The Economic Well-Being of Social Security Beneficiaries, with an Emphasis on Divorced Beneficiaries

*by David A. Weaver**

There are numerous types of benefits paid under the Social Security programs of the United States, with each type of benefit having its own set of eligibility rules and benefit formula. It is likely that there is an association between the type of benefit a person receives and the economic circumstances of the beneficiary. This article explores that association using records from the Current Population Survey exactly matched to administrative records from the Social Security Administration. Divorced beneficiaries are a particular focus of this article.

Type of benefit is found to be a strong predictor of economic well-being. Two large groups of beneficiaries, retired-worker and aged married spouse beneficiaries, are fairly well-off. Other types of beneficiaries tend to resemble the overall U.S. population or are decidedly worse off. Divorced spouse beneficiaries have an unusually high incidence of poverty and an unusually high incidence of serious health problems. A proposal to increase benefits for these beneficiaries is evaluated. Results of the analyses indicate that much of the additional Government expenditures would be received by those with low income.

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I. Introduction

There are more than a dozen types of benefits paid under the Social Security programs of the United States. Each type of benefit has its own set of eligibility rules and, generally, its own benefit structure. An individual's income has no direct bearing on his or her eligibility for any type of benefit under Social Security and a person eligible for a Social Security benefit receives an amount that is not directly affected by his or her income (one type of income, namely earnings, can affect the benefit amount). However, it is likely that the different eligibility rules and benefit structures are associated with differences in economic well-being among Social Security beneficiaries. For example, to receive a divorced spouse benefit from Social Security, a person must be aged 62 or older, must be—with rare exception—unmarried, and must have low lifetime earnings relative to his or her ex-spouse. Such a person may be less likely to have earnings-related income in retirement such as pension income and such a person does not get to share resources with a spouse. Also, divorced spouse benefits are small relative to other Social Security benefits. Thus, given the eligibility rules and benefit structure of divorced spouse benefits, it is plausible that divorced spouses have low economic status relative to other types of Social Security beneficiaries.

It is important for policymakers to have an understanding of the economic well-being of different beneficiary groups. Many reforms that are designed to improve the fiscal status of Social Security would affect some types of beneficiaries and not others. One concern of many policymakers will be whether the affected beneficiaries have low economic status. An example of this concern can be found in the report of the 1994-1996 Advisory Council on Social Security (U.S. Social Security Administration 1997). As part of a broader restructuring of Social Security, some members of the Council have proposed a reduction in disability benefits for persons becoming disabled in the future (see pp. 124-125 of the report for arguments for the reduction made by these members). Other members of the Council oppose the plan arguing that disability beneficiaries are likely to have low income relative to other beneficiaries and that reductions in benefits for a vulnerable population are inappropriate (see p. 72 of the report for the views of these members). Knowledge of the economic circumstances of different beneficiary groups also allows policymakers to assess whether the current benefit structures are providing adequate benefits. An example of concern over the adequacy of benefits can also be found in the Advisory Council's report. One member believes that a reason widow(er) benefits from Social Security should be increased is that widows have a high incidence of poverty (see page 135 of the report for this member's views).

Grad (1989) describes the economic circumstances of five major types of beneficiary groups, using the 1984 Survey of Income and Program Participation (SIPP). She finds important differences in the income of Social Security beneficiaries. Aged widow beneficiaries, nonadult child beneficiaries, and disabled-worker beneficiaries had high rates of poverty (26 percent, 26 percent, and 19 percent, respectively, were found to be poor), whereas retired-worker beneficiaries and aged wife beneficiaries had low rates of poverty (9 percent and 7 percent, respectively, were found to be poor).[1] She also found important differences in the value of assets held by beneficiaries. Median household net worth for disabled persons and for children was about one-third that of retired-worker beneficiaries or that of aged wife beneficiaries. The median net worth of widows was about two-thirds that of retired-worker beneficiaries or that of aged wife beneficiaries.[2]

The economic circumstances of beneficiary groups are also described in this article, but the approach taken here differs from Grad's approach in a number of ways. The results presented in this article are based on more recent data from a different survey, namely, the March Current Population Survey (CPS). The sample size of the CPS is large enough to allow for the study of some smaller beneficiary groups. In total, 10 beneficiary groups are examined in this article. For each member of the CPS sample, the Bureau of the Census has estimated the value for items such as Federal and State income tax liability, payroll taxes paid, housing and school lunch subsidies received, and capital gains and losses. (Food stamp amounts are also available, based on survey questions.) Whereas Grad uses before-tax cash income as the basis for measuring economic well-being, I use both before-tax cash income and a more comprehensive measure of income (taking into account taxes and noncash benefits) to measure economic well-being. A weakness of the CPS relative to the SIPP is that there is no information on assets. The availability of asset information in the SIPP allows Grad to examine differences in net worth among different beneficiary types; this type of analysis is important but cannot be conducted using the CPS.

There is an important difference in the way Grad defines type of benefit and the way it is defined in this article. This issue is discussed at the end of the next section.

Results presented in this article indicate that *type of benefit* is a strong predictor of economic well-being. Two large groups of beneficiaries, retired workers and aged married spouses, are fairly well-off. Other types of beneficiaries tend to resemble the overall U.S. population or are decidedly worse off.

Divorced spouse beneficiaries are a special focus of this article. The CPS and the benefit files of the Social Security Administration (SSA) are used to describe the circumstances of these beneficiaries. Results indicate that these beneficiaries have an unusually high incidence of poverty and an unusually high incidence of serious health problems. Although these beneficiaries often are poor, there is no indication from SSA's benefit files that their ex-spouses are likely to have a high incidence of poverty. The ex-spouses do not tend to have low benefit amounts nor do many receive Supplemental Security Income (SSI)—a means-tested benefit for the aged and disabled.

Policy proposals to improve divorced spouse benefits have been discussed in the past. Proposals to improve benefits for divorced spouses have been discussed in a report to Congress (U.S. Department of Health and Human Services 1985) and at a meeting of the 1994-1996 Advisory Council (along with several proposals that would affect benefits mainly received by women). In this article, a proposal to increase benefits for divorced spouses is discussed and analyzed using CPS data. Results from this analysis indicate that much of the additional Government expenditures would be received by those with low income.

The next section of this article provides a general discussion of the eligibility rules and benefit structures of various types of benefits. This is followed by a discussion of the data used to measure the economic well-being of different beneficiary groups and used to measure the effects of increasing divorced spouse benefits. Appendix I contains a more detailed discussion of some of the data issues. The three final sections of the article present the results of the analysis of the economic well-being of beneficiaries, the results concerning the circumstances of divorced spouses and the effects of increasing their benefits, and concluding comments. Appendix II contains a discussion of standard errors presented in this article.

II. Eligibility Rules and Benefit Structures

The economic circumstances of almost all Social Security beneficiary groups are described in this article. A total of 10 beneficiary groups are examined, with the only major omission—because of data limitations—being nonadult child beneficiaries. Two of the groups examined are primary beneficiaries: retired workers and disabled workers. A primary beneficiary is a person who receives a benefit based on his or her own work in Social Security covered employment. The benefit amount paid to a primary beneficiary depends on the primary insurance amount (PIA) generated from his or her work record. The PIA is a function of an average of past earnings (higher earnings produce a higher PIA). The other eight beneficiary groups examined in this article are secondary beneficiaries. A secondary beneficiary is a person who receives a benefit because of his or her relationship to a retired worker, a disabled worker, a deceased insured person, or, in some cases, an insured ex-spouse not yet receiving benefits.[3] The benefit amount paid to a secondary beneficiary depends on the PIA generated from the work record of the retired worker, the disabled worker, or the insured person. For many types of benefits, the amount is lower if it is first received before the normal retirement age (NRA). Generally, for those born in the 1930s or earlier, the NRA is age 65. It is scheduled to rise and will, generally, be set at age 67 for persons born in the 1960s or later. The earliest ages of eligibility for various types of old-age benefits are not scheduled to rise but, generally, as the NRA rises, the proportion of the PIA payable at an early age will fall.

To receive a *retired-worker benefit*, a person must be at least 62 years old. The benefit amount for a retired worker who first receives benefits at the NRA is equal to the PIA (the benefit is reduced if first received before the NRA and is augmented if first received after the NRA). To receive a *disabled-worker benefit*, a person does not have to be a certain age but does have to have a health problem severe enough to meet SSA's definition of disability. The benefit amount is equal to the disabled worker's PIA and is not adjusted for age at which the benefit is first received. At age 65, a disabled worker is reclassified as a retired worker.

