
Black-White Differences in Private Pensions: Findings From the Retirement History Study

by Gayle B. Thompson *

This article compares older black workers and older white workers on coverage under private pension plans, the receipt of pension benefits upon retirement, and the job characteristics associated with both coverage and receipt. Data are from the 1969 and 1975 interviews of the Retirement History Study and describe pre-ERISA conditions among persons in their late fifties to mid-sixties. Black workers were much less likely than white workers to have been covered by a private pension on their longest job. Moreover, among those who were covered, they were less likely to have received benefits. The racial differences appear to result in part from substantial differences on job characteristics, particularly industry.

In April 1978 the United States Commission on Civil Rights held a consultation dealing with racial and sex discrimination in private pensions and in the health, life, and disability insurance industry. A paper prepared for this purpose revealed that few data are available dealing with racial differences in private pension protection and the reason for such differences.¹

A 1972 study of pension plans conducted jointly by the Social Security Administration and Department of Labor reported coverage and vesting rates for white and minority full-time currently employed workers of all ages.² The Social Security Administration Survey of Newly Entitled Beneficiaries (SNEB) reported coverage and receipt rates, benefit levels, and earnings replacement rates for white and minority workers newly entitled to retired-worker benefits under the social security program from July 1968–December 1969.³ Neither study, however, analyzed racial differences in

private pension coverage in terms of differences in job characteristics.

This article compares black and white workers in their late fifties and early-to-middle sixties with respect to extent of private pension coverage on the longest job held throughout the worklife, extent of private pension receipt on retirement, characteristics of the longest job, and coverage and receipt rates within categories of these longest job characteristics.⁴

The specific questions addressed here are:

Among wage and salary workers employed in private industry on the longest job, what proportions of black and of white workers were covered by a private pension?

Of the workers covered by a private pension on the longest job, what proportions of black and white workers received private pension income in 1974 after they had completely retired?

To what extent do black and white workers differ on the longest-job characteristics previously found to be associated with both pension coverage and receipt?

To what extent can any existing racial differences on coverage and receipt be attributed to differences on longest-job characteristics?

The longest-job characteristics examined are industry,

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¹ Gayle B. Thompson and Martha Remy Yohalem, *Private Pension Coverage and Benefits for Women and Minorities* (Paper presented to Consultation on Discrimination Against Minorities and Women in Pension and Health, Life, and Disability Insurance), April 25, 1978.

² Walter W. Kolodrubetz and Donald M. Landay, "Coverage and Vesting of Full-time Employees Under Private Retirement Plans," *Social Security Bulletin*, November 1973.

³ *Reaching Retirement Age: Findings from a Survey of Newly Entitled Workers, 1968–70* (Research Report No. 47), chapters 10–15, Social Security Administration, Office of Research and Statistics, 1976.

⁴ For a similar analysis by sex and class of worker, see Gayle B. Thompson, "Pension Coverage and Benefits, 1972: Findings From the Retirement History Study," *Social Security Bulletin*, February 1978.

occupation, recency and tenure of job (year left), and annual earnings rate.

The data base is the Social Security Administration Retirement History Study (RHS), a 10-year panel study of the retirement process in the United States.⁵ Initial interviews were completed in 1969 with a national sample of 11,153 married and nonmarried men and nonmarried women aged 58–63. Reinterviews of the same individuals have been conducted at two-year intervals since that time.

The data on longest job characteristics and private pension coverage on that job were obtained from the 1969 interviews. The data on private pension receipt were obtained from the 1975 interviews and refer to receipt during calendar year 1974 when the sample members were aged 63–68. These data indicate the pension situation that existed before the effective date of the Employee Retirement Income Security Act (ERISA) of 1974. The effect of that legislation on racial differences in pension coverage, vesting, and receipt is unknown at this time.

