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# Federal Civil Service Adult Survivor Annuitants and Social Security, December 1975

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This article reviews the recent experience of adult survivor annuitants under the Federal civil service retirement program. Data are presented for such persons in terms of their status in December 1975 as primary beneficiaries, secondary beneficiaries, or nonbeneficiaries under the Old-Age, Survivors, and Disability Insurance (OASDI) program. Analysis reveals that 63 percent of the survivor annuitants were dual beneficiaries—that is, they received an OASDI benefit as well as an annuity payment. About half the remaining annuitants were permanently insured under the OASDI program, so it can be anticipated that at least four-fifths of the Federal civil service survivor annuitants ultimately will also receive an OASDI benefit. The survivor annuity replaced 27 percent of a deceased spouse's Federal civil service salary at the median. The median replacement rate of annuity plus OASDI benefit was 48 percent of civil service salary.

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The issue of universal coverage under the Old-Age, Survivors, and Disability Insurance (OASDI) program has become particularly prominent since the mid-1970's. One of the two largest groups of workers presently not covered under OASDI is the Federal civilian workforce, although individual workers often obtain coverage through employment outside of their Federal careers. Examination of the experience of Federal civil service annuitants is one relevant way of informing policymakers and legislators on the universal coverage issue.

The major purpose of this article is to add to the picture already drawn of civil service retired worker annuitants by presenting a view of survivor annuitants—that is, those persons whose annuity derives from the death of a Federal worker or a Federal annuitant. By examining annuitant characteristics such as sex, age, annuity amount, salary of the deceased, starting date of the annuity, and employment status of the deceased when he or she died, the analysis helps define who would be affected if the Federal civil service retirement system and the Social Security program were coordinated.

The issue of gaps and overlaps produced by the current lack of coordination between the two systems is also examined. This review shows, for example, the

extent to which civil service survivor annuitants have employment and benefits under the OASDI program. Further, the data on wage-replacement rates throw light on unintended benefit subsidies that may occur because of joint receipt of civil service annuities and OASDI benefits.

## Study Population

This article reviews the recent experience of adult survivor annuitants—those persons who receive annuities as widows or widowers of Federal civil service employees or annuitants.<sup>1</sup> The analysis is based on a 10-percent sample of the 310,310 widows and widowers on the civil service rolls as survivor annuitants on December 31, 1975.<sup>2</sup> Information on earnings and benefits under the OASDI program was obtained from the files of the Social Security Administration.

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<sup>1</sup> In December 1975, about 18 percent of all civil service survivor annuitants were children, whose characteristics are not examined in this article.

<sup>2</sup> Two previous articles based on this study have examined the characteristics of retired-worker annuitants—those persons with annuities based on their own Federal employment. See Daniel N. Price and Andrea Novotny, "Federal Civil-Service Annuitants and Social Security, December 1975," *Social Security Bulletin*, November 1977, pages 3-18, and Daniel N. Price, "Experience of Federal Annuitants Under OASDI: Age and Sex," *Social Security Bulletin*, July 1979, pages 33-37.

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Civil service annuities are payable to surviving spouses under two sets of circumstances:

(1) An annuity is automatically payable to the widow or widower of an employee who had at least 18 months of civilian service and, at the time of death, held a position subject to the retirement system. The surviving spouse must have been married to the deceased employee for at least 1 year or must be the parent of a child born of the marriage. The survivor annuity amounts to 55 percent of the annuity that the deceased employee earned up to the time of death. A minimum annuity is guaranteed: It amounts to the lesser of 22 percent of the employee's average salary during his or her high-3 consecutive years or 55 percent of the annuity calculated after increasing the employee's length of service by the period between the date of death and the date he or she would have reached age 60.

(2) An annuity is payable to the surviving widow or widower of a retired Federal employee if, at the time of retirement, the employee accepted a reduced annuity in order to provide a survivor benefit. The survivor must have been married to the employee at the time of his or her death. The size of the annuity is 55 percent of an amount—up to 100 percent of the retiree's unreduced annuity—designated by the retiree.

Regardless of the amount computed by formula, the minimum survivor annuity must at least equal the minimum primary insurance amount (PIA) under the OASDI program. Survivor annuities are payable until the spouse dies or until he or she remarries before reaching the age of 60.

The major classification of survivor annuitants used here is according to whether they were receiving an OASDI benefit as well as their annuity, and, if so, whether the OASDI benefit was primary (based on their own earnings record) or secondary (based on the earnings record of the deceased spouse, the husband in most cases). As table 1 shows, almost 169,000 of the 268,000 civil service survivor annuitants for whom OASDI data were available had benefits in force under the Social Security program in December 1975.<sup>3</sup> Among those with OASDI benefits, 85,000, or a little more than half, had a primary benefit, in most cases as a retired worker. The other 80,000 received secondary benefits.

The persons included in this study received the full benefits to which they were entitled under both the civil service and OASDI programs. It is interesting to note that another group of persons with entitlement under both programs are soon to have their Social Security benefits reduced by the amount of their civil service annuity. Public Law 95-216, enacted in 1977, provides that, effective in most instances after December 1982,

<sup>3</sup> Persons with benefits "in force" include, in addition to those with benefits in current-payment status, those from whom benefits were being withheld because they had returned to work or for other technical or administrative reasons.

OASDI spouse (and survivor spouse) benefits will be subject to reduction by the amount of any retired-worker annuity based on noncovered government employment. The experience of Federal civil service survivor annuitants under the Social Security program, therefore, is relevant to future consideration of the relationship between the two programs.

In examining the characteristics of the present study group, the differences in the structure of survivor benefits under the civil service system and the Social Security program should be observed. Survivor beneficiaries under the Social Security program receive higher benefits in relation to the deceased worker's benefit than do survivors under the Federal civil service retirement program. Under the Social Security program, aged surviving spouses receive 71.5-100 percent of the worker's PIA and widowed parents receive 75 percent. Surviving spouses of Federal civil service workers receive a maximum of 55 percent of the worker's annuity. (A small number receive no annuity at all because their spouses, at retirement, did not elect to provide survivor benefits.) Another difference in the two groups is that survivor annuities are payable under the Federal civil service system regardless of age, while under the OASDI program, widows must be at least 60 years old to receive benefits, unless they are disabled or entitled as the mother of dependent children.

## Characteristics of Survivor Annuitants

Ninety-eight percent of the 310,310 Federal civil service survivor annuitants included in the study were widows. Therefore, the data were not analyzed separately by sex, and this examination of the characteristics of "widows" should be understood to include a small number of widowers as well.<sup>4</sup> It is noteworthy that almost all the survivor annuitants were women, considering that, unlike the Social Security program at that time, the Federal civil service retirement program contained no dependency test for survivor annuities. The predominance of women among civil service survivor annuitants is explained by at least three factors:

- (1) A high proportion of men in Federal civil service employment (in 1975, 69 percent of the workers were men).
- (2) A higher mortality rate for men than for women (in 1975, the rate was 10.1 per 1,000 men, compared with 7.7 per 1,000 women).
- (3) A higher proportion of married men than married women retirees who designate the survivor annuity option (as of 1980, 96 percent of the men, compared with 55 percent of the women, elected this option).

