
Earnings Replacement Rates of Retired Couples: Findings From the Retirement History Study

by Alan Fox*

The earnings replacement rates of retired couples, which take into account the earnings and benefits of wives, are important for assessing the adequacy of social security benefits. Using data from the Social Security Administration's longitudinal Retirement History Study, this article presents the first view of replacement rates for couples. The findings show that, though about half the wives claiming benefits in 1968-74 were retired workers, their benefits were not necessarily much larger than what they would have received as dependent spouses. Couples with retired-worker wives had higher absolute retirement benefits, but the women's preretirement earnings caused the replacement rates of these couples to be lower than those of couples with dependent wives. In recent years, earnings have risen almost as fast as social security benefits and moderated the increases in replacement rates. These findings contrast sharply with assumptions in some analyses of work and retirement patterns of couples. The typical wife is as likely to be employed as keeping house, though she earns much less than her husband. Instead of waiting until age 65 to claim benefits, most couples choose early retirement and accept an actuarial reduction in their benefits. Research that assumes age-65 retirement and dependency status for wives based on hypothetical earnings has produced higher replacement rates than those calculated by means of this sample of actual retired couples.

The division of a married woman's time between home and an outside job, and her probability of acquiring social security coverage in her own right as a paid worker, have become topics of growing interest during the past few years. Because most men are married when they reach retirement age, the replacement rates of married couples—which take into account the wives' earnings and benefits—are important in assessing the adequacy and overall impact of the social security program.

Retirement has often been thought of in terms of stereotypes. The typical couple is seen as consisting of a husband who works until he reaches age 65 and a wife who keeps house and raises children. In this view, husband and wife retire together at age 65, at which time he

receives full social security benefits and she gets an additional 50 percent of his benefit amount as his dependent. Their combined benefits, along with income from second pensions and savings, provide the resources that enable them to enjoy old age.

As will be shown, none of these assumptions is typically borne out by experience. This finding has profound implications for the calculation and interpretation of earnings replacement rates.

Replacement rates for couples are not easy to calculate because social security program records are not kept on a family basis unless family members receive benefits as dependents. Furthermore, longitudinal data are needed since many husbands and wives do not come on the benefit rolls simultaneously. In the absence of usable data on couples, potential or hypothetical replacement rates have sometimes been calculated on the basis of hypothetical wage histories assumed to be typical of

*Division of Retirement and Survivors Studies, Office of Research and Statistics, Social Security Administration. The author acknowledges the assistance of those who reviewed the drafts of his manuscript, particularly Virginia P. Reno.

married men. This methodology makes it possible to adjust a man's replacement rate to include a dependent's benefit for his nonearner wife. Very little has been done thus far to enable policymakers to evaluate how closely replacement rates calculated in this way fit the experience of actual couples at retirement.

The Social Security Administration's Retirement History Study (RHS) provides the first opportunity to investigate these questions and calculate actual replacement rates for married couples. The RHS is a 10-year longitudinal study of a national sample of approximately 11,000 married men and their wives and nonmarried men and women who were aged 58-63 when the study began in early 1969.¹ This article uses survey data through the fourth (1975) biennial interview wave, supplemented by social security benefit and earnings data for the married men and their wives.

The replacement rates of married men alone are examined in the first section of this article. The second section focuses on the earnings and retirement benefits of the RHS wives,² and replacement rates for couples are examined in the third. A technical note details the methods used in calculating the replacement rates and compares these rates for individuals with rates calculated several years ago using a different data base.

Married Men

Benefit Status

By December 1974, the persons in the RHS sample were aged 63-69. Of the married men, 61 percent had begun receiving benefits as retired workers (table 1). These men constituted the group for which replacement rates were calculated.

Seven percent of the married men were entitled to retired-worker benefits but had not yet begun receiving them because their earnings were sufficiently high for benefits to be withheld under the earnings test. Twelve percent were receiving benefits as disabled workers or, if they were aged 65 or older, as retired workers whose benefits had automatically been converted from disabled-worker status. (All workers with evidence of disability status at any time in their lives were excluded from the "retired-worker" category in this article because, for them, retirement benefits do not reflect a reg-

¹For a detailed description of the RHS, see **Almost 65: Baseline Data From the Retirement History Study** (Research Report No. 49), Office of Research and Statistics, Social Security Administration, 1976. Other sources include Kathleen Bond, "Retirement History Study's First Four Years: Work, Health, and Living Arrangements," and Alan Fox, "Work Status and Income Change, 1968-72: Retirement History Study Preview," both in **Social Security Bulletin**, December 1976.

²This portion of the research was reported in preliminary form in Alan Fox, **Work and Retirement Patterns of Married Couples**, paper presented at the annual meeting of the Gerontological Society, San Francisco, November 1977.

Table 1.—Husband's benefit-payment status as of December 1974: Number and percentage distribution, by age

Benefit-payment status	Age in December 1974 ¹			
	Total	63-64 ²	65-66	67-69 ³
Total number ⁴	5,502	1,244	1,798	2,460
Total percent	100	100	100	100
Not entitled	15	47	7	5
Entitled	85	53	93	95
Retired-worker benefit:				
Payable	61	35	62	73
At entitlement	49	34	56	52
After entitlement	12	1	6	21
Postponed	7	1	12	6
Disabled-worker benefit ⁵	12	16	13	9
Other	5	2	6	7

¹Based on date of birth recorded in the summary earnings record.

²Includes 39 persons under age 63.

³Includes 53 persons over age 69.

⁴Includes 150 persons with missing earnings records.

⁵Received at any time, regardless of current type of benefit.

ular employment history.) The rest of the married men were receiving dependent's or other benefits (5 percent) or had not yet established entitlement to benefits (15 percent).

Persons not entitled included those who were eligible but had not filed for benefits, some individuals who were working in noncovered jobs, and others who may not have worked in covered employment long enough to qualify for benefits. As the table shows, a large proportion of persons under age 65 in December 1974 had not established entitlement.

Choice of Replacement Rate Measure

Replacement rates can be calculated in a number of ways.³ The replacement rate measure used here is designed to show the extent to which workers' benefits replace their recent typical earnings. It provides one method of measuring benefit adequacy, where adequacy is defined in relation to preretirement earnings levels.

The numerator is the annualized amount of the monthly benefit payable to the retiree in his first year of benefit receipt. This amount reflects any actuarial reduction incurred because of early retirement. (The procedure for determining the benefit amount is explained in the technical note.)

The denominator is the average of the worker's money earnings in the highest 3 of the 10 years before receipt of the first benefit payment. For workers who remain steadily employed in their career jobs right up to retirement, the highest 3 years of money earnings would

³Many of the approaches are described in Alan Fox, "Alternative Measures of Earnings Replacement for Social Security Beneficiaries," in **Reaching Retirement Age: Findings From a Survey of Newly Entitled Workers, 1968-70** (Research Report No. 47), Office of Research and Statistics, Social Security Administration, 1976.

be expected to be the most recent ones. Other workers, however, may experience spells of unemployment, partial disability, or partial retirement, or may retire in midyear. For these workers, earnings in the most recent years might be unusually low. Still other workers may have an unusually high year of earnings just before retirement. The average of the highest 3 years of money earnings is chosen as a measure of typical recent earnings for workers who may have had various patterns of actual earnings just before retirement.⁴

Information on earnings was obtained from program records of the workers' annual earnings that were taxable under the social security program. In the 10 years before the members of this study group claimed benefits, the taxable earnings base was relatively low, ranging from \$4,800 in the early 1960's to \$10,800 in 1973. Many of the men earned more than the taxable earnings base in their highest 3 years. The level of preretirement earnings would be understated for these men if only their taxable earnings were to be counted. Total earnings were therefore estimated on the basis of the quarter of the year in which the worker earned the taxable maximum.

It was not possible to calculate replacement rates for some members of the RHS sample of married men. Of the total of 3,349 married men who had started receiving retired-worker benefits by December 1974, replacement rates were calculated for 2,449, or 73 percent. Replacement rates were not calculated for the following groups.

- Persons who started receiving retired-worker benefits before 1968 (4 percent). Because RHS began in 1969, survey and program record information on resources at retirement was not available for this group.
- Those for whom either (1) pension information was lacking, or (2) pension status and earnings records indicated that pensions had been earned in jobs not covered under the social security program (8 percent). Information on actual preretirement earnings was not available for members of the latter group.
- Persons who earned more than the taxable earnings base in at least 1 year of their highest 3, and for whom total earnings were not estimated (12 percent). Included were (1) those who earned the maximum in the first quarter of the year; (2) those with an irregular pattern of employment during the year that made it impossible to determine the quarter in which the maximum was attained; and (3) self-employed or agricultural workers who earned the maximum at any time during the year—for these workers, earnings were not reported on a quarterly basis, so the quarter in which they reached the maximum could not be ascertained.
- Those who had less than 3 years of earnings in the

⁴Earnings in the most recent (or highest) 5 or 10 years have also been proposed for replacement rate calculations. It was felt, however, that the impact of inflation would make such long-term comparisons rather dubious and that the average retiree is likely to compare retirement benefits with more recent earnings.

Table 2.—Husband's social security earnings replacement rate: Number and percentage distribution, by year benefit first paid

Replacement rate (percent) ¹	Year benefit first paid			
	Total	1968-70	1971-72	1973-74
Number of retired workers:				
Total ²	3,349	821	1,283	1,126
With replacement rate ³	2,449	633	980	836
Total percent	100	100	100	100
0.1-19.9	14	27	12	7
20-39.9	62	60	64	61
40-59.9	21	11	22	28
60-79.9	2	2	1	3
80 or more	1	1	1	1
Median rate	31	26	32	35

¹ Social security benefit as percent of estimated total earnings in highest 3 of the 10 years before first benefit payment.

² Includes 119 persons who received first benefit before 1968.

³ Includes those with usable earnings records who received their first retired-worker benefit in 1968-74.

10 years before benefit receipt, or for whom other pertinent information was lacking (3 percent).

General Findings

The distribution of social security replacement rates (social security benefits divided by preretirement earnings) for married men is shown in table 2. The median replacement rate was 31 percent overall. It ranged from 26 percent for the 1968-70 retirees to 35 percent for the 1973-74 retirees.

A dominant factor in accounting for the difference in replacement rates is the level of preretirement earnings (table 3). The progressive structure of the social security benefit formula was reflected in the fact that median replacement rates declined from 44 percent among married men whose highest preretirement earnings were less than \$4,000 to only 19 percent among those with preretirement earnings of \$12,500 or more. This relationship does not tell the whole story, however, since the highest earners also had the greatest probability of receiving a second pension. As will be seen later, the total replacement rate—social security plus second pension benefits as a proportion of preretirement earnings—was approximately constant throughout the range of preretirement earnings.

Benefit increases over the period 1968-74 accounted for some of the increase in replacement rates. Congress raised benefits by 15 percent effective in 1970, 10 percent in 1971, 20 percent in 1972, and 11 percent in 1974—a total increase of almost 70 percent over the 1968 level. During this period, however, average earnings of all men increased approximately 35 percent.⁵ The extent to which those who retired later in the survey

⁵ Social Security Bulletin, Annual Statistical Supplement 1975, table 39.

