

Lifetime Covered Earnings and Quarters of Coverage of Retired and Disabled Workers, 1972

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This article presents information on the lifetime covered earnings of retired-worker and disabled-worker beneficiaries under OASDHI, the year of their first earnings credits, their quarters of coverage, and the relationship of these factors to 1972 benefit levels. Among both groups, relatively more women began earning credits after 1940, they also worked fewer years in covered employment and had lower lifetime earnings overall. Their benefits were thus smaller than those of men. White men tended to have higher lifetime covered earnings than did black and other men, but the latter sometimes had lifetime earnings that exceeded those of white women with equal quarters of coverage. Black women and those of other minority races tended to have the lowest lifetime covered earnings. Both retired and disabled workers whose covered employment began after 1950 were likely to have benefits as high or higher than the benefits of those with earlier credits—a reflection of rising wage levels and higher taxable maximums, as well as the "new start" computation method.

the Social Security Administration, are shown separately by age, sex, and race of worker¹

BENEFIT ENTITLEMENT

To become entitled to monthly retirement or disability benefits, a worker must meet certain requirements set by law. First, the worker must be fully insured, which requires at least 6 quarters of coverage.²

For entitlement to retirement benefits, being fully insured means having a quarter of coverage for each year elapsing after 1950 (or the year in which the worker attained age 21, if later) and before the year (1) in which a woman attains age 62, (2) in which a man born before 1911 reaches age 65, or (3) in which a man born in 1911 or later reaches age 62—or 1975, whichever is later.

For entitlement to disability benefits, being fully insured means having a quarter of coverage for each year elapsing after 1950 (or the year in which age 21 is attained, if later) and before the year of onset of disability. In addition, a disabled worker must have earned at least 20 quarters of coverage during the 40-quarter period ending with the quarter in which the worker became disabled. Less stringent quarters-of-coverage requirements apply to blind workers and to those who become disabled before reaching age 31.

BENEFIT COMPUTATION

Monthly benefits are based on the worker's primary insurance amount (PIA), which is re-

¹ For a discussion of the CWHS, see Lucy B. Mallan, "Women Born in the Early 1900's: Employment, Earnings, and Benefit Levels," *Social Security Bulletin*, March 1974.

² Individuals who attained age 72 before 1969 can receive benefits under the transitional insured status provision of the law if they have 3-5 quarters of coverage. At the end of 1972, 47,000 out of 15.5 million retired workers were receiving benefits under this provision. These individuals are included in the study data.

TO BE ELIGIBLE for monthly social security benefits, a worker must have sufficient quarters of coverage under the social security program. The number of quarters required depends on the worker's date of birth and, for a disabled worker, the date of onset of disability. Usually, a quarter of coverage is acquired by earning \$50 or more within a calendar quarter in employment covered under the program. Quarters of coverage for the self-employed and farm workers are based on the amount of annual earnings. The number of quarters of coverage earned by individuals and their lifetime covered earnings thus provide information about their lifetime attachment to the social security program.

This article examines the lifetime earnings and quarters of coverage for retired and disabled workers who were on the social security benefit rolls at the end of 1972, by year of entrance into covered employment and by benefit level at the end of that year. The data, based on the 1-percent Continuous Work History Sample (CWHS) of

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lated by law to the average amount of monthly earnings covered under the social security program. Statutory limitations govern the maximum amount of covered earnings that can be credited to the worker's earnings record each year. The maximums were \$3,000 in 1937-50, \$3,600 in 1951-54, \$4,200 in 1955-58, \$4,800 in 1959-65, \$6,600 in 1966-67, \$7,800 in 1968-71, and \$9,000 in 1972.

To compute a worker's average monthly earnings (AME), it is first necessary to establish the length of the period (number of computation years) to be measured. The minimum number of computation years is generally 5 for retirement benefits and 2 for survivor or disability benefits. Usually, the number of computation years is 5 fewer than the number considered in determining the worker's quarters-of-coverage requirement.

In averaging the covered earnings for the required number of years, covered earnings are used for years after 1950 in which such earnings were highest, even though they may have been earned before age 21 or after age 62 or 65. After the AME has been computed, the PIA is determined from a benefit table in the law that relates the PIA to the AME.

Under this procedure—the "new start" method—all computations begin with the year 1951. The "old start" method for computing the AME differs from the new-start method in the manner in which the number of computation years is determined, it also considers covered earnings during the period 1937-50. Usually, the new-start method is more favorable to the applicant who has the required number of years with covered earnings after 1950. If the old-start method yields a higher PIA, then that method is used in the computations.

The full PIA is payable to a retired worker upon entitlement to benefits at age 65 and to a disabled worker upon entitlement to benefits at any age. A retired worker may elect entitlement as early as age 62, but the PIA is then reduced by five-ninths of 1 percent for each month of entitlement preceding age 65, for a maximum reduction of 20 percent.

SOCIAL SECURITY COVERAGE

Employees in commerce and industry in the United States were first covered under the social

security program in 1937. By the end of 1940, about 46 million workers had become covered. About 30 million additional workers obtained coverage during World War II, and 13 million more did so during 1946-50.

In the 1950's, social security coverage was extended to most types of workers. Nonfarm self-employed persons (except those in certain professional groups), regularly employed farm and domestic workers, and certain employees of nonprofit organizations and State and local governments gained coverage in 1951. Largely as a result of this extension of coverage, nearly 6 million workers obtained their first credits in covered employment during that year, compared with an average of about 2.5 million persons annually in the preceding 5 years. About 7 million workers began to accumulate coverage credits during 1952-54. During the later part of the 1950's, coverage was extended to the farm self-employed, certain self-employed professionals (except medical doctors, who became covered in 1965), members of the Armed Forces, and additional State and local workers. Nearly 5 million additional workers became covered during the remainder of that decade. Federal civilian employees and many employees of nonprofit organizations and State and local governments remain without coverage.

RETIRED-WORKER BENEFICIARIES

At the end of 1972, 15.5 million retired workers were on the social security benefit rolls. About 8.9 million were men and 6.6 million were women. Of the total number on the rolls, about 14.6 million were actually receiving benefits. The remaining 893,000 persons—656,000 men and 237,000 women—did not receive benefits, primarily because they had earnings high enough to offset the benefits due them. In 1972 the earnings test provided that no benefits were to be withheld if annual earnings were \$1,680 or less, but that \$1 in benefits was to be withheld for each \$2 in earnings from \$1,681 to \$2,880, beyond which a dollar-for-dollar withholding applied. Benefits were payable, however, for any month in which the entitled individual earned \$140 or less or did not render substantial services in self-employment. Workers whose benefits were withheld were included in this study since they would be able