The analysis focuses only on workers employed in private industry on the longest job. The following tabulation shows that 79 percent of the black workers and

Class of worker on longest job	White	Black
Total number ¹	6,892	800
Total percent.....	100	100
Private wage and salary worker.....	68	79
Government worker.....	13	11
Self-employed.....	19	9
Unpaid family worker.....	(²)	(²)

¹ Excludes persons who never worked and those for whom class of worker was not ascertained (206 white and 25 black).

² Less than 0.5 percent.

68 percent of the white workers had been employed as private wage and salary workers. Black workers were less likely than white workers to have been self-employed and about as likely to have been government employees.

Pension Coverage on Longest Job

Among workers aged 58–63 in 1969, white workers employed in private industry were more than twice as likely as black workers to have been covered by a private pension on their longest job (table 1). Although nonmarried women had lower coverage rates than men, regardless of race, black nonmarried women were particularly disadvantaged with respect to pension coverage. Only 7 percent of them—compared with 24 per-

⁵ Lola M. Ireland, et al., **Almost 65: Baseline Data from the Retirement History Study** (Research Report No. 49), Social Security Administration, Office of Research and Statistics, 1976.

Table 1.—Pension coverage on longest job for private wage and salary workers aged 58–63 in 1969: Percentage distribution, by race and sex

Pension coverage on longest job	Total		Men		Nonmarried women	
	White	Black	White	Black	White	Black
Total number.....	4,678	630	3,322	376	1,356	254
Total percent.....	100	100	100	100	100	100
Covered.....	43	20	51	28	24	7
Not covered.....	57	80	49	72	76	93

cent of the white nonmarried women, 28 percent of the black men, and 51 percent of the white men—were covered by a pension on their longest job.

Part of the racial difference on private pension coverage is explained by differences on longest-job characteristics. A multiple classification analysis (MCA)⁶ indicates that these characteristics explain a substantial amount of variance in pension coverage: 34 percent and 38 percent for white and black workers, respectively (table 2). Each characteristic is significantly related (at the .01 level) to coverage for both races. After accounting for the existence of interrelationships among the characteristics, industry and the annual earnings rate emerge as the most important predictors of coverage.

With each characteristic taken separately, coverage rates were highest among workers who had been employed in manufacturing, were professional or technical workers, had many years of service, had been recently employed on their longest job, and were high earners. The coverage rates for white workers with a private pension are as follows:

Characteristics	Percent
Total.....	43
Manufacturing.....	57
Professional and technical.....	64
Employed in longest job in 1969.....	62
With 21 years or more of service.....	65
Earnings of \$10,000 or more annually.....	73

Black workers were much less likely than white workers to have possessed those job characteristics that had a high probability of pension coverage. They had fewer years of service, less recent employment on the longest job than white workers, and lower earnings. Moreover, fewer black workers than white workers (30 percent and 43 percent, respectively) had been employed in manufacturing and fewer had been professional or technical workers (1 percent, compared with 7 percent). On the other hand, a greater proportion of black workers (31 percent) than of white workers (7

⁶ See technical note for definition of MCA statistics.

percent) had been employed in nonprofessional service industries in which private pension plans are not common.

Even within individual job categories, black workers usually had lower coverage rates than white workers. In manufacturing, for example, 38 percent of the black

workers, compared with 57 percent of the white workers, were covered by a private pension.

A notable exception to this finding, however, exists within some categories of the annual earnings rate. Black workers had substantially lower earnings than white workers, a fact that is reflected in their lower

Table 2.—Pension coverage on longest job for private wage and salary workers aged 58–63 in 1969: Multiple classification analysis, by job characteristics and race