Three of the secondary beneficiary groups examined in this article are spouse beneficiaries. An individual who is aged 62 or older and who is married to a retired or disabled worker is eligible to receive an *aged spouse benefit*. Someone who is aged 62 or older and who is divorced from a retired worker, a disabled worker, or a living insured person also aged 62 or older is eligible to receive a *divorced spouse benefit*, as long as the marriage to the worker or insured person lasted 10 years or more. A person of any age who is married to a retired or disabled worker and who is caring for the worker's child is eligible to receive a *child-in-care spouse benefit* (the child must be under age 16 or must have a disability that began before age 22). The benefit amount for an aged spouse or a divorced spouse who first receives benefits at the NRA is equal to the PIA multiplied by 0.5 (thus, generally, a worker receives an amount twice as large as that of his or her spouse or ex-spouse). The benefit amount is reduced if first received before the NRA. For a child-in-care spouse benefit, the amount is equal to the PIA multiplied by 0.5 and is not adjusted for age at which the benefit is first received.

Four of the secondary beneficiary groups examined in this article are survivors of deceased insured persons. A widow(er) who is at least 60 years old is eligible for an *aged widow(er) benefit*, a widow(er) of any age who is caring for the deceased spouse's child is eligible for a *child-in-care widow(er) benefit* (the child must be under age 16 or must have a disability that began before age 22), and a widow(er) aged 50–59 and disabled is eligible for a *disabled widow(er) benefit*. A divorced person who is at least 60 years old and whose ex-spouse is deceased is eligible to receive a *surviving divorced spouse benefit*, as long as the marriage to the ex-spouse lasted 10 years or more.[4]

An aged widow(er) or a surviving divorced spouse receives a benefit equal to the PIA if it is first received at the NRA (the benefit is reduced if first received prior to the NRA).[5] A disabled widow(er) receives a benefit equal to the PIA multiplied by 0.715 and a child-in-care widow(er) receives a benefit equal to the PIA multiplied by 0.75. There is no age-at-first-receipt adjustment for either type of benefit.

The final group of secondary beneficiaries examined in this article are those who receive *disabled adult child benefits*. These are benefits paid to the children of retired or disabled workers or to the children of deceased insured persons. Disabled adult children are aged 18 or older and have a disability that began prior to age 22. The benefit amount is equal to the PIA multiplied by 0.5 (if the worker is alive) or equal to the PIA multiplied by 0.75 (if the insured person is deceased). The benefit amount is not adjusted for age at which the benefit is first received.

To receive some secondary benefits, a person must be unmarried. Marriage generally prevents payment of a divorced spouse benefit, a survivor benefit based on having a child in care, or a disabled adult child benefit.[6] Also, a married person cannot collect an aged widow(er) or surviving divorced spouse benefit unless his or her current marriage occurred after the age of 60. For example, a woman who lost her first husband and who remarries before age 60 would not be eligible for an aged widow benefit on the first husband's record as long as she was married to her second husband. A disabled widow(er) benefit cannot be paid to a married person unless the current marriage occurred after the age of 50 and after the disablement.

When a person's primary benefit exceeds his or her secondary benefit, only the primary benefit is paid. This feature of the law makes comparisons of demographic groups with type of beneficiary groups inappropriate. Divorced spouse beneficiaries are an important example. Most aged women with a marital status of divorced *do not* receive divorced spouse benefits. This is partly because many divorced women have earnings histories that entitle them to higher primary benefits. Also note that this feature of the law results in men rarely receiving secondary benefits. The eligibility rules and benefit structures of secondary benefits are the same for men and women but men have earnings histories that usually entitle them to higher primary benefits.

There are reasons persons may not receive the benefit amounts mentioned previously. The earnings tests of Social Security reduce benefits if earnings exceed certain thresholds. Also, total family benefits from one work record are not allowed to exceed family maximums specified in the law (see U.S. Department of Health and Human Services (1993) for details).

A dually entitled beneficiary is a person who is entitled to a primary benefit and a *higher* secondary benefit. The primary benefit is paid in full but the secondary benefit is paid only in the amount by which it exceeds the primary benefit. Though a dually entitled beneficiary receives a primary benefit, his or her total Social Security benefit is approximately or exactly equal to the full secondary benefit. Also, an individual may be eligible for two or more secondary benefits but generally only the highest secondary benefit is paid (in this case, an individual is not considered to be dually entitled).

Grad (1989) classifies dually entitled beneficiaries as primary beneficiaries, whereas I classify such persons by the type of secondary benefit that is received. (Note that, given the benefit data available at the time of her study, it would not have been possible for Grad to classify dually entitled persons as secondary beneficiaries.) From a policy perspective, I believe it makes more sense to classify dually entitled persons as secondary beneficiaries. This is because a change in Social Security law that, say, increases primary benefits would have approximately no effect on the total benefit amounts received by many dually entitled beneficiaries because the increases in primary benefits would be matched by reductions in secondary benefits. An increase in secondary benefits, however, would affect the total benefit amounts of dually entitled beneficiaries.

III. Data

Using Social Security numbers (SSNs) reported in the March 1991 CPS and the March 1994 CPS, the Social Security Administration and the Bureau of the Census have exactly matched Social Security administrative records to survey records for persons aged 15 or older. Administrative records contain information on Social Security benefits, on Supplemental Security Income payments, and on earnings histories. To protect the confidentiality of respondents, use of these files is highly restricted. They may be used only for research purposes and only by persons authorized by the Bureau of the Census.

Not all persons in the CPS files had their records matched. For example, some persons provided incomplete or incorrect SSNs and SSA was not always able to find the correct SSNs. SSA has valid SSNs for 87 percent of the respondents in the March 1991 CPS who were aged 15 or older at the time of the survey and matching was carried out for these respondents. The corresponding figure for the March 1994 file is 81 percent. (Both these figures are based on unweighted counts.)

In this article, the samples used for measuring economic well-being and for simulating a change in the divorced spouse benefit are restricted to persons for whom administrative data were successfully matched. This first sample restriction is used because the Social Security administrative records are needed to identify the type of benefit a person is receiving and are needed to simulate the change in benefits of divorced spouse beneficiaries. Once the first sample restriction has been implemented, it is possible to determine which respondents are beneficiaries and to classify beneficiaries by type of benefit. A beneficiary is a respondent who has a benefit in current-payment status for December of the calendar year that precedes the year of the CPS (December of 1990 for the March 1991 CPS and December of 1993 for the March 1994 CPS). Type of benefit is determined as of these dates.[7] Only beneficiaries are examined in this article. Thus, after the first restriction, there are samples of Social Security beneficiaries, all of whom have administrative records matched with CPS records.

Respondents to the March CPS report the type and amount of income received in the calendar year preceding the interview. Some types of income are more accurately reported than others. The March 1991 CPS technical documentation notes that "it has been determined that wages and salaries tend to be much better reported than such income types as public assistance, Social Security, and net income from interest, dividends, rents, etc." Overall, Social Security income is thought to be underreported in the CPS (U.S. Bureau of the Census 1992). For certain beneficiary groups, survey-reported Social Security income appears to be seriously mismeasured (this is discussed in more detail later). The misreporting of Social Security income is obviously an important problem in any study of the economic status of Social Security beneficiaries. Fortunately, the matched administrative records offer a reasonable solution to this problem.

For this study, data on Social Security income received in the calendar year preceding the CPS is, generally, taken from SSA's administrative records rather than from the survey. Appendix I contains a description and an evaluation of the procedures used to measure family Social Security income using the administrative records. These procedures should result in an accurate and valid measure of a family's Social Security income.

A second sample restriction, designed to ensure the accurate measurement of income, is the exclusion of beneficiaries for whom the CPS record indicates that family Social Security income is zero. This restriction is not important for aged beneficiaries but is somewhat important for nonaged beneficiaries. For persons who were aged 62 or older in the March 1991 CPS and who received benefits for December 1990 (according to SSA's administrative records), only 3 percent had a CPS record that indicated family Social Security income was zero. The corresponding figure for adult beneficiaries under age 62 is 23 percent. The figures for the March 1994 CPS are 3 percent and 28 percent, respectively. Note that, even among beneficiaries who do report family Social Security income, the reported income is often much too low. Among child-in-care widow(er) beneficiaries who report some family Social Security income, the average reported amount in the March 1991 CPS is $9,830, whereas the average amount using the matched SSA records is $12,060. A smaller, but roughly comparable, discrepancy was found for the March 1994 CPS. These results highlight the importance of using administrative-record amounts even for those who do report some Social Security income.