TABLE 1—Men and women retired-worker beneficiaries on the rolls¹ at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Years of covered employment and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150.00-199.99	\$200.00 or more	Total	Less than \$40,000	\$40,000-79,999	\$80,000 or more
Men										
Total	8 854	100	100	27	22	51	100	35	27	38
Earnings credits began—										
Before 1941	5,743	65	100	19	21	60	100	22	28	50
Less than 10	225	3	100	90	7	3	100	98	2	0
10-19	847	10	100	56	31	13	100	77	22	1
Less than 40 QC	241	3	100	88	9	3	100	99	1	0
40 QC or more	606	7	100	43	40	17	100	67	31	2
20-29	2 083	23	100	16	27	57	100	18	52	30
Less than 80 QC	540	6	100	41	34	25	100	50	46	4
80 QC or more	1 543	17	100	7	24	69	100	6	54	40
30 or more	2,588	29	100	3	13	84	100	2	13	85
1941-50	1,529	17	100	40	25	35	100	52	27	21
Less than 10	216	2	100	96	11	3	100	99	1	0
10-19	573	6	100	51	27	22	100	76	22	2
Less than 40 QC	188	2	100	77	18	5	100	99	1	0
40 QC or more	385	4	100	39	32	29	100	65	32	3
20-29	639	7	100	18	28	54	100	22	43	35
Less than 80 QC	232	3	100	34	33	33	100	44	47	9
80 QC or more	407	4	100	9	26	65	100	8	41	51
30 or more	101	1	100	6	20	74	100	4	22	74
1951-60	1,476	17	100	42	24	34	100	63	24	13
Less than 10	455	5	100	66	22	12	100	99	1	0
10-19	816	9	100	35	26	39	100	55	34	11
Less than 40 QC	84	1	100	70	19	21	100	95	5	0
40 QC or more	732	8	100	31	27	42	100	50	38	12
20 or more	205	3	100	14	21	65	100	16	37	47
1961 or later	106	1	100	68	20	12	100	79	21	0
Women										
Total	6 594	100	100	59	22	19	100	69	22	9
Earnings credits began—										
Before 1941	2 718	41	100	54	25	21	100	59	27	14
Less than 10	363	5	100	98	2	0	100	99	1	0
10-19	793	12	100	82	13	5	100	94	6	0
Less than 40 QC	324	5	100	95	4	1	100	99	1	0
40 QC or more	469	7	100	73	20	7	100	89	10	1
20-29	920	14	100	39	36	25	100	47	44	9
Less than 80 QC	370	6	100	61	26	13	100	77	21	2
80 QC or more	560	8	100	24	42	34	100	28	59	13
30 or more	632	10	100	14	35	51	100	9	42	49
1941-50	2,208	34	100	64	22	14	100	74	21	5
Less than 10	512	8	100	95	4	1	100	100	0	0
10-19	923	14	100	71	20	9	100	89	10	1
Less than 40 QC	372	6	100	90	8	2	100	99	1	0
40 QC or more	551	8	100	59	29	12	100	82	16	2
20-29	696	11	100	35	37	28	100	42	46	12
Less than 80 QC	301	5	100	52	31	17	100	65	31	4
80 QC or more	397	6	100	22	42	36	100	24	58	18
30 or more	75	1	100	16	42	42	100	10	50	40
1951-60	1,511	23	100	61	18	21	100	78	17	5
Less than 10	594	9	100	82	11	7	100	99	1	0
10-19	770	12	100	50	23	27	100	69	25	6
Less than 40 QC	171	3	100	79	14	7	100	96	4	0
40 QC or more	599	9	100	42	25	33	100	61	32	7
20 or more	147	2	100	33	25	42	100	39	37	24
1961 or later	157	2	100	82	11	7	100	92	8	0

¹ Represents here and in succeeding tables those with benefits in current payment status and those with benefits withheld

to receive benefits when their earnings decline or upon attainment of age 72

About 65 percent of the men with retired-worker benefits began working in covered employment before 1941 and an additional 17 percent during the period 1941-50 (table 1) Among

women with retired-worker benefits, 41 percent began working in covered employment before 1941 and 34 percent during the period 1941-50^a

^a The number of men in covered employment increased from 25.6 million in 1940 to 28.8 million in 1945, while the number of women rose from 9.8 million to 17.6 million

The proportion of men in covered employment before 1941 would probably be even higher if it were not for the fact that men have a shorter life expectancy than do women. In 1973, for example, only about 54 percent of the men born in 1903, compared with 73 percent of the women, were still alive.⁴

Most of the remaining retired-worker beneficiaries began working in covered employment during the decade of the 1950's. A substantial number of these beneficiaries were probably either self-employed persons to whom coverage was extended in the 1950's or women aged 45 and over, whose participation in the labor force increased during this period.⁵

Overall, women tended to have worked fewer years in covered employment than did men. Among retired-worker beneficiaries, 63 percent of the men but 38 percent of the women had 20 or more years of covered employment to their credit. Even among those beneficiaries who began working in covered employment during the same time period, women tended to have fewer years in covered employment and fewer quarters of coverage than did men. Among retired workers who began working in covered employment during 1941-50, for example, 42 percent of the men had 20-29 years in covered employment, compared with 32 percent of the women. Furthermore, 27 percent of the men in the same group, compared with only 18 percent of the women, had at least 80 quarters of coverage. In this study, individuals are credited with a year of covered employment if they earned at least 1 quarter of coverage in that year.

Even when they worked the same number of years in covered employment and earned the same number of quarters of coverage as did men, women beneficiaries sometimes had lower lifetime covered earnings. Among beneficiaries with first credits for covered employment before 1941 who had 20-29 years in covered employment and 80 or more quarters of coverage, 40 percent of

the men but 13 percent of the women had lifetime covered earnings of \$80,000 or more. Among those with their first credits during 1951-60 who had 10-19 years in covered employment and at least 40 quarters of coverage, 50 percent of the men but 61 percent of the women had lifetime earnings of less than \$40,000. About 12 percent of the men and 7 percent of the women had earnings of \$80,000 or more.

Lower lifetime covered earnings for women with work histories similar to those of men resulted in lower PIA's for the women. Thus, among workers whose first credits for covered employment were obtained before 1941 and who had at least 30 years in covered employment, 51 percent of the women but 84 percent of the men had PIA's of \$200 or more. Conversely, among workers with 10-19 years of covered employment beginning after 1951 and at least 40 quarters of coverage, 31 percent of the men and 42 percent of the women had PIA's of less than \$150.

Overall, half of the men but less than a fifth of the women had PIA's of \$200 or more. Almost three-fifths of the women but about a fourth of the men had PIA's of less than \$150.

In many instances, men and women who began working in covered employment after 1950 had higher lifetime earnings than did those who began working earlier and had a similar duration of covered employment and quarters of coverage. This situation can be attributed to the increases after 1950 in the maximum earnings creditable for social security purposes and to the general rise in earnings levels over the years. Beneficiaries who started working in covered employment after 1950 were under no disadvantage for not having accumulated earlier credits since the new-start method of computing the PIA did not require the inclusion of earnings for years before 1951.⁶ For beneficiaries with a similar duration of employment and quarters of coverage, the proportion with PIA's of \$200 or more was sometimes higher among those who began work in covered employment after 1950 than among those who also had earlier credits.

