

The Distribution of OASDI Taxes and Benefits by Income Decile

*by David Pattison**

On average, persons receiving Social Security benefits tend to have lower current incomes than do persons paying Social Security taxes. This article documents OASDI's income distributional patterns by dividing the 1992 Current Population Survey population into 10 income deciles and tabulating benefits received and taxes paid by each decile. The benefits and taxes, when compared with non-Social Security income, are progressive: as income rises from decile to decile, the ratio of benefits to income falls, and, except at the highest deciles, the ratio of taxes to income rises.

A large component of the current income distributional pattern is associated with age: the young on average receive more income and pay more taxes; the old on average receive more benefits. However, when benefits and taxes are tabulated for income deciles within specific age groups, a general progressivity is still observable, although it is weaker than that for the population as a whole.

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This article presents tabulations of the distribution by income decile of taxes and benefits in 1992 under the Old-Age, Survivors, and Disability Insurance (OASDI) programs. Looking at the population as a whole, average taxes and the share of aggregate taxes paid increase at higher income deciles; tax as a percent of income increases with income except at the highest decile. Average benefits and the share of aggregate benefits received decrease with income except at the highest decile; the benefit as a percent of nonbenefit income decreases steadily with income. Even within specific age groups, there is still a tendency for taxes as a percent of income to increase at all but the highest income levels and for benefits as a percent of income to decrease.

Under OASDI, workers pay contributions in the form of payroll taxes during the years in which they are active members of the labor force. The disability insurance contributions and the old-age and survivors insurance contributions are pooled in their respective trust funds and go toward paying disability benefits to disabled workers and their families, old-age benefits to retired workers and their spouses, and benefits to the survivors of deceased workers. Because OASDI contributors must have earnings, and because OASDI beneficiaries tend to have no earnings or only low earnings, it is expected that contributors on average will have higher incomes than will benefit recipients. The purpose of this article is to document the extent to which OASDI taxes do in fact tend to come from those with high current incomes and OASDI benefits tend to go to those with low current incomes. The distributional pattern is examined by dividing the population into income deciles—10 equally sized groups classified by income—and tabulating OASDI taxes and benefits by decile.

The pattern of the distribution of taxes and benefits between deciles is expected to have a strong association with age: taxes are paid almost entirely by nonelderly workers, found disproportionately in the upper income deciles, while benefits are received mainly by elderly retirees, a group found

disproportionately in the lower income deciles. The net transfer under OASDI from upper income deciles to lower income deciles is thus strongly associated with a transfer from younger persons to older persons in the population. To shed additional light on these distributional patterns, the distribution of OASDI taxes and benefits by income is also tabulated within specific age groups.

The focus of this article is on current redistributive patterns of Social Security, using data on one year's taxes and benefits. Social Security also has important lifetime redistributive aspects; the data used here are of limited relevance for the examination of lifetime redistributions.

Method

The estimates used in this article have been developed from a Bureau of the Census survey file, the March Current Population Survey (CPS), which contains information for the preceding year on earnings, Social Security benefits, and other sources of income (like interest and pension income) for each person in the survey population aged 15 or older.¹ The tabulations in this article are based on the March 1993 CPS survey for income in 1992. The CPS is used, rather than Social Security administrative data, because Social Security administrative data do not contain information on family income for OASDI taxpayers and beneficiaries.

OASDI benefits are one of the types of income surveyed in the CPS. OASDI taxes, on the other hand, are not directly elicited in the survey, but have to be simulated from survey information on wages and self-employment earnings. Using Social Security rules in effect in 1992 for maximum taxable earnings and OASDI tax rates, an OASDI tax is simulated for each earner in the CPS.² The OASDI tax includes both the employee and the employer shares.³

Several income concepts are used in the article. "CPS income" refers to the Census money income concept used on the CPS, but with some adjustments.⁴ Some of the tables use a concept of income before OASDI taxes and transfers, or "pre-OASDI income," equal to CPS

income, minus benefits, plus the employer's share of the OASDI tax. For beneficiaries who do not work, pre-OASDI income is CPS income minus the OASDI benefits. For wage and salary workers with no benefits, pre-OASDI income is CPS income plus the employer's share of the OASDI tax. For self-employed workers with no benefits, pre-OASDI income is equal to CPS income. In chart 1, a "post-OASDI" income concept is also used, equal to CPS income minus, for workers, the employee share (and for self-employed workers, the whole share) of the OASDI tax.

There are two ways in which these concepts of income are tabulated: First, "person income" is calculated from each person's income on the survey file, except for members of married couples, whose person income is set equal to half the couple's combined income. (OASDI taxes, similarly, are shared between couples in the person income tabulations.) Second, "family income" is calculated as the sum of the income of persons in the survey family.

For each income concept, 10 income deciles are determined. The family CPS income deciles are calculated by ranking families according to CPS income (Census "unrelated individuals" are counted as families) and determining the nine income percentiles—the 10th percentile, the 20th percentile, and so on, up to the 90th percentile—that divide the families into 10 groups with equal numbers of families. All families with income less than the 10th percentile are in the bottom decile, all families with income between the 10th and 20th percentile are in the second decile, and so on. Family pre-OASDI income deciles are determined the same way, reranking the families by pre-OASDI family income and determining the 10th through 90th percentile pre-OASDI income amounts that divide the reranked families into 10 equal groups.

For the person-based CPS income, pre-OASDI income, and post-OASDI income deciles, similar procedures are followed, except that persons, rather than families, are ranked by person income, and the 10th through 90th percentiles are calculated to divide the population into 10 groups with equal numbers of persons.⁵

Distribution by Family Income Deciles Across All Ages

The tabulation by decile of CPS family income of OASDI taxes, benefits, and benefits net of taxes is shown in table 1. In this and the following tables the first (poorest) decile is shown on top, and the 10th (richest) decile is shown on the bottom: income goes up reading down the table. The first column shows the incomes that were calculated to define each decile. The second and third columns show the estimated aggregate OASDI taxes coming from each decile and OASDI benefits going to each decile; the fourth column shows the benefits net of taxes going to each decile. For the population as a whole, more OASDI taxes were paid than benefits received, but for the bottom 6 deciles more benefits were received than taxes paid. Aggregate taxes paid (column 2) rise with each decile. Aggregate benefits received (column 3) rise through the 5th decile and fall from the 5th through the 10th decile. Benefits net of taxes (column 4) rise through the third decile and fall through the remaining deciles.

Table 1 shows the percent shares by decile of taxes and benefits in columns 5 and 6. The share of taxes rises across the deciles, from 0.5 percent in the bottom decile to 28.0 percent in the top decile. This strong rise is attributable to a strong association between earnings and income combined with the uniform tax rate on earnings for all earnings less than the maximum taxable earnings.⁶ The decile distribution of OASDI benefits has no such pattern. Above the bottom decile, which receives 2.6 percent of aggregate OASDI benefits, the percentage share of benefits rises and then falls.

The average taxes and benefits in each decile are shown in table 1, columns 7 through 9. The averages are taken for all families in each decile, including those who do not pay taxes or receive benefits; the average taxes and benefits shown in the table are therefore lower than if the averages were taken only among families with nonzero taxes or benefits. Because the deciles are calculated to have the same number of families in each decile, the

averages in columns 7 through 9 are proportional to the aggregates in columns 2 through 4 and the percent distributions in columns 5 and 6.