Table 3.—Husband's social security earnings replacement rate, by preretirement earnings: Number and percentage distribution, by year benefit first paid

Replacement rate (percent) ¹	Preretirement earnings ²						
	Total	\$1-3,999	\$4,000-5,999	\$6,000-7,999	\$8,000-9,999	\$10,000-12,499	\$12,500 or more
	Total						
Total number with replacement rate computed ³	2,449	390	438	474	493	290	364
Total percent	100	100	100	100	100	100	100
0.1-19.9	14	0	1	7	8	22	56
20-39.9	62	37	59	61	88	78	44
40-59.9	21	45	39	31	4	0	0
60-79.9	2	11	0	0	0	0	0
80 or more	1	7	0	0	0	0	0
Median rate	31	44	37	35	30	25	19
	1968-70						
Total number with replacement rate computed	633	195	120	112	101	434	71
Total percent	100	100	100	100	100	100	100
0.1-19.9	27	1	3	26	34	88	100
20-39.9	60	55	96	74	66	12	0
40-59.9	11	35	1	0	0	0	0
60-79.9	2	5	0	0	0	0	0
80 or more	1	4	0	0	0	0	0
Median rate	26	38	27	24	22	16	14
	1971-72						
Total number with replacement rate computed	980	135	187	181	202	151	124
Total percent	100	100	100	100	100	100	100
0.1-19.9	12	0	1	2	0	21	65
20-39.9	64	22	54	72	100	79	35
40-59.9	22	58	45	27	0	0	0
60-79.9	1	10	0	0	0	0	0
80 or more	1	10	0	0	0	0	0
Median rate	32	48	39	35	30	24	18
	1973-74						
Total number with replacement rate computed	836	60	131	181	190	105	166
Total percent	100	100	100	100	100	100	100
0.1-19.9	7	0	0	2	2	2	31
20-39.9	61	12	34	43	87	98	69
40-59.9	28	47	66	56	12	0	0
60-79.9	3	33	1	0	0	0	0
80 or more	1	8	0	0	0	0	0
Median rate	35	56	43	41	35	30	23

¹ Social security benefit as percent of estimated total earnings in highest 3 years.

² Average annual estimated total earnings in highest 3 years.

³ Includes those with usable earnings records who received their first retired-

worker benefit in 1968-74.

⁴ Based on 50 cases or less; subject to high sampling variability.

period shared in these earnings increases would influence the replacement rate levels over a period of time.

In addition, the RHS sample of married men newly claiming retirement benefits was aging. Those who claimed benefits in the early years included a disproportionate share of early retirees with actuarially reduced benefits and hence lower replacement rates.

Table 4 illustrates the second of these points. Of all men with retired-worker benefits payable during the entire period 1968-74, 34 percent were aged 65 or older. Only 9 percent of those whose benefits were first paid in 1968-70 were that old, compared with 48 percent with

benefits first paid in 1973-74. Conversely, the proportion of persons subject to the full actuarial reduction for retirement at age 62 fell from 65 percent among the 1968-70 retirees to only 12 percent among the 1973-74 retirees.

Table 5 shows the median replacement rates of the married men by age and year of the first benefit payment. Among all married men retiring in 1968-74, those aged 62 had a median social security replacement rate of 27 percent, about four-fifths as high as the 34-percent rate calculated for older men. The median replacement rate rose over the years within each age cate-

Table 4.—Husband's age at first benefit payment: Number and percentage distribution, by type of benefit and year benefit first paid

Type of benefit and year benefit first paid	Total number ²	Percentage distribution, by age ¹			
		Total	62	63-64	65 and over
No benefit as of December 1974	1,206	100	3	50	48
Retired-worker benefit postponed	372	100	3	10	88
Not entitled to any benefits	834	100	3	68	30
With retired-worker benefit	3,230	100	35	31	34
Year benefit first paid:					
1968-70	821	100	65	26	9
1971-72	1,283	100	36	26	38
1973-74	1,126	100	12	40	48

¹ For persons with payable benefits, age in year benefit first paid; for persons with no benefits or with benefits postponed, age as of December 1974.

² Excludes married men initially entitled to benefits other than retired-worker, or whose retirement benefits were first received before 1968.

³ Excludes 119 persons who received first benefit before 1968.

Table 5.—Number with earnings replacement rate computed and median social security earnings replacement rate and preretirement earnings for husbands, by age and year benefit first paid

Year benefit first paid	Age in year benefit first paid			
	Total	62	63-64	65 and over
	Number with replacement rate computed			
Total ¹	2,449	882	777	790
1968-70	633	419	161	53
1971-72	980	352	274	354
1973-74	836	111	342	383
	Median replacement rate (percent) ²			
Total	31	27	34	34
1968-70	26	25	28	27
1971-72	32	29	33	34
1973-74	35	30	37	35
	Median preretirement earnings ³			
Total	\$7,690	\$6,325	\$7,655	\$8,565
1968-70	6,030	5,475	6,675	8,265
1971-72	7,850	7,275	8,020	8,100
1973-74	8,595	7,500	7,830	9,385

¹ Includes those with usable earnings records who received their first retired-worker benefit in 1968-74.

² Social security benefit as percent of estimated total earnings in highest 3 years.

³ Estimated total earnings in highest 3 years.

gory. Because of rising earnings levels, however, the growth was considerably less than the legislated increase in benefit levels. Overall, replacement rates went up only about one-third (from 26 percent in 1968-70 to 35 percent in 1973-74), far less than the legislated benefit increases during the 1968-74 period.

The denominators of the replacement rates by age and year of first benefit receipt are also shown in table 5. As expected, the youngest retirees had the lowest median level of preretirement earnings—17 percent below the level of those who retired at ages 63-64 and 25 percent

below the level of those who retired at age 65. Thus, younger retirees not only incur a permanent actuarial reduction in their benefits, but the earnings on which their benefits are based also tend to be low. Among retirees of all ages, those receiving benefits in 1973-74 had median earnings about 40 percent higher than those reported by retirees receiving benefits in 1968-70.

Second Pensions and Replacement Rates

The RHS permits calculation of total replacement rates for persons with second pensions. For the purposes of this article, second pensions include private employer and union pensions, as well as public employee pensions that are combined with social security benefits. Excluded are the Federal civil service and State and local pension systems whose employees are not simultaneously covered under the social security program.

Table 6 shows the median replacement rates by level of preretirement earnings for married men with and without second pensions. The social security replacement rate declined as the level of preretirement earnings rose. The proportion of men with second pensions increased greatly, however, as the level of preretirement earnings went up, from 2 percent of those with earnings of less than \$4,000 to 75 percent of those with earnings of \$12,500 or more. The inclusion of second pensions in the replacement rate calculations almost completely offset the declining relative levels of social security benefits: The median total replacement rate for all married men in the sample remained within a range of 39-45 percent throughout the earnings distribution. Married men with second pensions had higher total replacement rates than those without such pensions.

For all married men with second pensions, the median total replacement rate was about twice the replacement rate provided by social security benefits alone: 50 percent and 27 percent, respectively. The increment in replacement rates caused by the presence of second pensions ranged from 50 percent (among the few low earners with second pensions) to about 140 percent (among those with the highest earnings).

The married men receiving second pensions, in addition to having a higher replacement rate than those who did not, had considerably higher median preretirement earnings—\$9,155, compared with \$5,655 (table 7). They were therefore better off, both absolutely and comparatively, than men without second pensions.

If replacement rates were calculated on an after-tax basis, the relationship between pension recipients and nonrecipients would change somewhat. The adjustment would occur because of the higher preretirement earnings of pension recipients and because most second pensions are taxable but social security benefits are not. For workers with private pensions, the 1970 Survey of Newly Entitled Beneficiaries showed that total replace-

Table 6.—Husband's median social security and total earnings replacement rates, by preretirement earnings and second-pension receipt

Replacement rate (percent)	Preretirement earnings ¹						
	Total	\$1-3,999	\$4,000-5,999	\$6,000-7,999	\$8,000-9,999	\$10,000-12,499	\$12,500 or more
Total							
Total number with replacement rate computed ²	2,449	390	438	474	493	290	364
Median replacement rate:							
Social security ³	31	44	37	35	30	25	19
Social security and second pension ⁴	42	45	40	42	44	39	40
Percent with second pension	45	2	21	45	66	68	75
With second pension ⁵							
Total number with replacement rate computed	1,108	9	92	213	326	196	272
Median replacement rate:							
Social security	27	(⁶)	37	34	30	25	19
Social security and second pension	50	(⁶)	57	54	53	46	46
With no second pension							
Total number with replacement rate computed	1,341	381	346	261	167	94	92
Median social security replacement rate	36	44	37	36	31	25	19

¹ Average annual estimated total earnings in highest 3 years.

² Includes those with usable earnings records who received their first retired-worker benefit in 1968-74.

³ Social security benefit as percent of estimated total earnings in highest 3 years.

⁴ Social security and second pension benefits (if any) as percent of estimated total earnings in highest 3 years.

⁵ Private or public employee pensions assumed to be combined with social security benefits; see technical note, page 34.

⁶ Not computed; base fewer than 25.

Table 7.—Number with earnings replacement rate computed and median preretirement earnings for husbands, by year benefit first paid and second-pension receipt

Year first benefit paid and second-pension receipt	Number with replacement rate computed	Median preretirement earnings ¹
Total	2,449	\$7,690
With second pension ³	1,108	9,155
With no second pension	1,341	5,655
1968-70	633	6,030
With second pension	242	8,460
With no second pension	391	4,045
1971-72	980	7,850
With second pension	477	8,855
With no second pension	503	5,580
1973-74	836	8,595
With second pension	389	9,975
With no second pension	447	6,930

¹ Estimated total earnings in highest 3 years.

² Includes those with usable earnings records who received their first retired-worker benefit in 1968-74.

³ Private or public employee pensions assumed to be combined with social security benefits; see technical note, page 34.

ment rates were about 10 percentage points higher when based on earnings and benefits net of Federal income and social security payroll taxes.⁶ For pension non-recipients the replacement rate net of taxes was about five percentage points higher. No such calculations have been attempted with the RHS sample.

It should be noted that social security benefits are now protected by an automatic cost-of-living adjust-

⁶ See Alan Fox, *op. cit.*, in Research Report No. 47, page 212.

ment, but many second pensions are not.⁷ The relative advantage of persons receiving second pensions at retirement therefore might eventually be eroded.⁸

Growth in Replacement Rates

Replacement rates from both social security benefits and second pensions by year of first social security benefit receipt are shown in table 8. The median total replacement rate for married men with second pensions rose from 45 percent among 1968-70 retirees to 51-52 percent among 1971-72 and 1973-74 retirees. The median social security replacement rate for married men without second pensions was also relatively constant among those who retired after 1972. It rose from 30 percent among 1968-70 retirees to 37-38 percent among 1971-72 and 1973-74 retirees.

This relative stability in replacement rates came about as the result of two factors: The level of preretirement earnings rose rapidly (at an annual rate of 11 percent during the entire 1968-74 period) while second pension benefits exhibited virtually no increase. At the same time the average annual percentage growth of initial social security benefits for new beneficiaries in the RHS sample was about 20 percent throughout the period.

⁷ Bankers Trust Company, *1975 Study of Corporate Pension Plans*, 1975.

⁸ This point is supported by early data from the RHS. See Gayle B. Thompson, "Impact of Inflation on Private Pensions of Retirees, 1970-74: Findings From the Retirement History Study," *Social Security Bulletin*, November 1978.