The absence of survey-reported Social Security income, in families that contain a beneficiary (according to administrative records), could be due to any number of factors including incorrect SSNs, respondent or interviewer error, inaccurate imputations, or receipt of Social Security benefits by a representative payee not living in a beneficiary's household. One could use SSA's records to measure family Social Security income but this presumes that the only problem with the CPS record is with Social Security income. It is more prudent, I believe, to remove these records from the samples and verify that the samples used are still representative.

I now turn to judging whether the CPS samples are approximately representative. A byproduct of this effort is an improved understanding of the economic circumstances of various beneficiary groups. In columns 1 and 2 of table 1, I present estimates of the median monthly benefit amount (MBA) from Social Security and the percentage who receive SSI for March 1991 CPS sample persons who meet the two previously mentioned sample restrictions. The estimates are based on the administrative records matched to the survey and are presented by benefit type and in some cases by sex. The median MBA for retired workers is estimated to be $641.4 and the percentage of retired workers who receive SSI is estimated to be 3.9. Columns 3 and 4 present the median MBA and the percentage who receive SSI from SSA's 10-percent file.[8] According to the 10-percent file, the median MBA for retired workers is $631.9 and the percentage who receive SSI is 3.9.[9,10] The ratio of the median MBA of the CPS sample of retired workers to the median MBA from the 10-percent file is 1.02 and the ratio of the percentage who receive SSI is 1.00 (these numbers are reported in columns 5 and 6). The receipt of SSI—a means-tested benefit—is a good reflection of a person's economic status.[11] The size of a retired worker's MBA is also a good reflection of economic status because it is an important component of family income in retirement and is primarily determined by a person's lifetime earnings, which determine other components of retirement income such as private pension income. Thus, the similarity between the CPS and the 10-percent samples of retired workers with regard to median MBA and the percent who receive SSI suggests that the restrictions imposed on the CPS sample are not creating a sample of retired workers whose economic status differs greatly from that of the overall population of retired workers.

Results for other beneficiary groups from the March 1991 CPS can be found in table 1, as well as results for beneficiary groups from the March 1994 CPS.[12,13] (The number of persons in each beneficiary group, as of December 1993, is also presented.) Although the sample restrictions undoubtedly introduce some bias, there is no pattern that would indicate that the beneficiary-group samples from the CPS are unusual samples. There are some exceptions. Surviving divorced spouse beneficiaries have a higher rate of receipt of SSI in the CPS samples than in the 10-percent samples. A number of the surviving divorced spouse records in the 10-percent samples could be for institutionalized persons ineligible to receive SSI, which would cause the 10-percent estimates to be too low.[14] One measure of economic status, the median monthly Social Security benefit amount, is similar in the two sources of data for this group of beneficiaries. Disabled adult children also have a higher rate of SSI receipt in the CPS data. It is known that this group of beneficiaries has a high rate of institutionalization and thus the 10-percent sample estimates of SSI receipt may be too low because not all benefit records of the institutionalized could be identified and removed.[15]

Even without survey data, it is possible to learn about the economic status of different beneficiary groups. As examples, the 10-percent file reveals that divorced spouses, disabled widow(er)s, and disabled adult children have unusually high rates of SSI receipt, indicating beneficiary populations with low assets and low income. Disabled workers, especially disabled-worker women, also have a high rate of SSI receipt, indicating low economic status. Retired-worker and married aged spouse beneficiaries have very low rates of SSI receipt, indicating high economic status.

Measures of Low Income

In this article, the unit of analysis is the person. However, members of a family residing in the same household are assumed to share resources, and family income and family composition are the bases for determining whether a person has low income. One measure of low income used here is having family cash income (before taxes) below the appropriate Federal poverty threshold. The Federal poverty thresholds vary by family composition. This measure of low income corresponds with the official measurement of poverty and persons with low income according to this measure will be referred to as being poor or as being in poverty.

The other measure of low income is based on a more comprehensive accounting of income. Comprehensive income is defined as family cash income less the amounts of several types of taxes paid by family members, plus the values of several types of noncash benefits received by family members, plus net capital gains received by family members, plus the amounts of the Earned Income Tax Credit received by family members. The types of taxes included in measuring comprehensive income are Federal income taxes, State income taxes, the employee portion of the Social Security payroll tax, and the employee portion of the Medicare payroll tax. Federal employee retirement deductions are also accounted for as they are analogous to the Social Security payroll tax. The types of noncash benefits included in measuring comprehensive income are the values of food stamps, housing subsidies, and school lunch subsidies. This definition of comprehensive income is motivated by Radner's (1996) work on measuring the economic well-being of different demographic groups, but the adjustments I make to comprehensive income—discussed below—are not the same as those made by Radner. Note that in calculating comprehensive income in the CPS files, the value of food stamps to the family is set equal to the face value of food stamps reported in the survey. This is the only noncash benefit or tax item that is completely based on survey responses. The remaining items are estimated by the Bureau of the Census using a combination of survey responses and data other than that reported in the survey.

Table 1.—Median monthly benefit amount (MBA) from Social Security and percentage receiving Supplemental Security Income (SSI), by type of benefit: CPS and SSA estimates, December 1990 and 1993

Type of benefit	December 1990						December 1993						
	CPS estimate		SSA estimate		Ratio of CPS to SSA		CPS estimate		SSA estimate		Ratio of CPS to SSA		Number of beneficiaries
	MBA	SSI	MBA	SSI	MBA	SSI	MBA	SSI	MBA	SSI	MBA	SSI	
Retired worker:													
All	641.4	3.9	631.9	3.9	1.02	1.00	716.6	3.6	709.1	3.7	1.01	0.97	20,260,440
Men	704.4	2.6	696.9	2.6	1.01	1.00	784.4	2.1	781.1	2.4	1.00	0.88	13,178,340
Women	489.7	6.3	485.0	6.2	1.01	1.02	545.9	6.7	541.1	6.1	1.01	1.10	7,082,100
Disabled worker:													
All	581.9	15.2	579.9	15.7	1.00	0.97	633.8	16.7	625.1	17.1	1.01	0.98	3,456,080
Men	669.8	10.4	668.9	12.1	1.00	0.86	742.9	12.5	723.1	13.4	1.03	0.93	2,224,220
Women	446.1	24.1	450.0	22.7	0.99	1.06	495.3	24.5	496.0	23.8	1.00	1.03	1,231,860
Aged spouse	341.7	2.8	338.9	2.6	1.01	1.08	377.5	2.3	381.1	2.5	0.99	0.92	4,974,820
Divorced spouse	363.7	27.9	352.0	26.0	1.03	1.07	415.2	20.8	396.1	26.2	1.05	0.79	223,550
Child-in-care spouse	157.8	(1)	148.0	(1)	1.07	(1)	175.1	(1)	153.0	(1)	1.14	(1)	303,390
Aged widow(er)	613.9	6.2	599.0	6.3	1.02	0.98	687.0	5.3	678.1	5.7	1.01	0.93	7,329,470
Surviving divorced spouse	633.6	10.3	618.9	8.1	1.02	1.27	712.2	10.0	702.0	6.9	1.01	1.45	402,640
Disabled widow(er)	424.0	17.8	427.0	23.4	0.99	0.76	475.7	29.1	473.1	22.9	1.01	1.27	144,290
Child-in-care widow(er)	430.4	(1)	414.0	(1)	1.04	(1)	479.1	(1)	449.0	(1)	1.07	(1)	274,750
Disabled adult child	341.7	59.2	358.0	46.1	0.95	1.28	351.6	54.8	405.0	46.1	0.87	1.19	568,010

[1] Statistic not presented. See article for explanation.

Note: CPS estimates are based on administrative records matched to Current Population Survey samples. See article for sample restrictions.

SSA estimates are based on the Social Security Administration's 10-percent file. Estimates are for beneficiaries who live in the 50 States or the District of Columbia and who are not known to be institutionalized. Whether a beneficiary is institutionalized is not always known by SSA. See article for further explanation.