Columns 10 through 12 of table 1 give the OASDI taxes, benefits, and benefits net of taxes as percents of CPS income. These measures can be used as indications of the progressivity of the taxes and benefits in the context of one year's taxes and benefits. If the ratio of tax to income rises as income rises, the tax is called *progressive*; if the ratio falls as income rises the tax is called *regressive*, and if the ratio stays the same, the tax is called *proportional*. The OASDI tax (column 10) is progressive as income rises from the 1st through the 9th deciles, and is regressive between the 9th and 10th deciles.⁷ The overall progressivity of the OASDI tax is attributable to the growing proportion of earnings in income as income rises. Many of the families in the bottom deciles have no earnings and therefore pay no OASDI taxes.

One of the characteristics of a progressive tax system is that after-tax income will typically be more equally distributed, by some commonly used measures of income inequality, than before-tax income. A proportional tax would have no effect on the inequality of the income distribution, and a regressive tax would leave after-tax income less equally distributed. The concept of

progressivity can be extended to benefits by noting that if the ratio of benefits to income falls (rather than rises) as income rises, after-benefit income will be more equally distributed than before-benefit income. In this article, the term *progressive* will accordingly be applied to benefits when the ratio of benefits-to-income falls as income rises. According to table 1, column 11, the percentage ratio of benefits to income does fall from the 2nd through the 10th deciles. Over most of the income distribution, therefore, benefits can be considered progressive, supplementing the progressivity of the OASDI taxes.

The progressivity of combined OASDI benefits and taxes is measured using the ratio of benefits net of taxes to income. To be considered progressive, this ratio should fall as income rises. (It is possible for either the taxes or the benefits, but not both, to be regressive and yet for the combination, that is, the benefits net of taxes, to be progressive.) Column 12 of table 1, showing net benefits as a percent of family income, indicates that net benefits fall as a percent of income from the second through the ninth deciles, that net benefits as a percent of income are higher in the first decile than in any of the top seven deciles, and that net benefits as a percent of income are lower in the top decile than in any of the bottom eight deciles. On the whole,

therefore, combined OASDI taxes and benefits are progressive, although at the level of detail given by the decile-to-decile picture there is a lack of progressivity going from the 1st to the 2nd decile and from the 9th to the 10th decile.

The paucity of OASDI benefits in the bottom decile is attributable to Social Security's success at keeping OASDI beneficiaries out of extreme poverty. Because entitlement to Social Security tends to lift families out of the bottom decile, the bottom decile is populated largely by families not eligible for Social Security benefits.

A more useful picture, perhaps, is gained by classifying families according to their pre-OASDI income, which is slightly higher than CPS income for workers (because of the inclusion of the employers' share of payroll taxes) but lower than CPS income for beneficiaries (because of the exclusion of benefits). The results of tabulating OASDI taxes and benefits according to pre-OASDI income deciles are shown in table 2. For the distribution of taxes (column 5), the picture is little different from that of table 1. For the distribution of OASDI benefits, however (column 6), the picture is strikingly different. The bottom decile now receives 24 percent of aggregate benefits, and the percentage declines through the higher deciles except for a slight rise in the top decile. The bottom

Table 1.—OASDI taxes and benefits, by family income decile

Decile	Decile income range (1)	Aggregate amounts					Average amounts			As percent of family income		
		Billions of dollars			Percent distribution by decile		Taxes (7)	Benefits (8)	Net benefit (9)	Taxes (10)	Benefits (11)	Net benefit (12)
		Taxes (2)	Benefits (3)	Net benefit (4)	Taxes (5)	Benefits (6)						
Total.....	...	\$311.1	\$286.0	-\$25.1	100.0	100.0	\$2,823	\$2,595	-\$228	8.0	7.4	-0.6
Bottom.....	\$1-\$6,262	1.5	7.4	5.9	.5	2.6	137	671	533	4.3	20.9	16.6
2nd.....	\$6,263-\$10,527	4.7	32.3	27.5	1.5	11.3	427	2,910	2,484	5.1	34.6	29.6
3rd.....	\$10,528-\$15,199	9.2	37.2	28.0	3.0	13.0	844	3,406	2,563	6.6	26.5	19.9
4th.....	\$15,200-\$20,321	14.6	37.8	23.2	4.7	13.2	1,325	3,434	2,109	7.5	19.4	11.9
5th.....	\$20,322-\$26,068	20.2	38.1	17.9	6.5	13.3	1,834	3,464	1,630	7.9	14.9	7.0
6th.....	\$26,069-\$32,931	26.7	35.4	8.8	8.6	12.4	2,424	3,219	795	8.2	11.0	2.7
7th.....	\$32,932-\$40,898	35.8	30.8	-5.0	11.5	10.8	3,257	2,802	-455	8.9	7.6	-1.2
8th.....	\$40,899-\$51,844	48.2	26.0	-22.2	15.5	9.1	4,379	2,358	-2,021	9.5	5.1	-4.4
9th.....	\$51,845-\$70,065	62.9	21.1	-41.7	20.2	7.4	5,711	1,921	-3,791	9.6	3.2	-6.3
Top.....	\$70,066 or more	87.2	19.8	-67.4	28.0	6.9	7,928	1,800	-6,128	6.8	1.6	-5.3

See notes to the tables on page 32.

five deciles receive more in benefits than they pay in taxes, while the top five pay more in taxes than they receive in benefits. Measured as a percent of pre-OASDI income, benefits (column 11) now show a continuous fall through the full range of deciles, and net benefits as a percent of income (column 12) fall through all but the very top decile.

Distribution by Person Pre-OASDI Income Deciles

To extract patterns of OASDI taxes and benefits for different age groups, it is useful to shift the unit of analysis from families to persons. The use of person income, rather than family income, has two effects. First, the income of members of couples is halved, tending to move couples down in the income distribution relative to nonmarried individuals. Second, the incomes of multiple subunit families are split up, reranking some of the family subunits down in the income distribution relative to individuals or single-unit families. In particular, a substantial fraction of the elderly in the population who live with their adult children will be treated as units on their own, with, typically, much lower incomes than when combined with the rest of the Census family.⁸

Nevertheless, although the average pre-OASDI income per unit is lower under the new definition, the percentiles that define the income deciles also shift downward, so that the distribution of OASDI taxes and benefits by decile is similar to that calculated for families. Table 3 for persons ranked by pre-OASDI person income corresponds to table 2 for pre-OASDI family income; the percent distribution of taxes and benefits (columns 5 and 6) is similar in the two tables. The person definition of units will be used for the remainder of this article.⁹

Much of the distribution by income decile of OASDI taxes and benefits can be attributed to patterns of income by age. Table 4 tabulates persons by 5-year age groups (with all persons 80 or older put into one age group), giving the average pre-OASDI income, taxes, and benefits for each age group along with the percent in each age group paying OASDI taxes or receiving OASDI benefits. The percent paying taxes (column 6) is high from the 20's through the early 50's then falls to very low values in the late retirement ages. Average incomes and average taxes paid rise through the late 40's and then fall. The percent receiving benefits (column 7) is low through the pre-retirement ages, then rises in the late 50's and early 60's to 90 percent or more for every

group aged 65 or older; the average benefit by age group (column 4) shows a similar pattern.