Table 8.—Husband's social security and total earnings replacement rates, by second-pension receipt: Number and percentage distribution, by year benefit first paid

Replacement rate (percent)	Second-pension receipt			
	Total, social security and second pension	With second pension		With no second pension
		Social security ¹	Social security and second pension ²	
	Total			
Total number with replacement rate computed ³	2,449	1,108	1,108	1,341
Total percent	100	100	100	100
0.1-19.9	5	22	1	8
20-39.9	41	68	21	57
40-59.9	39	10	50	30
60-79.9	11	0	20	3
80 or more	5	0	8	2
Median rate	42	27	50	36
	1968-70			
Total number with replacement rate computed	633	242	242	391
Total percent	100	100	100	100
0.1-19.9	9	48	2	14
20-39.9	53	52	34	64
40-59.9	28	0	46	18
60-79.9	6	0	11	3
80 or more	4	0	7	2
Median rate	35	20	45	30
	1971-72			
Total number with replacement rate computed	980	477	477	503
Total percent	100	100	100	100
0.1-19.9	3	17	0	7
20-39.9	37	73	18	55
40-59.9	42	9	51	33
60-79.9	13	0	23	3
80 or more	5	0	8	3
Median rate	43	28	51	37
	1973-74			
Total number with replacement rate computed	836	389	389	447
Total percent	100	100	100	100
0.1-19.9	2	11	0	4
20-39.9	35	72	16	52
40-59.9	45	17	52	38
60-79.9	13	1	22	4
80 or more	5	0	9	1
Median rate	44	31	52	38

¹Social security benefit as percent of estimated total earnings in highest 3 years.

²Social security and second pension benefits (if any) as percent of estimated

total earnings in highest 3 years.

³Includes those with usable earnings records who received their first retired-worker benefit in 1968-74.

Comparison With Hypothetical Replacement Rates

As noted earlier, hypothetical replacement rates, based on annual series of average earnings, have often been used as an analytical device by researchers both within and outside the Social Security Administration. A common replacement rate of this sort constructs a hypothetical lifetime earnings pattern, averaged for all workers in these years, using median wages reported to the Social Security Administration. The replacement

rate is the ratio of benefits derived from this hypothetical wage history to earnings in the last year before retirement, with retirement at age 65 usually assumed.

Four different computations of hypothetical replacement rates for men retiring from 1968 to 1976 are shown in table 9. First is the ratio of benefits to the final year's earnings for all male wage and salary workers—the most commonly used hypothetical replacement rate. In addition, replacement rates based on earnings in the final 3 years of employment are portrayed, mainly for comparison with the actual replace-

Table 9.—Computation of hypothetical median earnings replacement rates for male wage and salary workers (all and 4-quarter) aged 65 at entitlement

Year of entitlement	Year of birth	Years counted	Total earnings ¹	Earnings in last 3 years			AME	PIA ²	Replacement rate (percent), based on earnings in—	
				1 year before	2 years before	3 years before			Last year	Last 3 years
All wage and salary workers										
1968	1903	1956-67	\$49,780	\$5,179	\$4,902	\$4,630	\$345.70	\$139.30	32.2	34.1
1969	1904	1956-68	55,228	5,448	5,179	4,902	354.00	141.40	31.1	32.8
1970	1905	1956-69	61,266	6,038	5,448	5,179	364.70	165.80	33.0	35.8
1971	1906	1956-70	67,439	6,173	6,038	5,448	374.70	185.70	36.1	37.9
1972	1907	1956-71	73,849	6,410	6,173	6,038	384.60	226.70	42.4	43.8
1973	1908	1956-72	80,658	6,809	6,410	6,173	395.40	230.90	40.7	42.9
1974	1909	1956-73	87,987	7,329	6,809	6,410	407.30	261.30	42.8	45.8
1975	1910	1956-74	95,827	7,840	7,329	6,809	420.30	288.00	44.1	47.2
1976	1911	1957-75	100,451	8,196	7,840	7,329	440.60	315.80	46.2	48.6
4-quarter wage and salary workers										
1968	1903	1956-67	\$61,916	\$6,398	\$6,124	\$5,739	\$430.00	\$160.60	30.1	31.7
1969	1904	1956-68	68,735	6,819	6,398	6,124	440.60	163.10	28.7	30.4
1970	1905	1956-69	76,192	7,457	6,819	6,398	453.50	191.20	30.8	33.3
1971	1906	1956-70	83,893	7,701	7,457	6,819	466.10	214.10	33.4	35.1
1972	1907	1956-71	92,014	8,121	7,701	7,457	479.20	261.80	38.7	40.5
1973	1908	1956-72	100,804	8,790	8,121	7,701	494.10	267.20	36.5	39.1
1974	1909	1956-73	110,208	9,404	8,790	8,121	510.20	303.30	38.7	41.5
1975	1910	1956-74	120,252	10,044	9,404	8,790	527.40	335.10	40.0	42.7
1976	1911	1957-75	126,724	10,827	10,044	9,404	555.80	370.20	41.0	44.0

¹ Median annual earnings of male workers with taxable earnings, from the *Social Security Bulletin, Annual Statistical Supplement, 1975*, table 39.

² Computed by using benefit formulas from history of OASDI provisions, page 19, *1975 Supplement*. For 1969-71 and 1973, benefit formula in effect as of

January; for 1968, as of February; for 1972, as of September; and for 1974-76, as of June.

³ Weighted by number claiming retired-worker benefits, table 56, *1975 Supplement*.

ment rates. These computations are repeated for men with 4 quarters of covered earnings in each year.

These hypothetical replacement rates for men are compared with the RHS results for married men in table 10. The actual replacement rate of all RHS married men, based on earnings in the highest single year of the 10 before first benefit payment, was approximately three-fourths the hypothetical rate for men aged 65. If earnings for 4-quarter wage and salary workers had been used to construct the hypothetical rates, the actual rates for married men of all ages in the RHS sample would have closely approximated the hypothetical rates for those aged 62 but not those aged 65.

Table 10 also shows that approximately the same relationships hold between the hypothetical and actual rates based on earnings in the 3 highest (or last 3) years: The actual rates tend to be below the hypothetical rates, and by approximately the same relative amount.

This 25-percent difference between actual and hypothetical replacement rates for married men aged 65 can be explained by age at retirement and the level of preretirement earnings. As table 4 shows, 34 percent of those in the RHS sample who first started receiving benefits from 1968 to 1974 were aged 65 at entitlement, therefore received full benefits. Benefits were actuarially reduced for the remaining men: 31 percent were aged 63 or 64, and 35 percent were aged 62. When age at entitlement is controlled, the differential between actual and hypothetical replacement rates is made smaller but not eliminated. The actual rates based on earnings in the final or highest single year are 80-85 percent of the

hypothetical rates, as are actual rates based on earnings in the final or highest 3 years (table 11).

The remaining difference between hypothetical and actual replacement rates can largely be ascribed to the considerable disparity between the preretirement earnings used for the two types of replacement rates. The actual earnings of married men who retired during the period 1968-74 were from 15 percent to 30 percent higher than the earnings used as denominators in the hypothetical replacement rate calculations (table 12).

This difference reflects two facts:

1. Most workers enjoy rising relative earnings as they gain experience in the labor market. Thus, the earnings of a person nearing retirement are likely to be higher than the average for all workers, just as the earnings of a young worker are likely to be lower.
2. The average earnings used for hypothetical replacement rate calculations are reduced by the inclusion of the relatively low earnings of workers who die or become disabled before retirement. All such persons are excluded from the portion of the RHS sample for which actual replacement rates are calculated.

When the data are broken down by age at first benefit payment, the expected pattern emerges: Married men aged 65 had preretirement earnings 30-60 percent higher than the hypothetical earnings, and those who claimed benefits early had earnings up to 20 percent higher. The pattern is like that of several other studies,⁹ where it was

⁹ See, for example, *Reaching Retirement Age: Findings From a Survey of Newly Entitled Workers, 1968-70* (Research Report No. 47), Office of Research and Statistics, Social Security Administration, 1976.

Table 10.—Hypothetical earnings replacement rates and ratio of actual to hypothetical rates for men, by age and year benefit first paid

Item	Replacement rate (percent), ¹ by year benefit first paid			
	1968-70	1971-72	1973-74	1975-76
Based on earnings in last or highest single year				
Hypothetical:				
All wage and salary workers, aged—				
65	32	39	42	45
62	26	31	33	36
4-quarter wage and salary workers, aged—				
65	30	36	38	41
62	24	29	30	32
Actual	24	29	32	(²)
Ratio of hypothetical:				
All wage and salary workers, aged—				
65	0.75	0.75	0.75	(²)
62 .....	.95	.95	.95	(²)
4-quarter wage and salary workers, aged—				
65 .....	.80	.80	.85	(²)
62	1.00	1.00	1.05	(²)
Based on earnings in last or highest 3 years				
Hypothetical:				
All wage and salary workers, aged—				
65	34	41	44	48
62	27	33	35	38
4-quarter wage and salary workers, aged—				
65	32	38	40	43
62	25	30	32	35
Actual	26	32	35	(²)
Ratio of hypothetical:				
All wage and salary workers, aged—				
65	0.75	0.80	0.80	(²)
62 .....	.95	1.00	1.00	(²)
4-quarter wage and salary workers, aged—				
65 .....	.80	.85	.85	(²)
62	1.00	1.05	1.10	(²)

¹ Social security benefit as percent of estimated total earnings in highest single or highest 3 years.

² Data not available.

found that early retirees are likely to be less well off before retirement than persons who wait until age 65 to claim their benefits.

A third factor may explain why the hypothetical replacement rates are higher than the actual rates—the former includes nonmarried men and the latter excludes them. Nonmarried men tend to have lower earnings—and thus higher replacement rates—than married men. Relatively few men in the RHS sample are nonmarried, however, so adding them to the distribution of married men leaves it virtually unchanged (table 13). Although the median replacement rates for nonmarried men ranged up to five percentage points higher than the medians for married men, the medians for all men were the same as the medians for married men.

It should be noted that the use of hypothetical wage

Table 11.—Ratio of actual median earnings replacement rate to hypothetical rate for husbands,¹ by age and year benefit first paid

Age in year benefit first paid	Ratio, by year benefit first paid		
	1968-70	1971-72	1973-74
Based on earnings in last or highest single year			
Total	0.80	0.80	0.85
65 .....	.80	.80	.75
63-64 .....	.85	.85	.90
62 .....	.90	.85	.85
Based on earnings in last or highest 3 years			
Total	0.85	0.85	0.85
65 .....	.80	.85	.80
63-64 .....	.90	.90	.90
62 .....	.90	.85	.85

¹ Based on hypothetical rates in table 9. For age groups, actuarial reductions weighted by number of married men in the RHS sample retiring at specified ages.

series to calculate replacement rates is valuable for some purposes. Hypothetical replacement rates have a legitimate use in making long-term projections of payroll tax receipts and benefit patterns, as well as in comparing different benefit formulas. For judging the adequacy of actual retirees' benefits or portraying the typical experience of persons who have retired, however, it is preferable to use an actual data base such as the Retirement History Study. Further discrepancies between hypothetical and actual replacement rates are highlighted below in the section on couples.

Earnings and Retirement Patterns of Married Women

If the concept of a couple's replacement rate is to be relevant, both partners must be receiving benefits. Of the 5,502 married men in the RHS sample, 5,352 had com-

Table 12.—Ratio of actual median earnings for husbands in last or highest years to earnings used to compute hypothetical replacement rates, by age and year benefit first paid¹

Age in year benefit first paid	Ratio, by year benefit first paid		
	1968-70	1971-72	1973-74
Based on earnings in last or highest year			
Total	1.15	1.30	1.25
65	1.50	1.30	1.45
63-64	1.30	1.30	1.20
62	1.00	1.20	1.05
Based on earnings in last or highest 3 years			
Total	1.15	1.30	1.30
65	1.60	1.35	1.40
63-64	1.30	1.35	1.20
62	1.05	1.20	1.15

¹ Based on earnings in table 9.