Number of beneficiaries is estimated using SSA's December 1993 10-percent sample. The estimate is for beneficiaries who live in the 50 States or the District of Columbia and who are not known to be institutionalized. Whether a beneficiary is institutionalized is not always known by SSA. See article for further explanation.

To compare the comprehensive income of persons in different families, some adjustment must be made to reflect the fact that different families have different needs. For example, the food and housing needs of a three-person family are greater than those of a two-person family. One measure of how much income a family needs is the poverty threshold that pertains to the family. The poverty thresholds differ by family composition to reflect the different needs of families. To adjust for different needs, comprehensive income is divided by the poverty threshold that pertains to the person's family (the resulting value from this division will be referred to as RATIO). RATIO expresses comprehensive family income as a multiple (or fraction) of a poverty threshold. The median value of RATIO for persons in the United States based on the March 1991 CPS file is 2.46 and the value based on the March 1994 CPS file is 2.38. The second measure of low income (LOWCOMP) is defined as having a value of RATIO that is below one-half the median value of the Nation (1.23 for 1991 and 1.19 for 1994).[16]

IV. Low Income by Benefit Type

Estimates of the percentage of beneficiaries with low income, by benefit type, are presented in table 2. Standard errors of the estimates are also presented (see appendix II for a discussion of how the standard errors were calculated and how they can be used to construct confidence intervals). Retired workers, by far the largest group of Social Security beneficiaries, have a very low incidence of poverty and of low comprehensive income. Aged married spouses, a smaller but still large group of beneficiaries, are also very unlikely to have low income. The results are quite different for the other beneficiary groups. These groups resemble (roughly) the overall U.S. population or are considerably worse off.[17] The results presented in table 2 are reasonable. The beneficiary groups whose economic status is comparable to or worse than the overall population are mainly composed of unmarried women and disabled persons. In some cases, the benefit structure of Social Security is remarkably protective of potentially vulnerable populations. For example, widowed women who care for children and who have low earnings are certainly a potentially vulnerable group. However, fairly generous survivor benefits are available for these widows and their children. As a result, the poverty rate for child-in-care widow(er)s is comparable to the overall population. In other cases, the benefit structure is less effective at preventing hardship. Divorced spouse beneficiaries, who tend to receive low benefits, have an exceptionally high incidence of poverty and low comprehensive income.

As discussed earlier, Social Security income was derived mainly from agency administrative records rather than survey

Table 2.—Percentage with low income, by type of benefit, based on the March 1991 and 1994 Current Population Surveys (CPSs) matched to administrative records

Type of benefit	March 1991 CPS		March 1994 CPS		Average	
	Percentage in poverty	Percentage with LOWCOMP	Percentage in poverty	Percentage with LOWCOMP	Percentage in poverty	Percentage with LOWCOMP
U.S. population[1]	13.51	18.24	15.14	18.70	14.33	18.47
Retired worker:						
All	7.58	11.40	6.98	9.87	7.28	10.63
	(0.54)	(0.62)	(0.44)	(0.41)	(0.35)	(0.37)
Men	5.32	9.20	4.57	7.20	4.95	8.20
	(0.54)	(0.60)	(0.36)	(0.28)	(0.33)	(0.33)
Women	11.89	15.60	11.60	14.99	11.75	15.30
	(0.70)	(0.88)	(0.69)	(0.76)	(0.49)	(0.58)
Disabled worker:						
All	21.38	25.96	20.13	24.52	20.76	25.24
	(1.31)	(1.17)	(1.05)	(1.56)	(0.84)	(0.98)
Men	19.50	25.47	16.17	21.45	17.84	23.46
	(1.67)	(1.73)	(1.16)	(1.90)	(1.02)	(1.28)
Women	24.81	26.86	27.35	30.11	26.08	28.49
	(1.76)	(1.70)	(1.73)	(2.17)	(1.24)	(1.38)
Aged spouse	5.94	8.75	5.54	8.05	5.74	8.40
	(0.56)	(0.71)	(0.55)	(0.48)	(0.39)	(0.43)
Divorced spouse	33.46	40.32	29.58	33.50	31.52	36.91
	(4.36)	(4.89)	(6.43)	(3.70)	(3.88)	(3.07)
Child-in-care spouse	24.35	29.27	23.93	31.23	24.14	30.25
	(5.23)	(7.10)	(2.18)	(2.43)	(2.83)	(3.75)
Aged widow(er)	14.58	23.57	13.88	19.27	14.23	21.42
	(0.74)	(1.26)	(1.05)	(1.00)	(0.64)	(0.80)
Surviving divorced spouse	18.13	23.28	13.54	12.61	15.83	17.94
	(2.56)	(4.29)	(2.05)	(2.93)	(1.64)	(2.60)
Disabled widow(er)	25.56	33.67	48.84	47.95	37.20	40.81
	(8.06)	(8.30)	(9.52)	(9.85)	(6.24)	(6.44)
Child-in-care widow(er)	13.71	19.27	17.05	19.63	15.38	19.45
	(4.93)	(5.55)	(3.37)	(3.77)	(2.99)	(3.36)
Disabled adult child	21.53	31.96	17.34	25.30	19.43	28.63
	(2.95)	(3.05)	(3.91)	(4.92)	(2.45)	(2.90)

[1] The percentages for the U.S. population are for all persons in the United States, not just those receiving Social Security benefits.

Note: A person is in poverty if family cash income (before taxes) is below the appropriate Federal poverty threshold. See article for definition of LOWCOMP.

Average percentage in poverty is calculated by summing the percentages from the March 1991 and March 1994 CPSs and then dividing by 2. Average percentage with LOWCOMP is calculated in a similar manner.

Standard errors are in parentheses.

records. The alternative would have been to rely on the CPS records completely to measure family income. Poverty rates under this alternative were calculated for the same samples used to produce the estimates in table 2. These alternative rates tended to be higher, most likely because of underreporting of Social Security income in the CPS, but the pattern of poverty under the alternative is similar to that revealed in table 2. Retired workers and aged spouses are well-off relative to the overall U.S. population and the other beneficiary groups resemble the overall population or are worse off.

SSA's Office of Research, Evaluation and Statistics, as part of a project to examine the adequacy of benefits received by women, produced poverty estimates for women aged 65 or older who received certain types of benefits. These estimates were based on the 1990 Survey of Income and Program Participation and used only survey-reported information to measure family income. Among aged wife beneficiaries (including dually entitled wife beneficiaries and a small number of divorced wife beneficiaries), 3.3 percent were estimated to be in poverty. The corresponding figure for widow beneficiaries (including dually entitled beneficiaries and a small number of surviving divorced spouses) is 14.4 percent. Among women receiving only retired-worker benefits, 9.4 percent were estimated to be poor. The 1990 SIPP-based results are roughly consistent with results reported in table 2 for aged widow(er)s and retired-worker women. This is interesting from a methodological standpoint because CPS-based poverty estimates tend to be substantially higher than SIPP-based estimates. The similarity in this case may be due to the fact that Social Security income for these CPS-based estimates was taken from administrative records and not survey records. While the estimates differ somewhat, the results reported here and the results from the 1990 SIPP both indicate that aged spouses have a low incidence of poverty.

Grad's results using the 1984 SIPP suggest a higher incidence of poverty among aged widows than results presented here or results based on the 1990 SIPP. It is possible the 1984 SIPP, which was the first SIPP, is somewhat unusual. Statistics compiled by SSA indicate that, for the elderly, poverty rates calculated from the post-1984 SIPPs are well below those calculated from the 1984 SIPP. This probably does not reflect a trend toward lower poverty because no such trend was observed in CPS data.

Results from table 2 provide basic and important information for policymakers interested in restructuring the Social Security programs. Reform proposals that reduce benefits in an effort to improve the fiscal status of Social Security will partly be judged on whether the proposals put undue or unnecessary burdens on vulnerable populations. Because reform proposals can affect some beneficiary groups and not others, results from table 2 offer some guidance on whether vulnerable populations will be affected by specific proposals and on whether proposals can be modified to put less of a burden on these populations. For example, proposals to modify spouse benefits should, perhaps, not be designed to affect all types of spouse beneficiaries because divorced spouses and child-in-care spouses are not at all like aged married spouses in terms of their economic circumstances. Results from table 2 are also of interest to policymakers because they reveal whether the current benefit structures are providing adequate benefits. In the case of divorced spouse beneficiaries, the 50-percent benefit rate is clearly not high enough to prevent a substantial number of these beneficiaries from having low income. A proposal to improve divorced spouse benefits will be analyzed in the next section of this article.

