

Aged SSI Recipients: Income, Work History, and Social Security Benefits

by Charles G. Scott *

A large number of aged Americans depend on Social Security benefits to stay out of poverty. Those who have very small Social Security checks, or who have none at all, rely heavily on the Supplemental Security Income (SSI) program for much of their income. Most aged SSI recipients have earnings histories to explain their lack of adequate Social Security benefits. Information on these histories was obtained from a 1-percent sample file cross-matched to SSI administrative files and other agency files containing data on employment histories and industry codes. These histories and related SSI program records reflect periods of low wages, periods in noncovered employment, interruptions in employment, and periods of residence outside the United States. Data show that aged women represent a large portion of the aged poor. These women are particularly prevalent not only because of their weak earnings histories, but also because of their inability to establish entitlement to Social Security benefits through marriage.

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In general, the incomes¹ of aged Americans come from one or more of three main sources—Social Security benefits, employment related pensions, and other income from resources accumulated over a lifetime. Social Security accounts for about 38 percent of the aggregate income of those aged 65 or older, pensions account for 18 percent of aggregate income, and income from assets accounts for 25 percent.² The remainder is a combination of earnings and income from other sources.

For the aged poor, the picture is quite different. Social Security accounts for about 77 percent of the income of aged households with annual incomes of less than \$10,000. Moreover, without Social Security benefits, the number of aged households below the poverty level would rise from the current 14 percent figure to 51 percent.³ Obviously, Social Security benefits are the primary source of income security for the elderly poor. Some persons, however, do not receive

Social Security benefits because they are not eligible by law, or receive benefits that are very low. Such persons are especially likely to fall below the Federal poverty level. Typical of these persons are the 2 million aged Americans who rely on the Federal Supplemental Security Income (SSI) program to boost their incomes. Recipients of SSI payments are a particularly relevant group of persons to study when examining the incomes of the poor.

The SSI program makes cash payments to aged, blind, and disabled persons whose income and resources are below specified amounts. States have the option to supplement basic Federal payments, and many States choose to do so. A few SSI recipients in States offering larger supplements have pre-SSI incomes above the official poverty level, but the great majority of recipients have cash incomes well below the poverty level. Most SSI recipients aged 65 or older have small Social Security benefit checks that are supplemented by an SSI check. Some recipients, however, are not entitled to a Social Security benefit. This article focuses on the Social Security benefit status of these older SSI recipients, and attempts to shed some light on why their Social Security benefits are small or nonexistent by exploring

the underlying wage records and other variables. Because men and women have differing patterns of employment and receipt of Social Security, separate estimates will be shown throughout the article.

Methodology

The data presented here come from a combination of three data files:

- (1) **SSI 1-Percent Sample File.** This sample file is drawn monthly from the Supplemental Security Record (SSR), the main administrative data base for the SSI program. The sample is drawn, based on certain digits within the Social Security Number (SSN). The sample file contains demographic as well as program data, and represents the starting point for the matches to the other files. In December 1988, 19,825 SSI recipients aged 65 or older were identified in the sample, representing about 1,982,500 recipients. Of the 19,825 sample recipients, 17,359 were receiving a Federal SSI payment and, therefore, either did not have income from Social Security or had Social Security income at or below

¹ Income does not include noncash sources (such as in-kind support and maintenance and deemed income) used in computing SSI payments.

² Susan Grad, **Income of the Population 55 or older, 1988**, Office of Research and Statistics, Office of Policy, Social Security Administration, p. 99.

³ *Ibid.*, pp. 101-106. Poverty data based on thresholds used by the Bureau of the Census.

70 percent of the poverty level.⁴ This group was selected for the study.

(2) **Continuous Work History Sample (CWHS), 1937-87.**

The CWHS contains earnings and Social Security program data for a 1-percent sample of wage earners. The sample is drawn using the same SSN criteria as the SSI Sample file. Variables extracted from the CWHS for this study included annual summaries of earnings and quarters of coverage.

