,169	10.4	20,384
Total	285,317,346	34,563,631	12.1	34,563,631	12.1	215,860
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	66,016
18–64	178,387,747	18,702,806	10.5	15,030,345	8.4	129,460
65 or older	34,233,824	3,111,542	9.1	3,043,279	8.9	20,384
Total	285,317,346	33,757,308	11.8	27,757,842	9.7	215,860
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	62,682
18–64	172,660,884	18,192,264	10.5	13,616,602	7.9	108,038
65 or older	33,001,207	2,768,217	8.4	2,677,064	8.1	14,564
Total	278,113,682	32,792,976	11.8	25,747,504	9.3	185,284
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	323
18–64	3,595,948	1,577,196	43.9	1,577,196	43.9	2,534
65 or older	1,192,268	572,868	48.0	572,868	48.0	778
Total	5,153,020	2,282,215	44.3	2,282,215	44.3	3,635
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	696
18–64	3,809,850	1,609,734	42.3	1,557,189	40.9	2,604
65 or older	1,695,088	688,697	40.6	668,344	39.4	1,081
Total	6,335,054	2,518,195	39.8	2,406,775	38.0	4,381

(Continued)

Table 7.
Poverty rates across age and SSI recipient groups, 2002: Before and after income adjustment using administrative data—*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	Number of person records
		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	680
18–64	3,880,146	1,729,553	44.6	1,666,596	43.0	2,121
65 or older	1,956,997	781,043	39.9	754,997	38.6	906
Total	6,699,319	2,739,325	40.9	2,609,466	39.0	3,707

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

a. Persons are identified as "poor" if their CPS total family unadjusted income record is less than their corresponding CPS family poverty threshold 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 official poverty rates. Income and weight records are unadjusted.

c. Income adjustments were made using administrative data on earnings, OASDI, and SSI receipt, following decision rules presented in the text. CPS weights are unadjusted.

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

e. Persons are identified as SSI recipients if they have a positive CPS SSI record. Income and weight records are unadjusted.

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

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

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

Tabulations 1(c) and 2(c) illustrate the results of applying our adjustment conventions, restricting the sample to persons living in families with at least one member with matching individual CPS and SER records (n = 185,284) and reweighting the observations using propensity scores. Appendix C reports the parameter estimates for the logistic functions used to reweight the CPS person weights of the noted 185,284 member restricted person sample. The aggregate outcome (in 1(c)) is a modest additional decrease in estimated aggregate poverty rates under the restrictive convention when compared with estimates based only on adjusting data for respondents who could be matched to SSA records. When the inclusive procedure is employed, the outcome is similar—estimated poverty rates decline further. For SSI recipients, the effect is a bit more varied, with child and nonelderly adult SSI poverty estimates slightly higher and elderly rates slightly lower than those estimated without sample restriction and reweighting.

What drives the difference between the restrictive and inclusive estimates? A review of the details in Appendix A indicates that the most significant difference between the two alternative calculations is that for earnings and self-employment income, the restrictive 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 administrative data. Because the inclusive procedure generally follows a "greater of DER and CPS" rule, the amounts there will be larger; the results indicate the difference is quite significant. 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). What makes the difference is correction for SSI underreporting. Aside from imputations for state-administered SSI supplements, the same correction is applied in both the restrictive and inclusive procedures because SSA knows what people receive and the consequence in both cases is an 8–9 percentage-point reduction in estimated poverty, particularly among SSI elderly recipients.

SSI Population Estimates

In "The Merge" section of this article, we established the CPS undercount of SSI recipients by looking at the actual prevalence of SSI receipt for adults (aged 18 or older) in CPS households who were successfully matched with administrative data and comparing this number to what was actually reported to Census Bureau interviewers (see Table 4). The CPS is designed to provide estimates of the total numbers of households, families, and persons with various attributes. Thus the undercount could also be investigated by comparing the number of SSI recipients estimated from the CPS sample with total recipients recorded by SSA. This could presumably be done with both the original and the adjusted CPS data.

But just what is meant by "total recipients" poses yet another problem. Normally caseload data are reported for a point in time. For example, SSA regularly publishes case counts by age group in December (see, for example, SSA (2007), Table 3). However, the CPS/ASEC asks for SSI payments received in the preceding year. Thus, in principle the SSI recipient count derived from the 2003 CPS/ASEC is an estimate of the total number of people who received SSI at any time during calendar 2002. This "ever-on" number should be larger than the largest monthly caseload during the year.

There are nuances. Persons who receive SSI in 2003 but die before experiencing the CPS interview are uncounted. Age in the CPS is reported as of the time of the interview, so age categorization only approximates what would be obtained by considering, for example, age at some point in 2002. Any comparison between caseload projection from the CPS and administrative data should also be adjusted for the fact that the SSI caseload includes persons living in institutions who are not included in the CPS.

Despite these complications, it is important to gauge CPS coverage by estimating just how many SSI recipients should have been captured by the survey. To do this, we use a 1 percent sample of monthly SSR SSI recipient records to count the number of persons who received SSI at any time during calendar 2002, and we compare these counts with the recipient population estimated from the various CPS samples we used during our study.[14] The results by age group appear in Table 8. Columns 1, 2, and 3 show the SSI population estimates generated from our "baseline," "intermediate," and "final" CPS samples, respectively. More specifically, the first column of data (our baseline estimates) are straight from the CPS and indicate the sum of sample weights for persons for whom the unadjusted 2003 CPS/ASEC reports receipt of SSI in 2002. The second column shows 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.

Administrative counts are given in columns 4 and 5. Column 4 notes the average monthly SSI caseload for 2002. Column 5 shows our 1 percent SSR sample estimate of the number of persons, in the "universe" sampled by the CPS, who had income from SSI in 2002. That column also shows our "target count" because it indicates SSA's record of the number of persons, by age category, on March 15, 2003 (roughly the midpoint of the CPS/ASEC field interviews), who should have reported receiving SSI at some time in 2002. Estimates in column 5 exclude (obviously) persons deceased by March 15 and persons who were, in December 2002, residents in Medicaid institutions. The estimate is 1–2 percentage-points higher than the estimate indicated by the CPS because it includes homeless persons. The only estimate we have found for the point-in-time prevalence of

Table 8.
Estimated SSI population compared with administrative count (with Medicaid institution adjustment), 2002

Age group (at time of 2003 CPS/ASEC)	Total 2002 SSI recipients estimated from identified CPS samples			Average monthly recipient caseload in 2002 from administrative data	Total 2002 SSI recipients in 2003 CPS/ASEC universe, estimated from administrative data [a]	Ratio, CPS restricted/ reweighted sample population estimate to administrative recipient count
	2003 CPS/ASEC	CPS/ASEC using adjusted income data	CPS/ASEC using restricted/ reweighted sample and adjusted income data			
	(1)	(2)	(3)	(4)	(5)	(6)
0–17	364,804	830,116	862,176	897,771	1,024,500	0.842
18–64	3,595,948	3,809,850	3,880,146	3,862,587	4,308,000	0.901
65 or older	1,192,268	1,695,088	1,956,997	1,998,249	2,064,200	0.948
Total	5,153,020	6,335,054	6,699,319	6,758,608	7,396,700	0.906

SOURCE: Authors' calculations using 2003 CPS/ASEC data and the Social Security 1 percent SSR beneficiary sample. CPS income reports are adjusted using administrative data. See the text.

a. See the text and Table 6. This is the estimated number of persons ever receiving SSI in 2002 who were alive and in the indicated age group at the time of the 2003 CPS/ASEC survey. This estimate is reduced by the number of persons in communal facilities or by those who are homeless.

homelessness among SSI recipients is 55,000–70,000 in 2002, or about 1.1 percent of the average monthly adult caseload in that year.[15] (Child SSI recipients are unlikely to be homeless.) Note that our estimate of recipients "ever on" during the year and alive for the CPS interview exceeds the average monthly caseload by almost 10 percent.

Administrative Data Help

In Table 8, the ratio of columns 1 and 5 values (not shown) reflect the incidence of CPS SSI underreporting before adjustment. The overall CPS SSI underreporting rate, before adjustment, was 30 percent, and the underreporting rates for children, the working-aged, and elderly recipients were 64 percent, 17 percent, and 42 percent, respectively. Even with the allowance for exclusion of the homeless from the CPS, it is clear that without incorporation of administrative data, the CPS is not a reliable source of SSI child and adult recipient counts.

The last column in Table 8 gives the ratio of our CPS-based "best estimates" of our final SSI recipient estimate (column 3) compared with the total derived from administrative data (column 5). These figures reveal the effectiveness of our CPS income and weight adjustments and indicate that our CPS adjustments reduced the overall CPS SSI underreporting rate from 30 percent to 9 percent. For the elderly, these adjustments reduced their CPS SSI underreporting rate from 42 percent to 5 percent. Our final SSI estimates are not equal to the "target counts" estimated from the 1 percent SSR sample, but are closer than the expected number of SSI recipients captured by our baseline or intermediate samples. The low CPS SSI underreporting rates associated with our final sample reaffirms the use of our CPS income and weight adjustments.

Five conclusions are drawn from our analysis to this point:

1. More thought needs to be given to the advisability of and procedures for integrating administrative and survey data. The disparity between administrative and survey reports and the apparent correlation of this disparity with income levels presents serious difficulties.
2. We think truth lies somewhere between our restrictive and inclusive estimates. Because both procedures produce lower estimated poverty estimates, the implication is that income is underreported in the CPS, with the consequence that official poverty rates are exaggerated.
3. SSI receipt is underreported in the CPS—most substantially for children, and least for working-age adults.
4. Adjustment with administrative data reduces estimated elderly poverty rates. More specifically, our final estimates suggest that from 38.6–39.9 percent of elderly SSI recipients were poor in 2002.

5. Judged on the basis of comparing sample-based recipient counts to administrative data, the propensity-adjusted CPS sample offers a more reliable basis for inference about the prevalence of SSI receipt than either the CPS alone or the CPS partially adjusted with administrative income data.

Relative Poverty

In recent years the Census Bureau (2007) has conducted extensive studies on what effect alternative poverty standards and measures of resources have on poverty assessment. In general this work, while acknowledging the problem of underreporting, does not incorporate adjustments for it (Weinberg 2005). Our study utilizes only what the Census Bureau terms "money income." More refined measures subtract taxes, add capital gains and estimates of the value of various benefits, include food stamps and rent subsidies, and include in the most ambitious "disposable income" measure—imputed rental income for homeowners (Census Bureau 2007, 2). The effect on the estimated poverty rate of refining the income measure is similar in magnitude to the effect we discover for adjusting for underreporting. In 2002, use of the most inclusive measure of income drops the estimated aggregate poverty rates from 12.1 percent to 9.3 percent if imputed rental income of homeowners is not included and 8.6 percent if it is (Dalaker 2005, 7). As might be anticipated, the effect of considering homeownership is greatest for the elderly. These adjustments require a number of imputations that cannot be replicated without detailed information on Census Bureau procedures. This matter is addressed in our concluding remarks.

It is common internationally to assess poverty not on the basis of an absolute benchmark like the official U.S. measure, but in relation to the distribution of income within society. In this section, we consider the consequences of the CPS adjustments we have introduced for inferences about the distribution of income and the position of SSI recipients within it.

The Equivalence Scale

To investigate the poverty status of SSI recipients across a variety of family types, we must have an equivalence scale that makes explicit our assumption about the amount of income that makes the standard of living for a person in one family size (for example, a person living alone) equal to that of a person in a family differently composed (for example, two adults and a child). For these calculations we follow the precedent of the Census Bureau's alternative poverty estimates (Dalaker 2005; Census Bureau 2007) and adopt the three-parameter equivalence scale suggested by a recent National Research Council (NRC) review of recommendations for poverty standard reform (Iceland 2005). This is the same scale used by Koenig and Rupp (2004) in their analysis of the sensitivity of estimated poverty rates for SSI recipients to alternative ways of measuring poverty.

Under the three-parameter 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 $\$(A + \alpha + P * (C–1))^F$; 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's poverty reform recommendations and the Census Bureau, we assume that $\alpha = 0.8$, $P = 0.5$, and $F = 0.7$. The parameter P indicates how children are to be weighted relative to adults: $P = 5$ means that each child beyond the first one requires half the income needed for adults. The parameter α allows the first child in a single-parent family to be weighted differently from others. F reflects economies of scale; a value of 1.0 would mean that expenses go up proportionately with effective size. The assumed value of 0.7 indicates that a doubling (100 percent) increase in effective family size would increase the cost of sustaining a given standard of living by 70 percent. Inserting the appropriate numbers for a single parent with two children produces an equivalence adjustment of $\$(1 +0.8 +0.5)^{.7} = \$1.79$. For every $1 of income for a single individual, achieving an equivalent standard of living for a single adult with two children would require using the NRC equivalence scale—$1.79.

For the differential between single adults and childless couples, this scale follows the "square root" convention that living costs go up with the square root of family size, which is common in European analysis of income distribution (Förster and Mira d'Ercole 2005). We shall term this four-part system the NRC equivalence scale. Note that unlike the official poverty standard, the NRC scale does not differentiate among families on the basis of age. Also, like the official standard, the NRC scale is not affected by the presence of disabilities (as is the case for all nonelderly SSI recipients), even when offsetting the consequences of a disability is expensive (Zaidi and Burchardt 2005).