<sup>4</sup> Widowers may become a more significant part of the total at some time in the future. Widowers represented about 1 percent of the adult survivors added to the annuitant rolls in 1960, but since then there has been a gradual increase in the proportion of widowers. By fiscal year 1977, widowers made up more than 5 percent of the annual increment.

## Age

Seven out of every 10 survivor annuitants on the rolls on December 31, 1975, were aged 62 or older, and 3 in 10 were at least age 75. However, the median age of the civil service survivor annuitants—69 years—was 4 years below that for all widows and widowers, including the disabled, receiving benefits under the Social Security program in December 1975.

Notable but expected differences in age are evident in table 1 among civil service survivor annuitants according to their beneficiary status under the Social Security program. Those who were also entitled to primary Social Security benefits, whether for retirement or disability, were older than other survivor annuitants, largely reflecting the fact that the minimum age for receiving a Social Security retirement benefit is 62 years. The 53,360 annuitants under age 62 who were not receiving

**Table 1.**—Selected annuitant characteristics of civil service survivor annuitants: Number and percentage distribution, by OASDI beneficiary status, December 31, 1975

Characteristic	Total <sup>1</sup>	OASDI beneficiary status			
		Benefit in force <sup>2</sup>			Non-beneficiary
		Total	Primary <sup>3</sup>	Secondary <sup>3</sup>	
Total number . . . . .	310,310	168,930	85,230	80,410	98,870
Total percent . . . . .	100.0	100.0	100.0	100.0	100.0
<b>Age</b>					
Under 55 . . . . .	14.2	8.0	.8	15.9	24.1
55-59 . . . . .	10.3	2.5	1.0	4.3	22.1
60-61 . . . . .	4.9	3.0	.5	5.7	7.7
62-64 . . . . .	8.3	8.7	7.9	9.9	7.1
65-69 . . . . .	15.3	20.4	25.4	15.9	6.8
70-74 . . . . .	16.0	20.9	26.4	15.9	8.5
75 and over . . . . .	30.9	36.5	38.0	32.4	23.5
Median age . . . . .	<b>69</b>	<b>71</b>	<b>72</b>	<b>69</b>	<b>60</b>
<b>Monthly civil service survivor annuity</b>					
Less than \$100 . . . . .	11.0	14.6	13.2	16.5	4.5
\$100-\$149 . . . . .	20.8	21.1	20.8	20.8	18.4
\$150-\$199 . . . . .	14.5	15.4	15.5	15.4	12.8
\$200-\$249 . . . . .	15.1	15.2	14.7	15.9	15.0
\$250-\$299 . . . . .	10.6	9.9	10.2	9.7	11.7
\$300-\$399 . . . . .	14.4	13.1	14.4	11.7	17.4
\$400-\$499 . . . . .	6.7	5.6	6.0	5.2	8.9
\$500-\$599 . . . . .	3.2	2.4	2.5	2.4	4.7
\$600 or more . . . . .	3.9	2.6	2.7	2.4	6.6
Median annuity . . . . .	<b>\$212</b>	<b>\$196</b>	<b>\$202</b>	<b>\$191</b>	<b>\$247</b>
<b>Average annual salary of deceased <sup>4</sup></b>					
Less than \$4,000 . . . . .	19.2	21.6	23.3	18.9	13.8
\$4,000-\$5,999 . . . . .	32.7	35.7	37.8	33.6	26.5
\$6,000-\$7,999 . . . . .	20.5	20.0	19.1	21.5	20.6
\$8,000-\$9,999 . . . . .	11.0	9.4	7.9	11.3	14.3
\$10,000-\$11,999 . . . . .	6.2	4.9	3.8	6.3	9.4
\$12,000 or more . . . . .	8.4	6.1	4.2	8.4	13.7
Not available . . . . .	1.9	2.2	4.0	.1	1.7
Median salary . . . . .	<b>\$5,825</b>	<b>\$5,529</b>	<b>\$5,306</b>	<b>\$5,848</b>	<b>\$6,859</b>
<b>Starting year of survivor annuity</b>					
Before 1956 . . . . .	.7	.5	.7	.3	.8
1956-60 . . . . .	11.7	12.7	16.8	8.0	11.1
1961-65 . . . . .	17.0	16.8	18.7	15.1	16.9
1966-69 . . . . .	20.2	17.6	12.1	23.3	13.3
1970-71 . . . . .	13.0	13.2	11.3	15.3	13.9
1972-73 . . . . .	15.2	15.7	13.7	18.0	18.1
1974-75 . . . . .	14.0	14.2	13.0	15.8	18.5
Not available . . . . .	8.1	9.3	13.8	4.1	7.2
Median year . . . . .	<b>1969</b>	<b>1969</b>	<b>1968</b>	<b>1970</b>	<b>1970</b>
<b>Employment status of deceased at death</b>					
Employee . . . . .	35.0	29.3	29.2	29.9	42.9
Annuitant . . . . .	65.0	70.7	70.8	70.1	57.1

<sup>1</sup> Includes 42,510 annuitants for whom Social Security benefit status was not available.

<sup>2</sup> Includes 7,790 annuitants with OASDI cash benefits withheld because of earnings or for other reasons.

<sup>3</sup> Excludes annuitants who were special age-72 or transitionally insured beneficiaries included in total.

<sup>4</sup> For civil service retirement purposes, based on earnings in 3 highest consecutive years (before October 21, 1969, 5 highest years).

Social Security benefits consisted largely (79 percent) of individuals eligible for benefits but not old enough to receive them.

### Annuity Amounts

The civil service survivor annuities being paid as of December 1975 were fairly small, the median monthly amount being \$212 overall. The median monthly survivor annuity for those not receiving Social Security benefits—\$247—was well above the medians for the other groups, and most likely reflects the influence of two factors:

(1) The nonbeneficiary annuitants were younger than those in the other groups. This finding can be associated with the deceased employees having worked more recently, and thus at higher wage levels than those of the workers who died earlier. An inspection of the distributions of the deceased Government workers' average annual salaries as computed for retirement annuity purposes shows that the median pay of those in the nonbeneficiary survivor group was \$6,859, compared with \$5,848 or less for those in each of the other groups.

(2) The husbands of these annuitants had more years of Federal employment on the average than did the husbands of the others. This can be inferred from the fact that many of the husbands of the nonbeneficiary annuitants had not had any or enough earnings under the Social Security program to become insured.