(3) **Longitudinal Employee-Employer Data (LEED) File.**

The LEED file is another 1-percent file containing wage-related information. The only variables taken from this file were the industry codes and the number of years the wage earner was associated with the employer. Data were available for the period 1957-87.⁵

The study file used here was created by matching the base SSI 1-percent sample to the CWHS and the LEED files. Estimates shown are inflated from the sample. Standard errors for estimated counts and percentages are shown in the Technical Note at the end of this article.

Incomes of SSI Recipients

In December 1988, there were about 1,735,900 persons, aged 65 or older, receiving Federal SSI payments.⁶ One of the most striking characteristics of this group of the aged poor is that about 75 percent were women (table 1). Women have longer life expectancies than men and therefore make up a greater portion of the aged. However, only 59 percent of those aged 65 or older in 1988 were women.⁷ Why, then, are so many aged SSI recipients women? And why do these SSI recipients have low or nonexistent Social Security benefits?

One reason may be that many of these older women had marital histories that precluded Social Security coverage based on a spouse's earnings record (for example, they were never married or were married for less than 10 years). In a 1988 study,⁸ Iams and Ycas reported that only 5 percent of all women aged 55-64 appeared to be ineligible for Social Security benefits based on their marital histories. One might expect the proportion to be

not much different for the over-65 women. Although this seems to be a very small proportion of all older women, this 5 (or even 10) percent segment could comprise one-half of the SSI recipients in this study.

Another reason for low Social Security benefits is that SSI recipients, particularly women, are more likely to have insufficient work histories to qualify for Social Security benefits. Two factors may have caused this. First, they may have spent a large part of their working lives in jobs that were not covered by Social Security. Although coverage today is nearly universal, many jobs were not covered during the peak earnings years of many aged SSI recipients.

The original Social Security Act of 1935 covered only employees under age 65 working in private industry and commerce. In 1939, coverage was extended to employees aged 65 or older in the same types of employment. Significant revisions of coverage began in 1950, when non-farm self-employed workers were added. Also added at that time were some farm workers, domestic service workers, and some State and local government employees. In 1954, additional farm workers, self-employed farm operators, ministers, and domestic workers were added to the program. In 1956, farm landlords, servicemen, and self-employed professional persons were added. Several groups have been added since 1956, the most important of which were self-employed physicians (1965), Federal employees (1983), and some employees of State and local governments (1986).

In 1988, 50 percent of all SSI recipients were older than age 75. These same persons were aged 37 or older in 1950 when the substantial expansion in coverage

⁴The remaining 2,466 sample cases were receiving only a State supplement. The precise relationship of pre-SSI income to the poverty level for each recipient cannot be determined because the data base does not have the information on family size. For persons receiving a Federal payment, pre-SSI income would have to have been near or below the Federal SSI payment level. In 1988, the Federal level was about 70 percent of the poverty threshold for a single person. For persons receiving only an SSI State supplement, pre-SSI income can vary considerably, from nearly 70 percent of the poverty level in some States to slightly over the poverty level in California and Alaska. Those persons who received only a State supplement were eliminated from the study group because of the sizeable State variation.

⁵For a description of the CWHS and LEED files, see Creston M. Smith, "The Social Security Administration's Continuous Work History Sample," *Social Security Bulletin*, October 1989, pp. 20-28.

⁶Persons aged 65 or older in this article include those 553,400 recipients who originally applied for SSI disability payments before age 65.

⁷Bureau of the Census, "Population Estimates and Projections," *Current Population Reports*, Series P-25.

⁸See Howard Iams and Martynas Ycas, "Women, Marriage, and Social Security Benefits," *Social Security Bulletin*, May 1988, pp. 3-9. Before 1978, the required marital duration for a divorced spouse was 20 years.

began. Therefore, older SSI recipients who worked in jobs not covered until the 1950's or later may have spent most of their working lives in noncovered employment.

The second important cause of an insufficient work history is that many SSI recipients, particularly women, may have worked intermittently or not at all. Historically, women's work histories have had more gaps than men's because of years spent in child care.