The Results

Income distribution estimates are presented in Table 9. Again, we present three versions based on our baseline, intermediate, and final CPS-related data sets previously discussed and labeled (a), (b), and (c) in Table 7. In Table 9, we do this in the first panel under the restrictive income adjustment procedure and in the second panel for the higher inclusive alternative. For each set, the line marked "upper bound" shows the income level that demarks the percentile of the income distribution identified by the column header. Thus for the unadjusted CPS data (a), median personal income is $25,712. In the column adjacent to the top decile of the distribution, we report half the median and the proportion of the population with incomes (adjusted for family composition using the NRC equivalence scale) less than half this amount. Thus unadjusted CPS data for 2002 indicate that 22 percent of the population would have been counted as poor because their incomes fell below half the equivalence-adjusted median, one of the standards typically applied in Europe.[16]

For each of the samples, we also report where the elderly as a whole and elderly SSI recipients are on the equivalence scale. Again referring to sample (a) where (n = 215,860), the unadjusted CPS data indicate that 27.5 percent of the elderly had incomes below half the median, and over three-quarters of elderly SSI recipients were at the same level. At the same time, some elderly persons receiving SSI appear relatively well off: 8.3 percent of elderly SSI recipients have incomes above the median. This outcome occurs because these recipients live in families with substantial income from other sources. The annual equivalent of the 2002 single-person FBR was $6,540, well below the half-the-median relative poverty threshold of $12,856. Indeed, separate tabulations indicate that only 8.2 percent of all persons (regardless of SSI status) included in the 2003 CPS/ASEC had equivalence-adjusted incomes less than the annualized single-person FBR amount.

Tabulations in both the (b) and (c) panels of Table 9 show what occurs when the CPS data are adjusted. Our discussion concentrates on comparison of outcomes before adjustment—tabulation (a)—to outcomes using the income-adjusted, restricted, and reweighted sample, (c). It should be noted first that the restrictive and inclusive income-adjustment procedures have substantially different implications for the location and shape of the income distribution. Under the restrictive adjustment, median equivalent income changes very little, falling less than a percent, from $25,712 to $25,527. The inclusive adjustment produces a substantial upward shift, raising the estimated median by almost 12 percent, from $25,712 to $28,718. Every other decile cutoff increases as well. Second, under both adjustment protocols there is little difference between estimates based on the entire CPS with income adjustment—sample (b) where (n = 215,860)—and values calculated using the restricted sample (c) where (n = 185,284). Indeed, for all three CPS versions the estimated relative poverty rate for all persons is similar, 21–22 percent. The adjusted samples produce a reduced, but still very high, relative poverty rate for elderly SSI recipients; here, too, there is little difference between estimates made under restrictive and inclusive adjustment assumptions. Using sample (c) places the FBR even further down the income distribution. By our calculation, in 2002, the restrictive income-adjusted data indicate that only 7.7 percent of persons had equivalence-adjusted incomes less than the annualized FBR. The corresponding figure for the inclusive income adjustment is just 5.7 percent.

The restrictive and inclusive income-adjustment procedures differ in their consequences for the estimated dispersion of income. One common measure of dispersion, or inequality, of income is the ratio of the 90th to the 10th decile cutoff (see Burkhauser, Feng, and Jenkins (2007) for a critical discussion). Without adjustment, the 90/10 ratio calculated from the unadjusted sample is 8.68. The same ratio calculated using sample (c) is 8.70 using the restrictive income adjustment and 8.19 using the inclusive alternative.

Comparison of results by decile of the income distribution in Table 9 provides additional perspective on the absolute poverty rates reported in Table 7. In Table 6, the restrictive/inclusive adjusted estimate of the poverty rate for all persons is 9.3–11.8 percent. For the elderly the range is 8.1–8.4 percent, and for elderly SSI recipients the range is 38.6–39.9 percent. For the elderly these rates compare closely with the poverty rates in Table 8 if instead of considering half the median we take the 10th decile of the overall income distribution as the standard. Under this stringent definition, the restrictive/inclusive range for the elderly poverty rate is 6.8–10.0 percent, and the poverty rate range for elderly SSI recipients is 35.2–46.7 percent. Recall that the official 2002 poverty standard for elderly persons living alone was $8,628, falling between the first decile cutoff under restrictive ($7,624) and inclusive ($9,000) adjustment procedures. Thus in 2002 the official poverty standard was roughly equivalent in terms of estimated poverty prevalence to what would have been obtained had a relative standard

Table 9.
The effect of merging CPS and administrative data on the estimated national income distribution, 2002

General income distribution	Percentiles									Number of person records
	10	20	40	50	60	80	90	Top decile	50 percent of the median	
Restrictive 2002 CPS/administrative matched data set—										
(a): using unadjusted income percentiles for all people and the NRC equivalence scale (unadjusted weights) [a]										
Upper bound ($)	7,462	12,000	20,862	25,712	31,350	47,696	64,793	. . .	12,856	215,860
Distribution (%)										
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	22.0	215,860
Elderly [b]	7.8	16.1	29.1	11.9	9.2	13.3	6.0	6.7	27.5	20,384
Elderly SSI [c]	32.9	39.0	14.8	5.0	3.6	2.9	1.0	0.8	75.1	778
(b): using adjusted income percentiles for all people and the NRC equivalence scale (unadjusted weights) [d]										
Upper bound ($)	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
(c): using adjusted income percentiles for all people and the NRC equivalence scale (adjusted weights) [f]										
Upper bound ($)	7,624	12,109	20,726	25,527	31,086	47,903	66,343	. . .	12,764	185,284
Distribution (%)										
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.6	185,284
Elderly [b]	6.8	14.9	28.5	12.2	10.0	14.9	6.4	6.4	24.0	14,564
Elderly SSI [c]	35.2	34.2	11.5	5.8	4.8	5.7	1.4	1.5	70.7	906
Inclusive 2002 CPS/administrative matched data set—										
(a): using unadjusted income percentiles for all people and the NRC equivalence scale (unadjusted weights) [a]										
Upper bound ($)	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
(b): using adjusted income percentiles for all people and the NRC equivalence scale (unadjusted weights) [d]										
Upper bound ($)	8,708	13,585	23,095	28,325	34,441	52,321	72,435	. . .	14,163	215,860
Distribution (%)										
All people	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	21.3	215,860
Elderly	10.1	17.6	28.7	10.8	8.5	12.7	5.8	5.8	29.6	20,384
Elderly SSI [e]	42.3	27.4	13.2	4.2	5.1	5.1	1.4	1.4	70.7	1,081
(c): using adjusted income percentiles for all people and the NRC equivalence scale (adjusted weights) [f]										
Upper bound ($)	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
Elderly [b]	10.0	17.3	28.3	10.7	8.6	13.2	5.9	5.9	29.0	14,564
Elderly SSI [c]	46.7	23.9	12.4	3.7	5.2	5.3	1.5	1.4	71.7	906

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTES: . . . = 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 years 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 sample used to generate official poverty estimates.

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 (with "sample restriction" decision rules) and weights, and a 2003 CPS/ASEC poverty sample limited to those observations with at least one family member with matching CPS/SER records.

been used and set at the tenth decile. Whether the composition of the population identified as poor under the two approaches would be similar is a matter for additional research.

Table 9 compares the elderly as a whole and elderly SSI recipients with the national income distribution. For some purposes it may be more useful to compare elderly SSI recipients with the entire elderly population from which the former are a subset of. Table 10 places elderly SSI recipients in context of the income distribution of all elderly persons (with and without SSI payments), using the alternative merge assumptions. In this case, both the restrictive and inclusive adjustment procedures shift the estimated income distribution to the right, raising estimated median income among all elderly persons by 4.8 percent under the restrictive adjustment and 7.9 percent under the inclusive adjustment. (Here again we concentrate on the restricted and reweighted subsample.) Between 46.3 percent and 46.6 percent of elderly SSI recipients have incomes in the lowest decile of the elderly income distribution; nearly 70 percent fall in the lower 20 percent of the distribution. At the same time, under both adjustment rules we estimate that approximately 19 percent of elderly SSI recipients have equivalence-adjusted incomes that exceed the median income calculated for the entire elderly population.

Summary

When poverty is assessed using a relative standard of less than half the median, the prevalence of poverty is estimated to be much greater than when the official standard is employed, and poverty among the elderly exceeds the rate for all other persons. Adjusting the CPS data using information from administrative files leads to generally greater income, but little change in relative status. Considered in either relative or absolute terms, the prevalence of poverty among elderly SSI recipients is high, and the FBR is inadequate by itself to raise income above the poverty standard. Here as with the absolute poverty standard, the outcome is sensitive to the merging procedure employed.

Conclusions

This article explores the effect of merging CPS and SSA administrative data on perception of poverty among the elderly in general and SSI recipients in particular. The findings are as follows:

- The CPS substantially understates the prevalence of SSI receipt in the population.
- For the entire national population, adjustment of CPS weights and reported income using administrative data significantly reduces estimated rates of absolute poverty (using the official U.S. poverty standard), but has a smaller influence on relative poverty rates. In contrast, CPS adjustments have a sizable impact on the poverty rates of elderly SSI recipients, whether they are evaluated by an absolute or relative standard.
- Without adjustment, CPS data modestly exaggerate income inequality.
- Use of a relative poverty standard leads to perception of greater prevalence of poverty both overall and among the elderly.
- Elderly SSI recipients are very poor. Nearly 70 percent fall in the bottom fifth of the national income distribution, and about the same proportion fall in the bottom fifth of the income distribution among all elderly persons. Although correction for SSI underreporting reduces the official poverty rate for elderly SSI recipients, the revised absolute rate is still 38–40 percent when all SSI (and OASDI) benefits are included as income.

There are many opportunities for additional research. It is important to replicate this analysis for subsequent years. Among other things, replication would support the study of the effect of using administrative data on the perception of poverty at one versus numerous points in time. We need to assess the sensitivity of our results to alternative treatment of CPS response and variations in procedures for addressing unmatched observations. We have provided only point estimates and have slated testing for statistical precision for another time because of the challenges raised by reweighting and uncertainty about how to adjust such estimates for the effects of our merging strategy. Like official poverty measurement, our income measure does not include income from the Food Stamp Program or the Earned Income Tax Credit program despite these programs being among the largest of their kind in the United States (Trenkamp and Wiseman 2007). It is important to gauge the effect of such programs on poverty and the income distribution. Our analysis reveals that the CPS substantially underreports SSI receipt, and similar underreporting problems are known to arise for food stamp receipt (Meyer and Sullivan 2007). It would be advantageous to experiment with the incorporation of administrative data into the Census Bureau's "alternative poverty measures" analyses.

Table 10.
The effect of merging CPS and administrative data on the estimated income distribution of the elderly, 2002

Income distribution of the elderly [a]	Percentiles									Number of person records
	10	20	40	50	60	80	90	Top decile	50 percent of the median	
Restrictive 2002 CPS/administrative matched data set—										
(a): using unadjusted income percentiles for the elderly and the NRC equivalence scale (unadjusted weights) [b]										
Upper bound ($)	8,162	11,013	16,375	19,736	23,522	36,844	53,070	. . .	9,868	20,384
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	15.8	20,384
Elderly SSI [c]	47.7	18.4	15.8	3.6	4.6	6.5	2.0	1.5	61.3	778
(b): using adjusted income percentiles for the elderly and the NRC equivalence scale (unadjusted weights) [d]										
Upper bound ($)	8,604	11,448	16,962	20,248	24,006	37,027	53,747	. . .	10,124	20,384
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	14.9	20,384
Elderly SSI [e]	42.8	24.1	10.7	3.3	4.8	8.8	3.2	2.3	58.9	1,081
(c): using adjusted income percentiles for the elderly and the NRC equivalence scale (adjusted weights) [f]										
Upper bound ($)	8,868	11,669	17,318	20,690	24,472	37,508	54,300	. . .	10,345	14,564
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	15.0	14,564
Elderly SSI [e]	46.3	22.1	9.3	3.1	4.9	8.9	3.2	2.2	61.2	906
Inclusive 2002 CPS/administrative matched data set—										
(a): using unadjusted income percentiles for the elderly and the NRC equivalence scale (unadjusted weights) [b]										
Upper bound ($)	8,162	11,013	16,375	19,736	23,522	36,844	53,070	. . .	9,868	20,384
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	15.8	20,384
Elderly SSI [c]	47.7	18.4	15.8	3.6	4.6	6.5	2.0	1.5	61.3	778
(b): using adjusted income percentiles for the elderly and the NRC equivalence scale (unadjusted weights) [d]										
Upper bound ($)	8,687	11,557	17,256	20,749	24,633	38,589	56,083	. . .	15,675	20,384
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	15.6	20,384
Elderly SSI [e]	42.1	23.5	11.4	3.1	4.3	9.4	4.2	2.1	59.1	1,081
(c): using adjusted income percentiles for the elderly and the NRC equivalence scale (adjusted weights) [f]										
Upper bound ($)	8,988	11,856	17,763	21,298	25,438	39,860	57,294	. . .	10,649	14,564
Distribution (%)										
All elderly	10.0	10.0	20.0	10.0	10.0	20.0	10.0	10.0	15.5	14,564
Elderly SSI [e]	46.6	20.4	10.4	3.3	4.0	9.7	3.5	2.2	60.5	906

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTES: . . . = not applicable.