Beneficiaries with credits for covered employment earned before 1951 could also use the new-start method when it was advantageous to them if they had the required number of years with

⁴ National Center for Health Statistics, *Vital Statistics of the United States, 1973 Life Tables* (vol II, sec 5), 1973, pages 5-11.

⁵ Thirty-eight percent of women aged 45-54 and 27 percent of those aged 55-64 were in the labor force in 1950, but 49 percent and 37 percent, respectively, in 1959. See Barbara A. Lingg, *Women Social Security Beneficiaries Aged 62 and Older, 1960-74* (Research and Statistics Note No. 13), Office of Research and Statistics, Social Security Administration, 1975, page 3.

⁶ See Lucy B. Mallan, *op cit*, pages 20-21.

covered earnings after 1950 and did not have to count earlier earnings to establish coverage. Social security program data show that, at the end of 1972, the PIA's for about 89 percent of the men retired workers and 81 percent of the women were computed under the new-start method. Yet 18 percent of the men and 25 percent of the women on the rolls had no earnings in covered employment before 1951.

Age Comparisons

Lifetime covered earnings and PIA's according to the age of worker, year of first credits for covered employment, and number of quarters of coverage are shown in table 2. It might be expected that the proportion of those with higher lifetime covered earnings would be less for older than for younger beneficiaries, since many of

TABLE 2—Age of men and women retired-worker beneficiaries on the rolls at end of 1972. Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Age, years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150.00-199.99	\$200.00 or more	Total	Less than \$40,000	\$40,000-79,999	\$80,000 or more
Men										
62-64.....	796	100	100	31	19	50	100	25	22	53
Earnings credits began—										
Before 1941.....	566	71	100	24	18	58	100	18	19	63
Less than 40 QC.....	34	4	100	98	1	1	100	100	0	0
40-79 QC.....	88	11	100	74	18	8	100	62	31	7
80-119 QC.....	180	23	100	19	35	46	100	7	40	53
120 QC or more.....	264	33	100	1	9	90	100	1	4	95
1941-50.....	127	16	100	42	23	35	100	38	28	36
Less than 40 QC.....	17	2	100	99	1	0	100	99	1	0
40-79 QC.....	46	6	100	64	22	14	100	55	33	12
80 QC or more.....	64	8	100	12	29	59	100	7	31	62
1951 or later.....	103	13	100	54	23	23	100	52	29	19
Less than 40 QC.....	23	3	100	93	7	0	100	94	6	0
40 QC or more.....	80	10	100	43	27	30	100	40	36	24
65-71.....	4,059	100	100	22	19	59	100	24	24	52
Earnings credits began—										
Before 1941.....	2,786	69	100	16	17	67	100	15	20	65
Less than 40 QC.....	148	4	100	96	3	1	100	98	1	1
40-79 QC.....	391	10	100	54	27	19	100	58	37	5
80-119 QC.....	995	24	100	9	26	65	100	5	27	58
120 QC or more.....	1,252	31	100	1	7	92	100	1	4	95
1941-50.....	669	16	100	34	22	44	100	37	31	32
Less than 40 QC.....	98	2	100	92	6	2	100	98	2	0
40-79 QC.....	265	6	100	42	29	29	100	52	39	9
80 QC or more.....	305	8	100	8	22	70	100	5	32	63
1951 or later.....	604	15	100	38	24	38	100	45	35	20
Less than 40 QC.....	133	3	100	78	18	4	100	93	7	0
40 QC or more.....	471	12	100	27	28	47	100	32	43	25
72-79.....	2,713	100	100	27	23	50	100	41	33	26
Earnings credits began—										
Before 1941.....	1,681	62	100	18	21	61	100	25	38	37
Less than 40 QC.....	156	6	100	86	10	4	100	98	1	1
40-79 QC.....	366	13	100	36	38	26	100	61	38	1
80-119 QC.....	869	32	100	4	19	77	100	5	53	42
120 QC or more.....	290	11	100	1	12	87	100	1	12	87
1941-50.....	490	18	100	39	28	35	100	60	30	10
Less than 40 QC.....	153	6	100	78	16	6	100	99	1	0
40-79 QC.....	223	8	100	29	34	37	100	58	40	2
80 QC or more.....	114	4	100	7	26	67	100	11	51	38
1951 or later.....	542	20	100	42	23	35	100	72	20	8
Less than 40 QC.....	250	9	100	63	22	15	100	98	2	0
40 QC or more.....	292	11	100	24	25	51	100	50	36	14
80 and over.....	1,286	100	100	39	32	29	100	64	29	7
Earnings credits began—										
Before 1941.....	710	55	100	28	36	34	100	47	43	10
Less than 40 QC.....	139	11	100	83	12	5	100	99	1	0
40-79 QC.....	302	23	100	23	56	21	100	58	41	1
80-119 QC.....	224	17	100	5	27	68	100	8	74	18
120 QC or more.....	45	4	100	1	22	77	100	0	25	75
1941-50.....	243	19	100	54	29	17	100	83	14	3
Less than 40 QC.....	139	11	100	77	19	4	100	99	1	0
40-79 QC.....	81	6	100	27	45	28	100	72	27	1
80 QC or more.....	23	2	100	33	35	52	100	20	54	26
1951 or later.....	333	26	100	51	24	25	100	88	9	3
Less than 40 QC.....	231	18	100	62	24	14	100	99	1	0
40 QC or more.....	102	8	100	27	24	49	100	62	28	10

TABLE 2—Age of men and women retired-worker beneficiaries on the rolls at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings—Continued