Much of the observed progressivity in OASDI taxes and benefits with respect to pre-OASDI income can be attributed to the fact that incomes are, on average, higher during the ages in which OASDI taxes are paid and lower during the ages in which benefits are received. Progressivity in OASDI taxes would be observed even if the OASDI tax were applied to all earnings at a uniform rate, because the higher income deciles would contain a progressively higher proportion of tax-paying earners and a lower proportion of nontaxpaying beneficiaries. Similar considerations apply to benefits: there are few aged persons in the upper deciles, and many in the lower deciles, so that the average benefit per decile, the share received by decile, and the average benefit as a percent of income would be higher in the lower deciles even if every beneficiary received the same benefit.

But not all of the observed progressivity can be attributed to age patterns. At any given age in the pre-retirement years, it is possible that nonworkers relying on sources of income other than earnings will be more commonly found in the lower deciles, which would generate progressivity in the OASDI tax below the

Table 2.—OASDI taxes and benefits, by family pre-OASDI income decile

Decile	Decile income range (1)	Aggregate amounts					Average amounts			As percent of family pre-OASDI income		
		Billions of dollars			Percent distribution by decile		Taxes (7)	Benefits (8)	Net benefit (9)	Taxes (10)	Benefits (11)	Net benefit (12)
		Taxes (2)	Benefits (3)	Net benefit (4)	Taxes (5)	Benefits (6)						
Total.....	.....	\$311.1	\$286.0	-\$25.1	100.0	100.0	\$2,823	\$2,595	-\$228	8.3	7.6	-0.7
Bottom.....	\$0-\$2,226	.2	67.2	67.0	.1	23.5	15	6,105	6,090	2.5	1,064.4	1,061.9
2nd.....	\$2,227-\$6,959	1.9	46.5	44.5	.6	16.3	177	4,226	4,049	3.9	93.3	89.4
3rd.....	\$6,960-\$12,163	6.6	40.0	33.3	2.1	14.0	601	3,630	3,029	6.4	38.4	32.1
4th.....	\$12,164-\$17,882	13.1	32.7	19.6	4.2	11.4	1,189	2,970	1,781	8.0	19.9	11.9
5th.....	\$17,883-\$24,512	20.2	24.6	4.5	6.5	8.6	1,834	2,240	405	8.7	10.6	1.9
6th.....	\$24,513-\$31,758	27.4	20.6	-6.8	8.8	7.2	2,491	1,873	-618	8.9	6.7	-2.2
7th.....	\$31,759-\$40,876	36.6	17.0	-19.6	11.8	5.9	3,331	1,547	-1,784	9.2	4.3	-4.9
8th.....	\$40,877-\$52,842	49.7	14.6	-35.1	16.0	5.1	4,516	1,325	-3,191	9.7	2.8	-6.9
9th.....	\$52,843-\$72,097	65.7	9.8	-55.9	21.1	3.4	5,973	893	-5,080	9.8	1.5	-8.3
Top.....	\$72,098 or more	89.7	12.4	-77.3	28.8	4.4	8,149	1,128	-7,021	6.9	1.0	-5.9

See notes to the tables on page 32.

taxable maximum. Benefits, which at those ages are paid to disabled workers and their families and to the survivors of deceased workers, are also likely to be more commonly found in the lower deciles, generating progressivity in benefits as a percent of income. In the transitional ages when some persons are retired and some are not, taxes will be associated with nonretirement and the upper deciles, benefits with retirement and the lower deciles. Finally, in the age groups when most persons are retired, although it would not be surprising to find that average benefits increase with nonbenefit income, it seems unlikely that benefits as a percent of income would increase, because the Social Security benefit formula is designed to pay higher benefits, but not proportionately higher, to those with higher average earnings histories. Even if there is a positive correlation between average earnings before retirement and non-Social Security income after retirement, leading to a positive correlation during retirement between benefits and nonbenefit income, we would expect the relationship between benefits and nonbenefit income to be progressive, with the ratio of benefits to nonbenefit income falling as nonbenefit income rises.

The final tabulations for this article, accordingly, look at the distributions of OASDI taxes and benefits by age-specific, pre-OASDI income distributions. Income-receiving persons are divided into 5-year age groups and income percentiles are calculated for each age group. An overall picture of the effects of OASDI on the income distribution by age can be obtained by comparing the pre-OASDI and post-OASDI percentiles (tables 5 and 6). The 10th, 50th, and 90th percentiles are plotted in chart 1. In charts 1 and 2, the horizontal axis, showing age, is adjusted to reflect the number of persons in each age interval, so that each inch on the horizontal axis represents an approximately equal number of persons. At older ages, when much of each age cohort is deceased, the age intervals shrink accordingly.

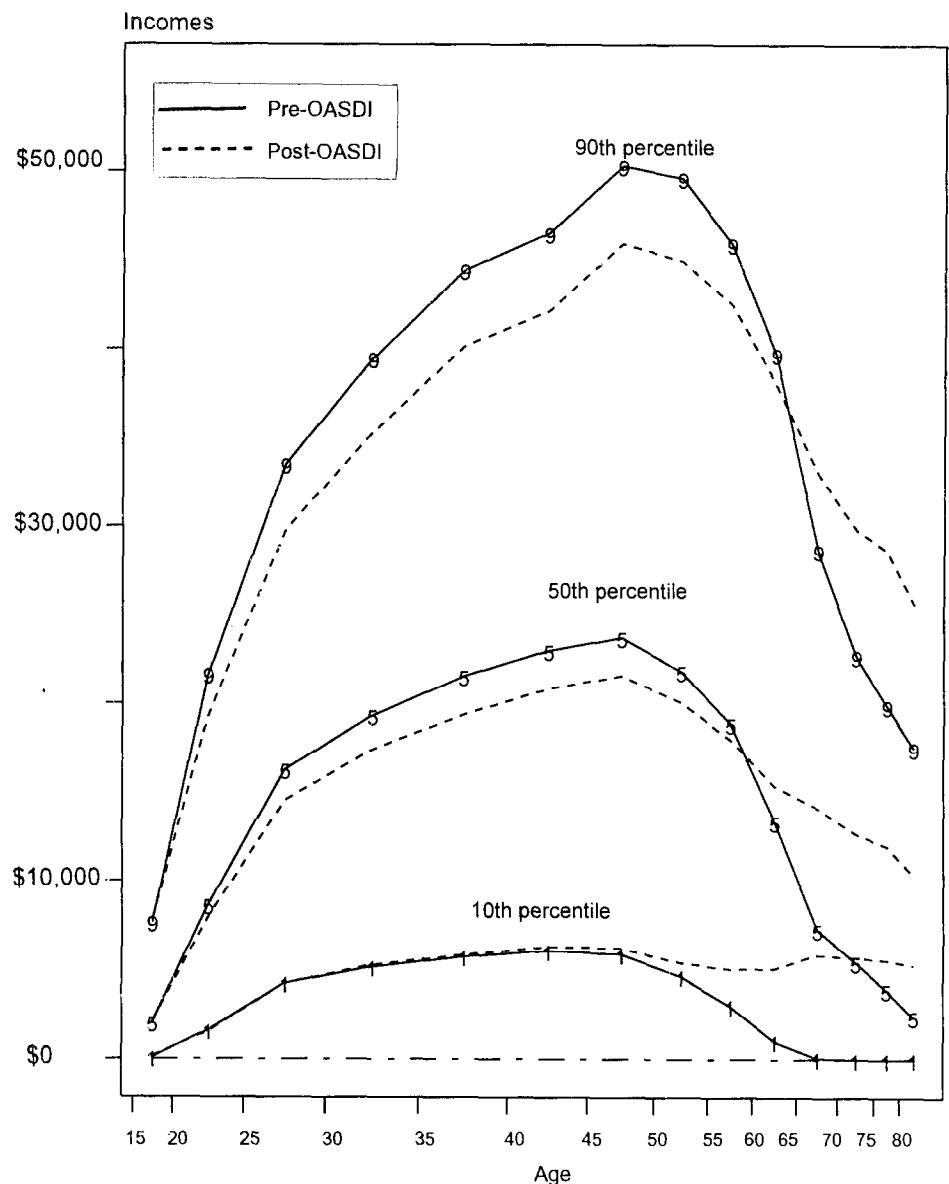
The impact of OASDI benefits on the income distribution at older ages can