Though considerable differences exist in the two types of programs, it is interesting to compare the \$212 level of monthly survivor annuities under the Federal civil service retirement program with corresponding survivor benefit amounts under the Social Security program. The PIA<sup>5</sup> for all widow and widower beneficiaries under the OASDI program at the end of 1975 was \$232.<sup>6</sup> Because the benefit amount is a fraction of the PIA for some categories of beneficiaries and actuarial reductions are applied when benefits are received before specified ages, however, the median monthly benefit amount actually received under the OASDI program by widows and widowers was only \$190.

In two-thirds of the cases surveyed, the survivor annuitant's husband had died while he himself was a Federal retiree annuitant. The husbands of the remaining one-third had died while still employed in the Federal Government. These proportions differed according to whether or not the survivor annuitant was also an OASDI beneficiary. Almost 71 percent of the civil serv-

<sup>5</sup> The primary insurance amount, or PIA, is the monthly amount that would be payable to a retired worker who begins to receive benefits at age 65.

<sup>6</sup> The OASDI beneficiaries being compared here with civil service annuitants include all aged widows and widowed mothers with dependent children—weighted to include the same proportions of each type of beneficiary as was reported among annuitants who were also OASDI beneficiaries.

ice survivor annuitants who also received Social Security benefits became survivor annuitants after the death of a retired husband. In contrast, only 57 percent of the civil service survivor annuitants not receiving OASDI benefits became entitled under these circumstances, a proportion consistent with the lower age shown in table 1 for annuitants who were not OASDI beneficiaries. As table 2 shows, the amount of the survivor annuity paid was somewhat higher if the deceased Federal worker had been retired when he died.

### Experience of Survivor Annuitants Under OASDI

Among the 267,800 civil service survivor annuitants in table 3 whose experience under the Social Security program was available, 168,930, or 63 percent, were receiving benefits under both programs. The remaining 98,870, or 37 percent of the total, were not OASDI beneficiaries. To throw light on some of their other characteristics, the members of this latter group are classified in the table according to whether they were under age 62 or older. The following figures show that, in December 1975, the largest proportions of dual beneficiaries were receiving their Social Security retirement benefits on the basis of their own earnings (50 percent) or as aged-widow beneficiaries (37 percent).

Type of OASDI benefit (in force)	Number of annuitants	Percentage distribution
Total .....	168,930	100.0
Primary:		
Retirement (old age) .....	85,030	50.3
Disability .....	2,820	1.7
Secondary:		
Aged widow .....	62,580	37.0
Widowed mother .....	15,690	9.3
Disabled widow .....	1,910	1.1
Aged wife <sup>1</sup> .....	900	.5

<sup>1</sup> Includes aged-parent beneficiaries.

### Covered Employment

Four-fifths of the civil service survivor annuitants had some covered earnings under the Social Security program. Virtually all dual beneficiaries receiving primary benefits had covered employment, while, at the other end of the range, among survivor annuitants aged 62 or over who were not entitled to Social Security benefits, 61 percent had no covered earnings under the program. Within each group shown in table 3, most survivor annuitants with some covered employment under OASDI first worked under the program before their civil service survivor annuity began. When persons whose survivor annuity starting date was unknown and those with no covered earnings are excluded, 91 percent of the nonbeneficiaries over age 62 worked in cov-

ered employment before their civil service annuity began.

By the time the survivors began to receive their civil service annuities, about 3 out of 10 had completed their Social Security work history (through 1975). Forty-five percent of the dual beneficiaries with primary Social Security benefits experienced their last covered employment under OASDI before their civil service survivor annuity began. As might be expected, the younger survivor annuitants (those under age 62) who did not receive Social Security benefits were more likely than their older counterparts to have had some work in covered employment after the beginning date of their civil service survivor annuity (56 percent, compared with 15 percent). Sixty-one percent of the older civil service survivor annuitants not receiving Social Security benefits did not have any covered employment under the program, and 19 percent did not have OASDI-covered employment since their civil service survivor annuity began (table 3). It is unlikely that many of these annuitants will ever be a primary Social Security beneficiary.

### Insured Status

Despite the foregoing, about half the civil service survivor annuitants not receiving Social Security benefits

**Table 2.—Monthly annuity of civil service survivor annuitants: Number and percentage distribution, by employment status of deceased, December 31, 1975**

Monthly civil service survivor annuity	Employment status of deceased at death		
	Total	Employee	Annuitant
Total number . . . . .	310,310	108,730	201,580
Total percent . . . . .	100.0	100.0	100.0
Less than \$100 . . . . .	11.0	11.3	10.8
\$100-\$149 . . . . .	20.8	22.2	20.1
\$150-\$199 . . . . .	14.5	15.3	14.0
\$200-\$249 . . . . .	15.1	15.0	15.2
\$250-\$299 . . . . .	10.6	10.7	10.5
\$300-\$399 . . . . .	14.4	13.0	15.1
\$400-\$499 . . . . .	6.7	5.8	7.1
\$500-\$599 . . . . .	3.2	3.0	3.3
\$600 or more . . . . .	3.9	3.7	3.9
Median . . . . .	\$212	\$204	\$216

were permanently insured—that is, they had enough covered employment to receive Social Security benefits in the future. Almost 15 percent of the nonbeneficiaries aged 62 and over were permanently insured. Some had not filed for Social Security benefits by December 1975 because of earnings exceeding the retirement test. Others aged 62-64 may have preferred to delay filing

**Table 3.—Selected OASDI characteristics of civil service survivor annuitants: Number and percentage distribution, by OASDI beneficiary status, December 31, 1975**

Characteristic	Total <sup>1</sup>	OASDI beneficiary status					
		Benefit in force <sup>2</sup>			Nonbeneficiary		
		Total	Primary <sup>3</sup>	Secondary <sup>3</sup>	Total	Under age 62	Aged 62 or older
Total number . . . . .	267,800	168,930	85,230	80,410	98,870	53,360	45,510
Total percent . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Covered employment under OASDI</b>							
First year was—							
Before annuity began . . . . .	71.7	76.1	82.8	71.2	64.1	90.9	32.6
During year annuity began or after annuity began . . . . .	3.1	3.0	3.4	2.6	3.3	3.6	3.1
Annuity date not available . . . . .	6.0	8.2	13.8	2.4	2.2	1.3	3.4
No covered earnings . . . . .	19.2	12.7	<sup>4</sup> 1.1	23.8	30.3	4.2	60.9
Last year was—							
Before annuity began . . . . .	31.5	35.5	44.9	26.3	24.7	29.6	19.0
During year annuity began . . . . .	4.3	3.8	4.2	3.6	5.2	8.5	1.3
After annuity began . . . . .	39.0	39.8	37.1	43.9	37.6	56.4	15.3
Annuity date not available . . . . .	6.0	8.2	13.8	2.4	2.2	1.3	3.4
No covered earnings . . . . .	19.2	12.7	<sup>4</sup> 1.1	23.8	30.3	4.2	60.9
<b>Insured status under OASDI</b>							
OASDI earnings, total . . . . .	80.8	87.3	99.9	76.2	69.7	95.7	39.0
Not permanently insured . . . . .	22.7	24.2	<sup>4</sup> 4.0	45.4	20.0	16.3	24.3
Permanently insured . . . . .	58.1	63.1	95.9	30.8	49.7	79.4	14.7
No benefits—excess earnings . . . . .	1.5	1.3	1.1	1.6	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
No covered earnings . . . . .	19.2	12.7	<sup>4</sup> 1.1	23.8	30.3	4.2	60.9

<sup>1</sup> Excludes 42,510 annuitants for whom Social Security benefit status was not available.