Age, years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150.00-199.99	\$200.00 or more	Total	Less than \$40,000	\$40,000-79,999	\$80,000 or more
Women										
62-64	825	100	100	64	20	16	100	62	25	13
Earnings credits began—										
Before 1941	376	46	100	61	20	19	100	56	26	18
Less than 40 QC	87	11	100	99	1	0	100	99	1	0
40-79 QC	125	15	100	83	12	5	100	82	16	2
80-119 QC	106	13	100	34	40	26	100	20	58	22
120 QC or more	58	7	100	7	32	61	100	2	28	70
1941-50	272	33	100	65	22	13	100	63	27	10
Less than 40 QC	75	9	100	99	1	0	100	99	1	0
40-79 QC	115	14	100	70	20	10	100	71	24	5
80 QC or more	82	10	100	26	45	29	100	18	57	25
1951 or later	177	21	100	67	16	17	100	71	19	10
Less than 40 QC	69	8	100	95	5	0	100	97	3	0
40 QC or more	108	13	100	49	24	27	100	53	29	16
65-71	2,808	100	100	52	23	25	100	58	28	14
Earnings credits began—										
Before 1941	1,198	43	100	47	25	28	100	49	30	21
Less than 40 QC	234	8	100	98	2	0	100	99	1	0
40-79 QC	339	12	100	69	20	11	100	79	19	2
80-119 QC	380	14	100	24	40	36	100	20	59	21
120 QC or more	244	9	100	5	29	66	100	2	28	70
1941-50	933	33	100	56	24	20	100	63	28	9
Less than 40 QC	274	9	100	96	3	1	100	99	1	0
40-79 QC	382	14	100	56	27	17	100	70	26	4
80 QC or more	277	10	100	18	41	41	100	17	58	25
1951 or later	677	24	100	59	19	22	100	68	24	8
Less than 40 QC	273	10	100	85	10	5	100	95	5	0
40 QC or more	404	14	100	42	25	33	100	50	37	13
72-79	2,012	100	100	60	23	17	100	77	19	4
Earnings credits began—										
Before 1941	803	40	100	53	28	19	100	64	28	8
Less than 40 QC	232	12	100	94	4	2	100	99	1	0
40-79 QC	246	12	100	60	30	10	100	86	13	1
80-119 QC	258	13	100	19	44	37	100	28	61	11
120 QC or more	67	3	100	9	38	53	100	5	47	48
1941-50	687	34	100	65	23	12	100	84	15	1
Less than 40 QC	323	16	100	89	7	4	100	100	0	0
40-79 QC	267	13	100	51	35	14	100	82	18	0
80 QC or more	97	5	100	26	43	31	100	35	55	10
1951 or later	522	26	100	64	18	18	100	87	11	2
Less than 40 QC	331	16	100	77	13	10	100	98	2	0
40 QC or more	191	10	100	42	26	32	100	67	29	4
80 and over	949	100	100	75	18	7	100	91	8	1
Earnings credits began—										
Before 1941	341	36	100	69	23	8	100	83	15	2
Less than 40 QC	142	15	100	96	3	1	100	99	0	0
40-79 QC	127	13	100	64	32	4	100	91	9	0
80-119 QC	61	7	100	27	47	26	100	41	55	4
120 QC or more	11	1	100	14	40	46	100	11	42	47
1941-50	316	33	100	81	15	4	100	95	4	1
Less than 40 QC	217	22	100	93	6	1	100	100	0	0
40-79 QC	83	9	100	57	36	7	100	91	8	1
80 QC or more	16	2	100	34	43	33	100	43	45	12
1951 or later	292	31	100	78	14	8	100	95	4	1
Less than 40 QC	233	25	100	82	12	6	100	100	0	0
40 QC or more	59	6	100	54	23	23	100	79	19	2

the former would not have worked during recent years, when the taxable maximum and the general earnings level rose considerably. It is therefore not surprising that the proportion of beneficiaries with lifetime covered earnings of \$80,000 or more was considerably lower for those aged 72-79 and for those aged 80 and over than for those aged 62-64 and 65-71.

In some instances, however, the same or a

smaller proportion of those aged 62-64 than of those aged 65-71 had lifetime covered earnings of \$80,000 or more. This disparity may perhaps be partly explained by the fact that persons in the younger group, composed solely of beneficiaries with actuarially reduced benefits, stopped working before age 65, and the older group, containing those with and without such benefit reductions, had a large number of beneficiaries who

worked up to age 65 and beyond. Furthermore, findings from the 1968-70 Survey of New Beneficiaries indicate that, among those awarded benefits in 1969, beneficiaries who elected benefits before age 65 tended to have poorer work histories than those who waited to claim benefits at age 65 or later.⁷

Although the beneficiaries aged 62-64 and those aged 65-71 had similar lifetime covered earnings, the proportion of those with PIA's of \$200 or more was somewhat less among the younger than the older retired workers. The lower PIA's for those aged 62-64 are probably related in part to differences in the number of years required in the computation of the AME. Under the new-start method commonly used in determining the AME, covered earnings are averaged for years after 1950 up to the year in which age 62 (or ages 63-65 for men born before 1913) is attained, after the 5 years with the lowest or zero earnings have been dropped. A younger beneficiary therefore has to include more years in the computation and some of these may be years with lower earnings.

Consider, for example, the experience of two men with the same earnings record who became entitled to benefits in 1972, one at age 65 and the other at age 72. The earnings record is assumed to be as follows:

<i>Period</i>	<i>Annual amount</i>
1951-55 -----	\$3,000
1956-60 -----	4,000
1961-65 -----	4,500
1966-70 -----	6,000
1971 -----	4,000

Each beneficiary would exclude from the computation the 5 years of lowest earnings—in this case, those for 1951-55. The 65-year-old beneficiary would have had to include 16 years of earnings—those for 1956-71—for a total of \$76,500. His AME would have been \$398.44 and his 1972 PIA would have been \$231.60. The 72-year-old beneficiary would have had to include only 9 years of earnings. Those with highest earnings—1962-70—would have yielded total earnings of \$48,000, an AME of \$444.44, and a 1972 PIA of \$248.90.

The older beneficiary, however, could only have gained an advantage from the smaller com-

⁷ See Virginia Reno and Carol Zuckert, "Benefit Levels of Newly Retired Workers: Findings From the Survey of New Beneficiaries," *Social Security Bulletin*, July 1971.

putation period if he had had substantial earnings relatively late in his working life—in the 1950's and 1960's, when the maximum taxable base was continually raised. Among men, 20 percent of those aged 72-79 and 26 percent of those aged 80 and over first obtained credits for covered employment after 1950, compared with 13 percent of those aged 62-64 and 15 percent of those aged 65-71. Among women, comparable proportions were 26 percent for those aged 72-79, 31 percent for those aged 80 and over, 21 percent for those aged 62-64, and 24 percent for those aged 65-71. For men with first credits in covered employment obtained after 1950, 35 percent of those aged 72-79 and 25 percent of those aged 80 and over had PIA's of \$200 or more, compared with 38 percent of those aged 65-71 and 23 percent of those aged 62-64. Similarly, among women with first credits in covered employment after 1950, 18 percent of those aged 72-79, 8 percent of those aged 80 and over, 22 percent of those aged 65-71, and 17 percent of those aged 62-64 had PIA's that high.

The coverage of the self-employed, which began in 1951, was perhaps partly responsible for the high proportion of older persons who obtained their first earnings credits after 1950, since the self-employed tend to be older than wage and salary workers. A recent study of self-employment in the labor force indicates that the difference in average age between the self-employed and wage and salary workers was not less than 12 years in 1960, 1963, or 1965.⁸ Relatively more of the older beneficiaries probably could not obtain coverage before 1951 because they were self-employed.

Race Comparisons

Among the 8 million white men who were retired-worker beneficiaries at the end of 1972, 2 out of 3 showed some earnings credits in covered employment for work before 1941 (table 3). The corresponding proportion for black men and those of other races was about 3 out of 5. The lower longevity among blacks and members of other races probably accounts in part for the lower proportion of blacks in 1972 with first credits in

⁸ Marcia Levy, *Self-Employment in the Covered Work Force* (Staff Paper No. 19), Office of Research and Statistics, Social Security Administration, 1974, page 15.