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

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

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 sample used to generate official poverty estimates.

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 (with "sample restriction" decision rules) and weights, and a 2003 CPS/ASEC poverty sample limited to those observations with at least one family member with matching CPS/SER records.

Appendix A: Data Merge Procedure

The sources used for the CPS/administrative data-matching process are identified by acronym as indicated and detailed in Box 1 below. For convenience, these acronyms are used both to refer to a source itself and, in places, to the value of payments recorded in the source. Hence "DER=0" indicates that the value of the DER for some person in the merged data set is zero.

The protocol for merging the 2003 CPS/ASEC and administrative data is summarized in Table A-1 on the following page.

Box 1.
Sources employed in CPS/administrative data match

CPS/ASEC	**Current Population Survey/Annual Social and Economic Supplement, 2003**. Captures wage and salary earnings for calendar year 2002 as well as self-employment income (SEI)—(including losses)—derived from farm and nonfarm activities.
SER	**Summary Earnings Record**. "SER match" indicates that the CPS individual has been matched to SSA's master database. The SER includes all earnings (including positive SEI) subject to FICA taxation, and thus the value is capped at the FICA contribution maximum. The SER does not capture SEI losses.
DER	**Detailed Earnings Record**. Summary of earnings reports from all employers and SEI received by SSA. Earnings totals are not capped at FICA contribution maximums and include earnings from employment not covered by OASDI, but subject to Medicare taxation. The tabulation includes separate information for wage and salary receipts, SEI (if positive), and deferred income.
SSR	**Supplemental Security Record**. Administrative record of SSI payments.
PHUS	**Payment History Update System**. Administrative record of OASDI benefit amounts.

Appendix B: State SSI Supplements

As shown in Table B-1, all but one of the 51 states (including the District of Columbia) supplemented the federal SSI payment in 2002 for at least some individuals (SSA 2004, 7). In a very few cases, these payments are required by federal law to sustain benefits for persons receiving state benefits at the time (1974). SSI replaced the federal/state programs—Old-Age Assistance and Aid to the Blind—instituted by the Social Security Act of 1935. The remaining "optional"[17] supplements serve a variety of purposes, from general income support to provision for special needs. Some state supplements are administered by SSA; in other cases the supplements are administered by states. When the supplements are administered by SSA, states pay both for the benefit itself and a per-payment charge levied by SSA to cover its costs.

The state supplements pose two problems for this analysis. First, in many instances the provision is not universal and compensates for some special need. Information on receipt of such payments or the benefits they support is not readily available. Second, if state-administered, such benefits do not appear in the SSR, yet it is likely that if reported at all they are reported as SSI in response to CPS interviewers. Thus in comparing SSA administrative data with CPS reports for states with state-administered supplements, it is essential to recognize that CPS reports may exceed amounts known to SSA because of the supplements. Moreover, it is possible for persons to retain eligibility for a state supplement even when income is too high for federal benefit receipt.

In this article, the state supplements are addressed in the following way. First, for individuals without an SER match, we assume state supplements are included in what is identified in the sum of SSI and OASDI income. (As discussed in the text, we work with the sum of SSI and OASDI to allow for misidentification of the source of benefits.) For individuals with an SER match, we concentrate on "universal" supplements, which we define as additions to cash benefits unrelated to special needs. We ignore supplements that are paid for special needs and unavailable to SSI recipients generally. Second, we differentiate between universal state supplements administered by SSA and those administered by states. Federally administered payments are recorded in the SSR

Table A-1.
Protocol for merging CPS and administrative data

Number of observations [a]	Administrative match status	CPS (baseline) record content	Income adjustment	
			Restrictive	Inclusive
			Earnings: Wage, salary, and self-employment income	
. . .	. . .	. . .	*Summary:* When a CPS/SER match and a positive DER earnings total exist, we accept the DER total. [b] If a DER record is not available, we use CPS values.	*Summary:* When a CPS/SER match and a positive SER earnings record exist, we generally accept the greater of the DER, SER, or CPS earnings totals. [b] If a SER record is not available, we use CPS values.
50,821	No SER match.	. . .	Accept the CPS earnings total.	Same. [c]
81,638	With SER match, no DER match, or DER earnings = 0.	CPS imputed and nonimputed earnings records.	Accept the CPS earnings total.	Same. [c]
83,401	With DER match; positive DER earnings total.	CPS imputed or nonimputed earnings records.	If the CPS/SEI record is negative and not imputed, set the adjusted earnings record to the DER earnings total plus the CPS/SEI value. Otherwise, set adjusted earnings record to the DER value.	Apply the greater of (1) the earnings value assigned under the "restrictive" procedure or (2) the CPS earnings total.
			OASDI/SSI: Income from OASDI and SSI [a]	
. . .	. . .	d	Use administrative data, when available.	Differs from the restrictive adjustment only in states with SSI supplement.
50,821	No SER match	. . .	Accept the CPS SSI/OASDI total.	Same. [c]
67,745	SER match in state with universal federally administered state SSI supplement.	. . .	Accept the sum of the SSR and PHUS amounts for the sum of SSI and OASDI receipt.	Same. [c]
97,294	SER match in state with universal state-administered SSI supplement.	. . .	Accept the sum of the SSR and PHUS amounts for federal contribution to the sum of SSI and OASDI receipt. Add the lower estimate of state-administered supplement (see Appendix B).	Accept the sum of the SSR and PHUS amounts for federal contribution to the sum of SSI and OASDI receipt. Add the higher estimate of state-administered supplement (see Appendix B).

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTES: . . . = not applicable.

a. Numbers below are counts of CPS person observations meeting indicated administrative match and CPS record content requirement for the row.

b. When appropriate, SER and DER values are adjusted for self-employment income (SEI) losses reported in the CPS.

c. "Same" means the same procedure as that used in the restrictive adjustment.

d. Given evident respondent confusion over difference between SSI and OASDI, we consider benefit totals.

Table B-1.
State SSI payment supplementation, January 2002

State and (FIPS code)		Recipients of federally administered SSI payments (national count)	Universal income supplement—monthly benefit, other than the mandatory minimum supplementation ($) [a]			Administration and take-up		Adjustment procedure [b] (1 = special rule; 2 = SSR + PHUS) (rule applied)
			SSI child, living with own family (child supplement)	Single adult, living independently (single supplement)	Couple, living independently (couple supplement)	Optional state supplement, federally administered (yes = 1; no = 0)	Optional supplement recipients—state or federally administered (state count)	
AL	(1)	161,729	a	a	a	0	672	2
AK	(2)	9,222	0	362.00	528.00	0	14,640	1
AZ	(4)	85,308	a	a	a	. . .	677	2
AR	(5)	85,369	. . .	. . .	. . .	. . .	. . .	2
CA	(6)	1,113,679	98.00	205.00	515.00	1	1,093,860	2
CO	(8)	53,821	37.00	37.00	347.00	0	34,982	1
CT	(9)	49,953	a	202.00	277.00	0	21,984	1
DE	(10)	12,310	. . .	. . .	. . .	1	590	2
DC	(11)	20,099	a	a	a	1	1,680	2
FL	(12)	387,626	a	a	a	0	15,169	2
GA	(13)	198,294	. . .	. . .	. . .	. . .	. . .	2
HI	(15)	21,402	4.90	4.90	8.80	1	19,680	2
ID	(16)	19,034	52.00	52.00	20.00	0	10,795	1
IL	(17)	250,212	. . .	. . .	. . .	0	38,388	2
IN	(18)	89,586	a	a	a	0	1,383	2
IA	(19)	41,146	a	22.00	44.00	1	6,630	2
KS	(20)	36,759	. . .	. . .	. . .	. . .	. . .	2
KY	(21)	176,458	a	a	a	0	4,739	2
LA	(22)	166,574	a	a	a	0	5,121	2
ME	(23)	30,390	10.00	10.00	15.00	0	34,977	1
MD	(24)	89,380	a	a	a	0	3,016	2
MA	(25)	167,359	114.39	114.39	180.06	1	162,740	2
MI	(26)	211,615	14.00	14.00	28.00	1	210,340	1
MN	(27)	66,331	a	81.00	111.00	0	38,146	1
MS	(28)	128,800	. . .	. . .	. . .	. . .	. . .	2
MO	(29)	113,990	a	a	a	0	8,486	2
MT	(30)	14,324	a	a	a	1	924	2
NE	(31)	21,572	8.00	8.00	a	0	5,884	2
NV	(32)	27,403	a	c	d	1	7,250	2
NH	(33)	12,101	a	27.00	21.00	0	6,780	1
NJ	(34)	147,817	31.25	31.25	25.36	1	143,670	2
NM	(35)	47,922	a	a	a	0	199	2
NY	(36)	623,307	23.00	87.00	104.00	0	605,850	1
NC	(37)	192,091	a	a	a	0	23,499	2
ND	(38)	8,182	a	a	a	0	465	2

(Continued)

Table B-1.
State SSI payment supplementation, January 2002—*Continued*

State (and FIPS code)		Recipients of federally administered SSI payments (national count)	Universal income supplement—monthly benefit, other than the mandatory minimum supplementation ($) [a]			Administration and take-up		Adjustment procedure [b] (1 = special rule; 2 = SSR + PHUS) (rule applied)
			SSI child, living with own family (child supplement)	Single adult, living independently (single supplement)	Couple, living independently (couple supplement)	Optional state supplement, federally administered (yes = 1; no = 0)	Optional supplement recipients—state or federally administered (state count)	
OH	(39)	242,696	. . .	a	a	0	2,546	2
OK	(40)	73,108	53.00	53.00	106.00	0	70,972	1
OR	(41)	54,795	a	1.70	a	0	24,009	2
PA	(42)	295,904	27.40	27.40	43.70	1	284,720	2
RI	(44)	28,697	64.35	64.35	120.50	1	27,880	2
SC	(45)	106,835	a	a	a	0	3,382	2
SD	(46)	12,819	a	15.00	15.00	0	3,601	1
TN	(47)	163,196	. . .	. . .	. . .	. . .	. . .	2
TX	(48)	420,279	a	a	a	0	6,441	2
UT	(49)	20,654	a	a	a	1	1,540	1
VT	(50)	12,678	59.04	59.04	110.88	1	12,730	2
VA	(51)	133,156	. . .	a	a	0	6,705	2
WA	(53)	105,074	25.90	25.90	19.90	1	97,850	1
WV	(54)	73,006	. . .	. . .	. . .	. . .	. . .	2
WI	(55)	86,053	83.78	83.78	132.05	0	90,299	1
WY	(56)	5,841	a	9.90	25.12	0	2,749	1

SOURCE: Unless otherwise noted, data for this table are derived from SSA (2004).

NOTES: FIPS = Federal Information Processing Standard.

. . . indicates a state that offers no optional state supplements regardless of one's living arrangement.

a. None for those states that offer a state SSI supplement, but not to persons living independently.

b. See the text. "SSR/PHUS" means SSA data employed exclusively; "rule" means administrative data on federal payment combined with "low" and "high" estimates of state-administered state supplement.

c. None, if younger than age 65; $36.40 otherwise.

d. None, if neither person is aged 65 or older.

and thus are covered by the procedures outlined in Table A-1. Third, in cases in which state supplements are state-administered, we develop restrictive and inclusive estimates of the amounts involved and impute these figures to administrative SSI payment totals. The restrictive estimate assumes that the state supplement is received only in the months during the year in which a federal benefit is paid. The inclusive estimate assumes the state benefit is received in all months of any year in which a federal benefit is paid in any month. Thus we are assuming in the restrictive-estimate case that any reduction in benefit amount that is the result of other income is taken from the federal payment, not the state supplement, and in the high-benefit case we assume that state eligibility continues for a longer period than federal benefit eligibility. There is little practical difference between the two because of the prevalence of application of these "special rule" state payments.

Appendix C: Propensity Functions for Sample Reweighting

This appendix reports parameter estimates for the logistic functions used for reweighting 2003 CPS/ASEC data for individuals in households meeting the administrative match criterion to account for the incomplete match. As discussed in the text, each person in the CPS who resides in a family in which at least one person was successfully matched to administrative data is included in the subsample. The log odds of this designation were estimated using a standard logit function and data for all individuals in the person's age class. The logit results were then translated into a point estimate of the probability of family match—"response." The inverse of this probability was then multiplied by the original CPS person weight to give a revised weight, adjusted for nonresponse.

Variables

All models are similarly constituted, using variables described in Table C-1 below.

Parameter Estimates

The propensity function was estimated separately for each of the three age groups. In each case, the dependent variable is the occurrence of an SER match for at least one person in the respondent's family (Table C-2).