V. Divorced Spouse Beneficiaries

Divorced spouse beneficiaries are not typical Social Security beneficiaries. Their benefit amounts are low (see table 1) and, unlike married spouse beneficiaries, there is no reason to believe family benefits are high. A large percentage of these beneficiaries have low income (using either of the low income measures discussed earlier). In addition, a large percentage of these beneficiaries appear to have developed serious health problems prior to old age. Twenty-four percent of dually entitled divorced spouses have, at some point in their lives, applied for Social Security disability benefits.[18] Eleven percent of all dually entitled divorced spouses have, at some point, received Social Security disability benefits. To put these numbers in perspective, it is useful to consider the experiences of aged *married* spouses who are dually entitled. Only 8 percent of these beneficiaries have applied for Social Security disability benefits and only 3 percent of all dually entitled married spouses have received Social Security disability benefits. Regarding divorced spouse beneficiaries who are not dually entitled, 39 percent have applied for disability payments from the SSI program and 29 percent have received payments.[19] For all divorced spouse beneficiaries, regardless of dual-entitlement status, 34 percent have applied for some type of disability benefit (Social Security or SSI) and 22 percent have received disability benefits from one or both of the programs.[20] It is remarkable that more than one-third of all divorced spouses had health problems that were severe enough to cause them to apply for disability benefits and that more than one-fifth of all divorced spouses had health problems that were severe enough to meet SSA's definition of disability.[21] Note that persons who experience a disabling health condition after age 64 are not reflected in these disability statistics because such persons would apply for and receive aged Social Security benefits (such as retired-worker benefits) and/or aged SSI payments. Thus, many divorced spouse beneficiaries appear to have had health problems that developed during their working-age years. This could be because the eligibility rules for divorced spouse benefits, in effect, screen out those who were healthy during these years. Divorced persons who were free from health problems during their working-age years probably have robust lifetime earnings and as a result receive only retired-worker benefits rather than divorced spouse benefits. Also, divorced persons who were free from health problems may have found it easier to remarry and as a result receive married spouse benefits in old age rather than divorced spouse benefits. In sum, persons without health problems develop work and/or marital histories that make them eligible for benefits other than divorced spouse benefits.

Interestingly, the ex-spouses of divorced spouse beneficiaries are typical Social Security beneficiaries. For December of 1996, the distribution of primary insurance amounts of the ex-spouses of divorced spouse beneficiaries was basically the same as the distribution of PIAs of the spouses of aged married spouse beneficiaries. The median PIA of ex-spouses was $1,060 and the median PIA of spouses was $1,052. Twenty-five percent of ex-spouses had a PIA below $895 and 25 percent of ex-spouses had a PIA above $1,164. The corresponding figures for spouses of aged married spouse beneficiaries are $886 and $1,154.[22] The ex-spouses of divorced spouse beneficiaries are also typical in that they rarely receive SSI. In December of 1996, only 1.7 percent were receiving SSI, which is comparable to the percentage of spouses of aged married spouse beneficiaries who were receiving SSI (1.6 percent).[23] Their low rate of SSI receipt suggests that the ex-spouses of divorced spouse beneficiaries do not have a high incidence of poverty or low income. Given that their ex-spouses appear to have had typical earnings (the main determinant of a PIA) and do not appear to have low income late in life, it is reasonable to believe that many divorced spouse beneficiaries did not have low family income while they were married.

The adequacy of Social Security benefits received by women has been a policy concern for decades. In the past, concerns over inadequate benefits have led to increases in benefits paid to some beneficiary groups. Legislation enacted in 1972 increased widow(er) benefits substantially. For widow(er)s filing for benefits at age 65, the benefit amount rose from 82.5 percent to 100 percent of the worker's PIA. More recently, legislation in 1983 increased benefits for disabled widow(er) beneficiaries. Disabled widow(er)s now receive 71.5 percent of the PIA regardless of the age at which benefits are first claimed. Prior to the legislation, some disabled widow(er)s received only 50 percent of the PIA (those first claiming benefits at age 50).

Many believe the 50 percent of PIA received by divorced spouses is too low for persons likely to be living by themselves (the 50-percent spouse benefit rate was initially established to *supplement* the larger benefit received by a married worker) and proposals to improve divorced spouse benefits have been made. Here I will consider the likely distributional effects of increasing divorced spouse benefits to 75 percent of the PIA. This would bring the benefit rate, roughly, into line with the rate received by other beneficiary groups composed primarily of unmarried women (such as disabled widow(er)s and child-in-care widow(er)s). The benefit rate would still be below the rate received by aged survivor beneficiaries.

The distributional effects of increasing the benefit rate to 75 percent of the PIA are measured by calculating (approximately) the additional benefits that would have been received by CPS respondents, net of any SSI offsets, had the law been in effect in the years preceding the CPS interviews, and by determining the percentage of these net additional benefits that would have been received by those with before-tax family cash income (prior to receiving the additional benefits) below specified levels. The gross additional benefits are calculated by multiplying the current-law benefits received in the year prior to the CPS by 0.5.[24] If the annual amount of SSI payments (as reported in the survey) is greater than gross additional benefits, then net additional benefits are zero. Otherwise, net additional benefits are equal to gross additional benefits minus the annual amount of SSI payments received. Under current law, a person's SSI payments decline, dollar for dollar, as Social Security benefits increase. A person who receives an additional $1,000 in Social Security and who loses $1,000 in SSI has no net additional benefits and there are no net Government expenditures.

Using the 1991 CPS, 30 percent of the net additional income to divorced spouses would have been received by those with income below the poverty level, 48 percent by those below 150 percent of the poverty level, and 80 percent by those below 291 percent of the poverty level (one-half of persons in the United States had family cash income (before taxes) below 291 percent of the poverty level based on the 1991 CPS). Using the 1994 CPS, 24 percent of the net additional income would have been received by the poor, 45 percent would have been received by those with income below 150 percent of the poverty level, and 66 percent would have been received by those with income below 278 percent of the poverty level (one-half of persons in the United States had family cash income (before taxes) below 278 percent of the poverty level based on the 1994 CPS). In 1991, the poverty rate for divorced spouses would have been lowered from 33.46 percent to 20.82 percent as a result of the reform. In 1994, the poverty rate would have dropped from 29.58 percent to 11.44 percent.[25]

There are a number of caveats that should be made regarding the estimates of distributional effects. First, the calculations of the net benefits are approximate. Second, no behavioral responses to the reform were modeled. Third, only before-tax cash income was used as the basis for determining the distributional effects. For those with high income, some Social Security income is subject to the Federal income tax (see U.S. Social Security Administration 1996 for details). Thus, it is possible a larger percentage of the net benefits of the reform would actually be received by persons with low income because those with high income (and high marginal tax rates) would have much of their new Social Security income returned to the Government via the Federal income tax. On the other hand, increased cash income from the reform will cause low income beneficiaries to lose some of their food stamps and housing subsidies (unlike SSI, however, a dollar increase in cash income does not lead to a dollar decline in food stamps or in a housing subsidy). A final caveat is that only divorced spouse beneficiaries under current law were used in the analysis. If the percentage of the PIA provided to divorced spouses increased to 75, there would be additional divorced spouse beneficiaries who under current law receive only primary benefits. Regarding this last issue, however, note that divorced women aged 62 or older who receive only primary benefits have a relatively high incidence of poverty. Using the matched March 1991 CPS data, 23.71 percent of these beneficiaries were found to be poor. The corresponding figure from the 1994 data is 23.33 percent (standard errors of the 1991 and 1994 estimates are 2.44 and 2.13). It is members of this group that would likely become divorced spouse beneficiaries with a change in the law and, given the relatively high incidence of poverty among members of this group, the distributional effects may not be too different from those estimated here.