	White			Black		
	Percent covered (unadjusted)	Adjusted coefficient	Percent of cases	Percent covered (unadjusted)	Adjusted coefficient	Percent of cases
Grand mean (percent covered)	43			20		
Standard error (percent)	0.8			1.8		
Sample size	4,678			630		
R ²	0.342			0.376		
Industry:						
Agriculture.....	5	-18	3	0	-12	8
Mining and construction.....	39	-1	9	25	5	8
Manufacturing.....	57	10	43	38	14	30
Transportation, communications, and public utilities.....	54	-1	10	30	-3	9
Trade.....	24	-11	17	24	9	9
Finance, insurance, and real estate.....	52	1	5	(¹)	(¹)	2
Service:						
Professional.....	34	-7	6	(¹)	(¹)	3
Other.....	14	-14	7	2	-12	31
	Eta ² = .112 Beta ² = .037			Eta ² = .153 Beta ² = .080		
Occupation:						
Professional and technical.....	64	10	7	(¹)	(¹)	1
Managers and officials.....	49	-6	12	(¹)	(¹)	(²)
Clerical.....	47	8	12	(¹)	(¹)	1
Sales.....	27	-1	6	(¹)	(¹)	1
Craftsmen and foremen.....	52	-3	22	38	-4	8
Operatives.....	45	(³)	26	27	-4	29
Service.....	14	-1	9	10	4	37
Laborers.....	38	-5	4	23	-4	16
Farm, all types.....	3	-3	2	0	2	7
	Eta ² = .076 Beta ² = .010			Eta ² = .085 Beta ² = .020		
Job recency (year left):						
1969 or later.....	62	7	46	34	2	35
1966–68.....	42	2	13	21	4	16
1962–65.....	37	2	10	14	1	11
1955–61.....	28	-5	12	10	(³)	14
1954 or earlier.....	14	-15	19	7	-6	22
Not ascertained.....	7	-13	(²)	(¹)	(¹)	2
	Eta ² = .145 Beta ² = .029			Eta ² = .080 Beta ² = .008		
Job tenure (in years):						
5 or less.....	9	-14	13	6	-8	18
6–10.....	19	-10	13	12	2	17
11–15.....	35	-3	15	15	2	13
16–20.....	46	3	15	16	-2	13
21 or more.....	65	8	43	36	4	34
Not ascertained.....	13	-13	1	3	-3	5
	Eta ² = .181 Beta ² = .031			Eta ² = .094 Beta ² = .012		
Annual earnings rate:						
Less than \$2,000.....	4	-20	7	2	-12	21
2,000–3,999.....	17	-21	11	8	-12	20
4,000–5,999.....	45	-5	14	43	16	13
6,000–9,999.....	72	16	26	68	40	11
10,000 or more.....	73	17	13	(¹)	(¹)	1
Not ascertained.....	23	-7	29	9	-7	34
	Eta ² = .257 Beta ² = .083			Eta ² = .335 Beta ² = .218		

¹ Not computed; base fewer than 25.

² Less than 0.5 percent.

³ Less than 0.5.

overall coverage rate. After accounting for these earnings differences, however, black workers were almost as likely as white workers to have been covered by a private pension. Within the \$4,000–\$5,999 category, for example, 43 percent of the black workers and 45 percent of the white workers had pension coverage. The \$2,000–\$3,999 category was the only one in which a statistically significant racial difference on coverage is found. Even within that category, a difference of only nine percentage points exists between the coverage rates of black workers and white—substantially less than the 23-percentage-point difference in overall coverage rates.

The narrowing of the coverage gap within earnings categories suggests that earnings may reflect the combined effects of industry, occupation, recency and tenure of job referred to as IORT. In other words, black workers and white workers in the same earnings categories may be similar in the other job characteristics as well, resulting in a similar probability of pension coverage. An analysis of the marginal and shared effects of the five factors on coverage provides some support for this hypothesis (table 3).

These shared effects on coverage are .208 and .199 among white workers and black workers, respectively. Under the assumption that earnings are predated and predicted by the other four factors,⁷ the shared effects may be interpreted as the indirect effects of IORT on coverage through earnings. Although the earnings factor also has a marginal (independent) effect on coverage (.048 among white workers and .131 among black workers), much of the relationship to coverage appears to reflect the effects of IORT.