Table 13.—Social security earnings replacement rates, by marital status: Number and percentage distribution of men, by year benefit first paid

Replacement rate (percent) ¹	Year benefit first paid								
	1968-70			1971-72			1973-74		
	Total	Married	Nonmarried	Total	Married	Nonmarried	Total	Married	Nonmarried
	Based on earnings in highest single year								
Total number	804	661	143	1,177	1,020	157	1,047	923	124
Total percent	100	100	100	100	100	100	100	100	100
0.1-19.9	33	34	24	16	17	11	10	11	6
20-39.9	58	58	55	66	66	68	65	66	59
40-59.9	7	6	13	15	15	19	22	21	29
60-79.9	1	1	3	1	1	2	2	1	2
80 or more	1	0	4	1	1	1	1	0	3
Median rate	24	24	28	29	29	31	32	32	35
	Based on earnings in highest 3 years								
Total number	768	633	135	1,132	980	152	948	836	112
Total percent	100	100	100	100	100	100	100	100	100
0.1-19.9	25	27	17	11	12	6	7	7	4
20-39.9	59	60	56	64	64	63	60	61	51
40-59.9	11	11	11	22	22	25	30	28	38
60-79.9	3	2	9	2	1	4	2	3	1
80 or more	2	1	7	1	1	2	1	1	6
Median rate	26	26	31	32	32	34	35	35	39

¹ Social security benefit as percent of estimated total earnings in highest single or highest 3 years.

plete benefit records. Almost 3,300, or three-fifths of the men in the sample, had begun receiving retired-worker benefits by December 1974 (table 1). Of these, about one-fourth had wives who were receiving retired-worker benefits and one-third had wives who were receiving benefits as dependent spouses. As the figures that follow show, these husbands and wives form the conceptual base for analysis of couples' replacement rates.¹⁰ Wives with other types of benefits, notably disability and widow's benefits, were excluded from the analysis because their benefits did not reflect their own or their husbands' recent earnings.

Type of wife's benefit	Percent
Total percent	100
Retired-worker benefit	27
Dependent's benefit	34
Disabled or widow's benefit	9
No benefit by December 1974	30

Before the replacement rates for couples are analyzed, it is useful to examine the patterns by which couples come on the benefit rolls, the types of benefits received by the wives, and the extent of their covered work experience. This analysis focuses on the 5,352 sampled couples with complete benefit records. In 47 percent of these couples, both members were receiving benefits in December 1974. Of these, 76 percent claimed benefits

¹⁰ Of the couples in which the wives were not yet receiving benefits, half the women were under age 60 in December 1974. For these couples, benefits and replacement rates will be applicable only for the husbands for several years.

within 2 years of each other and 62 percent did so within 1 year (table 14).

Wives tended to be several years younger than their husbands, as the following figures show.

Age	Percent
Total percent	100
Wife at least 4 years younger than husband	47
Wife 3 years younger	9
Wife 2 years younger	11
Spouses born within 1 year of each other	22
Wife 2 years older than husband	3
Wife at least 3 years older	6

In only a small number of couples were the spouses about the same age. Among these couples, 82 percent of the husbands and wives claimed benefits within 2 years of each other.

Type of Benefit Received

Whether or not the wife had enough covered work experience to qualify for benefits as a retired worker is a matter of considerable interest. How receipt of this type of benefit affects replacement rates is also important.

As table 15 shows, 7 out of 10 of all the wives had some years of covered employment from 1951 to the year preceding the one in which their first benefit was paid (or to 1974 if they were not yet receiving benefits). The degree of labor-force attachment varied considerably according to type of benefit received. As might be expected, wives receiving benefits as retired workers

Table 14.—Year of husband's and wife's benefit receipt: Number and percentage distribution, by age difference

Benefit-payment status ¹	Difference from husband's age, wife—						
	Total ²	4 years or more younger	3 years younger	2 years younger	About same age ³	2 years older	3 years or older
Total number	5,352	2,532	486	567	1,185	170	316
Total percent	100	100	100	100	100	100	100
Not receiving, husband and wife	11	14	14	10	8	3	4
Receiving	89	86	86	90	92	97	96
Husband only	22	39	17	6	1	0	0
Wife only	3	1	2	4	6	8	7
Other ⁴	17	18	16	17	15	16	15
Husband and wife	47	28	50	64	70	73	73
Total percent	100	100	100	100	100	100	100
Wife's first benefit received:							
Before husband's:							
5 years or more	5	5	0	2	2	11	30
3-4 years	6	1	2	2	10	11	8
2 years	5	1	2	4	8	13	6
1 year	6	2	5	11	9	9	1
Same year as husband's	45	39	40	40	51	45	51
After husband's:							
1 year	11	14	16	13	10	7	1
2 years	9	12	15	16	4	2	2
3-4 years	9	16	18	11	4	1	1
5 years or more	4	9	2	1	2	1	1

¹ Whether or not currently receiving retired-worker benefit (husband or wife) or spouse's benefit (wife).

² Includes a small number whose ages were not ascertained.

³ Born within 1 year of each other.

⁴ Represents persons receiving benefits other than as retired worker or dependent spouse, or those with benefits postponed as of December 1974.

tended to have the greatest attachment to the labor force. Almost 4 out of every 10 of such women had worked in at least four-fifths of the years from 1951 to the year the benefit was first paid; the median proportion of years worked was 67 percent. Wives receiving benefits solely on their own work record—classified as “not dual” beneficiaries—had an even greater attachment to the labor force. The median proportion of years worked by such women was 73 percent.¹¹

Wives receiving only dependent's benefits had a far weaker attachment to the labor force: Sixty percent had no covered earnings after 1950, and 84 percent had worked in less than one-fifth of the years. Wives not receiving any benefits as of December 1974 were a mixed group—some eventually will become retired workers and others will not. Though one-fourth of those not receiving benefits had never worked, for the group as a whole the median time in the labor force was nearly one-third of the years before entitlement.

The number of wives with substantial preretirement work experience is reflected in the number receiving retired-worker benefits by December 1974 (table 16). Among couples in which the husbands were receiving retired-worker benefits by that time, 27 percent of the wives were receiving retired-worker benefits and 34

¹¹ “Dual” beneficiaries are persons whose own benefits as retired workers are less than the amount to which they would be entitled as dependent spouses. The retired-worker benefits of such persons are therefore supplemented to bring total benefits up to the amount they would have received as dependent spouses. Since they have worked long enough to establish entitlement as retired workers, they are classified as such, rather than as dependents.

Table 15.—Percent of years wife in covered employment after 1950 to year before benefit first paid: Number and percentage distribution, by wife's type of benefit

Percent of years after 1950 in covered employment	Wife's type of benefit					
	Total ¹	Retired-worker benefit			Dependent's	No benefit ²
		Total	Not dual	Dual		
Total number	5,352	1,279	1,078	201	1,406	2,078
Total percent	100	100	100	100	100	100
0	30	³ 7	³ 5	³ 16	60	25
1-19	15	6	4	13	24	16
20-39	13	13	10	28	9	15
40-59	12	18	17	22	3	12
60-79	12	22	23	16	2	12
80-99	10	19	21	3	1	11
100	8	17	20	0	1	9
Median percent	27	67	73	35	0	32

¹ Includes 589 with disabled-worker, widow's, and unclassified benefits.

² Years after 1950 to 1974.

³ May have received retired-worker benefit on the basis of pre-1951 earnings.

percent were receiving dependent spouse's benefits.

To obtain a rough picture of the then current and future beneficiary status of all RHS wives, the probable future benefits for current nonbeneficiaries were estimated by means of their earnings records. If a nonbeneficiary wife had covered earnings in at least one-fourth of the years in the period 1951-74, she was classified as a probable retired worker. If her earnings were nonexistent or minimal, she was classified as a probable dependent. No attempt was made to ascertain probable

Table 16.—Husband's and wife's type of benefit and payment status: Number and percentage distribution of married couples, as of December 1974

Wife's type of benefit and payment status	Husband's type of benefit and payment status									
	Total	No benefit	With benefit						Disabled-worker ¹	Other
			Total	Retired-worker			Postponed			
				Payable						
Total	At entitlement	After entitlement								
Total number	5,352	788	4,564	3,278	2,654	624	362	628	296	
Total percent	100	100	100	100	100	100	100	100	100	
No benefit	39	77	32	30	30	29	55	29	35	
Likely to receive:										
Retired-worker ²	22	35	20	19	19	17	25	20	23	
Dependent's ³	17	42	13	11	11	12	30	9	12	
With benefit	61	23	68	70	70	71	45	71	65	
Retired-worker	24	17	25	27	26	29	19	21	21	
Payable:										
At entitlement	23	16	24	26	25	27	18	20	20	
After entitlement	1	1	1	1	1	2	1	1	1	
Postponed	0	0	0	0	0	0	1	0	1	
Dependent's	26	0	31	34	34	33	17	30	13	
Disabled-worker ⁴	4	3	5	3	4	3	2	14	1	
Other	7	4	7	6	6	5	6	7	28	
Actual or probable:										
Retired-worker	46	52	45	46	45	46	45	41	45	
Dependent	43	42	44	45	45	44	47	39	25	

¹ Received at any time, regardless of current type of benefit.
² Employed in 25 percent or more years after 1950.

³ Employed in less than 25 percent of years after 1950.
⁴ Disabled worker or dependent of disabled worker.

dual-beneficiary status. The figures indicate that 46 percent of all the RHS wives (including 22 percent who were nonbeneficiaries in 1974) were or were likely to become retired workers, and 43 percent (including 17 percent who were nonbeneficiaries) were or were likely to receive dependents' benefits. The proportionately larger future increase expected for retired workers than for dependents follows from the fact that wives tend to be younger than their husbands. In 1974, many wives were still working because they had not yet attained the age at which they could receive retired-worker benefits.

Although many wives had worked, the long-term

fruits of their labor—as measured by the relationship between the amount of their average monthly earnings (AME) and that for the couple—was generally not very great (table 17). Among all couples in which both partners were receiving some benefit, the wife's median AME was only 7 percent of the total; when the wife had had at least some covered work, the median proportion was still only 25 percent.¹² Thirty percent of the wives

¹² If a measure of average total earnings were used, the wife's contribution to the couple's total earnings would be even lower because men have a greater tendency to earn more than the taxable maximum.

Table 17.—Wife's average monthly earnings as percent of couple's: Number and percentage distribution of married couples, by type of benefit¹

Wife's AME as percent of couple's	Entitled couples						
	Total	Wives ever worked	Husband and wife with retired-worker benefit, wife's benefit—			Husband with retired-worker benefit, wife with dependent's benefit	Husband and wife entitled to other benefit
			Total	Not dual	Dual		
Total number	3,092	1,872	946	784	162	1,181	965
Total percent	100	100	100	100	100	100	100
0	39	.....	8	6	19	70	33
1-19	26	43	27	17	77	25	27
20-39	17	27	29	34	5	3	21
40-59	12	21	26	31	0	1	13
60-79	3	5	5	6	0	1	4
80 or more	2	4	5	6	0	0	2
Median percent	7	25	31	36	8	0	10

¹ Average monthly earnings estimated from summary earnings record as of date benefit first paid; "special minimum" and "old start" benefit computations not made. Benefit-payment status not determined. About one-fourth of the men with retired-worker benefits had them postponed at entitlement.

tations not made. Benefit-payment status not determined. About one-fourth of the men with retired-worker benefits had them postponed at entitlement.

with some covered earnings, however, had an AME that accounted for at least 40 percent of the total for the couple.