Table C-1.
Propensity function variables

Variable name	Type	Description
Independent		
PSERGRP	Binary	Individual has at least one family member with a CPS/SER match.
Dependent		
AAGE	Continuous	Individual's age (in years) at the time of their CPS interview.
AAGESQB	Continuous	Equal to AAGE2.
AAGESQC	Continuous	Equal to AAGE3.
AAGETEEN	Binary	Individual is 16 or 17 years of age.
FAMREF	Binary	Individual is a family reference person.
HISPANIC	Binary	Individual is Hispanic.
MALERRT	Binary	Individual is male.
MARRIED	Binary	Individual is married.
METRO	Binary	Individual lives in a metropolitan statistical area (MSA).
METROCC	Binary	Individual resides in a MSA central city.
MINORITT	Binary	Individual is nonwhite.
MULTFAMH	Binary	Individual lives in a multi-family household.
NEGINC	Binary	Individual has negative family total income.
PRATIO	Continuous	Ratio of individual's family total income to his or her applicable family poverty threshold. If negative, set to zero.
PRATIO2	Continuous	If PRATIO > 2, PRATIO2 = PRATIO-2, otherwise 0.
PZEROINC	Binary	Individual has no family income.
SINGLE	Binary	Individual belongs to a one-person family, living alone in household.
UNRELOTH	Binary	Individual belongs to a one-person family, but shares a household with nonrelatives.

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTE: For binary variables, the description identifies circumstance when indicator = 1; otherwise, the indicator value is 0.

Table C-2.
Parameter estimates: Logistic response propensity function, 2002

Variable	Children (aged 0–17)		Working-age adults (aged 18–64)		Elderly (aged 65 or older)	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Intercept	3.5171	0.0804	0.4972	0.2390	1.7056	0.2542
AAGE	-0.0450	0.0046	0.1372	0.0199	-0.0056	0.0031
AAGESQB	. . .	. . .	-0.0028	0.0005	. . .	. . .
AAGESQC	. . .	. . .	0.0000	0.0000	. . .	. . .
AAGETEEN	-0.6048	0.0563	. . .	. . .	. . .	. . .
FAMREF	-0.5565	0.2203	0.1236	0.0192	-0.0958	0.0408
HISPANIC	-0.3909	0.0457	-0.4046	0.0217	-0.1009	0.0596
MALERRT	-0.0407	0.0360	-0.0788	0.0157	0.1061	0.0353
MARRIED	-0.6696	0.4355	0.1427	0.0234	-0.4649	0.0544
METRO	-0.3121	0.0431	-0.3540	0.0183	-0.3115	0.0363
METROCC	-0.0918	0.0464	0.0349	0.0200	-0.0092	0.0428
MINORITT	-0.1427	0.0458	0.0869	0.0208	0.5031	0.0467
MULTFAMH	0.2026	0.0779	0.1590	0.0493	0.4175	0.2362
NEGINC	-0.3280	0.4332	-0.7908	0.1687	-0.5033	0.5822
PRATIO	0.2002	0.0359	-0.0281	0.0188	0.1003	0.0399
PRATIO2	-0.2046	0.0380	0.0076	0.0193	-0.0933	0.0415
PZEROINC	-0.5989	0.1423	-0.6986	0.0617	0.0625	0.2001
SINGLE	. . .	. . .	-1.0263	0.0305	-0.5415	0.0595
UNRELOTH	-0.8095	0.2883	-1.4198	0.0522	-1.0500	0.2559
Observation count	66,016		129,460		20,384	
Mean propensity estimate	0.95		0.83		0.71	

SOURCE: Authors' calculations using 2003 CPS/ASEC data matched to administrative records.

NOTE: . . . = not applicable.

Notes

Acknowledgments: The authors thank Paul Davies and Howard Iams for sharing their expertise on SSA administrative data and are especially appreciative of the helpful comments and suggestions provided by Kalman Rupp, Joyce Manchester, Glenn Springstead, Tom Rush, Tom Hale, Jim Sears, and Lynn Fisher.

[1] Throughout this article, the term "state" includes the District of Columbia.

[2] To the extent that the Consumer Price Index is biased upward, indexation has led to slight growth in the real value of the SSI payment. See Gordon (2006).

[3] See Census Bureau (2006) for a detailed CPS description.

[4] 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).

[5] 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 on elements of gross compensation (for example, pretax health insurance premiums paid by the employee) that do not appear in the DER.

[6] See Sears and Rupp (2003) for an investigation of 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 (SIPP). Koenig (2003) analyzes OASDI/SSI underreporting in the March 1997 CPS, but could at the time use only information on OASDI entitlement, not payments (as in the PHUS) for comparison with CPS reports.

[7] Koenig (2003, 131) reports linking 75 percent of March 1997 CPS observations (for persons aged 15 or older) to SSA administrative data.

[8] Burkhauser, Feng, and Jenkins (2007) discuss problems created by top-coding for analysis of trends at the top end of the earnings distribution.

[9] Koenig (2003, 132) reports that 31.2 percent of known SSI recipients for 1996 (as reported in the 1997 March CPS) do not report SSI receipt in the CPS. Table 4 indicates that our result for 2002 is 40 percent. The Koenig estimate is

weighted; ours is not because we are not interested at this point in statistical inference.

[10] Huynh, Rupp, and Sears (2002) report similar problems in the SIPP.

[11] It is possible to imagine scenarios in which persons residing in a state with a state-administered supplement would be missing an SSR entry and therefore would not receive either the restrictive or inclusive imputation, yet might report such amounts in the CPS/ASEC. Such cases, if they exist, are certain to be rare.

[12] In fact, the adjustments are in many cases quite large. In both the restrictive and inclusive cases, for roughly 60 percent of individuals for whom some adjustment was made the absolute value of the total income adjustment exceeded $2,000. The restrictive adjustment procedure affects more observations than does the inclusive alternative. These details are available on request from the authors.

[13] We have calculated all of the estimates cited later using subsample (c) instead of (a), and none of the outcomes reported is qualitatively dependent on choice of sample. These results are available from the authors.

[14] "We" here includes our colleagues Paul Davies and the late Jeff Shapiro, without whose assistance this table could not have been constructed.

[15] See SSA (2002). The methodology for SSA's estimate, based in part on an unidentified "1996 study," is not detailed.

[16] Practices vary. The half-of-median standard generally applies to income before taxes; the European Union uses 60 percent of median disposable income (Eurostat 2007, 36).

[17] In principle, states have the option of terminating these programs. However, if any state does terminate its SSI supplement program it loses eligibility for reimbursement for the federal share of Medicaid costs. At minimum, states are required to sustain either nominal payment levels or aggregate expenditure levels in order to retain Medicaid reimbursement. See Committee on Ways and Means (2004, 3–25).

References

Abowd, John M., and Martha H. Stinson. 2005. Estimating measurement error in SIPP annual job earnings: A comparison of Census survey and administrative data. Unpublished manuscript, Cornell University.

Blank, Rebecca M. 2008. How to improve poverty measurement in the United States. *Journal of Policy Analysis and Management* 27(2): 233–254.

Bound, John, Charlie Brown, and Nancy Mathiowetz. 2001. Measurement error in survey data. In *Handbook of Econometrics,* Volume 5, J. Heckman and E. Leamer, eds., 3705–3843. Amsterdam, The Netherlands: Elsevier.

Burkhauser, Richard V., Shuaizhang Feng, and Stephen P. Jenkins. 2007. Using the P90/P10 index to measure U.S. inequality trends with Current Population Survey data: A view from inside the Census Bureau vaults. IZA Discussion Paper No. 2839. Bonn, Germany: Institute for the Study of Labor (IZA).

Census Bureau. 2003. Current Population Survey: Annual Social and Economic Supplement. Washington, DC: Census Bureau. Available at www.census.gov/apsd/techdoc/cps/cpsmar03.pdf.

———. 2006. Current Population Survey design and methodology. Technical Paper No. 66. Washington, DC: Census Bureau.

———. 2007. *The effect of taxes and transfers on income and poverty in the United States: 2005*. Current Population Reports, P60-232. Washington, DC: Census Bureau.

Citro, Constance F., and Robert T. Michael. 1995. *Measuring poverty.* Washington, DC: National Academy Press.

Committee on Ways and Means. 2004. *2004 Green Book: Background material and data on the programs within the jurisdiction of the Committee on Ways and Means*. Washington, DC: Government Printing Office, 3–25.

Dahl, Molly, Thomas DeLeire, and Jonathan Schwabish. 2008. Year-to-year variability in workers' earnings and in household incomes: Estimates from administrative data. Unpublished mimeo.

Dalaker, Joe. 2005. *Alternative poverty estimates in the United States: 2003*. Current Population Reports, P60-227. Washington, DC: Census Bureau.

DeNavas-Walt, Carman, Bernadette Proctor, and Jessica Smith. 2007. *Income, poverty, and health insurance coverage in the United States: 2006*. Current Population Reports, P60-233. Washington, DC: Census Bureau. Available at www.census.gov/prod/2007pubs/p60-233.pdf.

Eurostat. 2007. *The social situation in the European Union, 2005–2006: Overview*. Luxembourg: Office for Official Publications of the European Communities.

Fisher, T. Lynn. 2005. Measurement of reliance on Social Security benefits. Paper presented at the 2005 Federal Committee on Statistical Methodology Research Conference, Arlington, VA (November 14–16).

Folsom, Ralph E. 1991. Exponential and logistic weight adjustments for sampling and nonresponse error reduction. Proceedings of the American Statistical Association, Social Statistics Section. Alexandria, VA: American Statistical Association, 197–201.

Förster, Michael, and Marco Mira d'Ecole. 2005. Income distribution and poverty in OECD countries in the second half of the 1990s. OECD Social, Employment, and Migration Working Papers No. 22. Paris, France: Organisation for Economic Co-operation and Development.

Gordon, Robert J. 2006. The Boskin Commission report: A retrospective one decade later. Working Paper No. 12311. Cambridge, MA: National Bureau of Economic Research.

Groves, Robert M., and Mick P. Couper. 1998. *Nonresponse in household interview surveys*. New York, NY: John Wiley & Sons, Inc.

Herzog, Thomas N., Fritz J. Scheuren, and William E. Winkler. 2007. *Data quality and record linkage techniques*. New York, NY: Springer.

Huynh, Minh, Kalman Rupp, and James Sears. 2002. The assessment of Survey of Income and Program Participation (SIPP) data using longitudinal administrative records. SIPP Working Paper No. 238. Washington, DC: Census Bureau.

Iannacchione, Vincent G. 1999. Location and Response Propensity Modeling for the 1995 National Survey of Family Growth. 1998 Proceedings of the American Statistical Association, Survey Research Methods Section. Alexandria, VA: American Statistical Association, 523–528.

Iceland, John. 2005. *Experimental poverty measures*. Washington, DC: National Academies Press.

Koenig, Melissa L. 2003. An assessment of the Current Population Survey and the Survey of Income and Program Participation using Social Security Administrative data. Paper presented at the 2003 Federal Committee on Statistical Methodology Research Conference, Arlington, VA (November 17–19).

Koenig, Melissa, and Kalman Rupp. 2004. SSI recipients in households and families with multiple recipients: Prevalence and poverty outcomes. *Social Security Bulletin* 65(2): 14–27.

Lehtonen, Risto, and Erkki Pahkinen. 2004. *Practical methods for design and analysis of complex surveys*. London, England: John Wiley & Sons, Inc.

Meyer, Bruce D., and James X. Sullivan. 2007. Reporting bias in studies of the Food Stamp Program. The Harris School Working Paper Series No. 08.01. Chicago, IL: The Harris School of Public Policy Studies at the University of Chicago.

Pedace, Roberto, and Nancy Bates. 2000. Using administrative records to assess earnings reporting error in the Survey of Income and Program Participation. *Journal of Economic and Social Measurement* 26(3-4): 173–192.

Proctor, Bernadette D., and Joseph Dalaker. 2003. *Poverty in the United States: 2002*. Current Population Reports, P60-222. Washington, DC: Government Printing Office.

Roemer, Marc. 2000. Assessing the quality of the March CPS and SIPP income estimates, 1990–1996. Staff Papers on Income, Housing and Household Economics Statistics Division. Washington, DC: Census Bureau.

———. 2002. Using administrative earnings records to assess wage data quality in the March Current Population Survey and the Survey of Income and Program Participation. Technical Paper TP-2002-22, LEHD. Washington, DC: Census Bureau.

Sears, James, and Kalman Rupp. 2003. Exploring Social Security payment history matched with the Survey of Income and Program Participation. Paper presented at the 2003 Federal Committee on Statistical Methodology Research Conference, Arlington, VA (November 17–19).

Smith, Karen E., Richard W. Johnson, and Leslie A. Muller. 2004. *Deferring income in employer-sponsored retirement plans: The dynamics of participant contributions*. Washington, DC: Urban Institute.

[SSA] Social Security Administration. 2002. *Service to the homeless: Report to the House and Senate Appropriations Committees on increasing access and services to SSA benefits by the homeless*. Baltimore, MD: SSA.

———. 2003. *SSI annual statistical report, 2002*. Baltimore, MD: SSA.

———. 2004. *State assistance programs for SSI recipients, January 2002*. Baltimore, MD: SSA.

———. 2007. *SSI annual statistical report, 2005*. Baltimore, MD: SSA.

Trenkamp, Brad, and Michael Wiseman. 2007. Food Stamps and Supplemental Security Income. *Social Security Bulletin* 67(4): 71–87.

Weinberg, Daniel H. 2005. Alternative measures of income poverty and the anti-poverty effects of taxes and transfers. Center for Economic Studies Research Paper, CES 05-08. Washington, DC: Census Bureau.

———. 2006. Measuring poverty in the United States: History and current issues. Center for Economic Studies Research Paper, CES 06-11. Washington, DC: Census Bureau.