The data in table 4 provide additional support for the hypothesis. Among workers with earnings of \$4,000–\$5,999 or \$6,000–\$9,999, an equal or near equal proportion of black workers and white workers had been employed in manufacturing—a high coverage industry—or had left their longest job in 1969 or later.

⁷ For a MCA analysis of the relationship between IORT and the annual earnings rate, see Gayle B. Thompson, *op. cit.*, table 3.

Table 3.—Pension coverage on longest job for private wage and salary workers aged 58–63 in 1969: Selected statistics from multiple classification analysis of job characteristics, by race

Statistic ¹	White	Black
Multiple R squared		
All job characteristics	0.342	0.376
Industry, occupation, recency, tenure	.294	.245
Annual earnings rate	.256	.330
Marginal effects of—		
Industry, occupation, recency, tenure	.086	.046
Earnings	.048	.131
Shared effects	.208	.199

¹ For definition of terms, see technical note, page 21.

Black workers in these two earnings categories, however, had longer service on their longest job than their white counterparts.

Large racial differences in private pension coverage within individual categories of the IORT characteristics probably reflect substantial differences on combined characteristics. Among workers employed in manufacturing, for example, black workers had somewhat shorter tenure than white workers and may not have met the service requirements for participation in a pension plan, as the following tabulation indicates.⁸

Characteristic	White	Black
Percent in manufacturing with—		
5 years or less tenure	8	17
21 years or more tenure	50	44
Percent with 21 or more years of tenure in—		
Manufacturing	51	38
Nonprofessional service	4	26

Moreover, black workers with many years of service, were much more likely than their white counterparts to have been employed in nonprofessional service industries where pensions are not common and less likely to have been employed in manufacturing.

Overall, the foregoing analysis suggests that greatly expanded coverage of black workers will occur only with changes in their labor-force characteristics. The liberalization of participation requirements under ERISA may result in some expansion of coverage among black workers with few years of service.⁹ But unless greater numbers of black workers move into that part of the private sector where private pension plans are prevalent (such as large, prosperous, highly unionized manufacturing firms),¹⁰ their chances of obtaining private coverage will remain slim.

Receipt of Private Pension Benefits, 1974

Pension receipt rates for black and white workers who had been covered by a private pension on their longest job and who reported no earnings for 1974

⁸ In 1969, 45 percent of the plans covering 22 percent of the workers specified participation requirements. The most common year-of-service requirements for plans covering the largest number of workers were 1 and 5. Age requirements ranged from age 20 (or less) to age 40, with ages 25 and 30 the most frequent. See Harry E. Davis and Arnold Strasser, "Private Pension Plans, 1960 to 1969—An Overview," *Monthly Labor Review*, July 1970, pages 45–56.

⁹ In general, ERISA provides that a company must permit an employee to participate in a pension plan if he has reached age 25 and has worked for the employer for 1 year.

¹⁰ For a discussion of the prevalence of private pension plans, see William C. Greenough and Francis P. King, *Pension Plans and Public Policy*, Columbia University Press, 1976, pages 109–115.

Table 4.—Percentage distribution of selected longest-job characteristics, by race and annual earnings rate ¹