Among wives receiving retired-worker benefits, the wife's median AME was 31 percent of the couple's combined AME and about one-third had AME's that amounted to less than 20 percent of the total. If the wife was receiving only her retired-worker benefits, however, the median AME amounted to 36 percent of the total.

Where the wives were receiving only dependent's benefits, 70 percent had never worked and thus had no AME at all. Virtually all the remaining dependent wives had AME's that were less than one-fifth that of the couple.

Age at Retirement

Table 18 provides a general picture of the retirement age pattern of married men and their wives. This analysis is restricted to couples in which the husband retired at the "normal" age (65-69) and was receiving a retired-worker benefit. Almost one-third of the wives had not yet retired, and almost half of them were under age 60 and therefore were not likely to claim benefits for several more years.

Both partners claimed full benefits at age 65 in only 7 percent of all RHS couples. Thus the assumption that couples retire together at age 65 is infrequently supported. An unknown number of the wives who were not yet beneficiaries might eventually receive benefits at age 65; on the basis of past experience, however, the proportion is likely to be small. For a far greater proportion of the couples—17 percent—both partners claimed benefits at age 62.

When both husband and wife were retired workers, only 6 percent of the couples began receiving benefits when both partners were aged 65 or older; the proportion for joint retirement at age 62 was 24 percent. Among these couples, three-fourths of the wives were aged 62 when their first benefits were received. Among couples in which the wife had initially been awarded a dependent's benefit, 15 percent had both partners aged 65 or older when benefits were first received, and 25 percent had both partners aged 62. Fifty-six percent of the wives receiving dependent's benefits were aged 62 or younger when they first received benefits. Eighteen percent were under age 62 at the time of the first benefit receipt. These women were mostly wives receiving dependent's benefits because they had children under age 18 in their care.

About 9 in 10 of the wives in couples in which the wife was receiving any benefit claimed them before age 65 and thus incurred a permanent actuarial reduction in the benefit amount. Among 1 couple in 4, both partners claimed benefits at age 62, thereby incurring the

Table 18.—Husband's and wife's age at first benefit payment: Percentage distribution of married couples, by wife's type of benefit and payment status

Wife's benefit-payment status and age ¹	Married couples, by entitled husband's age in year benefit first paid			
	Total	62	63-64	65-69
	Total ²			
Total percent	100	29	28	43
No benefits	31	7	9	15
Under 55	4	1	1	2
55-59	11	3	3	5
60-61	10	2	3	4
62 and over	6	1	1	4
With benefits	69	22	19	28
62 or under	45	17	12	15
63-64	12	3	4	5
65 and over	13	2	3	7
	Wife not entitled			
Total percent	100	22	29	49
Under 55	13	3	4	6
55-59	35	9	10	16
60-61	33	8	10	15
62 and over	19	3	4	12
	Wife receiving any benefit ³			
Total percent	100	32	28	40
62 or under ⁴	64	24	18	22
63-64	17	4	6	7
65 and over	19	3	4	11
	Wife with retired-worker benefit			
Total percent	100	29	26	45
62 or under ⁵	76	24	20	32
63-64	14	3	4	7
65 and over	10	2	3	6
	Wife with dependent's benefit			
Total percent	100	34	29	37
62 or under ⁶	56	25	16	15
63-64	19	5	7	7
65 and over	25	4	5	15

¹ For beneficiaries, age in year benefit first paid; for nonbeneficiaries, age as of December 1974.

² Includes husbands aged 65 and over entitled as retired workers, and those with benefits postponed as of December 1974. Excludes husbands whose disabled-worker benefit was converted to retired-worker benefit at age 65 and couples with unusable earnings records.

³ Includes 291 wives receiving benefits as widows or disabled workers.

⁴ Includes 16 percent who first received benefits before age 62.

⁵ Includes 3 percent under age 62.

⁶ Includes 18 percent under age 62.

maximum actuarial reductions of 20 percent for the retired worker and 25 percent for the dependent wife. In the most extreme case, that of a married couple in which both partners claim benefits at age 62, the combined benefit would be 117.5 percent of the husband's PIA, compared with 150 percent for a couple in which both partners claim benefits at age 65.

Summary

Overall, the work and retirement patterns of the RHS women reveal the presence of considerable diversity.

Table 19.—Couple's social security earnings replacement rate, by wife's type of benefit: Number and percentage distribution, by year husband's benefit first paid

Replacement rate (percent) ¹	Year husband's benefit first paid and wife's type of benefit											
	All years			1968-70			1971-72			1973-74		
	All couples ²	Retired worker	Dependent's	All couples	Retired worker	Dependent's	All couples	Retired worker	Dependent's	All couples	Retired worker	Dependent's
Total number ³ . . .	1,493	566	740	444	169	212	613	241	290	436	156	238
Total percent	100	100	100	100	100	100	100	100	100	100	100	100
0.1-19.9	6	6	4	12	12	9	4	4	3	2	2	0
20-39.9	43	50	36	52	62	47	41	49	32	35	38	32
40-59.9	37	34	41	26	17	33	38	37	42	47	47	47
60-79.9	11	7	15	6	5	8	13	6	18	13	9	18
80 or more	4	4	4	4	4	3	4	4	4	3	4	3
Median rate	41	38	45	35	32	38	42	39	47	45	43	49

¹ Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 of the 10 years before husband's first benefit payment.

² Includes a small number of couples with wives receiving benefits other than as retired workers or dependent spouses.

³ Includes husbands who received their first benefit in 1968-74, whose wives received retired-worker or dependent's benefit. Excludes couples whose combined earnings, social security benefit, or second-pension records were unusable.

Data from the Retirement History Study show that:

- Many women have worked during the two decades preceding their retirement.
- About as many wives receive or expect to receive retired-worker benefits as spouse's benefits.
- It is a rare couple in which neither partner incurs a permanent reduction in social security benefits because of early retirement.
- Retirement in the same year, at the same age, is rare because wives tend to be several years younger than their husbands.

None of these characteristics are in accord with the pattern postulated for the "typical" couple. The actual characteristics of these couples greatly affect the analysis of couples' replacement rates.

Couples' Replacement Rates

Replacement rates were computed for couples in which the husband was receiving retired-worker benefits and his wife was receiving benefits as a retired worker or as a dependent spouse. The numerator is the sum of annualized benefits for each spouse, adjusted to levels payable in the year of the husband's first benefit receipt, plus any second-pension benefits. The denominator is the average combined earnings of husband and wife in the highest 3 of the 10 years before the year of the husband's first benefit receipt. If either partner earned the taxable maximum, total earnings were estimated for that person and added to the couple's total.

Table 19 shows that, regardless of when the husband first received a benefit payment, the couples with retired-worker wives had median replacement rates six to eight percentage points lower than those of couples with dependent wives. Among couples that first received benefits in 1973-74, for example, the median replacement rate was 43 percent for those couples with

retired-worker wives, compared with 49 percent for those with dependent wives. This disparity may be explained by four factors:

1. Wives receiving benefits as retired workers were somewhat more likely than those receiving dependent's benefits to have incurred the full actuarial reduction (table 18).
2. Included among the retired workers were some who were dual beneficiaries—those also entitled to a spouse's benefit but receiving a total amount¹³ no larger than the spouse's benefit alone.
3. The retired-worker benefits of some other wives were not much higher than what they would have received as dependents. Thus, although wives make important contributions to the total earnings of married couples, their benefits as retired workers do not make commensurate contributions to retirement income because dependent spouses' benefits are available for nonearning wives. When both husband and wife are employed, their combined replacement rate tends toward the replacement rate for one person only. Such a situation would occur for a husband and wife who have equal earnings in the same years, and earn retired-worker benefits. For a nonearning wife, her dependent's benefit adds to the numerator (50 percent if she retires at age 65) without adding any earnings to the denominator.
4. The preretirement earnings of husbands with retired-worker wives tended to be higher than those of husbands with dependent wives (table 20). Because of the progressive nature of the benefit structure, the replacement rates for husbands with retired-worker wives were therefore slightly lower than those for husbands with dependent wives.

The degree of increase in the couple's replacement rate above that of the husband differed according to the type of benefit received by the wife. For couples in which the wife received dependent's benefits the median

¹³ It is this total benefit that is used in calculating the replacement rate.

Table 20.—Median preretirement earnings and social security earnings replacement rate for husbands and couples, by year husband's benefit first paid and wife's type of benefit

Type of wife's benefit	Preretirement earnings ¹		Median replacement rate	
	Husband only	Couple	Husband only ²	Couple ³
	Total ⁴			
All couples	\$7,680	\$8,670	31	41
Retired-worker	8,075	10,210	30	38
Dependent's	7,525	7,715	32	45
	1968-70			
All couples	\$5,745	\$6,970	26	35
Retired-worker	6,860	9,145	24	32
Dependent's	5,150	5,435	26	38
	1971-72			
All couples	\$8,010	\$8,750	32	42
Retired-worker	8,265	10,975	31	39
Dependent's	7,555	7,715	33	47
	1973-74			
All couples	\$8,735	\$9,690	35	45
Retired-worker	8,565	10,465	35	43
Dependent's	9,050	9,350	34	49

¹ Estimated total earnings in highest 3 years.

² Social security benefit as percent of estimated total earnings in highest 3 years.

³ Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 years.

⁴ Includes a small number of couples with wives receiving benefits other than as retired workers or dependent spouses.

replacement rate was about two-fifths higher than that of the husband alone—45 percent, compared with 32 percent. For couples in which the wife received retired-worker benefits the wife's contribution to the couple's median replacement rate was about one-fourth—38 percent, compared with 30 percent. When data for both groups of couples are combined, the median replacement rate becomes about one-third higher than that of the husband alone—41 percent, compared with 31 percent. Although replacement rates increased over the RHS timespan, the relationships in the amount by which couples' median replacement rates exceeded those of the husbands remained fairly constant.

As table 20 shows, couples with retired-worker wives had median preretirement earnings considerably higher (\$10,210) than those of couples with dependent wives (\$7,715). Thus, although couples with retired-worker wives had somewhat lower replacement rates, in absolute terms they had higher earnings before retirement and somewhat higher social security benefits afterward.

Age at Retirement

As noted earlier, wives who were retired workers tended to claim benefits earlier than did wives who were

dependents: Seventy-six percent of the retired-worker wives began receiving benefits at age 62, compared with 56 percent of the dependent wives (table 18). This age structure is reflected in the couples' replacement rates, which are distributed by selected age combinations in table 21. The median social security replacement rate was 50 percent when both partners were aged 65, compared with 38 percent when both were aged 62. As expected, when the husband was aged 65 and the wife was aged 62, the couple's replacement rate fell between those for the other two groups.

Second Pensions

Receipt of a second pension had a substantial effect on replacement rates. This additional source of retirement income was reported by 45 percent of the RHS couples (35 percent had private employer pensions and 10 percent had public employee pensions). In general, the husband, not the wife, received the second pension.