TABLE 3—Race of men and women retired-worker beneficiaries on the rolls at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Race years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150 00-199 90	\$200.00 or more	Total	Less than \$40,000	\$40 000-79,999	\$80,000 or more
Men										
White	8,011	100	100	25	21	54	100	33	27	40
Earnings credits began—										
Before 1941	5 246	66	100	17	20	63	100	20	28	52
Less than 40 QC	406	5	100	88	8	4	100	99	1	0
40-79 QC	1 022	13	100	39	39	22	100	57	40	3
80-119 QC	2,081	26	100	6	24	70	100	5	46	49
120 QC or more	1 737	22	100	0	7	93	100	0	5	85
1941-50	1 332	16	100	37	25	38	100	50	28	22
Less than 40 QC	842	4	100	80	15	5	100	99	1	0
40-79 QC	540	7	100	34	33	33	100	55	39	6
80 QC or more	450	5	100	7	23	70	100	6	37	57
1951 or later	1,433	18	100	41	24	35	100	62	25	13
Less than 40 QC	545	7	100	64	23	15	100	97	3	0
40 QC or more	888	11	100	25	26	49	100	42	38	20
Black or other	843	100	100	49	25	26	100	53	28	19
Earnings credits began—										
Before 1941	497	59	100	39	27	34	100	41	32	27
Less than 40 QC	70	8	100	95	4	1	100	98	2	0
40-79 QC	125	15	100	64	28	8	100	80	19	1
80-119 QC	188	22	100	21	30	43	100	17	57	26
120 QC or more	114	14	100	5	27	68	100	1	27	72
1941-50	197	23	100	58	23	19	100	65	23	12
Less than 40 QC	65	8	100	94	5	1	100	100	0	0
40-79 QC	75	9	100	58	28	14	100	73	25	2
80 QC or more	57	6	100	18	35	47	100	14	46	40
1951 or later	149	18	100	69	18	13	100	80	17	3
Less than 40 QC	91	11	100	80	12	8	100	89	11	0
40 QC or more	58	7	100	53	25	22	100	65	26	9
Women										
White	5 976	100	100	57	23	20	100	67	23	10
Earnings credits began—										
Before 1941	2,580	43	100	52	25	23	100	58	27	15
Less than 40 QC	654	11	100	96	3	1	100	99	1	0
40-79 QC	788	13	100	67	24	9	100	83	16	1
80-119 QC	771	13	100	22	43	35	100	23	60	17
120 QC or more	367	6	100	6	31	63	100	2	31	67
1941-50	1,974	33	100	62	23	15	100	73	21	6
Less than 40 QC	790	13	100	92	6	2	100	100	0	0
40-79 QC	759	13	100	54	31	15	100	75	23	2
80 QC or more	425	7	100	19	42	39	100	19	58	23
1951 or later	1,422	24	100	58	19	23	100	77	18	5
Less than 40 QC	764	13	100	80	13	7	100	98	2	0
40 QC or more	658	11	100	35	27	38	100	53	35	12
Black or other	618	100	100	82	12	6	100	86	12	2
Earnings credits began—										
Before 1941	138	22	100	77	17	6	100	78	18	4
Less than 40 QC	42	7	100	99	1	0	100	98	2	0
40-79 QC	49	8	100	84	13	3	100	92	7	1
80-119 QC	35	5	100	57	33	10	100	54	42	4
120 QC or more	12	2	100	32	44	24	100	15	60	25
1941-50	234	38	100	79	15	6	100	84	14	2
Less than 40 QC	100	16	100	98	2	0	100	100	0	0
40-79 QC	88	14	100	77	15	8	100	87	11	2
80 QC or more	46	8	100	42	43	15	100	42	49	9
1951 or later	246	40	100	87	7	6	100	92	6	2
Less than 40 QC	142	23	100	94	4	2	100	99	1	0
40 QC or more	104	17	100	77	12	11	100	84	12	4

covered employment before 1941 Among individuals born in 1903, about 56 percent of the white men and 75 percent of the white women were still alive in 1973, compared with 41 percent of the other men and 59 percent of the other women *

* National Center for Health Statistics, *op cit*, pages 5-11

Thus, relatively more blacks than whites who entered covered employment before 1941 may have died before 1972

Among women retired workers, the proportion with first credits in covered employment before 1941 was considerably smaller—43 percent for the nearly 6 million whites and 22 percent among

the 600,000 black and other beneficiaries Twenty-four percent of the white women workers obtained their first earnings credits after 1950, compared with 40 percent of black and other women The extension of coverage to domestic workers in 1951 may partly account for this disparity A 1965 study of household workers revealed that the proportion of blacks among such workers is much larger than it is among the working population as a whole ¹⁰

Overall and for specified groups, white workers tended to have higher PIA's and higher lifetime covered earnings than did those of other races Black men and those of other minority races who first obtained earnings credits before 1951, however, tended to have higher PIA's and higher lifetime covered earnings than did similarly situated white women with the same number of quarters of coverage Among workers who obtained earnings credits before 1941 and who had 80-119 quarters of coverage, for example, the proportions with PIA's of \$200 or more were 70 percent for white men, 43 percent for black men and men of other races, and only 35 percent for white women The proportions of those with lifetime earnings of \$80,000 or more were 49 percent for white men, 26 percent for black men and those of other races, but only 17 percent for white women Black women and those of other minority races lagged far behind the members of the other groups Only 10 percent had PIA's of \$200 or more and only 4 percent had lifetime earnings that amounted to \$80,000 or more

Among workers who first gained credits after 1950 and who earned 40 or more quarters of coverage, 53 percent of black men and those of other minority races but only 35 percent of the white women had PIA's of less than \$150, the proportions of those with lifetime covered earnings of less than \$40,000 were 65 percent and 53 percent, respectively Relatively more white men had higher PIA's and lifetime covered earnings than did white women or men of other races, and relatively more black women and those of other minority races had lower PIA's and lower lifetime covered earnings than did members of any of the other groups

¹⁰ Herbert R Tacker, "Household Employment Under OASDHI, 1951-68," *Social Security Bulletin*, June 1970, page 11

DISABLED-WORKER BENEFICIARIES

At the end of 1972, nearly 2 million persons were entitled to disabled-worker benefits About 70 percent of these beneficiaries were men and 30 percent were women Almost all of them were actually receiving benefits

As for retired workers, relatively more men than women disabled workers had first credits for covered employment before 1941 (table 4) Consequently, men had relatively more years in covered employment than did women Overall, about 67 percent of the men but 49 percent of the women had 20 years or more in covered employment Many women disabled workers had lower lifetime covered earnings than did men with a similar duration of covered employment Among disabled workers with 30 or more years in covered employment that began before 1941, for example, 43 percent of the women but 81 percent of the men had PIA's of \$200 or more, and 40 percent of the women but 81 percent of the men had lifetime covered earnings of \$80,000 or more Among those with 10-19 years in covered employment begun after 1950 who had earned at least 40 quarters of coverage, 48 percent of the women but 28 percent of the men had PIA's of less than \$150 Seventy percent of the women but 54 percent of the men had lifetime covered earnings of less than \$40,000