Of all SSI recipients, about 66 percent received a Social Security benefit in addition to an SSI check (table 1). Few recipients—only about 9 percent—had other sources of income. The most frequent sources encountered were veterans' pensions, interest

payments, employment pensions, and earnings. Nearly 32 percent of all recipients had no income besides their SSI checks. Very little difference can be seen in sources of income by sex and age.

The total incomes of SSI recipients (including SSI payments) vary somewhat, depending on the recipient's living arrangement, marital status, State of residence, and receipt of non-SSI income. For study recipients, the average monthly income (including SSI) was \$393. Both SSI payments and Social Security benefits were important sources of this income. Payments from SSI accounted for about 55 percent of the aggregate income of the aged recipients, while Social Security benefits accounted

for 43 percent (table 2). Other sources contributed only 2 percent to the aggregate income. The distribution of income types for women was similar to that for men. However, women received a much larger aggregate amount of income than men because women comprised such a large proportion of the recipients.

SSI Recipients with Social Security Benefits

Of the 1,138,300 recipients who received Social Security benefits, about 8 percent had monthly checks of less than \$150 (table 3). About 13 percent received benefit checks of \$350 or more. The distribution and amount show that Social

Table 1.—Number and percentage of SSI recipients aged 65 or older, by sex, age group, and type of non-SSI income received

Type of non-SSI income	All recipients	Recipients aged—		
		65-69	70-74	75 or older
All recipients				
Total number.....	1,735,900	451,200	399,000	885,700
Total percent.....	100.0	100.0	100.0	100.0
With Social Security.....	65.5	66.9	67.0	64.2
Social Security only.....	59.0	59.1	60.5	58.3
Social Security and other.....	6.5	7.8	6.5	5.9
Other only.....	2.7	2.5	2.7	2.9
None.....	31.7	30.6	30.3	32.8
Men				
Total number.....	429,000	117,800	96,500	214,700
Total percent.....	100.0	100.0	100.0	100.0
With Social Security.....	65.2	67.3	63.1	64.9
Social Security only.....	60.7	62.4	58.5	60.7
Social Security and other.....	4.5	4.9	4.6	4.2
Other only.....	3.2	3.1	4.2	2.8
None.....	31.6	29.5	32.6	32.2
Women				
Total number.....	1,306,900	333,400	302,500	671,000
Total percent.....	100.0	100.0	100.0	100.0
With Social Security.....	65.7	66.7	68.2	64.0
Social Security only.....	58.5	57.9	61.1	57.5
Social Security and other.....	7.2	8.8	7.1	6.5
Other only.....	2.2	2.2	2.1	2.9
None.....	32.0	31.0	29.6	33.0

Security benefit amounts were slightly lower for women than for men.

The mean monthly benefit for SSI recipients (\$259) was considerably lower than that for all Social Security beneficiaries aged 65 or older in 1988 (\$514; \$609 for men and \$452 for women).⁹ Aged persons can be entitled to Social Security benefits either as workers, based on their own earnings records, or as dependents or survivors of workers. Of those SSI recipients with a Social Security benefit, about 63 percent received Social Security benefits based either partially or entirely on their own work record (table 4). There was a considerable difference by sex. About 95 percent of the men had Social Security benefits based on their own work record, while only 53 percent of the women received

benefits based partially or entirely on their own work records. About 46 percent of the women received benefits as a spouse or widow. A few recipients received Social Security benefits as adult disabled children.

The average Social Security benefit for SSI recipients aged 65 or older was \$268. Benefits this low do not result from a lifetime of low-wage jobs in covered employment. Continuous employment at the minimum wage level would have resulted in a Social Security benefit of \$402 for a worker retiring at age 65 in 1988.¹⁰ This amount would have precluded eligibility for SSI except in those States offering substantial supplementation. Benefits at the \$268 level reflect abbreviated or interrupted working lifetimes or periods of noncovered employment. A look at the covered work histories of the 720,500 recipients with workers' benefits

reveals that the working lives of SSI recipients tended to be in the 10-30 year range. There were a few (5.2 percent) who had worked for 35 years or more, and a few (15.1 percent) who worked less than 10 years (table 5). The working pattern of women showed fewer years worked than that of men.