Zaidi, Asghar, and Tania Burchardt. 2005. Comparing incomes when needs differ: Equivalization for the extra costs of disability in the U.K. *The Review of Income and Wealth* 51(1): 89–114.

Uses of Administrative Data at the Social Security Administration

by Jennifer McNabb, David Timmons, Jae Song, and Carolyn Puckett*

The Social Security Administration (SSA) collects a wealth of data in its role as administrator of two large national entitlement programs. Linking SSA's administrative data with survey data yields a broader set of demographic and socioeconomic information and also improves the quality of the survey data. The agency uses these data to produce analyses and research on policy initiatives for its programs and on the earnings of the working and beneficiary populations. SSA studies how these programs and potential changes to them affect individuals, the economy, and program solvency, and develops models to project demographic and economic characteristics of the current working population into the future. The agency also produces public-use microdata files that are available to outside researchers, as well as a variety of research and statistical publications to inform policymakers and the public.

Introduction

The Social Security Administration (SSA) is an independent agency of the federal government. Its mission is to deliver Social Security services that meet the changing needs of the public. SSA is responsible for one of the largest federal entitlement programs: Old-Age, Survivors, and Disability Insurance (OASDI), commonly referred to as Social Security. As the name suggests, OASDI provides monthly benefits to qualified retired and disabled workers and their dependents, and also to survivors of insured workers.

Eligibility and benefit amounts are determined by the worker's contributions to Social Security. There is no means test to qualify for benefits, although for those under the full retirement age there is a limit on income earned from working while receiving benefits.

Today, more than 163 million people work and pay Social Security contributions, and more than 50 million people receive monthly Social Security benefits (Board of Trustees 2008). During 2006 approximately 162 million employees and self-employed workers, along with employers, contributed $626 billion to the OASDI trust funds, from which benefits are paid (SSA 2008). Workers and employers each contribute 6.2 percent of covered earnings (up to $106,800 in 2009) and self-employed workers contribute 12.4 percent of covered earnings. In December 2006, total benefits paid by the OASDI program exceeded $46 billion each month (nearly $546 billion annually). According to the 2008 Social Security Trustees Report, these cash benefits made up 4.3 percent of the nation's gross domestic product.

Social Security benefits are essential to the economic well-being of millions of individuals. Benefits are paid to about 90 percent of the U.S. population aged 65 or older. Social Security is the major source of income (providing 50 percent or more of total income) for 66 percent of the beneficiaries. It contributes 90 percent or more of income for one-third of the

Selected Abbreviations

CMS	Centers for Medicare and Medicaid Services
CPS	Current Population Survey
DMF	Death Master File
FEM	Financial Eligibility Model
HRS	Health and Retirement Study
IRS	Internal Revenue Service

* *Jennifer McNabb was with the Office of Retirement and Disability Policy (ORDP), Social Security Administration (SSA), when this presentation was written. David Timmons, Jae Song, and Carolyn Puckett are with ORDP, SSA.* *This article is adapted from remarks presented by Linda Drazga Maxfield at the International Seminar on the Use of Administrative Data for Economic Statistics and the Register-based Population and Housing Census, held May 19–20, 2008, in Daejeon, Republic of Korea.*

Selected Abbreviations—*Continued*

MBR	Master Beneficiary Record
MINT	Modeling Income in the Near Term
NCHS	National Center for Health Statistics
OASDI	Old-Age, Survivors, and Disability Insurance
ORDP	Office of Retirement and Disability Policy
ORES	Office of Research, Evaluation, and Statistics
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSI	Supplemental Security Income
SSN	Social Security number
SSR	Supplemental Security Record

beneficiaries. Social Security reaches almost every family, and at some point will touch the lives of nearly all Americans (Fisher 2008b).

SSA also administers Supplemental Security Income (SSI), a needs-based program that provides financial support for aged, blind, and disabled adults and children with limited income and resources.[1] In 2006, 7.2 million people received monthly SSI benefits totaling $38 billion, with an average benefit of $455 (SSA 2007).

SSA is headed by a Commissioner and has a staff of approximately 60,000 employees. The Agency's central office is located in Baltimore, Maryland, but the vast majority of the staff serves in a decentralized field organization with 10 regional offices, 6 processing centers, approximately 1,300 field offices, and over 140 hearing offices. The agency issues Social Security numbers (SSNs) to nearly all legal U.S. residents, maintains detailed earnings records for covered workers, keeps recipient records current and accurate, and determines eligibility for Medicare health insurance. SSA also provides support to the Railroad Retirement program, the Food Stamp program, and the Medicaid health insurance program for those with limited income. Because of these broad responsibilities, SSA collects and maintains a substantial amount of program-related data on current and potential beneficiaries residing in the U.S. and abroad.

With program administration as its primary function, SSA as a whole is not a statistical agency. The most prominent government agencies with a primary statistical function include the Census Bureau, the Bureau of Labor Statistics, the National Agricultural Statistical Service, and the National Center for Health Statistics (NCHS). However, the Office of Management and Budget, which oversees policies and procedures for all U.S. statistical programs, includes one component of SSA under its statistical purview: the Office of Research, Evaluation, and Statistics (ORES) within the Office of Retirement and Disability Policy (ORDP). ORES uses the Agency's administrative data to produce a wide range of research and statistical publications, as well as other products that inform the public about the beneficiary population and the operation of Social Security programs. ORDP develops and maintains a series of detailed statistical databases for research, evaluation, and analysis.

This article discusses the advantages and limitations of using administrative data for research, examines how linking administrative data to survey results can be used to evaluate and improve survey design, and discusses research studies and SSA statistical products and services that are based on administrative data.[2]

SSA Administrative Data

Data Systems

SSA maintains numerous administrative data systems. The four most commonly used are:

Numident file. The Numident file is a record of applications for Social Security cards. Unique, life-long SSNs are assigned to individuals based on these applications. A full record of all changes to the information (such as change of name) is also maintained. To obtain a card, the applicant must provide documented identifying information to SSA. Through the "enumeration at birth" program, children can be issued a Social Security card when they are born. Examples of data elements on a Numident record include name, date and place of birth, parents' names, and date of death.

Master Earnings File. The Master Earnings File contains the individual lifetime records of wages and self-employment earnings. The file's primary sources of information are the W-2 form (for wages) and electronic files of form 1040, schedule SE (for self-employment income) from the Internal Revenue Service (IRS) in the Department of the Treasury. The most frequently used data elements are the individual's SSN, annual total wages (1978 to present), annual

self-employment earnings, annual earnings used for OASDI contributions (1951 to present), and report year.

Master Beneficiary Record (MBR). The MBR is used to administer the OASDI program and contains beneficiary and payment history data. An MBR record is created whenever an individual applies for benefits and SSA adjudicates the application as an award, a denial, an abatement, or a withdrawal. Information maintained in the MBR includes the primary worker's SSN, the beneficiary's own SSN, benefit application date, benefit entitlement date, and type and amount of benefit.

Supplemental Security Record (SSR). The SSR contains information on individuals applying for SSI payments. SSA uses the income, resources, disabling condition, and living arrangement information from the application and other sources in determining eligibility for and administering the needs-based SSI program. SSR data elements include SSN, date of claim, citizenship status, income, resources, eligibility code, payment code, and payment amount.

Advantages and Limitations of Administrative Data

Because administrative data are used for determining eligibility and benefit amounts for social insurance programs, they are subject to stringent quality control procedures. However, because these data are typically limited to information required for program administration, they are restricted in scope and do not include broader variables of interest to the research community. For example, focusing on individual eligibility and participation, they often lack economic and demographic variables (such as total family income or marital status) that are critical to programmatic evaluations. In addition, administrative records alone cannot be used to address all analysis questions since they typically contain no information about nonparticipants who could be affected by a proposed program policy change. SSA researchers need this information to project policy change impacts on program costs, as well as potential distributional effects on different demographic or economic groupings. Survey data can provide this information.

Benefits of Supplementing Administrative Data with Survey Data

The federal government conducts numerous large surveys that produce key information to support decisionmakers and to document economic and social trends. Surveys conducted by statistical agencies ask a broad range of questions on a wide variety of topics. Survey results often include extensive demographic information and are typically representative of the civilian noninstitutionalized population.

Analogous to administrative data limitations, survey data are limited in that they do not typically contain enough program-level detail to compute or model the features of program eligibility. In addition, survey data are subject to various sampling and nonsampling errors—the latter often resulting in incomplete or inaccurate responses due to the respondent's inability to recall accurately or report demographic or economic information.

SSA takes advantage of the enhanced analytic potential afforded by linking survey and administrative data. In fact, SSA has been linking its administrative data with survey results for over 40 years. Some of these linkages are with surveys that SSA commissioned to study specialized populations, such as the Social Security New Beneficiary Survey, the National Survey of Supplemental Security Income Children and Families, and the National Beneficiary Survey. However, SSA's administrative data are more often linked with ongoing surveys conducted by other federal agencies. Linking survey and administrative data allows SSA to produce otherwise unavailable demographic estimates of the current beneficiary population and to develop models to project demographic and economic characteristics of the current working population into the future.[3]

Survey Information Used in Data Linkage

SSA's biggest data-linkage partner is the Census Bureau. Two of the Census Bureau's major survey efforts are the Current Population Survey and the Survey of Income and Program Participation. These surveys vary in sample size, amount of detailed information collected, and periods covered.

Current Population Survey (CPS). CPS is a monthly survey of 50,000 households. It collects data on employment, unemployment, earnings, income, and hours of work. It also has data elements covering a variety of demographic characteristics, including age, sex, race, marital status, and education. Monthly CPS supplements provide additional demographic and social data. The Annual Social and Economic Supplement, fielded in March of each year, focuses on income and poverty in the United States. CPS is the source of official unemployment rate and poverty rate statistics.[4]

Survey of Income and Program Participation (SIPP). SIPP provides considerably more detailed information on income and program participation than the CPS. It also features recurring modules focusing on special topics. SIPP data elements include income from all money and nonmoney sources (including public assistance programs and employer-provided benefits), financial assets, and family characteristics (including size, composition, income, and education of household members). The survey uses a "panel" design. Each panel consists of a set of respondents interviewed every 4 months for 32 to 48 months (Census Bureau 2009).

Linking administrative and survey data combines the completeness and accuracy of SSA administrative records with the range and scope of survey results, maximizing the strengths and minimizing the limitations associated with each. With the information on program participation and benefits from SSA administrative records, analysts are able to correct misreported values in survey files, yielding more accurate underlying data and improving statistical estimates.

Linking survey data and SSA administrative records also significantly expands research opportunities beyond those provided by either source alone. Survey information provides detailed background information on demographic, income, self-reported health status, and other characteristics of Social Security program participants and nonparticipants. Administrative records supplement this information by providing individuals' lifetime work and earnings histories, as well as accurate Social Security program participation histories. Researchers can use matched data to study work and earnings dynamics of survey respondents before, during, and after their interviews. Furthermore, the linked survey data allow for the construction of detailed profiles of individual and family characteristics at the time of program participation, as well as detailed information related to program dynamics.[5]

There are substantial methodological benefits to linking administrative and survey data. One major advantage involves the accuracy of the respondent's recollection of past program participation and income receipt. When comparable data are collected in both an administrative file and a survey, statisticians and policy analysts are able to evaluate the extent of underreporting or overreporting attributable to the respondent. For example, survey respondents often confuse one of SSA's programs (OASDI or SSI) with the other when reporting benefits or payments received. Further, survey responses matched to administrative data can document the benefit amounts that the recipient reports in the survey and compare them with the actual dollar amounts distributed. Another methodological benefit of matching administrative and survey data involves asset income. In 2002, only 55 percent of CPS respondents aged 65 or older reported any asset income, down from 69 percent of comparable respondents in 1990. The Census Bureau and SSA are linking CPS data with Social Security benefit and earnings data, and also with IRS income files, to investigate whether asset income among the elderly is actually declining or is merely unreported.[6]

Matching administrative and survey data also provides operational efficiencies. Rather than collecting its own information, an agency can tap into a source of information that is already being collected and validated by another government agency, saving both time and money. This is a real research concern, as people increasingly decline to participate in voluntary surveys because of identity fraud and privacy concerns.

Obstacles to Linking Administrative and Survey Data

Before linking its administrative records to survey data, SSA verifies the identity of the survey respondents to make certain that the survey record is matched to the correct administrative record. Because the SSN is the most commonly used unique identifier in the United States, it is the key variable used to link data. The SSN, name, date of birth, and gender from the survey files are matched with information in SSA's Numident file, the master file of SSN assignments. SSA uses an algorithm called the Enumeration Verification System for this validation. Certain tolerances are applied: For instance, the system checks for transposed digits in the SSN and tries variations of compound surnames. Only records that pass the validation check are linked.

Historically, to permit the linkage of individually collected survey data and administrative records for statistical research, the Census Bureau asked its survey respondents directly for their SSNs. For survey respondents who voluntarily provided a SSN, the bureau sent the SSNs and accompanying identifying information to SSA, where the information was validated through the Enumeration Verification System. Once SSNs were verified, SSA extracted the appropriate data from its administrative data files and sent the

data extracts to the Census Bureau for linkage with its corresponding survey record. The Census Bureau then removed the SSNs from the linked data and replaced them with unique survey identification numbers to protect the respondents' privacy.