be seen clearly in chart 1. The relative difference is most dramatic in the bottom deciles. The 10th percentile of pre-OASDI income is zero for the group aged 70-74 or older, meaning that at least 10 percent of persons aged 70 or older have no income other than OASDI benefits. When OASDI benefits are added and taxes subtracted, the strong decline in incomes with age is ameliorated, and the decline in incomes with age among

persons at the reranked 10th percentile is eliminated.

Using the age-specific, pre-OASDI income percentiles, each age group is divided into 10 age-specific deciles, and for each age-specific decile in each age group the average taxes, benefits, and net benefits (tables 7, 8, and 9) and taxes, benefits, and net benefits as a percent of pre-OASDI income (tables 10, 11, and 12) are tabulated.

Chart 1.—Age-specific income percentiles, 1992—10th, 50th, and 90th percentiles



Source: Tables 5 and 6 of this article.

The average taxes and benefits, by age and pre-OASDI income decile, for the 1st, 4th, 7th, and 10th deciles are plotted as four separate graphs in chart 2, with the vertical dimension representing average dollar amounts. The vertical scale within each graph is the same. Because the vertical dimension represents average dollar amounts, and the horizontal dimension indicates—because of the adjustment of the age axis—numbers of

persons, the *areas* in this chart give an indication of *aggregate* dollar amounts. In the top decile, the area representing taxes paid, although it does not reach quite as high as the area representing benefits received, is spread over an age range representing a considerably larger number of persons, indicating that much more is being paid in OASDI taxes by persons in the top age-specific deciles during the pre-retirement years than is

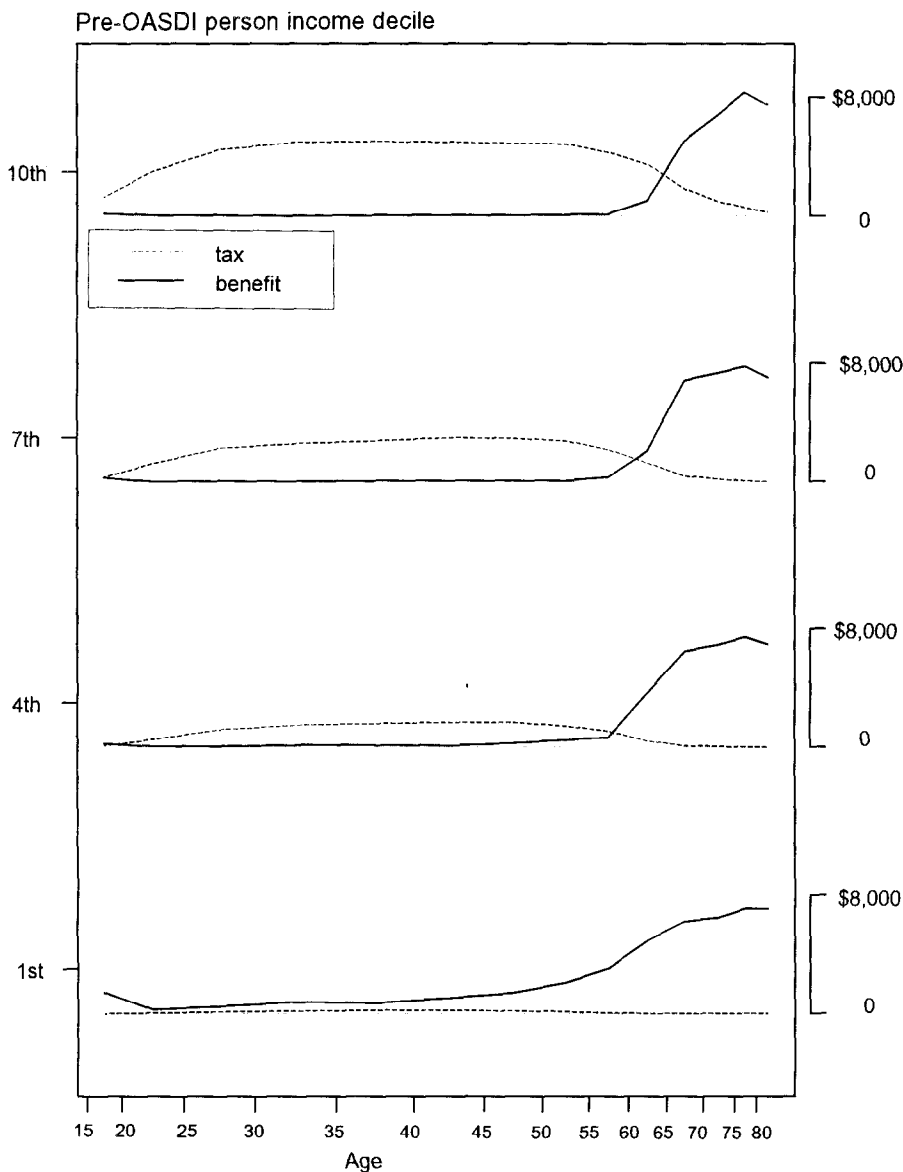
being received in OASDI benefits by persons in the top age-specific deciles during the retirement years. Moving down the deciles in chart 2, two patterns are evident: the average tax during the working years gets smaller in the lower deciles, dwindling almost to nothing for the bottom decile, and substantial amounts of benefits are paid at pre-retirement ages in the lower income deciles. In the bottom age-specific deciles there is no age at which taxes exceed benefits.

When taxes are measured as a percent of pre-OASDI income (table 10), the progressive relationship found in the overall population is diminished within specific age groups. The tax is progressive through the bottom deciles, but tends to be roughly proportional in the fifth through ninth deciles before falling off in the top decile. The average tax (table 7) continues to rise with income at all ages (the one exception, in the 75-79 age group, can be attributed to the small sample of workers in that age group).

Average OASDI benefits (table 8) in the pre-retirement ages start at relatively high values in the lowest decile, then fall as income rises, although there are exceptions to the general pattern at some ages and income deciles. Measured as a percent of income, the fall from the lowest decile is quite sharp because of the use of pre-OASDI income, which is near zero in the lowest decile, in the denominator of the percentage calculation (table 11). Most of the occasional exceptions to the progressivity of benefits at specific ages can be attributed to the small sample size of OASDI benefit recipients in the upper deciles at pre-retirement ages.