One issue that arises in any discussion of increasing divorced spouse benefits is the effect such an increase would have on marriage and divorce decisions. Specifically, some policymakers fear raising divorced spouse benefits would encourage divorce relative to the current law. A few observations regarding this issue are warranted. First, even if divorced spouse benefits are increased to 75 percent of the PIA, Social Security could still be thought of as being neutral with regard to marriage and divorce decisions. From the perspective of economic well-being, married spouses do not receive 50 percent of the PIA but, rather, share 150 percent of the PIA with the worker. A wife, for example, considering divorce chooses not between 50 percent of the PIA and 75 percent of the PIA (under the reform benefit) but rather between sharing 150 percent of the PIA with her husband or receiving 75 percent on her own. Another point to make is that, *under current law*, some individuals can receive higher individual benefits if they divorce. Widow(er)s who remarry prior to age 60 are ineligible to receive widow(er) benefits so long as their subsequent marriages remain intact. Divorce from the subsequent marriage partner may increase an individual's benefit substantially. In the case of remarried widow(er)s, a benefit structure was designed that in effect treated any incentive to divorce as a secondary concern. Finally, it seems unlikely that an increase in divorced spouse benefits would encourage young or middle aged persons to divorce because such individuals may not be aware of the detailed provisions of a retirement system and because near-term financial, emotional, and other issues are likely to be more important than concerns over benefit amounts received many years in the future. Many policymakers are concerned especially with divorce among young or middle aged persons because of the possible adverse consequences for young children. In this regard, the effects of this Social Security reform may be modest.

VI. Conclusion

A major contribution of this article is that the economic circumstances of many beneficiary groups have been carefully documented. The economic well-being of beneficiaries was assessed using cash income as well as a more comprehensive measure of income. A special effort was made to accurately measure a fundamentally important component of either income measure, namely, Social Security income. The records of the Social Security Administration were primarily used for the measurement of this source of income rather than the survey responses. The matched SSA records were also used to gauge whether the study samples were representative. To help judge the precision of the estimates, standard errors were constructed directly from the CPS.

Economic well-being varies sharply by type of benefit. Two large beneficiary groups—retired workers and aged married spouses—have a low incidence of poverty and of low comprehensive income. Other beneficiary groups, composed mainly of unmarried women and disabled persons, are not as well-off. Proposals to change the structure of the Social Security programs should perhaps be shaped in ways that leave potentially vulnerable beneficiary groups protected.

Divorced spouse beneficiaries were found to be atypical beneficiaries in several respects. They have a very high incidence of poverty and of low comprehensive income. A relatively large percentage of these beneficiaries appear to have suffered disabling health conditions prior to old age. Despite these adverse outcomes, divorced spouses may not have always been in unfortunate circumstances. The ex-spouses of these beneficiaries do not appear, generally, to have low economic status, suggesting many divorced spouses may have enjoyed a high standard of living while married. Divorced spouse benefits are low and, unlike in the case of married spouse benefits, there is no reason to believe family benefits are high. A proposal to increase divorced spouse benefits was analyzed. Results indicate a substantial portion of the increased Government expenditures would be received by those with low income and a large majority would be received by those with income below the national median.

Notes

[1] The various types of Social Security benefits will be discussed in detail in the next section of this article. Note that marital status does not necessarily determine the type of benefit a person receives from Social Security. For example, a married woman might receive a retired-worker benefit rather than a wife benefit.

[2] Net worth is defined as financial assets plus equity in homes, motor vehicles, businesses, and real estate. Grad adjusts household net worth for household size. Also, she presents median values for net worth other than home equity, and for financial assets only. The median value of household financial assets for disabled-worker beneficiaries was about 1 percent of the median value for retired-worker beneficiaries or for aged wife beneficiaries, which is a remarkably low figure. A comparable figure was found for the median value of household financial assets for child beneficiaries relative to the median value for retired-worker beneficiaries or for aged wife beneficiaries.

[3] A person achieves insured status by working enough in Social Security covered employment. There are three types of insured status (fully insured, disability insured, and currently insured). No primary or secondary benefit can be paid unless the worker, on whose earnings record the benefit is to be based, has the appropriate insured status. Which status is appropriate depends on the type of benefit and is not discussed here. Persons will simply be referred to as insured, without being more specific. See Myers (1993) for a detailed discussion of insured status.

[4] Divorced persons who survive their ex-spouses can also qualify for child-in-care benefits or disabled survivor benefits. There are too few of these beneficiaries in the CPS to examine these groups separately and for the purposes of this article they are combined with child-in-care widow(er)s and disabled widow(er)s.

[5] A widow(er) or a surviving divorced spouse may have his or her benefit capped at an amount below the PIA if the deceased insured person received retired-worker benefits before the NRA. A widow(er), a surviving divorced spouse, or a disabled widow(er) has his or her benefit increased if the deceased insured person earned credits for delaying retirement past the NRA.

[6] In a few cases, marriage does not prevent payment of these secondary benefits. See U.S. Department of Health and Human Services (1993) for details.

[7] Having a benefit in current-payment status for December means the beneficiary is due to receive a benefit for December. The benefit check for December is sent in early January. Samples of persons who have benefits in current-payment status for December are selected so that a comparison of characteristics of CPS samples to characteristics of the overall beneficiary population can be made. Characteristics of the overall beneficiary population can be measured using SSA's 10-percent file. This file, which contains benefit records of persons in current-payment status for December of each year, is discussed later in this article.

[8] The 10-percent file contains 10 percent of all Social Security benefit records and is used to produce many statistics published in SSA's *Annual Statistical Supplement* to the *Social Security Bulletin.* Even for the smallest benefit group (disabled widow(er)s), the 10-percent file has several thousand records and thus statistics from this file are likely to have only a small amount of sampling error. Only benefit records for persons living in the 50 States or the District of Columbia are used. The purpose of table 1 is to compare results from the 10-percent file to results from the CPS and only residents in the 50 States or the District of Columbia are eligible to be included in the CPS. Also, benefit records for those known to be institutionalized are excluded because only members of the noninstitutionalized population are interviewed for the CPS. It should be noted that SSA's records indicate whether a person is institutionalized only if a representative payee has been established for the person. It is likely that many institutionalized persons do not have representative payees and thus the statistics in table 1 from the 10-percent file are partly based on information from benefit records of the institutionalized.

[9] For the purposes of table 1, the MBA from the 10-percent file is actually the "monthly benefit credited" whereas the MBA from the matched CPS file is the "monthly benefit amount." The difference between a beneficiary's monthly benefit credited and monthly benefit amount is due to rounding and is insignificant. SSA's *Annual Statistical Supplement* to the *Social Security Bulletin* contains a discussion of the difference between the two in the glossary section under "Monthly benefit amount" (U.S. Social Security Administration 1996).

[10] For a dually entitled beneficiary in a CPS sample or in a 10-percent sample, the benefit amount for the purposes of table 1 is, generally, the primary benefit plus the partial secondary benefit. However, if the primary benefit and the secondary benefit are paid through different trust funds, then the benefit amount is the primary benefit only.

[11] Differences in the age distribution of a CPS sample and a 10-percent sample might cause a difference in the percentage who receive SSI because beneficiaries under age 65 do not meet the age eligibility requirement of SSI. Also, SSI cannot be received by some institutionalized beneficiaries and, as discussed earlier, some benefit records in the 10-percent file are those of institutionalized persons. This could cause the percentage who receive SSI in a 10-percent sample to be lower than in a CPS sample.

[12] Child-in-care spouse beneficiaries who are initially entitled to Social Security after age 61 are removed from the CPS samples. Most likely, these persons are actually aged spouse beneficiaries. Errors in benefit type for persons in the matched CPS samples can occur because the benefit records were extracted after the surveys and benefit type for the time periods December 1990 and December 1993 had to be reconstructed based on data elements in the benefit records. Sometimes these data elements are incorrect. The 10-percent file does not suffer from this problem because the data were actually extracted in December 1990 and December 1993.

[13] The percentage who receive SSI is not likely to be a very general measure of the economic status of child-in-care spouses or child-in-care widow(er)s because these beneficiaries are typically younger than age 65 and are unlikely to be eligible for SSI. Because of this, the percentage who receive SSI is not presented for these two groups.

[14] Surviving divorced spouses may have a high rate of institutionalization because they are likely to be of an advanced age (they have outlived their ex-spouses) and may not have family members to rely on in the event of health problems. Also, as discussed later in this article, divorced spouse beneficiaries (who become surviving divorced spouse beneficiaries when their ex-spouses die) seem to have an unusually high incidence of health problems.