Among couples who first received benefits in 1973-74, those with second pensions had a median total replacement rate of 62 percent, compared with 49 percent for those who did not (table 22). Couples receiving second pensions during the period had substantially higher preretirement earnings than did couples without them—a median of \$11,315, compared with \$7,905. The social security benefit replacement rates for the members of this group were therefore lower—41 percent, compared with 49 percent—but their second pension benefits more than compensated for this deficiency. Put another way, couples without second pensions had lower preretirement earnings than did those with second pensions and, although their median social security replacement rates were somewhat higher, their total replacement rates were lower than those of couples with second pensions. Among the second-pension couples, those with dependent wives had slightly higher total median replacement rates than did those with retired-worker wives—64 percent, compared with 61 percent.

As for the married men, the proportion of couples with second pensions increased with the level of preretirement earnings, and the second pensions did much to compensate for the decline in social security replacement rates with rising earnings levels (table 23). The median rate of earnings replaced by all benefits, including second pensions, remained fairly constant throughout the earnings distribution, ranging from 45 percent to 56 percent when the small number of couples with high-3 earnings of less than \$4,000 was excluded.

Within earnings level groups, however, the contrast in median replacement rates between those with and those without second pensions is sharp. Of the couples with high-3 earnings of \$6,000-\$7,999, for example, the median replacement rate for those with second pensions was 68 percent, compared with 48 percent for those without them. For couples with preretirement

Table 21.—Number of married couples and median social security earnings replacement rate, by age, year husband's benefit first paid, and wife's type of benefit

Year husband's benefit first paid	Total		Husband and wife aged 65 and over		Husband aged 65 and over, wife age 62		Husband and wife age 62		Other age combinations	
	Number	Median replacement rate (percent) ¹	Number	Median replacement rate (percent)	Number	Median replacement rate (percent)	Number	Median replacement rate (percent)	Number	Median replacement rate (percent)
All couples										
Total ²	1,306	41	109	50	262	42	369	36	566	43
1968-70	381	35	5	(³)	21	(³)	196	34	159	37
1971-72	531	43	41	52	132	42	138	38	220	44
1973-74	394	46	63	50	109	44	435	38	187	48
Wife with retired-worker benefit										
Total	566	38	23	(³)	153	41	166	34	224	38
1968-70	169	32	1	(³)	11	(³)	84	30	73	34
1971-72	241	39	11	(³)	79	39	66	37	85	39
1973-74	156	43	11	(³)	63	44	16	(³)	66	44
Wife with dependent's benefit										
Total	740	45	86	52	109	46	203	37	342	48
1968-70	212	38	4	(³)	10	(³)	112	36	86	42
1971-72	290	47	30	54	53	47	72	40	135	48
1973-74	238	49	52	51	46	46	19	(³)	121	50

¹ Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 years.

² Includes husbands who received their first benefit from 1968 to 1974, whose wives received retired-worker or dependent's benefit. Excludes

couples whose combined earnings, social security benefit, or second-pension records were unusable.

³ Not computed; base fewer than 25.

⁴ Based on 50 cases or less; subject to high sampling variability.

earnings of \$12,500 or more, the median replacement rate of those with second pensions was about 54 percent, compared with about 30 percent for those without second pensions.

Growth in Replacement Rates

Median replacement rates classified by the year of first benefit payment are shown in table 24. As for the husbands' own replacement rates, the rates for married couples increased with each succeeding cohort of new retirees until 1972. Since then they have remained essentially stable.

Comparison With Hypothetical Rates

Actual replacement rates for married couples in the RHS sample were substantially lower than the hypothetical rates calculated for couples on the assumption that all workers retire at age 65 with nonearning dependent wives claiming benefits at the same age (table 25). The hypothetical median replacement rate for couples is based on the husband's high-3 earnings. For couples retiring in 1973-74, this rate was 66 percent, compared with the actual median for the RHS sample, based on earnings of both the husband and wife, of 46 percent—only seven-tenths as high.

For couples in which the wives were dependent beneficiaries the actual median replacement rate was slightly

higher, but still only three-fourths of the hypothetical rate. For the substantial number of couples in which the wives were retired-worker beneficiaries the ratio of actual to hypothetical rates was only about two-thirds.

These differences can be accounted for by three factors. First, most couples incur a permanent actuarial reduction in their benefits because they claim them before reaching age 65. As table 26 shows, however, the actual median replacement rates were substantially below the hypothetical rates even when age was controlled.

Second, for those in the RHS sample, the preretirement earnings of the husbands and the couples were substantially higher than the earnings derived from the series of median earnings for all men wage and salary workers. This difference reflects not only the higher preretirement earnings of the men in the RHS sample but also the contributions made in many instances by the wives to the total earnings of the couples.

As table 27 shows, the actual earnings of the husbands in the RHS sample were usually about 30 percent higher than the amount determined by the hypothetical earnings pattern for all men. With the wife's earnings included, actual earnings of retired couples were 35-45 percent higher than the earnings for the husband alone used to calculate hypothetical replacement rates. The differences were especially evident among couples with retired-worker wives, whose actual earnings were 55-80 percent higher than the earnings of the hypothetical

Table 22.—Number with earnings replacement rate computed and couple's median preretirement earnings and social security and total earnings replacement rates, by second-pension receipt, wife's type of benefit, and year husband's benefit first paid

Year husband's benefit first paid	Second-pension receipt and wife's type of benefit								
	Total			With no second pension			With second pension ¹		
	Total ²	Retired worker	Dependent's	Total	Retired worker	Dependent's	Total	Retired worker	Dependent's
	Number with replacement rate computed								
Total	1,493	566	740	798	268	416	695	298	324
1968-70	444	169	212	276	88	139	168	81	73
1971-72	613	241	290	300	100	154	313	141	136
1973-74	436	156	238	222	80	123	214	76	115
	Median preretirement earnings ³								
Total	\$8,670	\$10,210	\$7,715	\$6,315	\$7,955	\$5,460	\$10,810	\$12,425	\$9,605
1968-70	6,970	9,145	5,437	4,640	6,400	3,870	10,210	11,340	8,680
1971-72	8,750	10,975	7,715	6,275	8,300	5,370	10,815	12,620	8,920
1973-74	9,690	10,465	9,350	7,905	8,800	7,500	11,315	13,095	10,345
	Median social security replacement rate ⁴								
Total	41	38	45	46	44	50	36	34	38
1968-70	35	32	38	41	38	44	28	27	30
1971-72	42	39	47	48	45	53	37	35	41
1973-74	45	43	49	49	47	53	41	38	44
	Median total replacement rate ⁵								
Total	52	50	55	46	44	50	59	57	61
1968-70	45	44	47	41	38	44	50	49	53
1971-72	55	54	58	48	45	53	61	59	64
1973-74	55	54	58	49	47	53	62	61	64

¹ Private or public employee pensions assumed to be combined with social security benefits; see technical note, page 34.

² Includes a small number of couples with wives receiving benefits other than as retired workers or dependent spouses.

³ Estimated total earnings in highest 3 years.

⁴ Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 years.

⁵ Couple's combined social security and second-pension benefits (if any) as percent of combined estimated total earnings in highest 3 years.

couple in which only the husband was assumed to be employed.

The third factor in the differences between the actual and hypothetical rates was the fact that wives receiving retired-worker benefits added more in earnings to the replacement rate's denominator than their benefits added to the numerator.

These factors suggest that a hypothetical replacement rate for married couples—based on the dual assumptions that the husband's preretirement earnings match the median for all men and that his wife had no earnings—presents an inaccurate picture of the actual experience of retired couples. Nevertheless, such measures are useful in projecting future benefit trends and in comparing proposed benefit structures. They should not, however, be used to measure benefit adequacy with respect to individual retirees or couples, most of whom do not fit the work and retirement patterns assumed for "typical" couples.

Summary and Conclusions

The basic message conveyed by this analysis is that it is impossible to form a usable stereotype of the retire-

ment behavior of married couples. It is sometimes assumed that the typical husband retires at age 65, and that his 65-year-old wife, who has never worked, claims dependent's benefits when he retires. Reality is far different, however.

- About half the wives studied had worked long enough to retire as workers rather than as dependent spouses. Among 1973-74 retirees, total benefits, on the average, replaced 54 percent of previous earnings for those couples with retired-worker wives, and 58 percent for those with dependent wives. The higher replacement rate for the latter group is explained mainly by the fact that the earnings of wives entitled as retired workers contribute substantially to the couple's standard of living before retirement, but the benefits for such couples are not proportionately greater because of the availability of dependent spouse's benefits.

- About 9 out of 10 couples incurred permanent benefit reductions because of early retirement.

- Because wives tend to be younger than their husbands, retirement in the same year or at the same age was rare.

- Forty-seven percent of the RHS couples received second pension benefits. In 1973-74 the median total

Table 23.—Couple's median social security and total earnings replacement rates, by couple's preretirement earnings and second-pension receipt

Second-pension receipt	Preretirement earnings ¹							
	Total	\$1-3,999	\$4,000-5,999	\$6,000-7,999	\$8,000-9,999	\$10,000-12,499	\$12,500-14,999	\$15,000 or more
All couples								
Total number with replacement rate computed ²	1,389	185	200	211	255	220	161	157
Median replacement rate:								
Social security ³	42	63	52	48	45	37	32	25
Social security and second pension ⁴	53	64	55	55	56	48	48	45
Percent with second pension	47	2	17	36	62	63	76	76
With second pension⁵								
Total number with replacement rate computed	653	4	34	77	157	139	123	119
Median replacement rate:								
Social security	36	(6)	754	49	45	37	32	25
Social security and second pension	59	(6)	782	68	64	55	54	53
With no second pension								
Total number with replacement rate computed	736	181	166	134	98	81	38	38
Median social security replacement rate	48	63	52	48	45	37	733	726

¹Average annual estimated total earnings in highest 3 years.

²Includes husbands who received their first benefit in 1968-74, whose wives received retired-worker or dependent's benefit. Excludes couples whose combined earnings, social security benefit, or second-pension records were unusable.

³Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 years.

⁴Couple's combined social security and second-pension benefits (if any) as percent of combined estimated total earnings in highest 3 years.

⁵Private or public employee pensions assumed to be combined with social security benefits; see technical note, page 34.

⁶Not computed; base fewer than 25.

⁷Based on 50 cases or less; subject to high sampling variability.

replacement rate for couples with second pensions was 62 percent, compared with 49 percent for those without such pensions. Median preretirement earnings being replaced were also considerably higher for couples with second pensions (\$11,315) than for nonrecipients (\$7,905).

- Mainly because of rising earnings levels, the large increases in social security benefits that went into effect during the time covered by the RHS did not mean equivalent increases in replacement rates for new beneficiaries. Replacement rates among newly entitled couples rose until about 1972 but leveled off thereafter. Because second pension amounts paid to new retirees remained virtually constant during the period 1968-74, their contribution to replacement rates stayed fairly stable. In fact, they showed some decline in 1974.

- The likelihood of receiving a second pension rose with preretirement earnings levels. The presence of second pensions among high earners counteracted the progressive nature of the social security benefit structure and tended to produce relatively even total replacement rates throughout the earnings distribution. Not surprisingly, sharp differences existed within earnings levels between the replacement rates of those with and without second pensions.

- Hypothetical replacement rates for couples were found to overstate considerably the actual replacement rates of retired couples, when such hypothetical rates assumed that the typical preretirement earnings of married men match the median earnings of all men, that wives have no preretirement earnings, and that the couple claims 150 percent of the husband's benefit at age 65.

- The social security replacement rate for the hypothetical couple (both members of which were aged 65) retiring in 1973-74 was 63 percent, compared with an actual median rate of 43 percent for all couples in the RHS—only about seven-tenths as high. Even when age at retirement was controlled, similar discrepancies occurred.