Disabled workers whose covered employment began after 1950 resembled their retired-worker counterparts in that they also tended to have PIA's as high as or higher than those with the same number of years of covered employment and quarters of coverage but with creditable covered employment before 1951 This pattern reflects the influence of increases in general wage levels, increases in the taxable maximum, and the new-start computation method

Age Comparisons

In certain instances, the distributions of PIA's among disabled workers aged 50-59 were not markedly different than those for persons aged 60-64 (table 5) No disabled-worker beneficiaries are over age 65 because they are reclassified as retired-worker beneficiaries when they reach that age, regardless of the severity of disability

TABLE 4—Men and women disabled-worker beneficiaries on the rolls at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Years of covered employment and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150 00-199 90	\$200.00 or more	Total	Less than \$40,000	\$40 000-79,999	\$80,000 or more
Men										
Total	1 380	100	100	22	28	50	100	37	30	33
Earnings credits began—										
Before 1941	724	53	100	15	25	60	100	22	31	47
Less than 10	14	1	100	82	15	3	100	93	0	7
10-19	82	6	100	42	41	17	100	81	18	1
Less than 40 QC	23	2	100	65	32	3	100	99	1	0
40 QC or more	59	4	100	34	44	22	100	74	25	1
20-29	303	22	100	16	32	52	100	23	51	26
Less than 80 QC	118	9	100	31	41	28	100	50	46	4
80 QC or more	185	13	100	6	27	67	100	6	54	40
30 or more	325	24	100	4	15	81	100	2	17	81
1941-50	421	30	100	26	31	43	100	41	35	24
Less than 10	20	1	100	74	33	3	100	100	0	0
10-19	129	9	100	41	37	22	100	77	22	1
Less than 40 QC	39	3	100	62	31	7	100	99	1	0
40 QC or more	90	6	100	32	40	28	100	67	32	1
20-29	248	18	100	16	30	54	100	22	45	33
Less than 80 QC	121	9	100	27	38	35	100	41	50	9
80 QC or more	127	9	100	4	22	74	100	3	40	57
30 or more	24	2	100	7	17	76	100	5	19	76
1951-60	176	13	100	37	29	34	100	68	27	5
Less than 10	28	2	100	60	25	15	100	100	0	0
10-19	134	10	100	33	30	37	100	66	31	3
Less than 40 QC	41	3	100	46	32	22	100	95	5	0
40 QC or more	93	7	100	28	29	43	100	54	42	4
20 or more	14	1	100	19	24	57	100	24	45	31
1961 or later	59	4	100	39	31	40	100	96	4	0
Women										
Total	575	100	100	52	31	16	100	66	27	7
Earnings credits began—										
Before 1941	201	35	100	44	35	21	100	52	36	12
Less than 10	4	1	100	100	0	0	100	100	0	0
10-19	48	8	100	70	25	5	100	92	8	0
Less than 40 QC	14	2	100	86	12	2	100	100	0	0
40 QC or more	34	6	100	64	30	6	100	89	11	0
20-29	98	17	100	43	38	19	100	51	44	5
Less than 80 QC	53	9	100	58	32	10	100	72	27	1
80 QC or more	45	8	100	26	45	29	100	27	64	9
30 or more	51	9	100	16	41	43	100	10	50	40
1941-50	240	42	100	54	32	14	100	67	27	6
Less than 10	10	2	100	90	9	1	100	100	0	0
10-19	105	18	100	70	25	5	100	91	8	1
Less than 40 QC	36	6	100	86	12	2	100	99	1	0
40 QC or more	69	12	100	61	32	7	100	86	13	1
20-29	118	21	100	41	39	20	100	47	43	10
Less than 80 QC	68	12	100	55	35	10	100	69	30	1
80 QC or more	50	9	100	22	44	34	100	18	61	21
30 or more	7	1	100	11	51	38	100	7	52	41
1951-60	106	19	100	59	26	15	100	81	17	2
Less than 10	20	4	100	77	16	7	100	100	0	0
10-19	79	14	100	56	28	16	100	80	18	2
Less than 40 QC	28	5	100	72	18	10	100	98	2	0
40 QC or more	51	9	100	48	33	19	100	70	27	3
20 or more	7	1	100	31	39	30	100	39	45	16
1961 or later	28	5	100	66	19	15	100	96	2	0

As noted earlier, the PIA's for younger retired workers tended to be lower than those of older workers with similar lifetime earnings because the inclusion of more years with lower or zero earnings in computing the AME yields a lower AME and PIA. By contrast, all workers who

attained age 21 before 1951 and were disabled in a particular year would have had the same computation period, regardless of age, since the period would begin with 1951 and end with the year before the one in which disablement occurred.

For disabled workers who attained age 21 after

1950, the younger the worker at disablement the fewer the years required because the computation period would begin with the year in which the worker attained age 22. A worker who became disabled in 1972 at age 35, for example, would have had a computation period extending from 1959, the year after attainment of age 21, through 1971, less the 5 years of lowest earnings. For a 50- or 60-year-old worker who became disabled in 1972, the computation period would have been 1951 through 1971, minus 5 years.

The shorter computation period for younger disabled workers probably accounts in part for the fairly significant proportion of disabled workers under age 50 with initial credits for covered employment obtained after 1960 who had PIA's of \$200 or more. About 33 percent of the men and 20 percent of the women in this situation had PIA's of that size, even though almost all

of them had lifetime covered earnings of less than \$40,000.

Race Comparisons

As table 6 shows, the proportion of disabled workers with first credits for covered employment after 1940 was lower for whites than for blacks and members of other races—45 percent for white men, 58 percent for black and other men, 61 percent for white women, and 83 percent for black and other women. Relatively more black women and those of other minority races—32 percent—first obtained credits in covered employment after 1950 than was the case for white women and all men.