<sup>2</sup> Includes 7,790 annuitants with OASDI cash benefits being withheld because of earnings or for other reasons.

<sup>3</sup> Excludes annuitants who were special age-72 or transitionally insured beneficiaries included in total.

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<sup>4</sup> Consists of beneficiaries entitled to benefits through transfer of military credits or railroad retirement credits and/or disabled-worker beneficiaries who were fully but not permanently insured.

<sup>5</sup> Not applicable.

until they reached age 65 in order to secure full (nonactuarially reduced) benefits. Most of these persons presumably will draw primary Social Security benefits at some future time. Almost four-fifths (79 percent) of those under age 62 were also permanently insured. Most of them are likely to become primary Social Security beneficiaries after they attain age 62.

Based on insured status, about half the civil service survivor annuitants in this study who were not Social Security beneficiaries might be expected to become primary beneficiaries in the future. Altogether, counting those on the benefit rolls in December 1975 plus those not on the rolls but permanently insured, it is reasonable to assume that about four-fifths of the civil service survivor annuitants will be dual beneficiaries at some time. In addition, of course, some annuitants who were neither Social Security beneficiaries nor permanently insured for benefits in December 1975 will subsequently become eligible for secondary Social Security benefits, such as the widows benefit available at age 60.

It should also be noted that about 25,000 survivor annuitants not receiving Social Security benefits, or 9 percent of all survivor annuitants for whom information on Social Security experience was available, paid premiums for and so were entitled to coverage under the Medicare program. About three-fourths of these annuitants were entitled to Hospital Insurance and Supplementary Medical Insurance (SMI) benefits (Parts A and B of Medicare), and about one-fourth were covered by SMI only.

Other types of Social Security benefits sometimes available to civil service survivor families, but not included in this study, are student benefits and payments to disabled-child beneficiaries. Often such beneficiaries are considered to be in separate households with respect to financial arrangements and are so treated here. Also, a few survivor annuitants may receive Social Security benefits not based on their own earnings or those of their deceased husband but on the earnings of a former husband. Further, some civil service survivor annuitants may also receive Supplemental Security Income payments, a source of Social Security protection not in the scope of the present investigation.

### **Timing of Benefit Receipt**

For a better understanding of the interaction of benefits under the OASDI and Federal civil service systems, it may be helpful to examine the timing of benefit receipt. Table 4 shows the distribution of dual beneficiaries who became survivor annuitants in specific years by the period in which they first became entitled to OASDI benefits. Taking all dual beneficiaries together, it can be seen that there is a tendency for a widow to begin receiving her survivor annuity and her Social Security benefit within a few years of each other. In each of the 2-year intervals shown from 1966-67 to 1974-75,

at least 30 percent of the dual beneficiaries began receiving both types of benefits during the same 2-year period. The especially high proportion of 42 percent for those who began receiving both civil service survivor annuities and OASDI benefits in the period 1961-65 is in part just an artifact of the broader (4-year) interval shown.

Differing patterns are revealed when survivor annuitants with primary Social Security benefits are compared with those who had secondary Social Security benefits. Dual beneficiaries with secondary OASDI benefits were much more likely to have begun receiving those benefits at the time their civil service survivor annuity began than were dual beneficiaries with primary Social Security benefits. This pattern is true for each period shown in table 4. The most striking example, disregarding the pre-1966 data, is the 1974-75 period, during which 50 percent of the dual beneficiaries with secondary OASDI benefits began receiving both types of benefits. By contrast, only 13 percent of the annuitants with primary Social Security benefits began receiving both types of benefits during that interval. For each period shown, at least 40 percent of the dual beneficiaries with secondary Social Security benefits began to receive both benefits in that interval.

Since the receipt of both a Federal civil service survivor annuity and an OASDI secondary benefit would ordinarily be expected to have been a consequence of the death of the beneficiary's husband, it might be thought that table 4 would show that most dual beneficiaries began receiving both benefits within a short period of each other. It should be kept in mind, however, that besides the delaying effect of the provisions requiring attainment of a specified age for certain categories of OASDI survivor benefits, some annuitants started receiving dependents' benefits under OASDI while their husbands were still alive. Further, a small number of annuitants were receiving OASDI secondary benefits based on the earnings record of someone other than the deceased civil servant.

## **OASDI Benefit Amounts and Wage-Replacement Rates**

### **OASDI Benefits**

Distributions of dual beneficiaries by their PIA and family benefit amount under OASDI are given in table 5. Very few (only 2.1 percent) dual beneficiaries had special age-72 or transitionally insured benefits (a PIA of \$69.60) under OASDI, or, at the other end of the range, a PIA of at least \$300 (3.2 percent). The median PIA of all dual beneficiaries, \$148, was much lower than that for the general population of Social Security beneficiaries, \$221. The following tabulation shows the median PIA's for civil service survivor annuitants who were dual beneficiaries and the corresponding medians

**Table 4.—Starting year of OASDI benefits for civil service survivor annuitants: Number and percentage distribution of dual beneficiaries,<sup>1</sup> by starting year of annuity, December 31, 1975**