Characteristic	Less than \$2,000		\$2,000–3,999		\$4,000–5,999		\$6,000–9,999	
	White	Black	White	Black	White	Black	White	Black
Industry								
Total number.....	310	130	536	123	678	81	1,223	72
Total percent.....	100	100	100	100	100	100	100	100
Agriculture.....	8	18	6	3	2	2	(²)	0
Mining and construction.....	2	1	3	6	8	10	7	14
Manufacturing.....	22	6	32	24	47	47	56	54
Transportation, communications, and public utilities.....	2	1	5	4	9	19	15	19
Trade.....	23	7	27	17	17	6	12	4
Finance, insurance, and real estate.....	5	2	3	2	6	1	4	1
Service:								
Professional.....	9	3	10	5	6	6	3	0
Other.....	29	62	14	39	5	9	2	7
Job recency (year left) ³								
Total number.....	307	125	535	122	678	81	1,222	72
Total percent.....	100	100	100	100	100	100	100	100
1969 or later.....	23	40	44	50	59	60	75	75
1966–68.....	16	21	16	20	18	18	13	19
1962–65.....	8	11	16	12	11	9	6	4
1955–61.....	13	11	14	10	9	7	5	0
1954 or earlier.....	40	17	10	7	4	5	1	1
Job tenure (in years) ³								
Total number.....	300	122	532	122	673	81	1,219	72
Total percent.....	100	100	100	100	100	100	100	100
5 or less.....	47	23	20	11	7	14	2	7
6–10.....	21	20	19	19	12	6	4	4
11–15.....	12	11	19	17	17	6	11	7
16–20.....	8	13	15	21	17	12	16	8
21 or more.....	12	33	27	31	47	62	66	74

¹ Excludes persons earning \$10,000 or more and those for whom earnings were not ascertained.

² Less than 0.5 percent.

³ Excludes a few cases for whom data were not ascertained.

are presented in the tabulation that follows. These workers are referred to as covered nonearners or, alter-

Receipt of private pension, 1974	Covered nonearners	
	White	Black
Total number.....	1,079	67
Total percent.....	100	100
Receiving.....	77	52
Not receiving.....	23	48

natively, as completely retired covered workers. The proportion of workers who lost private pension benefits at retirement may be approximated if the data are analyzed for completely retired workers only, rather than for all covered workers. Because members of the sample did not specify the job on which their pension benefits were based, the statistics cited here may underestimate slightly the extent of longest-job benefit loss.

Substantial numbers of workers covered by private pensions, particularly black workers, did not receive benefits from those pensions upon retirement. Forty-

eight percent of the black covered nonearners, compared with 23 percent of the white covered nonearners, did not receive private pension benefits in 1974.

Part of this difference in receipt rates may stem from racial differences on job recency and tenure. A recent multivariate analysis of the job factors associated with the receipt of private pensions indicated that recency and years of service on the longest job are predictors of receipt among completely retired covered men.¹¹ The probability of receiving private pension benefits upon retirement increased with the recency of the longest job and with the length of service on that job. These findings suggest that the absence of vesting rights—nonforfeitable rights to accrued pension benefits—and stringent age and service requirements for vesting when such provisions did exist contributed to the loss of private pension benefits.

Black covered nonearners had shorter job tenure and terminated their longest job earlier than white covered nonearners. Nevertheless, the racial differences for these

¹¹ Gayle B. Thompson, *op. cit.* The multivariate analysis is not replicated in the present analysis because there are not enough completely retired covered black workers to provide reliable statistical estimates.

Table 5.—Percentage distribution of selected longest-job characteristics among covered nonearners, by race

Characteristic	White	Black
Job recency (year left) ¹		
Total number in sample	1,120	69
Total percent	100	100
1969 or later	65	59
1966-68	15	17
1962-65	8	7
1955-61	7	9
1954 or earlier	5	7
Job tenure (in years) ¹		
Total number	1,115	69
Total percent	100	100
5 or less	3	4
6-10	5	12
11-15	10	10
16-20	14	13
21 or more	68	61
Annual earnings rate ²		
Total number	973	61
Total percent	100	100
Less than \$2,000	(³)	3
2,000-3,999	6	11
4,000-5,999	18	38
6,000-9,999	53	44
10,000 or more	22	3

¹ Excludes a few cases for whom data were not ascertained.
² Excludes covered nonearners for whom earnings data were not ascertained (149 white and 8 black).
³ Less than 0.5 percent.