Another variable that sheds some light on the reasons for low Social Security benefits is the industry in which the SSI recipient worked. Table 6 contains industry distributions, using the definitions contained in the **Standard Industrial Classification Manual**.¹¹ Since SSI recipients may have worked in more than one industry, the industry selected in the table was the one the data base most frequently cited for that person

⁹ Social Security Administration, Office of Research and Statistics, **Annual Statistical Supplement, 1988**, to the **Social Security Bulletin**, p. 1, table 1-A.

¹⁰ Estimate provided by the Office of the Actuary, Social Security Administration.

¹¹ Office of Management and Budget, **Standard Industrial Classification Manual, 1987**, Publication PB 87-100012, National Technical Information Service: Springfield, VA.

Table 2.—Sources of income of SSI recipients aged 65 or older, by sex, average monthly amount, aggregate amount, and percent of aggregate amount

Source of income	Number of recipients	Average monthly amount	Aggregate amount (in millions)	Percent of aggregate amount
All recipients				
Total	1,735,900	\$393	\$682	100.0
SSI payments ¹	1,735,900	216	375	55.0
Social Security benefits	1,138,300	258	294	43.1
Other	161,300	81	13	1.9
Men				
Total	429,000	\$396	\$170	100.0
SSI payments ¹	429,000	212	91	53.5
Social Security benefits	279,700	271	76	44.7
Other	33,200	82	3	1.8
Women				
Total	1,306,900	\$391	\$511	100.0
SSI payments ¹	1,306,900	217	283	55.4
Social Security benefits	858,600	254	218	42.7
Other	128,100	81	10	2.0

¹ The SSI dollar amounts are limited to Federal dollars, and State dollars where the Federal Government administers a State supplement. Not included are some supplemental payments made by States that administer their own supplements.

before age 65.¹² The most striking result of the distribution is that nearly one-half of the women worked mainly in the services industry. The industrial distribution for men shows a much more balanced distribution. Agriculture and manufacturing are the largest categories. A closer look at the major subgroups within the services division shows that of the women employed in the services industry, nearly one-half were employed in private households. As noted earlier,

work in private households was not covered by Social Security until the 1950's.

Even where coverage existed for these women, some evidence suggest that such work was often unreported, especially if the work was irregular.¹³ To the extent that the work was unreported, the amount of the Social Security benefit would have been negatively affected. More than one-half of the women in the services industry worked in other areas, including health services, hotels, rooming houses, lodging places, membership organizations, and in personal and educational services.

¹³ Ella Polinsky, "Women Household Workers Covered by Old-Age, Survivors, and Disability Insurance," *Social Security Bulletin*, July 1965, pp. 33-38.

¹²In the data base, a single code was selected for each person, for each year, from 1957 until the year the person reached age 65. That code represented the industry with the largest amount of earnings for the year. Industry codes were grouped into industrial divisions, and the industry with the largest number of codes was selected for inclusion in the analysis.

In order to show how the industrial pattern of SSI recipients contributes to low levels of Social Security benefits, it is useful to compare the industries of SSI recipients with those for a group of all Social Security retired-workers aged 65 or older. Table 7 shows the industrial mix for the larger group of Social Security beneficiaries, aged 65 or older, who received benefits as workers. There are two differences between the two groups of beneficiaries. First, SSI recipients, especially males, were much more likely to have been involved in farming than those in the Social Security beneficiaries group. About 21 percent of male recipients earned income in the agricultural sector, compared with only 3 percent of the overall group. The SSI recipients were also less likely to have worked in manufacturing than were males in the larger group. The second major difference between the two groups is that about 21 percent of the SSI women worked in private households compared with only 5 percent of the larger group of aged retirees.