Starting year of OASDI benefit	Total <sup>2</sup>	Starting year of annuity						
		Before 1960	1961-65	1966-67	1968-69	1970-71	1972-73	1974-75
<b>All dual beneficiaries</b>								
Total number.....	168,930	22,390	28,460	12,090	17,640	22,260	26,440	23,920
Total percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1960 and earlier.....	18.1	34.7	15.9	19.3	12.6	14.0	11.8	9.3
1961-65.....	26.7	26.9	41.9	24.7	23.4	20.5	21.2	18.6
1966-67.....	11.0	10.1	9.4	32.5	11.2	9.3	7.1	8.1
1968-69.....	11.1	7.8	9.0	6.6	30.2	10.0	9.3	9.6
1970-71.....	11.4	8.0	7.9	5.5	8.3	30.8	10.5	10.2
1972-73.....	12.0	7.4	8.8	6.6	8.3	8.5	32.8	11.4
1974-75.....	9.7	5.2	7.1	4.7	6.0	7.0	7.2	32.6
<b>Primary beneficiaries</b>								
Total number.....	87,850	15,580	16,210	4,040	6,770	9,890	11,900	11,130
Total percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1960 and earlier.....	19.5	28.1	19.4	18.3	12.9	16.5	14.0	11.0
1961-65.....	26.3	25.9	25.7	26.2	26.3	24.7	25.6	21.2
1966-67.....	12.3	12.3	11.4	18.1	15.2	13.1	9.2	10.2
1968-69.....	11.4	9.1	10.8	7.2	13.6	14.2	12.7	13.8
1970-71.....	10.9	9.6	10.1	9.7	11.2	11.0	15.2	13.8
1972-73.....	11.3	8.5	12.2	12.4	11.5	11.6	15.1	17.3
1974-75.....	8.2	6.6	10.5	8.2	9.2	8.9	8.2	12.7
<b>Secondary beneficiaries</b>								
Total number.....	81,080	6,810	12,250	8,050	10,870	12,370	14,540	12,790
Total percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1960 and earlier.....	16.5	49.6	11.3	19.8	12.4	12.0	10.1	7.9
1961-65.....	27.1	29.2	63.4	24.0	21.6	17.1	17.6	16.3
1966-67.....	9.7	5.0	6.8	39.8	8.7	6.2	5.4	6.3
1968-69.....	10.7	4.8	6.6	6.3	40.5	6.6	6.5	5.9
1970-71.....	11.9	4.4	4.9	3.5	6.5	46.6	6.7	7.1
1972-73.....	12.7	5.0	4.2	3.7	6.3	6.0	47.2	6.4
1974-75.....	1.4	1.9	2.6	3.0	4.0	5.5	6.5	50.0

<sup>1</sup> In receipt of civil service survivor annuity and with OASDI benefit in force.

<sup>2</sup> Includes 15,730 dual beneficiaries for whom annuity starting date is not available.

**Table 5.—Primary insurance amount and family benefit amount for civil service survivor annuitants: Number and percentage distribution of dual beneficiaries,<sup>1</sup> by type of OASDI benefit, December 31, 1975**

Monthly amount	Type of OASDI benefit							
	Primary insurance amount			Family benefit amount <sup>2</sup>				
	Total	Primary	Secondary	Total	Primary	Secondary		
Total						Widowed mother	Aged widow <sup>3</sup>	
Total number.....	168,930	87,850	81,080	168,930	87,850	81,080	15,690	65,390
Total percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$101.40.....	4 2.1	4 3.2	4 9	15.2	14.9	15.6	7.1	17.6
\$101.40.....	4 26.0	4 24.7	4 27.5	13.6	9.6	17.9	.8	22.0
\$101.50-\$129.90.....	12.0	10.3	13.8	12.9	11.4	14.5	5.8	16.6
\$130.00-\$159.90 <sup>5</sup> .....	15.9	13.8	18.2	10.6	10.8	10.3	5.5	11.5
\$160.00 <sup>6</sup> -\$189.90.....	13.8	13.7	14.0	17.0	18.0	16.0	25.8	13.6
\$190.00-\$249.90.....	18.6	19.0	18.2	18.2	20.9	15.2	21.8	13.6
\$250.00-\$299.90.....	8.4	10.3	6.3	7.4	9.4	5.3	12.2	3.7
\$300.00 or more.....	3.2	5.0	1.1	5.0	4.9	5.2	21.0	1.4
Median.....	<b>\$148</b>	<b>\$155</b>	<b>\$142</b>	<b>\$147</b>	<b>\$158</b>	<b>\$134</b>	<b>\$203</b>	<b>\$119</b>

<sup>1</sup> In receipt of civil service survivor annuity and with OASDI benefit in force.

<sup>2</sup> Benefit of survivor annuitant plus benefit of any other family members based on the same earnings record pertaining to the annuitant's OASDI benefit, except that benefits for disabled children and students are excluded.

<sup>3</sup> Includes 1,910 disabled widows and 900 beneficiaries in other categories.

<sup>4</sup> Minimum primary insurance amount as of December 1975: \$69.60 for special age-72 and transitionally insured beneficiaries; \$101.40 for regularly insured beneficiaries.

<sup>5</sup> Family benefit interval: \$130.00-\$152.00.

<sup>6</sup> Family benefit interval: \$152.10-\$189.90.

for similar categories of all OASDI beneficiaries at the end of 1975.<sup>7</sup>

Type of beneficiary	Civil service survivor dual beneficiaries	All OASDI beneficiaries
Total . . . . .	\$148	\$221
Primary beneficiaries . . . . .	155	212
Secondary beneficiaries . . . . .	142	232

The lower PIA's for civil service survivor annuitants probably reflects the combination of two work-career patterns. Survivor annuitants whose OASDI benefits were based on the earnings of a deceased husband—and who therefore were “secondary” beneficiaries—undoubtedly had lower PIA's because the husband's work career was partly under civil service and partly under Social Security, a situation that produces generally lower average monthly earnings for benefit computation purposes. Survivor annuitants whose OASDI benefits were based on their own earnings—“primary” beneficiaries—were likely to have had lower earnings and hence lower PIA's than the primary beneficiaries among the general OASDI beneficiary population because many of the annuitants had the interrupted employment and low-earnings patterns typical among married women of their generation. As could be expected, the \$155 median PIA for dual beneficiaries with primary benefits is much closer to the corresponding figure (\$168) estimated for women primary beneficiaries in the general OASDI beneficiary population than to the \$212 for all primary beneficiaries.

In conformance with the lower PIA's reported for dual beneficiaries was the substantial proportion found to be with minimum PIA's—about 28 percent, for both primary and secondary beneficiaries. This proportion was the same as that recorded in an earlier study of dual beneficiaries who were civil service *retiree* annuitants (28 percent),<sup>8</sup> but much above the 14-percent figure recorded for all OASDI retired-worker beneficiaries in December 1975.

Another measure of the Social Security benefits being received by dual beneficiaries is the monthly family benefit amount, shown in table 5. The family benefit amount received by dual beneficiaries consists mainly of the survivor's own Social Security benefit (primary or secondary) plus any applicable benefits for dependent children. The dollar intervals shown are the same as those for the PIA except that the family benefit amount available to a beneficiary at the minimum PIA, \$152.10, marks the end of one interval and the beginning of the next.

The effects of accepting actuarially reduced benefits

<sup>7</sup> Medians for the “All OASDI beneficiaries” categories were based on distributions that were weighted appropriately to include the same proportions of each type of beneficiary as was reported among dual beneficiaries.