[15] About 18 percent of disabled adult child benefit records were excluded from the 1990 10-percent sample when preparing statistics for table 1 because the records were for institutionalized beneficiaries. Among disabled adult child beneficiaries in the 1990 10-percent sample who were known to be in institutions, 25 percent received SSI. Forty-six percent of disabled adult child beneficiaries not known to be in institutions in the 1990 10-percent sample received SSI. Similar results were found in the 1993 10-percent sample. These findings suggest that this group has a high rate of institutionalization and that those in institutions are less likely to receive SSI.

[16] Note that the median values of RATIO for the Nation and the LOWCOMP cutoffs were calculated using CPS data exclusively (no Social Security administrative records were used). A beneficiary's value of RATIO is calculated using a combination of survey and administrative records.

[17] The results for the overall U.S. population were calculated using CPS data only (no Social Security administrative records were used). Underreporting of income in the CPS may cause these estimates of low income to be too high. The results regarding beneficiary groups are less susceptible to this because a major source of family income (Social Security) was taken from administrative records.

[18] I calculated this statistic and others presented in the first two paragraphs of this section using 1-percent samples from SSA's administrative records. The statistics reflect conditions as of December 1996.

[19] SSI disability statistics for married spouse beneficiaries are not presented for purposes of comparison. SSI is a means-tested program and married spouses, a group that tends to have high income, may have had little contact with the program regardless of their health circumstances.

[20] Because of data limitations, the 22-percent figure does not include a presumably small number of divorced-spouse-only beneficiaries (that is, not dually entitled) who have received Social Security disability benefits (those not dually entitled are unlikely to have been disability insured). Also, note that there are some dually entitled divorced spouses who have received SSI disability payments at some point but have never received Social Security disability benefits. Presumably, these individuals, who are fully insured, did not have disability insured status under Social Security at the time of their disablements.

[21] A person without a health problem, of course, might apply for a disability benefit. Generally, though, even applicants who are denied benefits are likely to have health problems (the health problems are just not severe enough to meet SSA's definition of disability). See Lahiri, Vaughan, and Wixon (1995) for descriptive statistics, by denial status, on survey-reported health measures for a sample of disability applicants.

[22] The statistics on PIAs are for those receiving Social Security benefits. Some ex-spouses of divorced spouse beneficiaries (fewer than 8 percent) were not receiving benefits. This occurs because the law allows divorced spouses to claim benefits even if their ex-spouses have not yet filed for benefits.

[23] The statistics on SSI are for those who are receiving Social Security benefits and who, because of age or disability, are potentially eligible for SSI. Eighty-eight percent of ex-spouses of divorced spouse beneficiaries and 95 percent of spouses of married spouse beneficiaries meet these conditions.

[24] This is an approximation of the gross additional benefits that would be received. For a current-law divorced spouse, the monthly benefit amount is approximately equal to k*0.5*PIA where k is a number, ranging between 0.75 and 1, that depends on when benefits were first received (this is an approximate amount because dually entitled persons who first claim benefits before the normal retirement age receive a slightly different age-at-first-receipt adjustment for part of their benefits and because some beneficiaries—those who have substantial earnings or those who are subject to the Government Pension Offset—have other adjustments made). Under the reform benefit, the MBA would be approximately equal to k*0.75*PIA. The difference between the two amounts is equal to k*0.25*PIA or the current-law benefit multiplied by 0.5.

[25] Some divorced spouses would lose their eligibility for Medicaid as a result of increased cash benefits, unless legislation was enacted to prevent this from occurring. When benefits were increased for disabled widow(er)s in 1983, legislation was enacted that preserved Medicaid eligibility for those receiving disabled widow(er) benefits at the time of the increase.

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Appendix I: The Use of Administrative Records to Measure Family Social Security Income

Generally, a person's Social Security income in the calendar year before his or her CPS interview is taken directly from the benefit records maintained by SSA. In a relatively small number of cases, Social Security income had to be taken from the CPS record. For example, consider a woman in the March 1991 CPS who provides her Social Security number (SSN) and who is married to a man for whom no SSN is available. Her Social Security income for 1990 will be taken from SSA's administrative records. For purposes of calculating family Social Security income, however, her husband's Social Security income will have to be taken from his person record in the CPS because no administrative record was matched for him. This issue is not of great importance. Ninety-seven percent of the beneficiaries from the March 1991 CPS who are studied in this article live with no family members or reside in families where each family member aged 15 or older provided a SSN. The corresponding figure for the March 1994 CPS is 93 percent. For the 3 percent of March 1991 records and the 7 percent of March 1994 records where SSNs are missing, some double counting of Social Security could occur. In the previous example, if the wife combines her Social Security income and her husband's Social Security income into one amount and reports in the CPS the combined amount as the husband's income, then there would be double counting because her income would be included in the CPS amount for the husband *and* taken from her administrative records. Another approach, which would circumvent the small amount of double counting that might occur, is to use survey reports of Social Security for all family members when one or more persons aged 15 or older in the family did not report a SSN. As a test, this approach was taken for the March 1994 CPS and results from this approach were the same as those reported in this article or only slightly different.

If a respondent provided a SSN and SSA has no record of a benefit being paid, then the person's Social Security income is estimated to be zero regardless of whether the person reports Social Security income in the survey or not. This approach is in keeping with using SSA's records to determine Social Security income. There is one exception, however. If a person aged 15–19 reports receiving some Social Security income but SSA does not have a record of benefits being paid, the person's survey income is used (this is done in only a handful of cases). This approach was taken because in a very small minority of cases beneficiaries in this age range do not have their own SSNs recorded in the benefit records and thus would not be found in SSA's system even though they provided SSNs. For beneficiaries over age 19, this problem is practically nonexistent and SSA's records can be relied on completely.

Because SSNs were not collected in the CPS files for children under age 15 (hereafter referred to as minors), additional work was necessary to measure the Social Security income of minors. Each benefit record maintained by SSA has an account number and contains information on all benefits associated with a given earnings record. For example, if a widow and her minor child each receive a benefit based on the deceased husband's earnings record, then SSA will have one record in its system with information on both the widow's and the child's benefit. If such a widow provides a SSN in the CPS, then SSA would find the one record and benefit information on both the widow and the child would be available. Generally, then, if a person in the CPS provides a SSN and the person shares an account number with a minor, it is possible to retrieve benefit information on the child. Benefit information on a minor is used to construct family Social Security income if the person who provided the SSN is related to and living with a minor (at the time of the survey) whose survey-reported age matches (approximately) the age recorded for the minor in SSA's benefit record.[1] The requirement that there be an age match between the survey and the benefit record is imposed so that I can be reasonably confident that the administrative-record income of a minor actually pertains to someone in the family at the time of the survey.[2]

Some families are composed of children who receive Social Security benefits and adults who do not. Benefit information cannot be found for these child beneficiaries because the SSNs of the adult family members will not be associated with the benefit account numbers of the children (or any benefit account number for that matter). This is not a concern for the purposes of this article because the focus is on family income for families where there is an adult beneficiary (the 10 beneficiary groups examined in this article are all adult beneficiary groups). Even in adult beneficiary families, it is possible that there is a child beneficiary who has an account number that is different from all the adult beneficiaries in his or her family. For example, an orphaned child beneficiary may begin residing with an uncle who receives a retired-worker benefit on another account number. These cases, however, are rare[3] and, generally, for adult beneficiaries in the CPS it is possible to measure family Social Security income (including the income of minors) using the administrative records.

There is a conceptual difference between survey-reported Social Security income and administrative-record income from the matched SSA records. The matched SSA records were extracted from SSA's benefit record system a few years after the surveys had been concluded.[4] Information on past benefit amounts is available but the amounts reflect what should have been paid for a given period. For example, if it was found in 1991 that SSA underpaid a beneficiary during all or some of the months in 1990, the beneficiary might receive a retroactive benefit payment in 1991 to correct the underpayments in 1990. Once SSA corrected the problem through the retroactive benefit payment, the administrative records would be adjusted to show that the person received all the benefits they were due for 1990. However, the person would have actually received some portion of benefits in 1991 (the retroactive payment) and presumably would not report this amount in a survey, such as the March 1991 CPS, that asks about Social Security income received in calendar year 1990. Overpayments by SSA in a given period may lead to withholding in a later period, again leading to a conceptual difference between the survey measure of benefits and the administrative-record measure of benefits for a given period. In the large majority of cases, though, the survey and the administrative records will be conceptually consistent.[5] In any event, SSA's records reflect a valid concept of Social Security income even if it is not, in every case, the same concept as that of the survey.