Large differences between the two race groups

TABLE 5—Age of men and women disabled-worker beneficiaries on the rolls at end of 1972. Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Age, years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150 00	\$150 00-199 90	\$200 00 or more	Total	Less than \$40,000	\$40 000-79,999	\$80,000 or more
Men										
Under 50	392	100	100	28	30	42	100	57	28	15
Earnings credits began—										
Before 1951	228	58	100	24	31	45	100	42	34	24
Less than 40 QC	41	10	100	65	30	5	100	100	0	0
40-79 QC	114	29	100	23	40	67	100	48	45	7
80 QC or more	73	19	100	3	18	79	100	13	35	62
1951-60	110	28	100	31	28	41	100	71	26	8
Less than 40 QC	52	13	100	47	31	22	100	97	3	0
40 QC or more	58	15	100	17	26	57	100	47	47	6
1961 or later	54	14	100	36	31	33	100	97	3	0
50-59	542	100	100	21	27	52	100	31	32	37
Earnings credits began—										
Before 1941	368	68	100	16	25	59	100	23	32	45
Less than 40 QC	22	4	100	72	25	3	100	98	2	0
40-79 QC	100	19	100	31	41	28	100	57	40	3
80-119 QC	184	34	100	6	24	70	100	4	41	55
120 QC or more	62	11	100	0	5	95	100	0	4	96
1941-50	137	25	100	28	31	41	100	41	34	25
Less than 40 QC	15	3	100	72	24	4	100	99	1	0
40-79 QC	67	12	100	3	39	24	100	57	39	4
80 QC or more	55	10	100	5	23	72	100	4	39	57
1951 or later	37	7	100	49	29	22	100	66	28	6
Less than 40 QC	13	2	100	66	26	8	100	97	3	0
40 QC or more	24	5	100	40	30	30	100	48	42	10
60-64	446	100	100	18	26	56	100	26	31	43
Earnings credits began—										
Before 1941	337	75	100	14	24	62	100	19	30	51
Less than 40 QC	13	3	100	68	28	4	100	100	0	0
40-79 QC	72	16	100	35	43	22	100	62	36	2
80-119 QC	154	34	100	8	27	65	100	6	45	49
120 QC or more	98	22	100	1	7	92	100	0	5	95
1941-50	75	17	100	27	29	44	100	37	26	27
Less than 40 QC	8	2	100	71	24	5	100	100	0	0
40-79 QC	37	8	100	25	35	30	100	51	42	7
80 QC or more	30	7	100	7	25	68	100	5	37	48
1951 or later	34	8	100	46	31	23	100	64	30	6
Less than 40 QC	9	2	100	66	25	9	100	92	8	0
40 QC or more	25	6	100	39	33	28	100	55	37	8

TABLE 5—Age of men and women disabled-worker beneficiaries on the rolls at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings—*Continued*

Age years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150 00–199 90	\$200 00 or more	Total	Less than \$40 000	\$40,000–79,999	\$80,000 or more
Women										
Under 50.	134	100	100	52	31	17	100	79	18	3
Earnings credits began—										
Before 1951	76	57	100	53	33	14	100	66	26	5
Less than 40 QC	18	13	100	88	11	1	100	100	0	0
40–79 QC	45	34	100	51	38	11	100	75	25	0
80 QC or more	13	10	100	12	45	43	100	5	67	28
1951–60.	39	29	100	47	32	21	100	87	12	1
Less than 40 QC	22	16	100	55	29	16	100	99	1	0
40 QC or more	17	13	100	38	37	25	100	75	24	1
1961 or later.	19	14	100	60	20	20	100	98	2	0
50–59	247	100	100	53	31	16	100	63	29	8
Earnings credits began—										
Before 1941	111	45	100	44	35	21	100	53	36	11
Less than 40 QC	12	5	100	88	9	3	100	100	0	0
40–79 QC	50	20	100	58	32	10	100	78	22	0
80–119 QC	41	17	100	21	47	32	100	19	65	16
120 QC or more	8	3	100	2	31	67	100	0	29	71
1941–50	98	40	100	57	31	12	100	67	26	7
Less than 40 QC	18	7	100	89	9	2	100	100	0	0
40–79 QC	55	23	100	62	31	7	100	78	21	1
80 QC or more	25	10	100	23	46	31	100	19	57	24
1951 or later	38	15	100	72	21	7	100	82	16	2
Less than 40 QC	18	7	100	91	8	1	100	99	1	0
40 QC or more	20	8	100	57	31	12	100	67	29	4
60–64	194	100	100	50	32	18	100	60	30	10
Earnings credits began—										
Before 1941	87	45	100	44	35	21	100	50	36	14
Less than 40 QC	6	3	100	94	6	0	100	100	0	0
40–79 QC	36	19	100	64	29	7	100	81	18	1
80–119 QC	35	18	100	23	45	32	100	23	62	15
120 QC or more	10	5	100	4	40	56	100	0	32	68
1941–50	69	36	100	52	34	14	100	64	29	7
Less than 40 QC	11	6	100	88	9	3	100	100	0	0
40–79 QC	38	20	100	55	31	14	100	76	22	2
80 QC or more	20	10	100	23	42	35	100	17	61	22
1951 or later	38	19	100	62	23	15	100	75	20	5
Less than 40 QC	16	8	100	88	10	7	100	99	1	0
40 QC or more	22	11	100	45	31	24	100	60	32	8

are apparent in the overall distributions of PIA's and lifetime covered earnings. Only 19 percent of the disabled white men but 38 percent of the black and other men had PIA's of less than \$150. Thirty-three percent of the whites, compared with 55 percent of the black and other men, had lifetime covered earnings of less than \$40,000. Among women, the corresponding proportions were 48 percent and 74 percent with respect to PIA's of less than \$150 and 63 percent and 81 percent with respect to lifetime covered earnings of less than \$40,000.

The differences in the distributions by PIA and lifetime covered earnings between white disabled workers and those of other races existed also within some specified groups based on the year in which credits were first obtained and number of quarters of coverage. Among workers who first obtained earnings credits during the

years 1941–50 and who had earned 40–79 quarters of coverage, for example, 52 percent of the white women, compared with 77 percent of the black and other women, had PIA's of less than \$150. Among men with the same characteristics, 25 percent of the whites, compared with 46 percent of the blacks and others, had PIA's of less than \$150, and 48 percent of those in the former group, compared with 68 percent of those in the latter, had lifetime covered earnings of less than \$40,000. Although disabled black men and those of other minority races tended to have lower PIA's and lower lifetime covered earnings than did white men, their PIA's and lifetime earnings still tended to be higher than those of disabled white women, overall and for specified groups. Black women and those of other minority races tended to have the lowest PIA's and the lowest lifetime covered earnings of all disabled workers.

TABLE 6 — Race of men and women disabled-worker beneficiaries on the rolls at end of 1972 Number and percentage distribution, by covered employment history, primary insurance amount, and lifetime covered earnings