<sup>8</sup> Daniel N. Price and Andrea Novotny, *op. cit.*

as retired workers or as widows and of the fact that widowed-mother's benefits amount to only 75 percent of the PIA (or less, when the family maximum causes her benefit to be reduced), are clearly seen in the large proportion (15 percent) of dual beneficiaries with family benefits below \$101.40, although only 2 percent of the PIA's were that low. Aged-widow beneficiaries, in particular, had very low Social Security benefits: almost two-fifths had a monthly family benefit of \$101.40 or less.

For dual beneficiaries overall, the net effect of actuarial reductions on some benefits and increments for dependents' benefits was roughly offsetting, so that the distributions of PIA's and monthly family benefit amounts look fairly similar. (The exception is the concentration noted at the lowest family benefit interval; if the comparison is broadened to include the two lowest intervals, however, the distributions are almost identical.) The effect can also be seen in the fact that the median family benefit (\$147) was almost the same as the median PIA (\$148).

### Annuity Replacement Rates

Data in table 6 permit examination of the income-replacement value of benefits received by civil service survivor annuitants. The analysis considers (1) the relationship of the civil service survivor annuity to the civil service salary on which the annuity is based (adjusted for increases in the earnings of Federal workers up to the date of the survey) and (2) the relationship of the civil service survivor annuity plus any Social Security family benefits to the civil service salary on which the survivor annuity is based. Although the data are too limited to permit a complete replacement-rate analysis, they give a general idea on the extent to which civil service survivor annuities replace the deceased worker's earnings, and the effect on the replacement rate of joint receipt of a civil service survivor annuity and a Social Security benefit.

The exclusion from the analysis of sources of income other than civil service adult survivor annuities and Social Security benefits, and the lack of earnings covered under OASDI should be kept in mind, however. Insufficient information is available to make an exact appraisal, but on balance the benefit-wage ratios are affected as follows:

- (1) The ratios in part A of table 6 dealing with the replacement of civil service salaries by annuities are probably understated for about one-tenth of the widows because of the exclusion of survivor-children's annuities.
- (2) Despite the exclusion of children's annuities, the ratios in part B of table 6 dealing with the replacement of civil service salaries by combined civil service and Social Security benefits are probably overstated



**Table 6.—Ratio of annuity and OASDI benefits to deceased's civil service salary<sup>1</sup> for civil service survivor annuitants: Number and percentage distribution, by OASDI beneficiary status, December 31, 1975**

Estimated wage-replacement ratio	OASDI beneficiary status				
	Total	Benefit in force <sup>2</sup>			Nonbeneficiary
		Total	Primary	Secondary	
Monthly survivor annuity as percent of deceased worker's civil service salary					
Total number	3 279,040	149,420	71,850	77,570	90,050
Total percent	100.0	100.0	100.0	100.0	100.0
Less than 9	4.1	5.4	3.9	6.7	2.1
10-19	21.9	23.2	21.7	24.6	18.4
20-29	30.2	28.7	25.2	32.0	31.5
30-39	21.1	19.1	21.4	17.0	24.8
40-49	11.6	11.6	13.8	9.6	12.3
50-59	5.6	5.7	6.9	4.6	5.6
60-69	2.8	3.2	3.6	2.8	2.6
70-79	1.6	1.8	2.2	1.6	1.5
80-89	.8	.9	1.0	.7	.8
90-99	.2	.2	.2	.2	.2
100 and over	.2	.2	.2	.2	.3
Median	27	27	29	25	29
Monthly survivor annuity plus family OASDI benefit as percent of deceased worker's civil service salary <sup>4</sup>					
Total number	239,470	149,420	71,850	77,570	90,050
Total percent	100.0	100.0	100.0	100.0	100.0
Less than 9	.8	.1	.1	.1	2.1
10-19	7.7	1.4	.8	1.9	18.4
20-29	17.7	9.8	7.0	12.4	31.5
30-39	22.0	20.1	17.2	22.8	24.8
40-49	17.9	21.0	20.1	21.9	12.3
50-59	12.1	16.0	18.1	14.0	5.6
60-69	8.1	11.3	12.9	9.9	2.6
70-79	5.1	7.2	8.6	6.0	1.5
80-89	2.9	4.2	5.0	3.5	.8
90-99	1.9	2.9	3.4	2.4	.2
100 and over	3.8	6.0	6.9	5.1	.3
Median	40	48	52	45	29

<sup>1</sup> As computed for civil service retirement purposes by averaging earnings in the 3 highest consecutive years (before October 21, 1969, 5 highest consecutive years); salary adjusted for rising wage levels; excludes 31,270 annuitants for whom adjusted salary could not be computed because either the salary used for computing annuity or the starting date of annuity was unavailable. Also excludes annuitants for whom Social Security benefit status was not available except where stated otherwise.

<sup>2</sup> Includes 7,790 annuitants with OASDI cash benefits being withheld because

of earnings or for other reasons.

<sup>3</sup> Includes 39,570 annuitants for whom Social Security benefit status was not available, but for whom civil service survivor annuity amount and starting date was available.

<sup>4</sup> Benefit of survivor annuitant plus benefit of any other family members based on the same earnings record pertaining to the annuitant's OASDI benefit, except that benefits for disabled children and students are excluded. Appropriate measure of OASDI covered earnings to include in salary not available.

as a result of the lack of earnings covered under OASDI. In particular, a tendency toward overstatement is particularly likely for survivor annuitants whose Social Security benefit was based on their own earnings. Many in this group had been part of a two-earner household. Their earnings, then, would have constituted an addition to family income not accounted for in the study data. (See the technical note to this article for further discussion of this issue.)

The civil service survivor annuities paid to 9 out of 10 widows as of December 1975 represented less than half of the civil service salary of their deceased husbands. Overall, a median of only 27 percent of the deceased worker's pay was replaced for the survivor annuitant. Although the salary replacement rate of civil service annuities did not differ dramatically according to a survivor's status as an OASDI beneficiary, the direction of some of the differences is noteworthy. A median replacement rate of 25 percent was reported for civil serv-

ice survivor annuitants who were also entitled to secondary OASDI benefits, compared with 29 percent for annuitants without OASDI benefits. As is the case with respect to some other characteristics already discussed, this difference can be interpreted in light of the differing Federal employment patterns of the deceased husbands. That is, some of the husbands with enough earnings covered under the Social Security program to provide benefits to their widows could be expected to have had shorter Federal careers than other Federal workers. At any given salary level, a worker who had less Federal employment would have earned a lower civil service survivor annuity and hence would have provided a lower wage-replacement rate.