At older ages the benefit as a percent of income still falls with increasing income. The average OASDI benefits themselves, however, show no strong correlation with pre-OASDI income even though, as mentioned earlier, it would not be surprising if there were such a correlation. It can be seen from chart 2 that, while the lowest decile receives more benefits throughout the pre-retirement ages than any of the higher deciles, and while average benefits increase earlier in the lower deciles, by the time of late retirement (ages 70 or older) there is no clear increase with income in the average

Chart 2.—Average taxes and benefits by pre-OASDI income decile and age, 1992



Source: Tables 7 and 8 of this article.

benefit. This lack of strong correlation is a puzzle that remains to be explained. There are several possible nonexclusive explanations. The link between pre-retirement earnings and postretirement benefits might have been weakened by the relatively low maximum taxable earnings that existed during part of the working career of many of those now retired. The presumed link between

pre-retirement earnings and postretirement non-OASDI income might be subject to considerable individual variation in savings or pension behavior or investment returns, which would weaken the correlation. Finally, any indirect link between OASDI benefits and non-OASDI income might be partly counteracted if persons with high Social Security benefits are better able to retire

or to spend down non-OASDI sources of income.¹⁰

The age-specific effects on net benefits (average net benefits, table 9, and net benefits as a percent of income, table 12) are equal to the effects on benefits minus the effects on taxes. At younger ages, the strong progressivity of the benefits going from the bottom decile to the second and third deciles reinforces the weak progres-

Table 3.—OASDI taxes and benefits, by person pre-OASDI income decile

Decile	Decile income range (1)	Aggregate amounts					Average amounts			As percent of person pre-OASDI income		
		Billions of dollars			Percent distribution by decile		Taxes (7)	Benefits (8)	Net benefit (9)	Taxes (10)	Benefits (11)	Net benefit (12)
		Taxes (2)	Benefits (3)	Net benefit (4)	Taxes (5)	Benefits (6)						
Total.....	...	\$311.1	\$286.0	-\$25.1	100.0	100.0	\$1,610	\$1,480	-\$130	8.3	7.6	-0.7
Bottom.....	\$0-\$1,223	.3	76.3	76.0	.1	26.7	14	3,955	3,941	4.4	1,205.1	1,200.8
2nd.....	\$1,224-\$4,166	2.6	53.3	50.7	.8	18.6	135	2,765	2,630	5.1	103.2	98.1
3rd.....	\$4,167-\$7,322	6.8	42.7	35.9	2.2	14.9	353	2,213	1,860	6.2	38.6	32.5
4th.....	\$7,323-\$10,976	13.4	34.9	21.5	4.3	12.2	696	1,812	1,117	7.6	19.9	12.2
5th.....	\$10,977-\$14,958	21.2	23.7	2.5	6.8	8.3	1,098	1,229	130	8.5	9.5	1.0
6th.....	\$14,959-\$19,117	29.6	17.0	-12.6	9.5	5.9	1,534	881	-653	9.1	5.2	-3.9
7th.....	\$19,118-\$23,821	39.3	11.7	-27.7	12.6	4.1	2,040	606	-1,434	9.6	2.8	-6.7
8th.....	\$23,822-\$29,688	49.8	8.0	-41.7	16.0	2.8	2,580	417	-2,163	9.7	1.6	-8.1
9th.....	\$29,689-\$39,638	62.8	7.1	-55.7	20.2	2.5	3,260	369	-2,890	9.6	1.1	-8.5
Top.....	\$39,639 or more	85.3	10.5	-74.8	27.4	3.7	4,417	544	-3,874	6.8	.8	-6.0

See notes to the tables on page 32.

Table 4.—Pre-OASDI person income, taxes, and benefits, by age group

Age	Number of persons (in millions) (1)	Average dollar amount over all persons in age group ¹				Percent with tax (6)	Percent with benefit (7)
		Pre-OASDI income (2)	Average tax (3)	Average benefit (4)	Net benefit (5)		
All persons.....	193	\$19,430	\$1,610	\$1,480	-\$130	75	22
15-19.....	10	3,272	308	323	15	74	7
20-24.....	17	10,705	1,074	40	-1,035	86	1
25-29.....	20	18,243	1,868	85	-1,783	90	2
30-34.....	23	21,998	2,177	127	-2,049	91	2
35-39.....	22	25,373	2,329	189	-2,140	91	3
40-44.....	19	27,074	2,410	217	-2,192	91	4
45-49.....	16	28,150	2,425	288	-2,137	89	5
50-54.....	13	27,365	2,219	429	-1,790	87	6
55-59.....	11	24,435	1,771	817	-953	79	16
60-64.....	11	19,162	1,122	2,730	1,608	62	49
65-69.....	10	13,262	406	6,261	5,855	32	90
70-74.....	9	9,821	190	6,943	6,753	19	94
75-79.....	6	8,509	92	7,610	7,517	10	95
80 or older.....	7	6,624	42	7,315	7,273	5	95

¹ Average is taken over all persons in age group with nonzero CPS income.

See notes to the tables on page 32.

Table 5.—Age-specific pre-OASDI person income percentiles

Age	Percentile								
	10th	20th	30th	40th	50th	60th	70th	80th	90th
All ages..	\$1,224	\$4,167	\$7,323	\$10,977	\$14,959	\$19,118	\$23,822	\$29,689	\$39,639
15-19.....	52	413	827	1,296	2,033	2,751	3,761	5,147	7,635
20-24.....	1,594	3,372	5,082	6,768	8,639	10,688	13,315	16,632	21,651
25-29.....	4,236	7,623	10,344	13,399	16,269	19,447	22,811	27,282	33,466
30-34.....	5,144	9,271	12,870	16,174	19,312	22,699	26,426	30,836	39,417
35-39.....	5,714	10,462	14,348	18,117	21,507	25,155	29,240	34,663	44,457
40-44.....	6,049	11,180	15,323	19,254	22,978	27,029	31,386	37,481	46,518
45-49.....	5,853	10,846	15,297	19,931	23,709	27,827	32,656	39,157	50,327
50-54.....	4,646	9,245	13,610	17,786	21,833	26,163	31,220	38,086	49,628
55-59.....	3,014	7,180	11,292	15,144	18,889	23,018	27,545	33,894	45,933
60-64.....	1,011	3,936	6,805	9,714	13,339	16,975	21,763	28,221	39,757
65-69.....	69	1,406	3,214	5,089	7,275	9,928	13,276	18,501	28,650
70-74.....	0	727	1,975	3,659	5,440	7,341	10,404	14,821	22,672
75-79.....	0	289	1,132	2,294	3,909	5,799	8,140	12,446	19,897
80 or older.....	0	48	520	1,228	2,388	3,916	6,180	9,610	17,510

See notes to the tables on page 32.