- These discrepancies are explained in part by the fact that many wives have been in the labor force, and their earnings add more to the couples' preretirement earnings than they do to the couples' total benefits. (The preretirement earnings of wives are not considered in hypothetical replacement rate calculations.) Furthermore, the actual earnings of married men nearing retirement tend to be higher than the median earnings of male workers of all ages.

Technical Note

Computation of Replacement Rates

The object of this research was to ascertain the extent to which the earnings of married men and their wives were replaced by social security and second pension benefits. The measure used is described in detail below. Because the focus of this article is on the adequacy of earnings replacement, benefits were compared with an estimate of total earnings just before retirement rather than with earnings up to the annual taxable maximum, an approach frequently used.¹⁴ Data on sex, marital

¹⁴For a discussion of alternate ways of computing replacement rates, see Alan Fox, *op. cit.*, in Research Report No. 47.

Table 24.—Couple's median social security and total earnings replacement rates, by detailed year husband's benefit first paid and couple's second-pension receipt

Second-pension receipt	Year husband's benefit first paid							
	Total	1968	1969	1970	1971	1972	1973	1974
Number with replacement rates computed								
Total ¹	1,389	88	141	182	294	279	254	151
With second pension ² ..	653	³ 36	³ 43	82	138	156	133	65
With no pension	736	52	98	100	156	123	121	86
Husband's median social security replacement rate ⁴								
Total	31	26	25	27	30	34	34	35
With second pension ..	26	³ 19	³ 16	23	25	30	31	33
With no pension	35	30	29	31	35	39	38	37
Couple's median social security placement rate ⁵								
Total	42	37	35	36	41	45	45	47
With second pension ..	36	³ 29	³ 24	31	34	42	39	45
With no pension	48	44	41	44	49	51	51	49
Couple's total replacement rate ⁶								
Total	53	49	43	48	54	59	58	55
With second pension ..	59	³ 56	³ 46	51	59	65	64	62
With no pension	48	44	41	44	49	51	51	49

¹ Numbers in sample for husband's social security replacement rate about 5 percent larger. Includes husbands who received their first benefit in 1968-74, whose wives received retired-worker or dependent's benefit. Excludes couples whose combined earnings, social security benefit, or second-pension records were unusable.
² Private or public employee pensions assumed to be combined with social security benefits; see technical note, page 34.
³ Based on 50 cases or less; subject to high sampling variability.
⁴ Husband's social security benefit as percent of estimated total earnings in highest 3 years.
⁵ Couple's combined social security benefit as percent of combined estimated total earnings in highest 3 years.
⁶ Couple's combined social security and second-pension benefits (if any) as percent of combined estimated total earnings in highest 3 years.

status, second pensions, and other variables were taken from the 1969-75 RHS questionnaire response file. In addition, for almost all married couples the master beneficiary record and the summary earnings record were located for both husband and wife.

The master beneficiary record contains information about the type (retired worker, spouse, disabled worker, etc.) and amount of social security benefits paid in each year. The husband's date of current entitlement provided a reference year for the couple's replacement rate computation. Benefit information was extracted as soon after that date as possible, except in cases where benefits initially had been postponed because of continued work. In that case the reference year was the first year of benefit receipt after the date of current entitlement. Persons whose retired-worker benefits were still postponed as of December 1974 were eliminated from the replacement rate computations. All persons either receiving disabled-worker benefits or whose file included a date of disability onset at any time before the date of current entitlement were counted as disabled. All such persons were eliminated from the replacement rate cal-

Table 25.—Hypothetical social security replacement rates for couples aged 65 and actual rates, by wife's type of benefit and year husband's benefit first paid

Type of replacement rate (percent) and wife's type of benefit	Replacement rates, by year husband's benefit first paid			
	1968-70	1971-72	1973-74	1975-76
Based on earnings in last or highest single year				
Hypothetical, husband and wife aged 65 ¹	48	59	63	68
Actual ²	32	39	43	(³)
Retired-worker	30	36	41	(³)
Dependent's	34	43	44	(³)
Based on earnings in last or highest 3 years				
Hypothetical, husband and wife aged 65 ¹	51	61	66	72
Actual ⁴	35	43	46	(³)
Retired-worker	32	39	43	(³)
Dependent's	38	47	49	(³)

¹ Hypothetical replacement rates from table 9, with a 50-percent dependent spouse's benefit assumed; based on husband's earnings only.
² Couple's combined social security benefits as percent of combined estimated total earnings in highest year of the 10 before husband's first benefit payment.
³ Data not available.
⁴ Couple's combined social security benefits as percent of combined estimated total earnings in highest 3 years.

culations because their current benefits usually did not depend on recent earnings.¹⁵

The numerator. The numerator of the replacement rate fraction consists of two parts, the social security benefit and the second pension benefit. The social security benefit amount, obtained from the master beneficiary record, is the annualized monthly benefit amount recorded in December of the year following the husband's year of first payment (the "reference year" mentioned above). This amount was adjusted back to the reference year by the inverse of any legislated increase in benefits in the following year. Since the initial benefit is based on earnings up to the year before entitlement, and benefits are recomputed in the following year to account for earnings during the year of entitlement, the use of benefit amounts in the year after first benefit payment avoids the low monthly benefit amounts that can prevail in the first year of entitlement. The first year's December monthly benefit amount might also have been offset by the earnings test, although this reduction was somewhat unlikely to occur so late in the year.¹⁶ The annualized rate was used as the benefit

¹⁵ Since disabled-worker benefits are automatically converted to retired-worker benefits at age 65, the presence of a date of disability onset on the record was taken to indicate disability status. In addition, it was expected that the earnings and benefits of the few workers who recover from their disabilities would tend to be anomalous.

¹⁶ Benefits are withheld entirely during the first part of the year until the total amount withheld equals the amount to be offset. By December, therefore, all persons except those whose benefits are to be withheld entirely are receiving them.

Table 26.—Couple's hypothetical and actual earnings replacement rates for selected age combinations, married men and their dependent wives, by year husband's benefit first paid

Type of replacement rate (percent) and age of husband and wife at first benefit payment	Replacement rates, by year husband's benefit first paid			
	1968-70	1971-72	1973-74	1975-76
Based on husband's earnings in last or highest single year				
Hypothetical, all wage and salary workers: ¹				
Husband and wife aged 65	48	59	63	68
Husband 65, wife 62	44	54	57	62
Both 62	38	46	49	53
Actual, RHS married men, wife with dependent's benefit: ²				
All ages ³	35	44	45	(⁴)
Both 65	(⁵)	651	46	(⁴)
Husband 65, wife 62	(⁵)	44	642	(⁴)
Both 62	34	40	(⁵)	(⁴)
Based on husband's earnings in last or highest 3 years				
Hypothetical, all wage and salary workers: ¹				
Husband and wife aged 65	51	61	66	72
Husband 65, wife 62	47	56	61	66
Both 62	40	48	52	56
Actual, RHS married men, wife with dependent's benefit: ²				
All ages ³	38	46	49	(⁴)
Both 65	(⁵)	652	52	(⁴)
Husband 65, wife 62	(⁵)	47	46	(⁴)
Both 62	35	40	(⁵)	(⁴)

¹Retired-worker replacement rates from table 9 plus dependent's benefits based on assumed age at retirement.

²Couple's combined social security benefit as percent of husband's estimated total earnings in highest single year.

³Includes ages not listed below.

⁴Data not available.

⁵Not computed; base fewer than 25.

⁶Based on 50 cases or less; subject to high sampling variability.

⁷Couple's combined social security benefit as percent of husband's estimated total earnings in highest 3 years.

amount that would be expected if the person did not work or earned less than the exempt amount.

Since wives can and often do retire at different times than their husbands, their benefit amounts were adjusted to the reference year of their husbands by the inverse of the legislated increases in benefits between their husbands' reference year and their own. The combination of benefits for husband and wife therefore gives a rate of benefit receipt that would prevail if both were retired and not earning enough to affect their total benefits.

Because annualized monthly benefit amounts as of the end of the year were first calculated a year later, no December 1969 monthly benefit amount was available. For 1968 entitlements the December 1970 monthly benefit amount, after suitable adjustment, was therefore used. For 1974 entitlements the December 1974 monthly benefit amount was used without adjustment.

Second pension benefits were taken from amounts reported in the first survey wave following entitlement to social security benefits. Thus, for entitlements in 1970 or 1971, the 1972 pension amount was used. For 1968 entitlements the 1970 pension amount was used. For

Table 27.—Median actual and hypothetical earnings in highest 3 years and ratio of actual to hypothetical earnings for husbands only and couples, by wife's type of benefit and year husband's benefit first paid

Wife's type of benefit and year husband's benefit first paid	Earnings in highest 3 years			Ratio	
	Actual		Hypothetical ¹	Ratio	
	Husband only	Couple		Husband only	Couple
All couples:					
1968-70	\$5,745	\$6,970	\$5,210	1.10	1.35
1971-72	8,010	8,750	6,045	1.30	1.45
1973-74	8,735	9,690	6,655	1.30	1.45
Wife with retired-worker benefit:					
1968-70	6,860	9,145	5,210	1.30	1.75
1971-72	8,265	10,975	6,045	1.35	1.80
1973-74	8,565	10,465	6,655	1.30	1.55
Wife with dependent's benefit:					
1968-70	5,150	5,435	5,210	1.00	1.05
1971-72	7,555	7,715	6,045	1.25	1.30
1973-74	9,050	9,350	6,655	1.35	1.40

¹Based on assumption that the husband is the only earner and that he earned the median earnings of male wage and salary workers in every year; see table 9.

1974 entitlements the 1974 pension amount was annualized by the presumed month of entitlement.¹⁷ Since few pensions are automatically adjusted for increases in the consumer price index or average wages, the reported benefits were not adjusted back to the reference year.¹⁸

The questionnaire did not distinguish among the various types of public employee pension benefits. A rough test was therefore used to determine whether a public pension recipient was likely to have been working in a job covered by a plan that was combined with social security benefits or by a plan whose benefits were expected to take the place of social security benefits. If the sum of taxable wages equaled or exceeded half the taxable maximum in the 3 years of highest estimated total earnings in the 10 years preceding receipt of benefits, the pension was assumed to be a combined one—mostly for State and local workers. If the sum was less than half the taxable maximum, the pension was assumed to have been received by an employee who was not simultaneously covered under the social security program—mostly for Federal workers.

Public pension recipients in the RHS sample were divided rather evenly between the two groups, as the tabulation that follows shows. Workers assumed to be receiving combined social security and public pension benefits were included with those receiving private pensions in the replacement rate tabulations. Those assumed to be in completely separate public pension sys-

¹⁷The first month of pension receipt was assumed to coincide with the receipt of a social security benefit. For an immediately payable benefit, the month of current entitlement was used. If benefits were initially postponed but later became payable, the number of months of benefits paid in the first payable year was used to estimate how early in the year "retirement" occurred.

¹⁸See Bankers Trust Company, *op. cit.*, and Gayle B. Thompson, *op. cit.*

High 3 earnings as percent of taxable maximum	Married men	Wives
Total number ¹	324	81
Total percent	100	100
With no covered earnings	16	36
1-24	12	7
25-49	5	1
50 or more	66	56
50-74	9	7
75-100	57	49

¹ About 6.0 percent of married men in the sample had public pensions and 1.5 percent of their wives.

tems were excluded from the replacement rate tabulations on the grounds that whatever social security wages they might have had did not accurately reflect their standard of living before retirement.