Regrettably, survey respondents have become increasingly reluctant to provide their SSNs to survey data collectors. Because SSNs are widely used as a universal identifier, widespread access to them from non-SSA sources has provided individuals with the opportunity to commit identity theft. Respondents refusing to provide SSNs to SIPP interviewers increased from 12 percent to 35 percent between the 1996 and 2004 panels. Those refusing to provide SSNs in CPS increased from approximately 10 percent in 1994 to almost 23 percent by 2003. Declining response rates threatened the utility of linked survey and administrative data. One problem was that missing SSNs meant smaller and smaller proportions of the sample could be matched to administrative records. Additionally, differing rates of SSN nonresponse could instill potential bias into subsequent analyses if respondents who provided SSNs differed in some systematic, nonrandom way from those who did not.

Reacting to an expanding SSN nonresponse problem, the Census Bureau has stopped directly requesting a SSN. Instead, under a new methodology, a respondent is informed that the survey data will be matched with other federal data for research purposes. Unless the respondent opts out, the Census Bureau then combines SSN application information from SSA's Numident file with address records from the IRS, SSA, and other sources to determine the respondent's correct SSN. Once a match is found, survey and administrative data for the respondent are linked. Using this methodology, match rates have increased from about 60 percent in 2001 to 79 percent in 2004.

Data Sharing Authority and Procedures

As provided under the Privacy Act (5 U.S.C. § 552a), SSA is responsible for safeguarding the information maintained in its administrative files against an invasion of an individual's personal privacy. Other legal protections of the information SSA maintains or links to are provided by the Social Security Act and regulations, the Confidential Information Protection and Statistical Efficiency Act, Title 13 of the United States Code governing the Census Bureau, and the Internal Revenue Code covering earnings data that are considered to be tax return information.

SSA policy is to share identifiable data only with those having the legal authority to access data for a particular purpose, and only if identifiable data are required to accomplish a research or statistical purpose. The requestor must submit a proposal, a data protection plan, and confidentiality agreements. A Memorandum of Agreement must be approved by SSA's Office of the General Counsel. The user must guarantee to keep the data secure, not redisclose the data, and restrict the use of the data to the approved purpose. Access to SSA data that have been linked to Census Bureau data is subject to additional restrictions imposed by Title 13 of the U.S. Code, such as requiring users to obtain Special Sworn Status and permitting access only for Census-approved purposes and at a Census-approved site. Census Bureau procedures and regulations dictate how survey data can be used. SSA is not authorized to grant access to matched CPS or SIPP data. Additionally, the Internal Revenue Code provides its own restrictions, such as limiting access to earnings data to certain individuals and for certain purposes.

Economic Analysis and Modeling

Linked administrative and survey data are of vital importance in developing predictive modeling systems that enable SSA and policymakers to understand the broad impact and distributional effects of current program regulations and reform proposals. To address this need, SSA has developed microsimulation models to analyze the current status of its programs, the scope and impact of those programs in the future, and the effect of proposed changes to the Social Security system. Model outputs describe the impact of SSA programs on our economy, society, and beneficiary populations, and provide detailed demographic and economic information on beneficiaries and covered workers. Those products are used by government planners and policymakers and also by actuaries, economists and other social scientists, the media, and the public to analyze Social Security programs and their impacts. As such, these models are powerful research tools. Two significant examples are briefly described below.

Modeling Income in the Near Term (MINT). MINT is the most prominent model used in OASDI analysis. MINT is a microsimulation dataset that links household data from Census Bureau surveys with SSA administrative records to obtain information on earnings, benefit receipt, and date of death. It covers

individuals born between 1926 and 1972, with a core population consisting of individuals born between 1931 and 1965. The most recent MINT dataset contains more than 350,000 observations.[7]

MINT is used to estimate the effects of a variety of policy and other program changes. It tracks the experiences of survey respondents and projects their income and other characteristics into the future, adjusting for expected demographic and socioeconomic changes. Accordingly, MINT projects the major pillars of retirement income: Social Security benefits, pension benefits, income from assets, earnings (for working Social Security beneficiaries), and SSI. In addition, MINT simulates events such as marital outcomes, age at first benefit receipt, and year of death, as well as the characteristics of former, current, and future spouses.

Because many of the parameters in the MINT data system can be altered by the analyst, the model has numerous uses in potential policy evaluation. For example, MINT has been used to examine cross-cohort differences in the sources of retirement income, and to assess the impact of Social Security benefit reforms on the level of benefits, expected retirement income, and expected poverty rate among future retirees. With its detailed demographic information, MINT enables examinations of economic well-being in retirement by sex, race, education, marital status, and birth cohort. MINT is also used to analyze the effects of proposed or hypothetical policy reforms.

Financial Eligibility Model (FEM). SSA also regularly models eligibility and participation in the SSI program. SSI is the income source of last resort for individuals who are elderly or severely disabled. Eligibility is restricted to individuals with limited resources, and the payment amount is reduced as the recipient's income rises. Information from SIPP is matched to SSA administrative data to model SSI eligibility and participation. SIPP collects detailed information on sources and amounts of income, as well as assets, which are vital in determining eligibility under SSI program rules. The fact that SIPP asks respondents about program participation and provides income data on a monthly basis is also critical to modeling SSI eligibility, which can vary from month to month.

FEM simulates the effects of potential changes to SSI eligibility criteria on the number of eligible individuals, the number of participants, the distribution of SSI benefits among participants, and poverty status under various policy regimes.[8] However, FEM is limited in the area of behavioral modeling.

The core SIPP demographic characteristics, as well as household composition, are important factors in determining SSI eligibility. Other characteristics such as race, sex, ethnicity, educational attainment, and health insurance coverage are not directly used in the SSI eligibility determination, but are important descriptors that can be used to model SSI participation. Information on disability and work limitations can be used to estimate whether an individual meets the disability criteria for SSI eligibility, while data on assets are used to estimate resource eligibility for SSI.

Incomplete surveys and administrative data can affect the accuracy of modeling estimates. It is particularly critical to use the correct program participation information and benefit amounts in the FEM because these values are used to estimate model parameters. For modeling in particular, the linking of administrative and survey data maximizes the robustness of the model's base information. Modeling efforts benefit from having the wide range of survey data items (often with incomplete or inaccurate respondent reporting) supplemented by the complete and accurate data from program administrative records.

SSA Public-Use Information Products

For research and statistical purposes, SSA develops a wide range of information from linked data that is shared with other researchers, policymakers, and the public. One way SSA disseminates information is by creating public-use versions of its administrative data. Public-use microdata files are beneficial for conducting statistical analyses and research studies that could not be performed using other publicly available data.

SSA has two strategies for producing public-use files. One involves working with other agencies to develop a synthetic file, which has all of the statistical properties of the original dataset, but is artificially generated so as not to breach the confidentiality of survey results. This methodology is the outcome of a joint research project of the Census Bureau, SSA, IRS, and Congressional Budget Office, in which SSA benefit and longitudinal earnings records are linked to SIPP data. To prevent disclosure of individual identities, especially through linkages of previously released SIPP public-use files, synthetic data are generated based on models prepared using the actual underlying data sets. Two criteria must be satisfied before this file can be publicly released: protection of the confidentiality of the source data and the analytical validity of the synthetic data. Testing has confirmed that the data file

meets all privacy protection criteria. Still in progress is an evaluation of the quality of the data resulting from this new methodology.

SSA has used a different methodology to produce three more traditional public-use microdata files based on its administrative data. The agency took a number of steps in developing the public-use files to ensure that individuals cannot be identified, including removing information such as SSN, name, address, and exact date of birth; topcoding (removing extremely high values and substituting a ceiling value); and rounding benefit and earnings amounts. The files were also reviewed by a Disclosure Review Board, using a detailed checklist on disclosure potential, looking in particular for unique records and for overlap with other publicly available data. Approval was obtained by the Office of Public Disclosure in SSA, and by the IRS for the file containing earnings information.

The first of these three traditional public-use files, released in 2003, is based on 2001 data for the OASDI program. It consists of approximately 460,000 records—a 1 percent sample of SSA's MBR—and can be used to study the beneficiary population and the effects of current and proposed legislative and program provisions. Because of its size, it can also be used to study relatively small subpopulations. It includes such detailed information as type and amount of benefits received, timing of benefit receipt, benefit reductions resulting from early retirement, and benefit increases resulting from delayed retirement.

The second public-use file, also released in 2003, is based on 2001 data for the SSI program. It consists of a 5 percent sample of the master record of SSI applicants and beneficiaries. It includes approximately 320,000 records and provides a number of programmatic variables concerning the SSI population, such as disability diagnosis code, living arrangements, and non-SSI income.

The third SSA public-use file, released in 2005, uses a 1 percent random sample from the MBR. It consists of approximately 470,000 records representative of beneficiaries who were entitled to receive Social Security benefits for December 2004. This file consists of two separate but linkable subfiles—one with benefit information and the other with longitudinal earnings information. This public-use file is significant since it is the first public release of longitudinal earnings records drawn as a representative sample of the beneficiary population. Because of the importance of earnings histories for calculating benefits, this file has broad appeal to outside researchers studying Social Security-related issues.

SSA also maintains a record of deaths called the Death Master File (DMF), a version of which is available to the public through the Department of Commerce's National Technical Information Service.[9] As of December 2008, the DMF contained more than 83 million records. The information for each decedent consists of SSN, name, date of birth, date of death, state or country of residence (for records added before February 1988), ZIP code of last residence, and ZIP code of lump-sum death payment. The public version of the DMF does not include data from certain states that restrict SSA's redisclosure of their death information. This file has been used for research to determine the vital status of subjects in longitudinal studies, to evaluate age reporting in other data sources, as a sampling frame for long-lived individuals, and for genealogical purposes.

In addition to public-use data files, SSA produces a wide array of publications and related products that range from ORES research monographs in support of policy analysis to recurring statistical publications. Monthly or annual publications provide statistics on the operation and beneficiaries of the OASDI and SSI programs and on the earnings of the working and beneficiary populations. SSA publications can be categorized as research and analysis publications, statistical publications and chartbooks, publications that cover the OASDI and SSI programs, publications on the income of the aged, and special topic publications.[10]

Additional Statistical Linkages and Services

Linkages between SSA administrative files and Census Bureau surveys are discussed above. SSA also links its administrative data with survey data from NCHS' National Health Interview Study, the principal source of information on the health of the civilian population. In addition, SSA collaborates with data collection efforts of nongovernmental research institutions. For example, the University of Michigan conducts the Health and Retirement Study (HRS), which is in part supported by SSA. Every 2 years, this survey collects socioeconomic and health-related information on more than 22,000 Americans over age 50.[11] Because of limitations under the Privacy Act, SSA can share its administrative data with the University of Michigan only if the survey respondent has signed a release.

SSA also matches its administrative data with the administrative data of other federal, state, and local agencies for internal research purposes, as well as for external researchers on a cost-reimbursable basis. For example, SSA's benefit and earnings records have been matched with files identifying homeless people compiled by the New York City Department of Homeless Services. SSA used the linked data to produce statistics showing the impact of benefits and earnings on the homeless population's use of shelters. In addition, there is a long-standing agreement with the Centers for Medicare and Medicaid Services (CMS) to match CMS and SSA data for internal research projects and contract-based research.

Because SSA's administrative data cover virtually the entire U.S. population, Congress directs the agency to provide vital status information to epidemiologists when such projects are determined to support the national health interest. For instance, members of the National Cancer Registry provide lists of cancer patients to SSA, or industry epidemiologists provide SSA with industry-specific lists of former employees. These files are used to check SSA's death records, beneficiary rolls, and earnings files to ascertain if the persons have died, or can be presumed alive.[12]

On request, SSA also provides tabulations of its data to Congress and to executive branch entities to answer policy questions and to better inform policymakers about characteristics of the worker and beneficiary populations.

Conclusion

Data and data accessibility lie at the heart of social science and policy-related research. SSA collects a wealth of data in its role as administrator of two large national entitlement programs. SSA and SSA-approved research organizations use these data to produce a wide variety of information that is vital to developing social insurance policy.

Linking SSA's administrative data with survey data yields a broader set of demographic and socioeconomic information and also improves the quality of the survey data. These data are used to produce analyses and research on policy initiatives for the OASDI and SSI programs, and on the earnings of the working and beneficiary populations. SSA studies how these programs and potential changes to them affect individuals, the economy, and program solvency. The agency develops models to project demographic and economic characteristics of the current working population into the future. SSA also produces public-use microdata files that are available to outside researchers, as well as a large variety of research and statistical publications to inform policymakers and the public.

SSA administrative data are a great benefit not only to those administering the Social Security programs, but also to the wider statistical, research, and policy analysis community.

Notes

[1] For characteristics of program participants, see DeCesaro and Hemmeter (2008).

[2] See Haines and Greenberg (2005) for more detail.

[3] Some examples of studies using linked survey and administrative data include Rupp, Strand, Davies, and Sears (2007) and Powers and Neumark (2001).

[4] See Census Bureau (2008), Koenig (2003), and Fisher (2008a) for more detail.

[5] Examples of studies using linked data include Olson (2002), Huynh, Rupp, and Sears (2002), and Neumark and Powers (2004).