Low replacement rates for civil service survivor annuitants are to be expected since the survivor annuity provided by the civil service retirement program amounts to a proportion, not exceeding 55 percent, of the annuity for which the deceased was, or would have

been, eligible. The retirement annuity is, in turn, a proportion of the worker's salary, up to a maximum of 78 percent<sup>9</sup> for those with almost 42 years of service. Thus, civil service survivor annuities ordinarily would not be expected to exceed 42.9 percent of the worker's average salary for the high-3 consecutive years. One reason higher replacement rates exist for some annuitants is the fact that annuity payments have been raised a number of times for those already on the rolls. The increases have exceeded the amounts needed to compensate for rising prices (and presumably for rising wages in some instances), in two ways: (1) A 1-percent increment above the price-level rise was included in each of the 9 automatic adjustments from November 1969 through August 1975 and (2) in 1965 and 1974, specified groups of older annuitants were provided special additional annuity increases.

### Annuity-OASDI Benefit Wage-Replacement Rates

Part B of table 6 examines the proportion of salary replaced by the combined total of the civil service survivor annuity and any applicable family Social Security benefits. The combining of benefits from these two programs presents difficulties in interpretation. The benefits available and the computation methods under these programs are very different because of different program objectives.

(1) The Federal civil service annuity is computed as a constant fraction of earnings that varies only by the number of years of service. The earnings level used in the computation is the average of the highest consecutive 3 years of annual salary. No dependents' allowance is provided and the amount of survivor benefits is limited under the Federal plan. Hence, the annuity is a staff retirement pension closely tied to the worker's own salary and period of employment, with minimal social welfare considerations.

(2) In contrast, the OASDI benefit formula, while wage-related, also has other significant elements deriving from the establishment of the program as social insurance. Social Security replaces a higher proportion of earnings for workers at lower earnings levels and provides substantial allowances for dependents and survivors. The earnings level used is a career average.

Nevertheless, these ratios are of interest because of recent public debate about the effects of individuals receiving benefits from both systems simultaneously. This

<sup>9</sup> The maximum annuity is 80 percent minus the reduction for electing a survivor annuity. The reduction produces a maximum annuity of 72.7 percent on a \$39,600 salary (the maximum Federal civil service salary as of December 1975), and an annuity as high as 78 percent of a salary below \$3,600. A slightly higher rate is possible for some annuitants through retirement credits earned for unused sick leave.

analysis, then, offers one facet of evaluating the experience of those with both types of benefits.

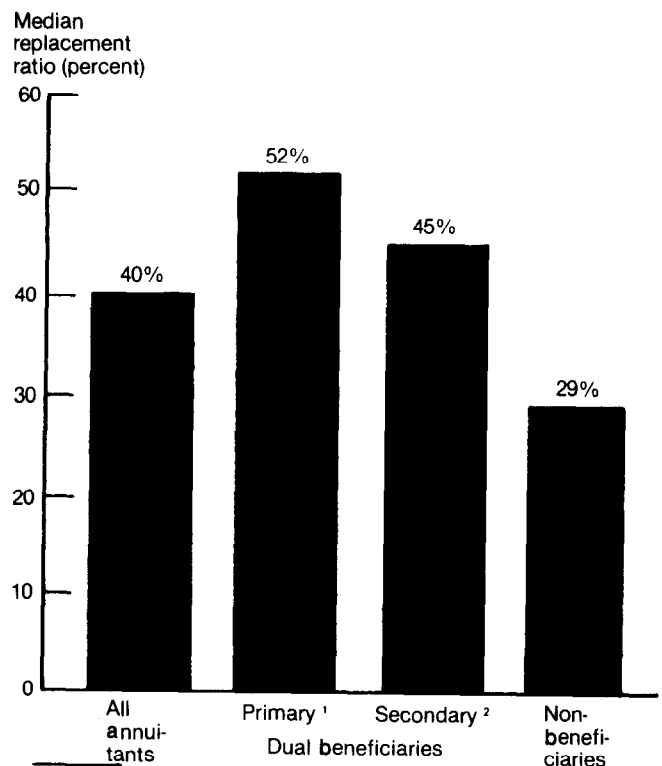
Naturally, wage-replacement rates for annuities and family OASDI benefits combined were higher for each beneficiary group in table 6 than the corresponding rates based upon annuities alone. As measured by the median, the average replacement rate for dual beneficiaries was 40 percent, compared with 27 percent for those with survivor annuities alone. Civil service survivor annuitants who received OASDI benefits based on their own covered earnings had somewhat higher wage-replacement rates than those with secondary benefits: The median rates were 52 percent and 45 percent, respectively (chart 1). About 87 percent of the survivor annuitants with OASDI benefits had wage-replacement ratios of less than 80 percent.

### Summary

This article provides the following profile of annuitants who might be affected by any coordination made between the Federal civil-service retirement and OASDI programs:

- As of December 1975, almost all Federal civil service survivor annuitants were women. Although there is no age restriction on eligibility for civil service survivor

**Chart 1.**—Median ratio of survivor annuity and applicable OASDI benefit to civil service salary of deceased Federal worker, December 1975



<sup>1</sup>Retirement or disability benefit.  
<sup>2</sup>Survivor or dependent benefit.

annuities, 7 of 10 survivor annuitants on the rolls at the end of December 1975 were aged 62 or older. Their median monthly annuity was \$212.

- Sixty-three percent of these annuitants were also entitled to OASDI benefits. Most of the dual beneficiaries were entitled to OASDI retirement benefits based on their own earnings (50 percent) or as aged widows (37 percent). Among the civil service survivor annuitants not receiving OASDI benefits, about half were permanently insured under the program but were not old enough to draw benefits, had excess earnings, or were not receiving benefits for other reasons. Altogether, it can be estimated that at least four-fifths of the civil service survivor annuitants will receive cash benefits under the Social Security program at some time.

- Individuals tend to start their civil service survivor annuity and their Social Security benefit within a few years of each other. Dual beneficiaries with OASDI benefit entitlement based on their own employment, however, are less likely to begin receiving both benefits at around the same time. For example, only 26 percent of dual beneficiaries whose civil service survivor annuities began during the 1961-65 period also became entitled to their own Social Security retirement benefit in those years.

This review contains information to aid in the examination of gaps and overlaps in benefit protection available to individuals as Federal civil service survivor annuitants and OASDI beneficiaries: Dual beneficiaries had a median PIA of \$148, considerably less than the \$221 median for all Social Security beneficiaries in the general population. When account is taken of actuarial reductions and the additional dependents' benefits available to these survivors under OASDI, the median monthly Social Security family benefit was found to be \$147, about the same as the median PIA. These OASDI benefits, when added to the survivor annuity under the Federal civil service retirement program, represented 40 percent of the civil service salary of the annuitant's deceased husband. If the civil service survivor annuity alone is considered, the median wage-replacement rate with respect to the civil service salary was just 27 percent.