The denominator. The Social Security Administration's summary earnings record was used to obtain a measure of the highest earnings attained in the 10 years preceding the year of the first benefit payment. Since the objective was to compare actual benefits with actual preretirement earnings and since the summary earnings record includes earnings only up to the annual taxable maximum, a rough estimate was made of total annual earnings, based on the quarter of the year in which the maximum was attained. The estimation procedure was somewhat different from that used in early replacement rate analyses that employed data from the Survey of Newly Entitled Beneficiaries.¹⁹

The new method involved dividing the year into eight segments. A fourth-quarter maximum was assumed to have been attained in the middle of the fourth quarter, seven-eighths of the way through the year. Thus, the estimated total was derived by multiplying the taxable maximum by eight-sevenths. Likewise, a third-quarter maximum was assumed to have been attained five-eighths of the way into the year, a second-quarter maximum three-eighths of the way, and a first-quarter maximum one-eighth of the way. For a year with \$7,800 taxable maximum, these two methods yield the results given in the following tabulation. The new method is much sim-

Method	Estimated total annual earnings, by quarter			
	4th	3d	2d	1st
Old	\$9,100	\$12,350	\$21,060	\$49,610
New	8,915	12,480	20,800	62,400
Ratio of new to old	0.98	1.01	0.99	1.26

pler and yields results that come within 2 percent of those obtained by the method previously used, except

¹⁹ For information on the earlier estimation procedure, see Alan Fox, *op. cit.*, in Research Report No. 47, and Alan Fox, **Earnings Replacement From Social Security Benefits: Newly Entitled Beneficiaries, 1974** (Research and Statistics Note No. 13), Office of Research and Statistics, Social Security Administration, 1976.

Table I.—Wage estimation flags indicating difficulty of estimating total annual earnings in highest 3 years of the 10 before benefits first paid, by second-pension receipt: Number and percentage distribution, by sex and marital status¹

Wage estimation flag ²	Total	No second pension	Private pension	Public pension ³
Total				
Total number with benefits	4,317	2,695	1,322	300
Total percent	100	100	100	100
Usable	90	87	96	92
Flag 0	47	62	19	33
Flag 1	13	9	19	18
Flag 2	21	12	39	28
Flag 3	9	4	19	13
Unusable, flag 4	10	13	4	8
Married men				
Total number with benefits	2,958	1,750	1,010	198
Total percent	100	100	100	100
Usable	87	82	95	89
Flag 0	37	52	12	29
Flag 1	13	10	18	19
Flag 2	25	15	41	28
Flag 3	12	5	23	13
Unusable, flag 4	13	18	5	11
Nonmarried men and women; surviving spouses				
Total number with benefits	1,359	945	312	102
Total percent	100	100	100	100
Usable	97	97	100	97
Flag 0	68	81	38	39
Flag 1	11	7	23	17
Flag 2	14	7	31	27
Flag 3	4	2	8	14
Unusable, flag 4	3	3	0	3

¹ Includes only persons receiving cash retired-worker benefits by December 1974, and reporting on second-pension receipt.

² For description of wage estimation flags, see page 37.

³ Public pensions combined with social security benefits.

with respect to first-quarter maximum cases.²⁰

Because of the considerable margin for error, workers attaining the taxable maximum in the first quarter of one or more years of highest estimated total earnings were excluded from the replacement rate calculations. Unlike the earlier research, this study included in the calculations those workers who attained the taxable maximum in the second quarter. Table I outlines the difficulty of estimating total earnings in the highest 3 years before the first benefit payment. The breakdown is by wage estimation "flags," as follows:

0: Wages below taxable maximum; no estimation of any sort used.

1: Wage and salary worker attaining maximum in fourth quarter.

2: Wage and salary worker attaining maximum in

²⁰ Either method yields an unbiased estimate of total annual earnings. See Alan Fox, *op. cit.*, in Research Report No. 47, Page 286.

Table II.—Problems encountered in computing earnings replacement rates for married couples: Number and percentage distribution, by wife's type of benefit

Problem	All couples	Husband retired worker, wife—		
		Total	Retired worker	Dependent spouse
Total number:				
Married couples	5,502			
Neither entitled to benefits by December 1974	618			
Husband or wife not entitled, or entitled to other benefits ¹	2,863			
Husband retired worker, wife retired worker or dependent spouse	2,021	2,021	888	1,133
Total percent ²		100	100	100
No problems in computing replacement rates		66	65	67
Total earnings could not be estimated		12	9	14
Social security benefits defectively reported		8	12	4
Second pension benefits defectively reported ³		7	8	6
Husband or wife entitled before 1968 or after 1974		4	4	5
Couple had less than 3 years earnings in last 10		3	2	3
Earnings record not located		2	2	1
Replacement rate over 200 percent		1	1	1

¹"Other benefits" include disability or survivor benefits, as well as retired-worker or dependent-spouse benefits not in current payment status as of December 1974.

²Categories add to more than 100 percent as more than one problem in

estimating replacement rates is possible.

³Includes persons receiving second pension not coordinated with the social security system.

third quarter; reported wages above maximum (multiple jobholders).²¹

3: Wage and salary worker attaining maximum in second quarter.

4: Wage and salary worker attaining maximum in first quarter; self-employed or agricultural worker attaining maximum²²; and wage and salary worker attaining maximum with irregular quarters-of-coverage pattern in the year.

Of the married men receiving benefits, 13 percent had a flag-4 year among their highest 3 years and were therefore excluded from the replacement rate calculations. Such unusable cases are found most often among persons with no second pensions or with public employee pensions. Many of these persons are self-employed persons or others who had irregular earnings during the year; few persons attain the taxable maximum in the first quarter of the year. Few workers with private pensions had unusable earnings.

After total earnings for all years were estimated for both husband and wife, the couple's combined total earnings were sorted to obtain the highest 3 years of earnings in the 10 years preceding the year of the husband's first benefit payment (the "reference year"). Couples without 3 years of earnings in the preceding 10 years were excluded from the replacement rate calculations. The average estimated total earnings in those 3 years were used as the denominator of the replacement rate fraction.

²¹The method for estimating total earnings for multiple jobholders is outlined in Alan Fox, *ibid.*, page 287.

²²Since the summary earnings record shows only the total number of quarters of coverage earned by self-employed and agricultural workers, no quarters-of-coverage pattern exists by which to estimate the total earnings of such persons.

A summary of the problems encountered in the computation of replacement rates for married couples is shown in table II. Replacement rates could be calculated for two-thirds of the couples in which the wife received retired-worker or dependent benefits.

Weighting of Replacement Rates

Because the age of the RHS cohort is rising, the age composition of the newly retired group changes from year to year. In 1968-70, for example, in about 50 percent of the newly entitled couples, both members were aged 62; in 1973-74, only 10 percent of the couples were that young. For this reason, it might seem unreliable to use the experience of the RHS couples who first receive benefits in a given year to approximate the results that would have been obtainable from a national cross-sectional sample of new retirees in that year. A rough set of weights can be used to standardize the age-specific replacement rates. These weights are derived from table 18, which shows the distribution of age at first benefit receipt for couples with both husband and wife receiving benefits. The data approximate the age at first benefit receipt of the entire RHS cohort, on the assumption that the age composition remains stable over the years covered. These weights are:

Age	Percent
Total	100
Husband and wife both aged 65	11
Husband aged 65, wife aged 62	22
Husband and wife both aged 62	24
Other age combinations	42

This distribution can be used to weight the age-specific median replacement rates for each year to approximate

Table III.—Selected median earnings replacement rates using standardized and year-specific age distribution weights, by year husband's benefit first paid

Year benefit first paid	Replacement rate	
	Standardized weights	Year-specific weights
Husband's social security benefit—		
As percent of husband's estimated total earnings in highest single year:		
1968-70	24	24
1971-72	29	29
1973-74	31	32
As percent of couple's combined estimated total earnings in highest 3 years:		
1968-70	22	22
1971-72	27	28
1973-74	29	31
Couple's social security and second pension benefits as percent of couple's combined estimated total earnings in highest 3 years:		
1968-70	47	46
1971-72	57	57
1973-74	55	57

an overall median replacement rate. Table III shows the results of this standardized weighting for selected replacement rates and compares them with results obtained through the use of weights specific to each year's cohort of retirees.

In no case did the standardized weights produce results varying by more than two percentage points from results derived directly from the tabulations for the cohort retiring in each year. Because the results are so similar, the data presented here were not adjusted by the standardized weights. Furthermore, the use of these weights would have necessitated the averaging of some extremely small cells (for example, the husband and wife were both aged 65 in only five of the couples reporting all retirement benefits in 1968-70). Evidently the heavy weight associated with couples of "other age combinations" reduced the variation caused by the changing age composition.

Comparisons with Previously Calculated Rates

By means of methods similar to those employed here, the Survey of Newly Entitled Beneficiaries (SNEB) was used to compute earnings replacement rates for persons claiming benefits in January-June 1970. One measure—the respondent's social security benefits as a percentage of his estimated total earnings in the highest 3 years during the period 1960-69—was essentially the same as that presented here in table 24.

The SNEB analysis was repeated with a July-December 1974 sample of new beneficiaries. The later sample included only the internal record data; no questionnaire was administered. The analysis was therefore limited to social security replacement rates for all men, whether they were married or not. Private pension receipt was not indicated.

Table IV.—Social security earnings replacement rate in 1970 and 1974: Comparison of Survey of Newly Entitled Beneficiaries (SNEB) and Retirement History Study (RHS) samples: Number and percentage distribution of men respondents, by marital status

Respondent's replacement rate (percent)	All men		Married men	
	SNEB	RHS	SNEB	RHS
1970 beneficiaries				
Total number ¹	218,000	329	173,000	282
Total percent	100	100	100	100
1-19	13	19	15	20
20-39	67	68	69	68
40-59	12	10	11	10
60-79	4	3	3	2
80 and above	4	1	3	0
Median rate	29.1	27.2	28.2	26.7
1974 beneficiaries				
Total number ¹	200,000	369	(²)	331
Total percent	100	100	.....	100
1-19	1	7	.....	7
20-39	64	60	.....	60
40-59	24	31	.....	31
60-79	5	1	.....	2
80 and above	6	1	.....	0
Median rate	34.7	35.4	.....	35.3

¹SNEB—weighted to national totals. RHS—unweighted sample cases.

²Data not available.

Table IV presents some previously unpublished results from the two SNEB samples. The SNEB distributions combine data on men whose earnings had attained the taxable maximum in at least 1 of the 3 highest years with data on men whose earnings were consistently below the maximum. These replacement rates are compared with RHS rates for similar groups.

In all cases the RHS medians are within two percentage points of the SNEB medians, and, except for the 1974 retirees, the chi-square tests of the difference between distributions are not significant. These findings indicate similar results despite differences between the two samples and in the methods used to calculate replacement rates.

Replacement rates of private pensions have also been computed by dividing reported pension amounts by last-job earnings reported in the SNEB questionnaire.²³ The results were practically identical with the results obtained by using estimated total earnings from the earnings records.²⁴

²³Walter W. Kolodrubetz, "Earnings Replacement From Private Pensions," in *Reaching Retirement Age: Findings From a Survey of Newly Entitled Workers, 1968-70* (Research Report No. 47), Office of Research and Statistics, Social Security Administration, 1976.

²⁴Alan Fox, *op. cit.*, in Research Report No. 47.