Table 6.—Age-specific post-OASDI person income percentiles

Age	Percentile								
	10th	20th	30th	40th	50th	60th	70th	80th	90th
All ages..	\$3,568	\$6,497	\$9,157	\$12,036	\$15,082	\$18,404	\$22,444	\$27,427	\$36,358
15-19.....	139	529	898	1,431	2,047	2,738	3,872	5,350	7,796
20-24.....	1,527	3,155	4,620	6,284	7,931	9,724	11,908	14,957	19,333
25-29.....	4,219	7,142	9,508	12,119	14,542	17,477	20,329	24,303	29,780
30-34.....	5,250	8,568	11,670	14,396	17,392	20,309	23,541	27,836	35,247
35-39.....	5,825	9,672	13,136	16,402	19,376	22,509	26,320	31,418	40,147
40-44.....	6,267	10,548	14,202	17,516	20,817	24,272	28,302	33,798	42,167
45-49.....	6,199	10,386	14,364	18,107	21,546	25,208	29,676	35,543	45,919
50-54.....	5,386	9,248	12,754	16,384	20,090	23,789	28,278	34,524	44,961
55-59.....	5,040	8,169	11,401	14,695	17,954	21,469	25,613	31,421	42,567
60-64.....	5,062	7,650	10,115	12,653	15,345	18,505	22,586	27,975	38,095
65-69.....	5,823	7,707	9,673	11,866	14,102	16,590	19,582	23,733	32,991
70-74.....	5,679	7,461	9,159	10,887	12,671	14,979	17,697	21,751	29,797
75-79.....	5,529	7,163	8,493	10,198	11,990	14,144	16,648	20,659	28,593
80 or older.....	5,268	6,600	7,711	8,950	10,347	12,087	14,412	18,231	25,580

See notes to the tables on page 32.

Table 7.—Average OASDI tax, by age and age-specific pre-OASDI decile

Age	Pre-OASDI decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	\$14	\$135	\$353	\$696	\$1,098	\$1,534	\$2,040	\$2,580	\$3,260	\$4,417
15-19.....	0	15	52	91	154	218	288	416	577	1,281
20-24.....	45	195	355	513	715	987	1,263	1,593	2,057	3,030
25-29.....	126	470	851	1,190	1,572	1,874	2,284	2,675	3,173	4,481
30-34.....	157	639	1,107	1,496	1,822	2,245	2,601	3,013	3,694	5,020
35-39.....	207	721	1,232	1,623	2,060	2,432	2,770	3,261	4,015	5,036
40-44.....	202	739	1,260	1,685	2,133	2,524	2,983	3,402	4,212	5,010
45-49.....	179	755	1,262	1,710	2,156	2,580	2,971	3,514	4,266	4,921
50-54.....	112	550	1,041	1,421	1,882	2,294	2,775	3,223	4,055	4,865
55-59.....	38	285	751	1,075	1,370	1,745	2,196	2,644	3,330	4,302
60-64.....	2	80	251	407	656	921	1,278	1,868	2,270	3,527
65-69.....	1	6	37	85	158	227	373	527	804	1,857
70-74.....	0	2	12	36	64	104	158	185	352	993
75-79.....	0	0	2	7	26	56	54	84	152	546
80 or older.....	0	0	1	1	4	9	14	31	92	272

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

Table 8.—Average OASDI benefit, by age and age-specific pre-OASDI decile

Age	Pre-OASDI decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	\$3,955	\$2,765	\$2,213	\$1,812	\$1,229	\$881	\$606	\$417	\$369	\$544
15-19.....	1,424	193	140	201	187	247	276	214	222	156
20-24.....	231	70	16	26	3	13	4	3	10	20
25-29.....	476	118	92	40	26	40	16	1	21	19
30-34.....	786	110	89	109	44	79	6	17	19	9
35-39.....	675	399	107	140	91	77	53	51	19	39
40-44.....	1,058	523	174	82	89	97	57	48	30	18
45-49.....	1,387	528	269	254	123	94	57	61	48	59
50-54.....	2,096	659	424	454	180	120	34	134	95	96
55-59.....	3,025	1,213	1,317	656	638	469	309	234	183	129
60-64.....	4,915	4,469	3,593	3,688	2,786	2,400	2,069	1,194	1,160	1,055
65-69.....	6,219	6,352	6,611	6,504	6,896	6,856	6,852	5,772	5,471	5,095
70-74.....	6,498	6,933	7,073	6,917	7,074	7,129	7,344	7,198	6,513	6,819
75-79.....	7,115	7,086	7,461	7,431	7,198	7,484	7,802	8,112	8,025	8,345
80 or older.....	7,108	7,118	7,153	6,970	7,335	7,436	7,050	7,639	7,766	7,552

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

Table 9.—Average OASDI net benefit, by age and age-specific pre-OASDI decile

Age	Pre-OASDI decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	\$3,941	\$2,630	\$1,860	\$1,117	\$130	-\$653	-\$1,434	-\$2,163	-\$2,890	-\$3,874
15-19.....	1,424	178	88	111	33	30	-12	-202	-355	1,125
20-24.....	186	-125	-339	-487	-712	-974	-1,260	-1,590	-2,047	-3,010
25-29.....	351	-352	-759	-1,150	-1,546	-1,834	-2,268	-2,674	-3,151	-4,462
30-34.....	628	-529	-1,017	-1,387	-1,778	-2,166	-2,595	-2,997	-3,675	-5,011
35-39.....	468	-322	-1,125	-1,484	-1,969	-2,355	-2,717	-3,210	-3,996	-4,998
40-44.....	855	-217	-1,086	-1,602	-2,045	-2,427	-2,926	-3,354	-4,182	-4,991
45-49.....	1,208	-228	-993	-1,456	-2,033	-2,486	-2,914	-3,452	-4,218	-4,862
50-54.....	1,984	110	-616	-968	-1,702	-2,173	-2,741	-3,089	-3,961	-4,769
55-59.....	2,987	928	566	-419	-732	-1,276	-1,887	-2,410	-3,147	-4,172
60-64.....	4,913	4,390	3,342	3,281	2,129	1,480	790	-674	-1,110	-2,472
65-69.....	6,218	6,346	6,574	6,419	6,738	6,629	6,478	5,245	4,667	3,237
70-74.....	6,498	6,931	7,061	6,881	7,010	7,024	7,186	7,012	6,161	5,825
75-79.....	7,115	7,086	7,458	7,424	7,173	7,428	7,748	8,029	7,872	7,799
80 or older.....	7,108	7,118	7,153	6,969	7,331	7,428	7,037	7,608	7,674	7,280

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

Table 10.—OASDI tax as percent of pre-OASDI income, by age and age-specific pre-OASDI income decile

Age	Pre-OASDI income decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	4.4	5.1	6.2	7.6	8.5	9.1	9.6	9.7	9.6	6.8
15-19.....	2.2	6.7	8.3	8.6	9.1	9.1	9.0	9.3	9.2	9.9
20-24.....	7.0	7.7	8.3	8.6	9.3	10.2	10.5	10.6	10.8	10.0
25-29.....	6.1	7.9	9.4	10.0	10.6	10.5	10.9	10.7	10.6	10.0
30-34.....	6.2	8.8	9.9	10.3	10.3	10.7	10.6	10.6	10.7	8.6
35-39.....	6.8	8.9	9.9	10.0	10.4	10.4	10.2	10.3	10.3	6.8
40-44.....	6.6	8.6	9.4	9.7	10.1	10.1	10.2	10.0	10.1	6.4
45-49.....	6.7	8.9	9.5	9.6	9.9	10.0	9.8	9.8	9.7	6.0
50-54.....	5.8	7.9	9.1	9.1	9.5	9.5	9.7	9.4	9.4	5.5
55-59.....	3.7	5.5	8.1	8.2	8.1	8.4	8.7	8.6	8.5	5.2
60-64.....	1.0	3.3	4.7	4.9	5.7	6.1	6.7	7.5	6.9	4.9
65-69.....	⁽¹⁾	.9	1.7	2.1	2.6	2.6	3.3	3.4	3.5	3.0
70-74.....	⁽¹⁾	.7	.9	1.3	1.4	1.7	1.8	1.5	1.9	2.3
75-79.....	⁽¹⁾	.1	.3	.4	.8	1.2	.8	.8	1.0	1.3
80 or older.....	⁽¹⁾	⁽¹⁾	.3	.1	.2	.3	.3	.4	.7	.8

¹ Deciles in which all or most incomes are zero.