[6] See Fisher (2008a) and Butrica (2008) for more detail.

[7] Some examples of the many studies that use MINT are Butrica, Iams, and Sandell (1999), Butrica and Iams (1999), Butrica, Iams, Moore, and Waid (2001), and Burtless, Bosworth, and Sahm (2001). For more detail on MINT, see Toder and others (2002) and Shoffner, Biggs, and Jacobs (2005).

[8] An example of a study using FEM simulations is Davies and others (2002).

[9] See www.ntis.gov/products/ssa-dmf.aspx.

[10] A comprehensive list of publications can be found at www.socialsecurity.gov/policy. More information on public-use files and other SSA data is available at www.socialsecurity.gov/policy/docs/microdata/index.html and www.socialsecurity.gov/policy/data_subject.html.

[11] Some examples of studies using HRS data include Gustman, Mitchell, Samwick, and Steinmeier (1997), Cunningham and Engelhardt (2002), Gustman and Steinmeier (2005), and Engelhardt and Kumar (2006).

[12] Epidemiologists can request vital status information from SSA at www.socialsecurity.gov/policy/about/epidemiology.html.

References

[Board of Trustees] Board of Trustees of the Federal Old-Age and Survivors and Disability Insurance Trust Funds. 2008. *2008 annual report of the federal Old-Age and Survivors and Disability Insurance Trust Funds.* Washington, DC. Available at www.socialsecurity.gov/OACT/TR/TR04.

Burtless, Gary, Barry Bosworth, and Claudia Sahm. 2001. The trend in lifetime earnings inequality and its impact on the distribution of retirement income. CRR Working Paper No. 2001-03. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Butrica, Barbara A. 2008. Older Americans' reliance on assets. Opportunity and Ownership Facts No. 10. Washington, DC: Urban Institute. Available at www.urban.org/publications/411632.html.

Butrica, Barbara A., and Howard M. Iams. 1999. Projecting retirement income of future retirees with panel data: Results from the Modeling Income in the Near Term (MINT) project. *Social Security Bulletin* 62(4): 3–8.

Butrica, Barbara A., Howard M. Iams, and Steven H. Sandell. 1999. Using data for couples to project the distributional effects of changes in Social Security policy. *Social Security Bulletin* 62(3): 20–27.

Butrica, Barbara A., Howard M. Iams, James H. Moore, and Mikki D. Waid. 2001. Methods in Modeling Income in the Near Term (MINT I). ORES Working Paper No. 91. Washington, DC: SSA, Office of Research, Evaluation, and Statistics. Available at www.socialsecurity.gov/policy/docs/workingpapers/wp91.pdf.

Census Bureau. 2008. Current Population Survey (CPS). Washington, DC. Available at www.census.gov/cps.

———. 2009. Survey of Income and Program Participation (SIPP). Washington, DC. Available at www.census.gov/sipp.

Cunningham, Christopher R., and Gary V. Engelhardt. 2002. Federal tax policy, employer matching, and 401(k) saving: Evidence from HRS W-2 Records. *National Tax Journal* 55(3): 617–645.

Davies, Paul S., Minh Huynh, Chad Newcomb, Paul O'Leary, Kalman Rupp, and Jim Sears. 2002. Modeling SSI financial eligibility and simulating the effect of policy options. *Social Security Bulletin* 64(2): 16–45.

DeCesaro, Anne, and Jeffrey Hemmeter. 2008. Characteristics of noninstitutionalized DI and SSI program participants. Research and Statistics Note No. 2008-02. Washington, DC: SSA. Available at www.socialsecurity.gov/policy/docs/rsnotes/rsn2008-02.html.

Engelhardt, Gary V., and Anil Kumar. 2006. Employer matching and 401(k) saving: Evidence from Health and Retirement Study. NBER Working Paper No. 12447. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/papers/w12447.

Fisher, T. Lynn. 2008a. Estimates of unreported asset income in the Survey of Consumer Finances and the relative importance of Social Security benefits to the elderly. *Social Security Bulletin* 67(2): 47–53.

———. 2008b. Measuring the relative importance of Social Security benefits to the elderly. *Social Security Bulletin* 67(2): 65–72.

Gustman, Alan L., and Thomas L. Steinmeier. 2005. Imperfect knowledge of Social Security and pensions. *Industrial Relations* 44(2): 373–397.

Gustman, Alan L., Olivia S. Mitchell, Andrew A. Samwick, and Thomas L. Steinmeier. 1997. Pension and Social Security wealth in the Health and Retirement Study. NBER Working Paper No. 5912. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/papers/w5912.

Haines, Dawn E., and Brian Greenberg. 2005. Statistical uses of Social Security administrative data. Paper presented at American Statistical Association Joint Statistical Meetings, Minneapolis, MN. Available at www.oecd.org/dataoecd/58/13/36237686.pdf.

Huynh, Minh, Kalman Rupp, and James Sears. 2002. The assessment of Survey of Income and Program Participation (SIPP) benefit data using longitudinal administrative records. SIPP Working Paper No. 238. Washington, DC: Census Bureau. Available at www.census.gov/dusd/MAB/wp238.pdf.

Koenig, Melissa L. 2003. An assessment of the Current Population Survey and the Survey of Income and Program Participation using Social Security administrative data. Paper presented at the Federal Committee on Statistical Methodology Research Conference, Arlington, VA. Available at www.fcsm.gov/03papers/Koenig.pdf.

Neumark, David, and Elizabeth T. Powers. 2004. The effect of the SSI program on labor supply: Improved evidence from Social Security administrative files. *Social Security Bulletin* 65(3): 45–60.

Olson, Janice A. 2002. Social Security benefit reporting in the Survey of Income and Program Participation and in Social Security administrative records. ORES Working Paper No. 96. Washington, DC: SSA, Office of Research, Evaluation, and Statistics. Available at www.socialsecurity.gov/policy/docs/workingpapers/wp96.pdf.

Powers, Elizabeth T., and David Neumark. 2001. The Supplemental Security Income program and incentives to take up Social Security early retirement: Empirical evidence from matched SIPP and Social Security Administration files. NBER Working Paper No. 8670. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/papers/w8670.

Rupp, Kalman, Alexander Strand, Paul Davies, and Jim Sears. 2007. Benefit adequacy among elderly Social Security retired-worker beneficiaries and the SSI federal benefit rate. *Social Security Bulletin* 67(3): 29–51.

Shoffner, Dave, Andrew Biggs, and Preston Jacobs. 2005. Poverty-level annuitization requirements in Social Security proposals incorporating personal retirement accounts. Issue Paper No. 2005-01. Washington, DC: SSA.

[SSA] Social Security Administration. 2007. *SSI Annual Statistical Report, 2006.* Washington, DC. Available at www.socialsecurity.gov/policy/docs/statcomps/ssi_asr/2006/index.html.

———. 2008. *Annual statistical supplement to the Social Security Bulletin, 2007.* Washington, DC. Available at www.socialsecurity.gov/policy/docs/statcomps/supplement/2007/index.html.

Toder, Eric, Lawrence Thompson, Melissa Favreault, Richard Johnson, Kevin Perese, Caroline Ratcliffe, Karen Smith, Cori Uccello, Timothy Waidmann, Jillian Berk, Romina Woldemariam, Gary Burtless, Claudia Sahm, and Douglas Wolf. 2002. Modeling Income in the Near Term: Revised projections of retirement income through 2020 for the 1931–1960 birth cohorts. Washington, DC: Urban Institute. Available at: www.urban.org/publications/410609.html.

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 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 2008–March 2009.

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 2009 are given on pages 86–87. Trust Fund data for March 2009 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 www.socialsecurity.gov/OACT/ProgData/beniesQuery.html.

Monthly Statistical Snapshot

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

Table 1.
Number of people receiving Social Security, Supplemental Security Income, or both, March 2009 (in thousands)

Type of beneficiary	Total	Social Security only	SSI only	Both Social Security and SSI
All beneficiaries	56,427	48,827	4,948	2,652
Aged 65 or older	36,958	34,920	881	1,158
Disabled, under age 65 [a]	12,282	6,721	4,067	1,494
Other [b]	7,187	7,187	. . .	. . .

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 2009

Type of beneficiary	Beneficiaries		Total monthly benefits (millions of dollars)	Average monthly benefit (dollars)
	Number (thousands)	Percent		
All beneficiaries	51,479	100.0	54,413	1,057.00
Old-Age Insurance				
Retired workers	32,723	63.6	37,853	1,156.80
Spouses	2,363	4.6	1,347	570.10
Children	551	1.1	313	568.00
Survivors Insurance				
Widow(er)s and parents [a]	4,351	8.5	4,756	1,092.90
Widowed mothers and fathers [b]	153	0.3	126	827.10
Children	1,956	3.8	1,460	746.60
Disability Insurance				
Disabled workers	7,500	14.6	7,964	1,061.90
Spouses	154	0.3	44	284.80
Children	1,727	3.4	550	318.20

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 2009

Age	Recipients		Total payments [a] (millions of dollars)	Average monthly payment [b] (dollars)
	Number (thousands)	Percent		
All recipients	7,599	100.0	4,162	503.70
Under 18	1,172	15.4	747	599.40
18–64	4,389	57.8	2,564	519.40
65 or older	2,038	26.8	851	414.70

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 2009 (in millions of dollars)

Component	OASI	DI	Combined OASI and DI
		Receipts	
Total	$50,378	$8,529	$58,907
Net contributions	50,140	8,516	58,656
Income from taxation of benefits	13	0	13
Net interest	225	13	238
Payments from the general fund	0	0	0
		Expenditures	
Total	46,147	9,987	56,135
Benefit payments	45,846	9,763	55,609
Administrative expenses	301	225	526
Transfers to Railroad Retirement	0	0	0
		Assets	
At start of month	2,219,583	214,409	2,433,993
Net increase during month	4,230	-1,458	2,772
At end of month	2,223,814	212,951	2,436,765

SOURCE: Data on the trust funds were accessed on April 24, 2009, 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.

SSI Federally Administered Payments

Awards of SSI Federally Administered Payments

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

Table 1.
Recipients (by type of payment), total payments, and average monthly payment, March 2008–March 2009

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		
2008						
March	7,399,632	5,089,646	2,013,465	296,521	3,769,599	476.90
April	7,428,073	5,111,396	2,019,671	297,006	3,845,076	476.40
May	7,408,267	5,096,218	2,014,736	297,313	3,777,113	477.70
June	7,453,089	5,129,012	2,025,843	298,234	3,841,233	477.00
July	7,450,629	5,125,978	2,025,538	299,113	3,769,838	475.70
August	7,468,701	5,138,210	2,030,920	299,571	3,809,124	477.40
September	7,509,397	5,168,764	2,040,252	300,381	3,866,226	476.70
October	7,504,271	5,163,780	2,039,238	301,253	3,838,166	476.80
November	7,533,795	5,185,746	2,046,378	301,671	3,820,243	477.30
December	7,520,501	5,176,902	2,042,110	301,489	3,880,433	477.80
2009						
January	7,533,922	5,192,985	2,047,850	293,087	4,009,142	504.10
February	7,566,208	5,217,483	2,055,832	292,893	4,044,694	502.80
March	7,599,464	5,243,129	2,063,657	292,678	4,162,308	503.70

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 2008–March 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
March	7,399,632	1,204,243	6,195,389	1,126,322	4,251,217	2,022,093
April	7,428,073	1,204,559	6,223,514	1,132,149	4,271,980	2,023,944
May	7,408,267	1,201,557	6,206,710	1,124,418	4,263,373	2,020,476
June	7,453,089	1,202,416	6,250,673	1,140,154	4,289,159	2,023,776
July	7,450,629	1,202,303	6,248,326	1,137,327	4,288,179	2,025,123
August	7,468,701	1,203,846	6,264,855	1,136,978	4,302,730	2,028,993
September	7,509,397	1,205,505	6,303,892	1,147,765	4,328,605	2,033,027
October	7,504,271	1,206,466	6,297,805	1,138,706	4,330,689	2,034,876
November	7,533,795	1,210,023	6,323,772	1,152,268	4,341,446	2,040,081
December	7,520,501	1,203,256	6,317,245	1,153,844	4,333,096	2,033,561
2009						
January	7,533,922	1,203,955	6,329,967	1,153,684	4,344,951	2,035,287
February	7,566,208	1,204,781	6,361,427	1,165,415	4,362,970	2,037,823
March	7,599,464	1,204,671	6,394,793	1,172,224	4,388,753	2,038,487

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 2008–March 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
March	5,089,646	608,122	4,481,524	899,489	3,070,057	1,120,100
April	5,111,396	607,789	4,503,607	904,323	3,086,385	1,120,688
May	5,096,218	605,553	4,490,665	898,091	3,080,232	1,117,895
June	5,129,012	605,097	4,523,915	910,658	3,099,644	1,118,710
July	5,125,978	604,523	4,521,455	907,961	3,099,058	1,118,959
August	5,138,210	604,910	4,533,300	906,983	3,110,480	1,120,747
September	5,168,764	605,337	4,563,427	915,806	3,130,287	1,122,671
October	5,163,780	605,292	4,558,488	908,584	3,132,083	1,123,113
November	5,185,746	606,874	4,578,872	919,557	3,140,406	1,125,783
December	5,176,902	602,347	4,574,555	920,836	3,135,122	1,120,944
2009						
January	5,192,985	604,209	4,588,776	920,828	3,148,016	1,124,141
February	5,217,483	604,285	4,613,198	930,292	3,162,043	1,125,148
March	5,243,129	603,315	4,639,814	936,012	3,182,658	1,124,459