Lack of Social Security Coverage

If low Social Security benefits for some recipients are partially explained by the type of work performed and by abbreviated or interrupted work lives, the total lack of benefits for other recipients raises

Table 3.—Percentage distribution of recipients aged 65 or older receiving Social Security benefits, by benefit amount and sex

Amount of Social Security benefit	All recipients	Men	Women
Total number.....	1,138,300	279,700	858,600
Total percent.....	100.0	100.0	100.0
Less than \$99.....	2.6	1.8	2.9
\$100-\$149.....	5.4	3.8	5.9
\$150-\$199.....	12.4	10.6	13.0
\$200-\$249.....	26.7	24.1	27.5
\$250-\$299.....	18.8	21.0	18.1
\$300-\$349.....	20.8	22.1	20.4
\$350 or more.....	13.2	16.6	12.1
Mean amount.....	\$259	\$271	\$254

Table 4.—Number of SSI recipients aged 65 or older receiving Social Security benefits, by type of benefit, amount, and sex

Type of Social Security benefit	All recipients		Men		Women	
	Number	Average amount	Number	Average amount	Number	Average amount
All recipients.....	1,138,300	\$259	279,700	\$271	858,600	\$254
Worker.....	720,500	268	265,300	275	455,200	264
Spouse.....	112,100	162	6,500	135	105,600	163
Widow(er).....	294,800	272	2,900	272	291,900	272
Other.....	10,900	250	5,000	244	5,900	254

other issues. About 597,600 SSI recipients aged 65 or older had no Social Security benefits; 448,300 (75 percent) were women. Some of the reasons for lack of entitlement to Social Security benefits are the same as those previously given for low benefits—that is, lack of coverage and intermittent employment.

Another important explanation for lack of Social Security benefits is that many SSI aged recipients have spent some or all of their working lives outside of the United States. Aliens can become eligible for SSI payments if they are lawfully admitted for permanent residence or are permanent residents in the United States under "color of law."¹⁴ Aliens comprised about 30 percent of all SSI recipients who lacked Social Security benefits (table 8).

About 69 percent of the aliens were women. Earnings histories for aliens are even more limited than for other SSI recipients, and about three-fourths of the aliens had no covered earnings at all.

If the earnings records of aliens were nonexistent, the earnings records for the citizens in the group were not much better. About half had no record of covered earnings, and less than 8 percent had earnings in 10 years or more.

An additional measure of the marginal nature of these recipients' earnings records is an estimate of the number of years with earnings needed to ensure the receipt of a Social Security benefit. To become entitled to Social Security retirement benefits on one's own work record, a person must be "fully insured;"

¹⁴ Aliens are lawfully admitted for permanent residence if they follow the regular immigration procedures. Aliens admitted under "color of law" include refugees who, for humanitarian reasons, were not required to follow the regular immigration procedures. The great majority of aliens who receive SSI payments are "lawfully admitted."

Table 5.—Percentage distribution of SSI recipients aged 65 or older receiving Social Security retired-worker benefits, by sex and number of years of covered earnings

Years with earnings before age 65	Total	Men	Women
Total number.....	720,500	265,300	455,200
Total percent.....	100.0	100.0	100.0
Less than 5 years.....	3.0	1.8	3.8
5-9.....	12.1	9.4	13.7
10-14.....	19.4	15.2	21.9
15-19.....	20.7	19.6	21.4
20-24.....	18.2	19.3	17.6
25-29.....	13.3	16.7	11.3
30-34.....	8.0	10.4	6.6
35 years or more.....	5.2	7.6	3.8
Mean years.....	18.8	20.8	17.7

Table 6.—Percentage distribution of SSI recipients aged 65 or older receiving Social Security retired-worker benefits, by sex and industry division¹

Industry division	Total	Men	Women
Total number.....	720,500	265,300	455,200
Total percent.....	100.0	100.0	100.0
Agriculture, forestry, and fishing.....	10.4	21.3	4.0
Mining.....	.3	.8	0
Construction.....	5.6	14.5	.5
Manufacturing.....	17.4	18.3	16.9
Transportation.....	1.5	3.1	.5
Wholesale trade.....	2.3	3.4	1.7
Retail trade.....	14.5	9.7	17.3
Finance, insurance, and real estate...	1.5	1.5	1.5
Services.....	35.0	13.4	47.5
Private households.....	13.7	.6	21.3
Other services.....	21.3	12.8	26.2
Public administration.....	2.2	3.8	1.2
No industry listed ¹	9.3	10.2	8.8

¹ Includes persons whose industry codes were outside the recognized coding scheme and persons who had no codes listed between 1957 and age 65.