two job characteristics are not large enough to account fully for the gap in pension receipt rates (table 5). Sixteen percent of the black covered nonearners, for example, compared with 12 percent of the white, terminated their longest job in 1961 or earlier. The difference was not significant at the .05 level. In addition, a difference of only eight percentage points exists between the two races for workers with 10 years or less of service on the job (16 percent and 8 percent, respectively).¹²

Even among workers in the job recency and tenure categories with the highest receipt rates, the rates were substantially lower for black covered nonearners than for their white counterparts, as the following tabula-

Characteristic	Covered nonearners			
	White		Black	
	Number	Percent	Number	Percent
Left job in 1969 or later	698	87	39	69
21 or more years of tenure	721	85	41	68

¹² For details on vesting provisions in 1969, see Harry E. Davis and Arnold Strasser, *op. cit.*

tion shows. Among those with 21 years or more of tenure, for example, 85 percent of the white group but only 68 percent of the black—a difference of 17 percentage points—received private pension benefits in 1974.

Regrettably, the number of black covered nonearners was too small to permit a more detailed analysis of pension receipt rates within all job characteristics. It is impossible, therefore, to estimate the extent to which racial differences in receipt rates are primarily a function of different combinations of the job characteristics.

Summary and Conclusions

The private pension system in the United States covers less than half of the workers employed in private industry and provides retirement benefits to an even smaller proportion of workers. Although many workers are not protected by private pensions, black workers are especially ill-advantaged. Among workers aged 58-63 in 1969 (the first interview year of the Retirement History Study) only 20 percent of the black workers, compared with 43 percent of the white, had been covered by a private pension on their longest job. Of those covered workers who had retired completely by 1974, when they had attained age 63-68, 52 percent of the black group and 77 percent of the white group received private pension benefits in the later interview year.

Some of the racial differences in private pension coverage and receipt appear to result from substantial differences in job characteristics. Black workers were much less likely to have possessed job characteristics in which there is a high probability of pension coverage and, conversely, were more likely to have been in jobs where private pensions are not common. They were also less likely to have the long tenure and recent employment necessary for the receipt of pension benefits upon retirement.

In general, black workers had lower coverage and lower receipt rates than white workers even after accounting for differences in individual characteristics. Nevertheless, some evidence shows that workers of both races with the same combination of job characteristics are almost equally likely to have been covered by a private pension.

Liberalization of the participation and vesting requirements in private plans under ERISA may result in expanded coverage and in higher receipt rates for black workers with short tenure and discontinuous work histories. Greatly expanded coverage of these workers, however, will come only with movement into jobs where private pensions are prevalent.

Table I.—Approximate standard errors of estimated percentages

Size of base	Estimated percentage									
	2 or 98	5 or 95	8 or 92	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	40 or 60	50
25.....	3.1	4.8	6.0	6.6	7.8	8.8	9.5	10.0	10.8	11.0
50.....	2.2	3.4	4.2	4.7	5.6	6.2	6.7	7.1	7.6	7.8
100.....	1.5	2.4	3.0	3.3	3.9	4.4	4.8	5.0	5.4	5.5
200.....	1.1	1.7	2.1	2.3	2.8	3.1	3.4	3.6	3.8	3.9
300.....	.9	1.4	1.7	1.9	2.3	2.5	2.8	2.9	3.1	3.2
500.....	.7	1.1	1.3	1.5	1.8	2.0	2.1	2.2	2.4	2.4
800.....	.5	.8	1.0	1.2	1.4	1.6	1.7	1.8	1.9	1.9
1,500.....	.4	.6	.8	.8	1.0	1.1	1.2	1.3	1.4	1.4
3,000.....	.3	.4	.5	.6	.7	.8	.9	.9	1.0	1.0
5,000.....	.2	.3	.4	.5	.6	.6	.7	.7	.8	.8
8,000.....	.2	.3	.3	.4	.4	.5	.5	.6	.6	.6
10,000.....	.2	.2	.3	.3	.4	.4	.5	.5	.5	.6

Technical Note

The Sample

The sampling frame for the RHS is the same as that used by the Bureau of the Census for its Current Population Survey (CPS).¹³

Members of the sample were persons living in households that had last participated in the CPS before February 1969. They were men in all marital-status categories and women who, at the time of sample selection, had no husband in the household. In any month the CPS panel consists of eight groups of households selected up to 18 months previously. The oldest of these rotation groups is dropped and replaced by a new one each month.