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 2008–March 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
March	2,013,465	494,626	1,518,839	224,507	1,033,195	755,763
April	2,019,671	495,216	1,524,455	225,482	1,037,319	756,870
May	2,014,736	494,441	1,520,295	223,909	1,034,682	756,145
June	2,025,843	495,450	1,530,393	227,132	1,040,607	758,104
July	2,025,538	495,842	1,529,696	226,878	1,039,642	759,018
August	2,030,920	496,836	1,534,084	227,526	1,042,646	760,748
September	2,040,252	497,843	1,542,409	229,530	1,048,281	762,441
October	2,039,238	498,613	1,540,625	227,594	1,048,053	763,591
November	2,046,378	500,397	1,545,981	230,264	1,050,271	765,843
December	2,042,110	497,841	1,544,269	230,458	1,048,077	763,575
2009						
January	2,047,850	500,080	1,547,770	230,668	1,050,539	766,643
February	2,055,832	500,584	1,555,248	233,092	1,054,940	767,800
March	2,063,657	501,483	1,562,174	234,221	1,060,209	769,227

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 2008–March 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
March	296,521	101,495	195,026	2,326	147,965	146,230
April	297,006	101,554	195,452	2,344	148,276	146,386
May	297,313	101,563	195,750	2,418	148,459	146,436
June	298,234	101,869	196,365	2,364	148,908	146,962
July	299,113	101,938	197,175	2,488	149,479	147,146
August	299,571	102,100	197,471	2,469	149,604	147,498
September	300,381	102,325	198,056	2,429	150,037	147,915
October	301,253	102,561	198,692	2,528	150,553	148,172
November	301,671	102,752	198,919	2,447	150,769	148,455
December	301,489	103,068	198,421	2,550	149,897	149,042
2009						
January	293,087	99,666	193,421	2,188	146,396	144,503
February	292,893	99,912	192,981	2,031	145,987	144,875
March	292,678	99,873	192,805	1,991	145,886	144,801

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 2008–March 2009
(in thousands of dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2008						
March	3,769,599	472,120	3,297,479	670,708	2,299,885	799,006
April	3,845,076	473,162	3,371,915	681,076	2,362,885	801,115
May	3,777,113	470,934	3,306,179	668,912	2,309,775	798,426
June	3,841,233	471,815	3,369,418	683,340	2,357,134	800,758
July	3,769,838	470,803	3,299,034	665,779	2,304,600	799,459
August	3,809,124	471,801	3,337,323	674,981	2,332,418	801,724
September	3,866,226	473,306	3,392,920	683,173	2,378,779	804,274
October	3,838,166	473,343	3,364,824	671,832	2,361,694	804,640
November	3,820,243	475,770	3,344,472	680,894	2,331,667	807,682
December	3,880,433	475,880	3,404,553	684,552	2,386,554	809,328
2009						
January	4,009,142	496,179	3,512,964	718,597	2,445,116	845,429
February	4,044,694	496,670	3,548,024	727,249	2,470,398	847,048
March	4,162,308	499,779	3,662,529	747,164	2,563,702	851,443
			Federal payments			
2008						
March	3,392,883	369,029	3,023,854	652,280	2,098,149	642,455
April	3,463,950	369,735	3,094,214	662,372	2,157,503	644,074
May	3,400,489	367,931	3,032,558	650,593	2,108,041	641,855
June	3,460,281	368,409	3,091,872	664,631	2,152,097	643,554
July	3,392,740	367,562	3,025,179	647,315	2,102,976	642,450
August	3,430,320	368,265	3,062,055	656,424	2,129,688	644,208
September	3,483,686	369,382	3,114,304	664,311	2,173,220	646,155
October	3,457,102	369,367	3,087,735	653,337	2,157,278	646,487
November	3,440,107	371,338	3,068,768	662,297	2,128,868	648,941
December	3,497,759	371,512	3,126,247	665,678	2,181,608	650,473
2009						
January	3,630,829	392,284	3,238,545	699,999	2,243,606	687,225
February	3,664,119	392,537	3,271,582	708,369	2,267,299	688,451
March	3,775,713	394,882	3,380,831	727,912	2,355,990	691,811

(Continued)

Table 6.
Total payments, by eligibility category, age, and source of payment, March 2008–March 2009 (in thousands of dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2008						
March	376,716	103,091	273,625	18,428	201,737	156,551
April	381,127	103,427	277,700	18,704	205,382	157,041
May	376,624	103,003	273,621	18,319	201,734	156,571
June	380,952	103,406	277,546	18,710	205,038	157,204
July	377,097	103,241	273,856	18,464	201,624	157,009
August	378,804	103,536	275,268	18,557	202,730	157,516
September	382,540	103,924	278,616	18,862	205,558	158,120
October	381,064	103,976	277,089	18,496	204,416	158,153
November	380,136	104,432	275,704	18,597	202,799	158,740
December	382,674	104,368	278,306	18,875	204,946	158,854
2009						
January	378,313	103,895	274,418	18,599	201,511	158,204
February	380,575	104,133	276,442	18,880	203,098	158,597
March	386,595	104,897	281,698	19,252	207,711	159,632

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 2008–March 2009 (in dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2008						
March	476.90	390.50	493.70	567.50	492.50	393.50
April	476.40	390.70	493.00	565.40	492.00	393.70
May	477.70	391.00	494.50	571.20	492.70	394.00
June	477.00	391.10	493.50	567.70	492.00	394.10
July	475.70	391.00	492.10	562.70	491.30	393.90
August	477.40	391.20	494.00	569.90	492.30	394.20
September	476.70	391.20	493.10	566.00	491.90	394.10
October	476.80	391.50	493.20	566.30	492.20	394.30
November	477.30	391.90	493.70	567.10	492.40	394.60
December	477.80	393.50	493.90	561.30	494.00	396.00
2009						
January	504.10	411.10	521.80	603.00	519.90	414.30
February	502.80	410.60	520.30	597.90	518.80	413.90
March	503.70	411.60	521.00	599.40	519.40	414.70
			Federal payments			
2008						
March	445.80	333.40	466.50	553.20	464.30	341.20
April	445.40	333.50	465.90	551.20	463.90	341.30
May	446.70	333.70	467.40	557.00	464.60	341.60
June	446.10	333.80	466.50	553.60	463.90	341.60
July	444.80	333.60	465.10	548.50	463.30	341.50
August	446.60	333.90	467.10	555.80	464.30	341.70
September	445.90	333.80	466.20	551.90	464.00	341.70
October	446.00	333.90	466.30	552.10	464.30	341.80
November	446.50	334.40	466.90	553.00	464.50	342.10
December	447.00	336.00	467.00	547.10	466.10	343.60
2009						
January	473.90	354.40	495.40	588.60	492.60	362.60
February	472.60	353.80	493.90	583.60	491.50	362.20
March	473.50	354.80	494.70	585.10	492.10	362.90

(Continued)

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, March 2008–March 2009 (in dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2008						
March	156.30	171.50	151.10	76.40	159.60	172.20
April	156.30	171.60	150.90	76.40	159.50	172.20
May	156.40	171.70	151.10	76.60	159.60	172.30
June	156.20	171.70	150.80	76.30	159.40	172.20
July	156.10	171.70	150.70	76.30	159.20	172.20
August	156.10	171.70	150.70	76.20	159.30	172.30
September	156.00	171.80	150.60	76.10	159.10	172.20
October	156.10	171.90	150.70	76.30	159.10	172.30
November	156.00	171.90	150.50	76.00	159.10	172.40
December	156.20	172.30	150.70	76.10	159.30	172.70
2009						
January	156.00	172.20	150.40	76.00	159.00	172.50
February	155.80	172.10	150.20	75.80	158.80	172.50
March	155.90	172.30	150.20	75.80	158.80	172.60

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 2008–March 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
March	70,815	8,313	62,502	14,395	47,992	8,428
April	85,983	9,111	76,872	17,671	59,044	9,268
May	76,256	8,981	67,275	15,150	51,979	9,127
June	85,974	8,769	77,205	18,261	58,787	8,926
July	73,646	8,965	64,681	14,822	49,738	9,086
August	75,295	9,126	66,169	14,244	51,789	9,262
September	85,720	9,076	76,644	16,499	59,986	9,235
October	79,082	9,769	69,313	13,874	55,273	9,935
November	72,635	9,945	62,690	13,521	49,048	10,066
December	77,917	8,074	69,843	15,287	54,422	8,208
2009						
January	67,577	8,475	59,102	13,239	45,743	8,595
February [a]	72,988	8,938	64,050	14,398	49,538	9,052
March [a]	93,961	9,490	84,471	19,206	65,113	9,642

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:

- assess the Social Security retirement, survivors, and disability programs and the economic security of the aged;
- 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.

Submitting a Paper

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:

Social Security Bulletin
Perspectives Editor
Social Security Administration
Office of Research, Evaluation, and Statistics
500 E Street, SW, 8th Floor
Washington, DC 20254-0001

We regard the submission of a paper as your implied commitment not to submit it to another publication while it is under consideration by the *Bulletin*. If you have published a related paper elsewhere, please state that in your cover letter.

Disclosures—Authors are expected to disclose in their cover letter any potential conflicts of interest that may arise from their employment, consulting or political activities, financial interests, or other affiliations.

Copyright—Authors are responsible for obtaining written permission to publish any material for which they do not own the copyright.

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.

- **Title Page**—Papers must include a title page with the paper's title, name(s) of author(s), affiliation(s), address(es), including the name, postal address, e-mail address, telephone and fax numbers of a contact person. Any Acknowledgments paragraph should also be on this page. In the Acknowledgements, reveal the source of any financial or research support received in connection with the preparation of the paper. Because papers undergo blind review, the title page will be removed from referee copies. Eliminate all other identifying information from the rest of the paper before it is submitted. Once papers are accepted for publication, authors are responsible for reinserting self-identifying citations and references during preparation of the paper for final submission.
- **Synopsis**—For the *Bulletin's* table of contents include a separate synopsis, including the title of the paper along with one to three sentences outlining the research question.
- **Summary**—Prepare a brief, nontechnical summary of the paper (one to two double-spaced pages) describing the research question, methodology, and findings. The policy implications of the findings also should be included.
- **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.
- **References**—Verify each reference carefully; the references must correspond to the citations in the text. The list of references should start on a new page and be listed alphabetically by the last name of the author(s) and then by year, chronologically. Only the first author's name is inverted. List all authors' full names and avoid using *et al*. The name of each author and the title of the citation should be exactly as it appears in the original work.
- **Tables/Charts**—Tables must be prepared in Microsoft Excel. Charts or other graphics must be prepared in or exported to Excel or Adobe Illustrator. The spreadsheet with plotting data must be attached to each chart with the final submission. Make sure all tables and charts are referenced in the text. Give each table and chart a title and number consecutive with the order it is mentioned in the text. Notes for tables and charts are independent of Notes in the rest of the paper and should be ordered using lowercase letters, beginning with the letter a (including the Source note, which should be listed first). The sequence runs from left to right, top to bottom. The order of the notes as they appear below the tables or charts is (1) Source, (2) general notes to the table or chart, if any, and (3) letter notes.

For specific questions on formatting, use the *Chicago Manual of Style* as a guide for notes, citations, references, and table presentation.

JEL Abstract—If your paper is appropriate for indexing in the *Journal of Economic Literature*, include a separate, double-spaced abstract of not more than 150 words, clearly labeled "JEL Abstract." The abstract should state the purpose of the study, the basic procedures, main findings, and conclusions. Below the abstract, supply the JEL classification number and two to six keywords that are not in the title. JEL classifications can be found at http://www.aeaweb.org/journal/jel_class_system.html

Review Process

Papers that appear to be suitable for publication in Perspectives are sent anonymously to three reviewers who are subject matter experts. The reviewers assess the paper's technical merits, provide substantive comments, and recommend whether the paper should be published. An editorial review committee appointed and chaired by the Associate Commissioner, Office of Research, Evaluation, and Statistics, makes the final decision on whether the paper is of sufficient quality, importance, and interest to publish, subject to any required revisions that are specified in a letter to the author(s). The entire review process takes approximately 12 weeks.

Data Availability Policy

If your paper is accepted for publication, you will be asked to make your data available to others at a reasonable cost for a period of 3 years (starting 6 months after actual publication). Should you want to request an exception from this requirement, you must notify the Perspectives Editor when you submit your paper. For example, the use of confidential or proprietary data sets could prompt an exemption request. If you do not request an exemption, we will assume that you have accepted this requirement.

Questions

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.

Program Highlights, 2009

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)	1,090
Maximum of Four Credits a Year	4,360
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)	2,323
Full Retirement Age	66
Cost-of-Living Adjustment (percent)	5.8

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)	5.8
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)	980

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

Social Security Administration
Office of Retirement and Disability Policy
Office of Research, Evaluation, and Statistics
500 E Street, SW, 8th Floor
Washington, DC 20254

SSA Publication No. 13-11700
May 2009

www.socialsecurity.gov/policy