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

Table 11.—OASDI benefit as percent of pre-OASDI income, by age and age-specific pre-OASDI income decile

Age	Pre-OASDI income decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	1,205.1	103.2	38.6	19.9	9.5	5.2	2.8	1.6	1.1	0.8
15-19.....	(1)	86.7	22.3	19.2	11.0	10.3	8.6	4.8	3.6	1.2
20-24.....	35.9	2.8	.4	.4	.0	.1	.0	.0	.1	.1
25-29.....	23.1	2.0	1.0	.3	.2	.2	.1	.0	.1	.0
30-34.....	30.7	1.5	.8	.7	.2	.4	.0	.1	.1	.0
35-39.....	22.4	4.9	.9	.9	.5	.3	.2	.2	.0	.1
40-44.....	34.6	6.1	1.3	.5	.4	.4	.2	.1	.1	.0
45-49.....	51.7	6.2	2.0	1.4	.6	.4	.2	.2	.1	.1
50-54.....	109.1	9.5	3.7	2.9	.9	.5	.1	.4	.2	.1
55-59.....	297.5	23.3	14.2	5.0	3.8	2.3	1.2	.8	.5	.2
60-64.....	(1)	186.4	66.7	44.7	24.1	15.9	10.8	4.8	3.5	1.5
65-69.....	(2)	951.2	292.7	157.3	113.0	79.9	59.8	36.9	24.0	8.3
70-74.....	(2)	(1)	537.2	249.9	158.2	113.0	84.2	57.7	35.9	15.5
75-79.....	(2)	(1)	(1)	448.1	232.0	155.5	113.9	80.5	51.1	19.7
80 or older.....	(2)	(2)	(1)	833.1	417.6	236.5	141.4	98.0	59.5	21.9

¹ Deciles in which incomes are so small that the percentage ratio is greater than 1,000.

² Deciles in which all or most incomes are zero.

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

Table 12.—OASDI net benefit as percent of pre-OASDI income, by age and age-specific pre-OASDI decile

Age	Pre-OASDI income decile									
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
All ages.....	1,200.8	98.1	32.5	12.2	1.0	-3.9	-6.7	-8.1	-8.5	-6.0
15-19.....	(1)	80.0	14.0	10.5	1.9	1.2	-.4	-4.5	-5.7	-8.7
20-24.....	28.9	-4.9	-7.9	-8.2	-9.3	-10.0	-10.5	-10.6	-10.8	-9.9
25-29.....	17.0	-5.9	-8.4	-9.6	-10.4	-10.2	-10.8	-10.7	-10.5	-10.0
30-34.....	24.6	-7.3	-9.1	-9.5	-10.0	-10.3	-10.6	-10.5	-10.6	-8.6
35-39.....	15.5	-4.0	-9.0	-9.1	-10.0	-10.1	-10.0	-10.1	-10.2	-6.8
40-44.....	28.0	-2.5	-8.1	-9.2	-9.7	-9.7	-10.0	-9.8	-10.0	-6.4
45-49.....	45.1	-2.7	-7.4	-8.2	-9.3	-9.6	-9.7	-9.6	-9.6	-5.9
50-54.....	103.3	1.6	-5.4	-6.2	-8.6	-9.0	-9.6	-9.0	-9.2	-5.4
55-59.....	293.8	17.9	6.1	-3.2	-4.3	-6.1	-7.5	-7.9	-8.0	-5.0
60-64.....	(1)	183.1	62.0	39.8	18.5	9.8	4.1	-2.7	-3.4	-3.4
65-69.....	(2)	950.3	291.1	155.2	110.5	77.3	56.6	33.6	20.5	5.3
70-74.....	(2)	(1)	536.3	248.7	156.8	111.4	82.4	56.2	34.0	13.3
75-79.....	(2)	(1)	(1)	447.7	231.2	154.4	113.1	79.7	50.2	18.4
80 or older.....	(2)	(2)	(1)	833.0	417.4	236.1	141.1	97.6	58.8	21.1

¹ Deciles in which incomes are so small that the percentage ratio is greater than 1,000.

² Deciles in which all or most incomes are zero.

Note: Age-specific deciles are given in table 5. "All ages" row is from table 3, using whole population deciles. Also see notes to the tables on page 32.

sivity of the tax in the bottom deciles. In the upper deciles at younger ages the near absence of benefits causes the net benefit pattern to reflect the approximate proportionality of the tax at those ages in the third through the ninth deciles. Going from the 9th to the 10th decile, the net benefit as a percent of income is, like the tax, regressive. At the older ages, the relative absence of OASDI taxes causes the net benefit pattern to reflect the pattern of benefits at those ages, progressive at all income levels.

OASDI taxes and benefits, then, continue to have a slight progressive effect even within specific age groups, although not as large an effect as when looking at all ages combined. The 1-year cross-sectional data cannot be pushed much farther than this; in particular, they cannot be used to answer questions of the progressivity of lifetime OASDI taxes and benefits relative to lifetime income. Such questions can be settled conclusively only through detailed studies of lifetime histories of incomes and benefits (see the article by Leimer in this issue for an introduction to such studies). The observed progressivity of current OASDI net benefits at each age, however, is suggestive of a progressive relation between lifetime net benefits and lifetime incomes.

Summary

The OASDI system of taxes and benefits has a substantial redistributive impact on current incomes that is summarized here. OASDI taxes are paid primarily by persons in the upper income deciles. Although specified as a proportional tax on earnings up to the maximum taxable earnings, the OASDI tax is progressive relative to income because an increasing proportion of income is attributable to earnings as income increases. Many persons with no earnings in the lower deciles are the retired aged, so that the overall progressivity of the OASDI tax is partly attributable to an age effect: the relatively young workers who pay the tax tend to have higher incomes than the relatively old retirees who receive the benefits and as nonworkers are exempt from the tax. Nevertheless, even among working-

aged persons, the OASDI tax is weakly progressive, except at higher incomes.

OASDI benefits are received primarily by persons in the lower income deciles. Again, this is partly an age effect: the old-age beneficiaries, who are the preponderant recipients of benefits, are also preponderantly found in the lower deciles. But there is a marked progressivity found even at specific ages. Among persons of working age, the target populations insured under OASDI—disabled workers, their families, and the families of deceased workers—are much more likely to be found in the lower deciles, so that in the lower deciles average benefits as well as the ratio of benefit to nonbenefit income will be higher. Among persons in the transitional ages between work and retirement, benefits are associated not only with disability or early survivorship but also with earlier retirement, again leading to higher average benefits, and a higher ratio of benefit to nonbenefit income, in the lower income deciles. Finally, among retirement-aged persons, although there is no longer a decline in average benefits as nonbenefit income rises, there is still a strong decline in benefits as a percent of nonbenefit income.