Table 7.—Percentage distribution of Social Security beneficiaries aged 65 or older receiving retired-worker benefits, by sex and type of industry, 1988¹

Industry division	Total	Men	Women
Total number.....	22,866	11,917	10,949
Total percent.....	100.0	100.0	100.0
Agriculture, forestry, and fishing.....	1.8	2.9	.6
Mining.....	1.0	1.8	.1
Construction.....	4.9	8.7	.7
Manufacturing.....	27.3	32.0	22.2
Transportation.....	4.4	6.4	2.1
Wholesale trade.....	4.7	6.2	3.1
Retail trade.....	14.3	9.8	19.2
Finance, insurance, and real estate...	4.2	3.9	4.8
Services.....	22.1	11.8	33.0
Private households.....	2.3	.2	4.5
Other services.....	19.8	11.6	28.5
Public administration.....	6.6	8.0	5.0
No industry listed.....	8.7	8.5	8.9

¹ Based on a 0.1 percent sample.

Table 8.—Percentage distribution of SSI recipients aged 65 or older not receiving Social Security benefits, by alien status, sex, and number of years with covered earnings¹

Years with earnings	Total	Men	Women
All recipients			
Total number.....	597,600	149,300	448,300
Total percent.....	100.0	100.0	100.0
No earnings.....	58.1	47.6	61.6
Less than 5 years.....	22.6	24.8	21.9
5-9.....	13.7	18.8	12.0
10-14.....	4.2	5.8	3.6
15-19.....	1.0	2.0	.6
20 years or more.....	.4	1.1	.2
Aliens			
Total number.....	177,900	55,700	122,200
Total percent.....	100.0	100.0	100.0
No earnings.....	74.5	65.7	78.5
Less than 5 years.....	17.3	23.1	14.6
5-9.....	7.9	11.0	6.5
10-14.....	.3	.2	.4
15-19.....	...	...	...
20 years or more.....	...	...	...
Citizens			
Total number.....	419,700	93,600	326,100
Total percent.....	100.0	100.0	100.0
No earnings.....	51.1	36.8	55.3
Less than 5 years.....	24.9	25.7	24.7
5-9.....	16.2	23.5	14.1
10-14.....	5.8	9.1	4.8
15-19.....	1.4	3.2	.9
20 years or more.....	.6	1.7	.3

¹Includes all years with earnings, not just those before age 65.

that is, he or she must have the required number of quarters of coverage.¹⁵ The number of quarters needed in order to be fully insured for retirement benefits also varies from 6 to 40, depending primarily on year of birth. A typical 75-year-old SSI recipient who filed for benefits at age 62 would have needed 24 quarters of coverage when he or she filed in 1975.

Of the recipients who lacked Social Security benefits, most were well short of fully insured status (table 9).¹⁶ About 87 percent needed 9 or more quarters to become fully insured. Only about 6 percent of the men and 3 percent of the women were within 4 quarters of being fully insured. Clearly, few of the recipients who lacked Social Security benefits were on the verge of receiving them.¹⁷

¹⁵The value of a quarter of coverage and the method for crediting have changed over the years. Before 1978, a quarter of coverage was a calendar quarter in which a worker was paid \$50 or more in wages for covered employment or was credited with \$100 or more of self-employment income. Effective in 1978, the crediting of a quarter of coverage was changed from a quarterly to an annual basis and was subject to an annual automatic increase. By 1988, a quarter of coverage was earned for each \$470 of covered earnings in a year (not to exceed 4 quarters).