Race, years of covered employment, and quarters of coverage (QC)	Number (in thousands)	Percent	Percentage distribution by—							
			Primary insurance amount				Lifetime covered earnings			
			Total	Less than \$150.00	\$150.00-199.99	\$200.00 or more	Total	Less than \$40,000	\$40,000-79,999	\$80,000 or more
Men										
White	1,157	100	100	19	26	55	100	33	31	26
Earnings credits began—										
Before 1941	630	55	100	13	23	64	100	19	30	51
Less than 40 QC	30	3	100	71	25	4	100	96	1	3
40-79 QC	148	13	100	29	43	28	100	64	43	3
80-119 QC	303	26	100	5	23	72	100	4	40	56
120 QC or more	149	13	100	1	6	93	100	0	3	97
1941-50	340	29	100	22	30	48	100	38	35	27
Less than 40 QC	48	4	100	64	30	6	100	99	1	0
40-79 QC	167	14	100	25	39	36	100	48	46	6
80 QC or more	125	11	100	3	19	78	100	2	35	63
1951 or later	187	16	100	34	29	37	100	72	24	4
Less than 40 QC	97	8	100	43	31	26	100	96	4	0
40 QC or more	90	8	100	25	27	48	100	46	45	9
Black or other	223	100	100	38	33	29	100	55	29	16
Earnings credits began—										
Before 1941	94	42	100	30	35	35	100	40	36	24
Less than 40 QC	7	3	100	74	24	2	100	99	0	1
40-79 QC	31	14	100	51	38	11	100	76	23	1
80-119 QC	45	20	100	15	40	45	100	14	57	29
120 QC or more	11	5	100	4	17	79	100	1	19	80
1941-50	81	36	100	41	34	25	100	55	30	15
Less than 40 QC	12	5	100	75	22	3	100	100	0	0
40-79 QC	44	20	100	46	37	17	100	68	29	3
80 QC or more	25	11	100	14	33	53	100	10	47	43
1951 or later	48	22	100	48	30	22	100	87	12	1
Less than 40 QC	30	14	100	56	27	17	100	99	1	0
40 QC or more	18	8	100	34	34	32	100	68	30	2
Women										
White	480	100	100	48	34	18	100	63	29	8
Earnings credits began—										
Before 1941	185	39	100	42	36	22	100	50	37	13
Less than 40 QC	16	3	100	89	9	2	100	100	0	0
40-79 QC	80	17	100	59	32	9	100	78	21	1
80-119 QC	71	15	100	21	47	32	100	19	65	16
120 QC or more	18	4	100	3	34	63	100	0	32	68
1941-50	191	40	100	50	35	15	100	64	29	7
Less than 40 QC	37	7	100	85	13	2	100	99	1	0
40-79 QC	108	23	100	52	37	11	100	74	25	1
80 QC or more	46	10	100	15	46	39	100	12	61	27
1951 or later	104	21	100	55	28	17	100	83	15	2
Less than 40 QC	57	12	100	67	21	12	100	99	1	0
40 QC or more	47	9	100	39	37	24	100	62	33	5
Black or other	95	100	100	74	20	6	100	81	16	3
Earnings credits began—										
Before 1941	16	17	100	67	25	8	100	72	22	6
Less than 40 QC	2	2	100	94	6	0	100	100	0	0
40-79 QC	7	8	100	78	18	4	100	89	11	0
80-119 QC	6	6	100	54	35	11	100	54	39	7
120 QC or more	1	1	100	0	55	45	100	0	44	56
1941-50	49	51	100	73	22	5	100	78	19	3
Less than 40 QC	10	10	100	93	6	1	100	100	0	0
40-79 QC	27	29	100	77	20	3	100	88	12	0
80 QC or more	11	12	100	43	41	16	100	35	53	12
1951 or later	30	32	100	79	14	7	100	91	7	2
Less than 40 QC	18	19	100	85	9	6	100	99	1	0
40 QC or more	12	13	100	68	21	11	100	80	17	3

Technical Note*

The estimates presented here are based on data obtained from the Continuous Work-History

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Sample (CWHIS) of the Social Security Administration The CWHIS is a 1-percent longitudinal sample of persons with covered employment under the social security program. Data in the CWHIS are derived from reporting forms and records used in program administration. Race data from employees' social security application forms, age

and sex data from the master beneficiary record, and earnings data from the report forms submitted by employers and self-employed persons. The sample domain of the study consists of 174,007 retired and disabled workers who were on the benefit rolls at the end of 1972.

SAMPLE DESIGN

The sample design can be described as a stratified sample of clusters, from which the overall sampling fraction of 1 percent is obtained through subsampling. The CWHS consists of all persons with specific combinations of the last four digits (the serial number) in their social security number. The first three digits of the social security number are the area number, and the next two digits are the group number or chronological indicator. Each area/group number (the first five digits) is considered a stratum. Within each stratum, several levels of subsamples are made to select individuals with the specified combination of digits in the serial number component.²¹

SAMPLING VARIABILITY

Because estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if all retired and disabled workers who were on the rolls at the end of 1972 had been surveyed. The standard error is a measure of this sampling variability—that is, the variation that occurs by chance because a sample of the population rather than the entire population is surveyed. About 68 percent of all possible probability samples selected with the same specification will give estimates within one standard error of the figure obtained from the entire population. Similarly, about 95 percent of all possible probability samples will give estimates within two standard errors and about 99 percent of all possible probability samples will give estimates within two and one-half standard errors.

The effect of the clustering and stratification in the design and the sample size must be con-

²¹ For a more detailed discussion of the sampling procedures used for the CWHS, see Robert H. Finch, Jr., "Sampling Variability in the 1-Percent Continuous Work History Sample" (Miscellaneous Report), Office of Research and Statistics, Social Security Administration, 1977.

sidered in determining the standard error. Although these effects are not the same for all variables, table I provides a general approximation of the standard error of the percentages for all retired and disabled workers who were on the rolls at the end of 1972. Linear interpolation may be used to obtain values not specifically shown.

The reliability of an estimated percentage depends on both the size of the percentage and the size of the total upon which the percentage is based, as illustrated below.

Table I shows that 17 percent of the base of 8,854,000 retired men had covered employment beginning in 1941-50. Table I shows that an estimate of 10 percent for a base of 7,500,000 has a standard error of 0.1 percent and that an estimate of 25 percent for this base has a standard error of 0.2 percent. An estimate of 10 percent for a base of 10,000,000 has a standard error of 0.1 percent, and a 25-percent estimate for this base has a standard error of 0.2 percent. Two-way linear interpolation reveals a standard error of 0.17 percent. Thus, the 68-percent confidence interval for this estimate is from 16.8 percent to 17.2 percent.

NONSAMPLING ERROR

In this survey, as in others, the results are subject to errors of response and nonreporting and processing errors. Some factors that contribute to nonsampling errors are (1) Failure to report and credit some covered earnings and (2) the reporting and processing of demographic errors.

TABLE I—Approximate standard errors of estimated percentages

Size of base	Estimated percentage				
	2 or 98	5 or 95	10 or 90	25 or 75	50
2,500	2.8	4.3	5.9	8.6	9.9
5,000	2.0	3.0	4.2	6.1	7.0
7,500	1.7	2.5	3.4	5.0	5.8
10,000	1.4	2.2	3.0	4.3	5.0
25,000	9	1.4	1.9	2.8	3.2
50,000	6	1.0	1.4	2.0	2.3
75,000	5	8	1.1	1.6	1.9
100,000	4	7	1.0	1.4	1.6
250,000	3	5	6	9	1.1
500,000	2	3	4	7	8
750,000	2	3	4	6	7
1,000,000	2	2	3	5	6
2,500,000	1	2	2	3	4
5,000,000	1	1	2	3	3
7,500,000	1	1	1	2	3
10,000,000	1	1	1	2	2
25,000,000	(^a)	1	1	1	2

^a Less than 0.05