## Technical Note

### Sampling and Data Availability

A data file containing characteristics and entitlement information on civil service survivor annuitants as of December 31, 1975, was made available by the Office of Personnel Management (formerly the Civil Service Commission) to the Social Security Administration (SSA). The file consisted of 310,310 annuitant records representing all those on the rolls at that time. Ten percent, or 31,031, were selected for study. These sample

records were matched to SSA's master beneficiary record files and earnings records to identify those who were OASDI beneficiaries—current or potential—as of December 31, 1975.

Of the 26,780 annuitants in the sample for whom information on Social Security benefit status was available, 16,893, or 63 percent, had benefits in force. The following tabulation distributes sample annuitants by the type of OASDI benefit they had, if any. The proportion is also shown for annuitants whose OASDI benefit status was unknown (see the discussion of this group below).

OASDI benefit status	Number	Percentage distribution
Total .....	31,031	100.0
Benefits in force:		
Primary benefit .....	8,523	27.5
Secondary benefit .....	8,041	25.9
Special age-72 benefit <sup>1</sup> .....	329	1.1
No OASDI benefit .....	9,887	31.9
Benefit status unknown .....	4,251	13.7

<sup>1</sup> Includes transitionally insured beneficiaries.

The estimates presented here, like those from any sample survey, may differ from figures obtained from a complete census conducted under the same procedures. Errors of misreporting may also affect the accuracy of estimates made. In this survey, the very large sample taken and the fact that the data reported are from operating agency records tend to reduce the level of discrepancies that might be expected to be found in the estimates.

A measure of the sampling variability of an estimate is given by the standard error of the estimate. Generally, the chances are about 68 out of 100 that an estimate will differ from the value given by a complete census by less than one standard error. The chances are about 95 out of 100 that the difference will be less than twice the standard error. For this study, the standard error of a

percentage is given by:  $\sqrt{\frac{p(1-p)}{n}}$ , where p is the

percentage, and n is the number of sample cases.

Data in table 5 can be used to illustrate the minimal sampling error in the results presented in this article. The proportion of dual beneficiaries with a PIA of \$300 or more was 3.2 percent of 16,893 sample cases. The standard error for 3.2 percent of the beneficiaries is 0.1 percent. Thus, with 95-percent confidence, the proportion of annuitants receiving a PIA under OASDI of \$300 or more was 3.2 percent plus or minus 0.2 percent, or can be said to lie between 3.0 percent and 3.4 percent.

To make a rough determination of the statistical significance of the difference between two independent percentages in this study, it is necessary to calculate the standard error of the difference, which is the square

root of the sum of the variances for the two percentages. If  $p_1$ ,  $q_1$ , and  $n_1$  refer to the first percentage and  $p_2$ ,  $q_2$ , and  $n_2$  refer to the second, the standard error of the dif-

ference would then be estimated as  $\sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$ .

If the absolute difference between the two percentages is greater than twice the standard error of the difference, the percentages are said to be significantly different from one another at the 95-percent level.

Data in table 1 permit an examination of the significance of the difference between the percentages of annuitants aged 62-64 with OASDI benefits in force and nonbeneficiaries aged 62-64. The proportion of those with benefits in force aged 62-64, 8.7 percent (of 16,893 sample cases), is subtracted from the corresponding proportion of nonbeneficiaries, 7.1 percent (of 9,887 sample cases), resulting in a percentage-point difference of 1.6. The standard error of the difference is 0.3 percent. At a 95-percent confidence level, twice the estimated standard error of the difference, or 0.6 percent, is used. Since the absolute difference of the two percentages in question is 1.6 percent, which is larger than twice the estimated error of the difference (0.6 percent), it can be said that the proportion of survivor annuitants aged 62-64 with a Social Security benefit in force is significantly higher than the proportion of nonbeneficiaries aged 62-64.

Another factor affecting the data presented in this article is that 4,251 annuitant records, or 14 percent of the sample, had no usable Social Security numbers for the annuitant or the deceased worker. (If either was available, the other was traced through SSA files.) The annuitants involved were included in distributions of all annuitants in tables 1, 2, and 6. Also, data were incomplete on the beginning date of the civil service annuity of the survivor in 2,522 cases, and on the civil service salary of the deceased worker in 605 cases.

As far as is known, the lack of information for these individuals resulted from a less complete recordkeeping system in use a number of years ago that produced a random group of such cases rather than omission of any particular type of annuitant. Almost 37 percent of the cases with missing Social Security numbers, however, occurred among survivors whose annuity began in the 1966-69 period. This concentration is thought to be associated with use of special annuity application forms that did not provide for a Social Security number, following a change in the law liberalizing eligibility for civil service survivor annuities. Also, most annuitants with missing annuity commencement dates were older than other annuitants, as evidenced by the predominance (68 percent) of pre-1966 beginning dates among those in this group receiving Social Security benefits. Therefore, to the extent age is associated with any patterns of civil service annuitant characteristics, the patterns reported

here for older persons may be slightly understated.

The SSA earnings records used in the study did not have data on the number of years in covered employment under OASDI before 1951. Data concerning this period were estimated for the annuitants through the use of information on total earnings and number of quarters of coverage that was available for 1947-50 and on earnings for earlier groups of years. Assignment was made to each individual's record of \$400 a quarter for the number of quarters shown in 1947-50. Similar assignment was made for years before 1947 according to covered earnings recorded for that earlier period. Estimates for these years were added (where applicable) to the number of years of covered employment after 1950.

### Interpretation of Benefit-Wage Ratios

The ratios in table 6 offer useful but by no means complete information. The following limitations should be recognized. In December 1975, about 18 percent of all Federal civil service survivor annuitants were children living with widows. Data on the children's annuities were not available for this analysis. After taking into account the number of annuitant families with two or more children, it is estimated that about 1 in 10 adult survivor annuitants had, in addition to his or her own annuity, an annuity for children (of \$119 monthly in most cases) that was not accounted for in table 6 data.

Another limitation in table 6 is the lack of earnings under Social Security in the denominator of the benefit-wage ratios for part B. There were two reasons for this component being missing. First, complete earnings data were not available from SSA records (individual earnings records are limited to the taxable maximum amounts). Second, there was no suitable way to identify which earnings covered under the Social Security program should have been added to civil service earnings. Presumably, OASDI-covered earnings should have been included only if they had been received during the same period that the Federal civil service salary was earned. Perhaps it would also have been appropriate to include in the ratios the OASDI-covered earnings from other periods that were in excess of the high-3-year-average Federal salary of the individual. Even if a suitable measure had been established for includable Social Security earnings, information was not available on the amounts and dates of Federal civil service salaries to match with Social Security earnings records.

It should be noted that the wage data used are expressed in terms of gross earnings. No attempt was made here to construct a spendable earnings amount to compare with benefits. Besides the usual difficulties involved in making reasonable estimates of taxes paid, work-related expenses, and forgone work-related fringe benefits to adjust gross cash wages, estimates would have been needed for taxes paid on Federal annuities.