Appendix I. Notes

[1] There is an approximate age match if the survey-reported age equals the age on the administrative record, or is different by no more than 1 year.

[2] It is possible in some cases that an age match exists even though the child in the survey and the child on the benefit record are not the same, which could lead to mismeasurement of Social Security income. There is reason, however, to believe that this does not occur frequently. The benefit record and the survey record contain the child's sex (which was not used to establish a match). Note, for some unknown reason, SSA's benefit records for children aged 18 or younger appear to have sex recorded accurately only if the benefit record indicates the child is a female (this is based on examination of matched 1991 CPS records for children aged 15–18, who provided SSNs). For minors (persons aged 14 or younger) who had an age match and who had sex coded as female in the benefit records, I examined the survey records to determine if sex was generally reported as female. In almost all cases, it was. Data limitations

prevent validating all matches but the results for females indicate the age matching is linking survey children with the appropriate benefit records.

[3] For the 1990 Survey of Income and Program Participation, there was an attempt to obtain SSNs for all respondents, including minors. Using these SSNs, the Social Security Administration and the Bureau of the Census exactly matched SSA's administrative records to the SIPP. Thus, the matched SIPP offers an opportunity to examine how common it is for adult beneficiaries to live in households where there is at least one minor child beneficiary who does not share an account number on a benefit record with someone in the household aged 15 or older. I have made tabulations from the matched SIPP that indicate this occurs in only a handful of cases. The weighted total of persons receiving primary, spouse, survivor, or disabled adult child benefits (these are the adult beneficiaries examined in this article) in the matched SIPP is 34.3 million. Only about 44,000 of these beneficiaries (13,000 retired workers, 8,000 aged spouses, 14,000 disabled workers, and 8,000 aged widow(er)s) are estimated to reside in households where a minor child beneficiary does not share an account number on a benefit record with someone in the household aged 15 or older. Some minor child beneficiaries did not provide SSNs and thus are not reflected in these results. However, a large majority did (the weighted total of minor child beneficiaries who provided SSNs in the SIPP is 83 percent of the total number of minor child beneficiaries according to SSA's records) and thus these SIPP-based results are fairly complete. In addition, minor child beneficiaries who did not provide SSNs are likely to be on the account numbers of adult household members. For a special matched SIPP file, SSA looked for child beneficiaries who did not provide SSNs using the account numbers of adult household members. When these child beneficiaries were added, the weighted total of child beneficiaries in the SIPP was about the same as the total from SSA's records.

[4] Because of an unusual software problem, administrative-record income for some disabled widow(er)s had to be estimated using data actually extracted during the calendar years preceding the CPS interviews.

[5] Some of SSA's records reflect what happened for a particular month, not what should have happened. Every month, data elements from a 1-percent sample of benefit records are written out and stored by SSA. These records reflect what happened for a particular month and are not subject to later revision by SSA due to underpayments and overpayments. For March 1994 CPS respondents who are part of the 1-percent sample, a comparison was made between benefit amounts recorded in the 1-percent files and the benefit amounts recorded in the revised records (which reflect what should have been paid). The sample was restricted to respondents who received benefits in calendar year 1993 according to one or both types of records. For 84 percent of the sample respondents, the total amount of benefits received in 1993 in the 1-percent records was the same as the amount in the revised records. For an additional 11 percent, the ratio of the amount in the 1-percent records to the amount in the revised records was between 0.9 and 1.1. Thus, the two types of records generally yield exact or similar amounts.

Appendix II: Standard Errors and Confidence Intervals

Some of the estimates presented in this article are based on small samples.[1] With a small sample, there is an increased risk that the estimate from the sample differs greatly from the value that would have been obtained had the entire population been interviewed. Standard errors of the sample estimates are calculated and presented so that some judgment can be made about the reliability of the estimates.

The sample design of the CPS is complex and standard error formulas that apply to simple random samples are inappropriate. Standard errors presented in this article are calculated using a method referred to as the jackknife. The application of the jackknife method in the calculation of standard errors for CPS-based estimates is described in Scheuren (1973) and Wolter (1985). The basic idea is to create subsamples from the overall CPS sample using the eight rotation groups in the CPS and to use the variability of the estimates from the subsamples to determine the variability associated with the estimate from the overall sample. There are potentially important problems associated with using jackknife standard errors for CPS-based estimates because they can be biased upward or downward and can be unstable (these issues are discussed by Scheuren). However, this approach or slight variants of this approach are the only direct ways of calculating standard errors using public-use CPS data. At the end of this appendix, I offer some evidence that the jackknife method is unlikely to yield misleading standard errors.

The standard errors shown in table 2 of the article can be used to calculate approximate confidence intervals for the estimated percentages with low income. To calculate a 90-percent confidence interval, first calculate an amount equal to 1.645 multiplied by the standard error. The lower bound of the confidence interval is determined by subtracting this amount from the estimate of the percentage with low income and the upper bound of the interval is determined by adding this amount to the estimate. For example, as reported in table 2, the estimate of the percentage of divorced spouses who are poor in 1990 is 33.46 and the standard error of this estimate is 4.36. Thus, a 90-percent confidence interval for the percentage of divorced spouses in poverty is 26.29 to 40.63.

The standard error of a difference between two estimates depends on the standard errors of the two estimates and the sample covariance of the two estimates. Under the assumption that the covariance is zero, the standard error of a difference between two estimates can be calculated by squaring the standard errors of the two estimates, summing the squared errors, and then taking the square root of the sum. For example, the estimated percentage of retired workers who are poor in 1990 is 7.58 and the standard error of the estimate is 0.54. The estimated difference in the percentage of divorced spouses who are poor and the percentage of retired workers who are poor is 25.88 and the standard error of this difference is 4.39.

The covariance will not be zero when the sample design causes the two estimates to be related. For example, the estimate of percentage poor for aged spouse beneficiaries is probably related to the estimate for retired-worker beneficiaries because the aged spouses in the CPS sample are married to retired workers in the CPS sample. If the covariance is positive and one ignores it in the calculation of the standard error of a difference, then the calculated standard error will be conservative, that is, larger than it really is. In many cases, though, it is reasonable to believe the covariance is small or zero in which case the standard error of a difference can be calculated using the standard errors of the two estimates.

Under an assumption of zero covariance, the standard error of an average of two estimates (that is, one-half of one estimate plus one-half of another estimate) can be calculated by multiplying each standard error by one-half, squaring each resulting amount, summing the squared amounts, and then taking the square root of the sum. The standard errors for the averages reported in table 2 are calculated in this manner. The assumption of zero covariance is valid in these cases because the averages are of estimates from two CPS files where the samples do not overlap (that is, persons in the March 1991 CPS are generally not in the March 1994 CPS).

As a test of whether the jackknife standard errors presented in this article are likely to be misleading, I compared jackknife standard errors with standard errors from the Bureau of the Census for 57 demographic groups. The Bureau's standard errors were calculated directly from its internal-use CPS files by its Office of the Director. The demographic groups were defined by single year of age, marital status, and sex. They were selected so that each group would have a fairly small sample size in a given CPS (between 50 and 150 observations) and so that each group would be composed of older persons (aged 50 or older). Eleven groups are composed of married persons, 21 are composed of widow(er)s, and 25 are composed of divorced persons. Eighteen groups are composed of males and 39 are composed of females. Estimates of percentages with income below 150 percent of the poverty level and estimates of standard errors were calculated for the 57 groups, using the March 1991 CPS and the March 1993 CPS (the internal-use CPS file for March 1994 was not available for the purpose of comparing standard errors). The average percentage with low income and standard errors of the average were calculated for each group. For the 57 groups, the median ratio of the jackknife standard error to the Census standard error was 0.98. The jackknife method rarely yielded a standard error that was below 70 percent of the Census standard error (this occurred for only three groups). Thus, for average percentages, such as those reported in the last two columns of table 2, the jackknife method appears to produce reasonable standard errors, even for small samples. The results were not too different when jackknife standard errors of percentages from a single CPS file (as opposed to standard errors of average percentages based on two files) were compared to the corresponding Census standard errors.

Appendix II. Note

[1] The smallest sample used for this article is the disabled widow(er)s sample from the March 1991 CPS, which is composed of 52 individuals.

Appendix II. References

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