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Notes to the Tables

Persons and families whose CPS incomes are zero or negative are excluded from the percentile calculations and decile tabulations for tables 1, 2, 3, 10, 11, 12 and tables 5, 6, 7, 8, and 9. It is possible, however, to have positive OASDI taxes or benefits and still have a negative CPS income; such families or persons, while excluded from the tabulation by decile, are included in the "total" line in tables 1, 2, and 3.

Persons or families with only Social Security income will have a positive CPS income but a pre-OASDI income of zero. Such units are included in the pre-OASDI percentile calculations and decile tabulations for tables 2, 3, 10, 11, and 12 and tables 5, 6, 7, 8, and 9, as well as in the "total" line in tables 2 and 3.

A very small number of persons or families have a positive CPS income but a negative pre-OASDI income. These units, unlike the units with a zero pre-OASDI income, are excluded from the pre-OASDI percentile calculations and decile tabulations for tables 2, 3, 10, 11, and 12 and tables 5, 6, 7, 8, and 9. They are included in the "total" line in tables 2 and 3.

For the age-specific pre-OASDI person income deciles at ages 70 or older—for which the 10th percentile is zero dollars—some of the persons with pre-OASDI incomes of zero are randomly assigned to the 2nd decile, rather than the 1st, in order to arrive more closely at an even division into 10 percent of persons in each income decile.

Notes

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¹ The annual March CPS is a source for official statistics on poverty and on family and person income.

² The simulation of wage and self-employment taxes is done using the Simulated Tax and Transfer System (STATS) micro-simulation program (described in Wixon, and others, 1987). The simulation includes a determination, using industry and occupation codes on the CPS, of whether each worker's earnings are covered, and, if covered, of the OASDI tax applied to the worker's earnings. For

self-employment earnings, the self-employment tax is calculated; for wage and salary earnings, both the employee and employer portions are calculated.

³ For distributional analysis of the effects of OASDI taxes, it is necessary to allocate the burden of both the employee and employer portions of the OASDI payroll tax. The simplest procedure is to assume that each worker bears a burden equal to the combined employee and employer taxes on his or her earnings. Some of the burden of the combined portions *might not be borne directly through* reductions in each worker's earnings net of tax, but might be borne more indirectly through, for example, higher prices on consumption goods, the distributional effects of which often would be harder to estimate. Many economists have concluded, however, that the assumption that the combined burden is borne by the worker is plausibly close to the truth.

⁴ For various reasons, average and aggregate income on the CPS do not exactly match corresponding averages or aggregates calculated from other sources of data. In the data tabulated in this article, adjustments are made to some income components based on comparisons in past years between average incomes on Federal income tax returns and average incomes on tax returns simulated on the CPS. These adjustments are described in the appendix to Pattison and Harrington (1993). The adjustments have small effects on the distributions reported in this article, but do not affect the qualitative nature of the results.

In addition, a set of small scaling adjustments is made to align the CPS-derived aggregate OASDI taxes and benefits with the historical aggregates for 1992. The aggregates used for alignment are the calendar year contributions and benefit payments for the combined operations of the OASI and DI Trust Funds, from the 1994 Annual Report of the Board of Trustees. The aggregate amounts were \$311.1 billion in contributions and \$286.0 billion in benefit payments. (The OASDI funds in 1992 received \$25 billion more in contributions than was paid out in benefits.) To align the simulation aggregates with the administrative aggregates, two adjustments are made. First, all tabulation weights are scaled up by 4.11 percent; this uniform scaling of weights has no effect on averages or on percent distributions. Second, all OASDI taxes are scaled up by 0.78 percent, and all OASDI benefits are scaled down by 0.78 percent; these small adjustments are designed to bring aggregate taxes and benefits into alignment with minimal effect on average

incomes; the adjustments should have only small effects on the distribution of taxes or benefits. The purpose of these adjustments is to improve the net benefit estimates by aligning the aggregate tax and benefit estimates with reliable aggregate information.

⁵ For the family income percentile calculations and tabulations by decile, families whose CPS incomes are zero or negative are excluded. For the person income percentile calculations, adult units (single persons or married couples) whose CPS incomes are zero or negative are excluded, as are children under age 15. (If a child under age 15 is receiving OASDI benefits, and there is an adult in the household receiving the benefits on the child's behalf, the CPS includes the child's benefit income in the income of that adult.) Families or persons whose CPS income is entirely made up of OASDI benefits, and who therefore have a positive CPS income but a pre-OASDI income of zero, are included in the pre-OASDI income percentile calculations and decile tabulations, but the very small number of families or persons with positive CPS incomes but negative pre-OASDI incomes are excluded from the pre-OASDI income percentile calculations and decile tabulations.

⁶ The maximum taxable earnings in 1992 was \$55,500. This lies within the 9th decile for family income and the 10th decile for person income, no matter which way family or person income is measured—CPS income, pre-OASDI income, or post-OASDI income.

⁷ The OASDI tax is sometimes called a regressive tax, because the tax as a percent of covered earnings is proportional, or non-progressive, for earnings up to the maximum taxable earnings, and is regressive above it. Distributional analysis, however, measures the ratio of taxes to total income, taxable and nontaxable, rather than the ratio to the tax base used on the nominal tax schedule that defines the tax. A uniform sales tax on food, for example, while nominally defined as a proportional tax on food expenditures, would in the broader sense used in distributional analysis be considered a regressive tax, since the ratio of food expenditures to income falls as income rises.

⁸ For example: If a widow aged 70 with an income of \$8,000 lives with her married daughter, whose income together with that of her husband's is \$40,000, the three would be classified under the family definition as one family with an income of \$48,000, but under the person definition as three persons with incomes of \$8,000, \$20,000, and \$20,000.

⁹ Neither the family nor the person measure of income is fully satisfactory for determining a person's economic status. When comparing couples with individuals, the person measure will understate the well-being of couples relative to individuals, since it does not take into account the economizing that a couple is able to achieve; the family measure, on the other hand, overstates the well-being of couples relative to individuals. The most widely used method of adjusting family incomes for family size, the Census family poverty line, was explicitly tailored to reflect economies of size for individuals and couples living at incomes near poverty and may therefore be inappropriate for use over the whole income distribution. When comparing persons who live on their own with persons who live with other members of their families, other problems arise. The person measure used here takes into account neither the household economies of living in a larger household nor the possible sharing of income among the subfamilies of the extended family. The use of family income, on the other hand, would cause aged persons who are forced to economize by moving in with their children to be considered better off than aged persons who still have sufficient income to live on their own. Person income is used in this article because it allows a straightforward tabulation of OASDI taxes and benefits by age of person.

¹⁰ To the extent that workers who expect higher than average benefits feel they need to make less than average provision for non-OASDI retirement income, the use of pre-OASDI income in retirement as a measure of income is weakened. It seems unlikely, however, that the tendency for workers with higher earnings to save more for retirement would be overcome by a tendency to compensate for higher OASDI benefits by reducing other savings. Nevertheless, this is one reason why studies of cross-sectional data like this article can only give suggestive indications of the lifetime consequences of OASDI taxes and benefits; definitive conclusions can be reached only through the study of life histories of earnings and savings.