¹⁶Includes all quarters of coverage, including those earned after age 65.

¹⁷When someone files for SSI, it is SSA policy to explore eligibility to all appropriate Social Security benefits, including auxiliary and survivor benefits. If insured status is attained at a later date, computer alerts are sent to field offices so that an application can be obtained. The few recipients listed as "appear to be insured" in table 9 were comprised mostly of persons who were entitled to Social Security benefits, but whose benefits were temporarily interrupted in the study month.

Conclusion

Many factors, including a lack of protection in the Social Security statutes contribute to the low incomes of aged SSI recipients. About two-thirds have Social Security benefits that are far lower than those received by the average beneficiary; the remaining one-third lack Social Security benefits altogether. Wage records and other variables can be used to provide some insights into reasons why SSI recipients have low Social Security benefits. Many women have low Social Security benefit amounts because they have worked for many years in private households. Another large group of recipients receives no Social Security benefits at all, because they are resident aliens who spent only part of their working lives in the United States. Another reason mentioned, but not explored here, is differences in marital

Table 9.—Percentage distribution of SSI recipients aged 65 or older not receiving retired-worker benefits, by sex and quarters of coverage needed for fully insured status¹

Quarters of coverage needed	Total	Men	Women
Total number	597,600	149,300	448,300
Total percent	100.0	100.0	100.0
1 to 4 quarters	3.3	4.4	2.9
5-8	8.9	6.4	9.7
9-12	10.5	9.6	10.8
13-19	24.4	22.0	25.2
19 quarters or more	52.2	56.1	50.9
Appear to be insured .....	.7	1.5	.5

¹ Includes all years with earnings, not just those before age 65.

histories between SSI recipients and other beneficiaries. The data base did not permit any more details on this subject. Further study is needed on why such a large number of persons, mostly women, are not eligible for the protection afforded to others by the Social Security program.

Technical Note

Estimates based on sample data may differ from the figures that would have been obtained had all, rather than a sample, of the records been used. These differences are termed sampling variability. The standard error is a measure of sampling variability; that is, the variation that occurs by chance because a sample is used. The standard error is used to describe confidence intervals. The confidence interval represents the extent to which the sample results can be relied upon to describe the results

that would occur if the entire population (universe) had been used for data compilation rather than the sample.

In about 68 percent of all possible probability samples with the same selection criteria, the universe value would be included in the interval from one standard error below to one standard error above the sample estimate. Similarly, about 95 percent of all possible samples will give estimates within two standard errors, and about 99 percent will give estimates within two and one-half standard errors.

Tables I and II provide approximations of standard errors of estimates shown in this article. Table I presents approximate standard errors for the estimated number of recipients from the SSI 1-Percent Sample File. Table II presents approximations of standard errors for the estimated percentage of persons from that 1-percent file. Linear interpolation may be used to obtain values not specifically shown.

Table I.—Approximations of standard errors of estimated numbers of persons from the SSI 1-Percent Sample File

Size of estimate (inflated)	Standard error
500	250
1,000	300
2,500	500
5,000	800
7,500	900
10,000	1,100
25,000	1,700
50,000	2,400
75,000	3,000
100,000	3,400
250,000	5,400
500,000	9,600
1,000,000	11,100
5,000,000	25,800

Table II.—Approximations of standard errors of estimated percentages of persons from the SSI 1-Percent Sample File

Size of base (inflated)	Estimated percentage				
	2 or 98	5 or 95	10 or 90	25 or 75	50
1,000	4.7	7.3	10.1	14.5	16.8
10,000	1.5	2.3	3.2	4.6	5.3
50,000 .....	.7	1.0	1.4	2.1	2.4
100,000 .....	.5	.7	1.0	1.5	1.7
500,000 .....	.2	.3	.4	.7	.8
1,000,000 .....	.1	.2	.3	.5	.5
5,000,000 .....	.1	.1	.1	.2	.2