Nineteen of these discontinued CPS rotation groups were used for the RHS. Information was gathered from sample members and their spouses by Bureau of the Census interviewers, usually in late spring of the survey year. In 1969, 11,153 interviews were completed; 10,169 were completed in 1971, 9,423 in 1973, and 8,693 in 1975.

Sampling Variability

A measure of the sampling variability of an estimate is given by the standard error of the estimate. Generally speaking, 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 differences will be less than twice the standard error.

Table I gives approximate standard errors for the estimated percentage of individuals with a certain char-

acteristic. Linear interpolation may be used to obtain values not specifically given. To derive standard errors that are applicable to a wide variety of items, a number of assumptions and approximations were required. As a result, these standard errors provide an indication of the order of magnitude rather than the precise standard error for any specific item.

To make a rough determination of the statistical significance of the difference between two independent percentages, the following procedure may be used. Find estimates of the standard errors of the percentages in question, using table I. Square these standard errors to get variances and add the variances. Take the square root of this sum to get the standard error of the difference. If the absolute difference between the two percentages in question is greater than twice the standard error of the difference, they are said to be significantly different from one another at the 5-percent level.

Multiple Classification Analysis

Multiple classification analysis (MCA), a type of dummy variable multiple regression, shows the category means and the overall ability of each predictor variable to explain variation in the dependent variable both before and after adjusting for the effects of all other predictors. It also shows the combined effect of the predictors on the dependent variable. The specific MCA statistics presented in this article are described below.¹⁴

Grand mean. If the dependent variable is a dichotomy, the grand mean is the proportion of all persons with a score of 1 (that is, the proportion covered by a pension).

R² (multiple correlation coefficient, squared). An estimate of the amount of variation in the dependent

¹³ For a general description of the CPS, see Bureau of the Census, *The Current Population Survey—Design and Methodology* (Technical Paper No. 40), 1978. See also Marvin M. Thompson and Gary Shapiro, "The Current Population Survey: An Overview," *Annals of Economic and Social Measurement*, April 1973.

¹⁴ For more detail, see Frank M. Andrews et al., *Multiple Classification Analysis: A Report on a Computer Program for Multiple Regression Using Categorical Predictors*, University of Michigan, Institute for Social Research, revised 1973.

variable explained by all predictor variables combined.

Unadjusted category mean. If the dependent variable is a dichotomy, the unadjusted category mean is the proportion of persons in each category of each predictor variable with a score of 1 on the dependent variable, unadjusted for the effects of the other predictor variables.

Adjusted coefficient. The amount of deviation of the adjusted category mean (adjusted for the effects of all other predictors) from the grand mean. The adjusted coefficients can be used to obtain a predicted average score on the dependent variable for individuals with any combination of job characteristics by summing these coefficients for each category of interest and adding that value to the grand mean. The adjusted coefficient can also be used to obtain the adjusted category mean for each category by adding it to the grand mean.

Eta². An estimate of the overall ability of each predictor variable to explain variation in the dependent variable unadjusted for the effects of the other predictors.

Beta². An estimate of the overall ability of each predictor variable to explain variation in the dependent variable adjusted for the effects of the other predictors—on the assumption that in each category of the predictor in question all other predictors are distributed as they are in the population at large.

Marginal effect. Amount of the total variance in the dependent variable explained by that predictor independent of the effects of the other predictors in the model.

Shared (combined) effect of all predictors. Amount of total variance in the dependent variable explained by these predictors after removing the marginal effects of each predictor or set of predictors (that is, R^2 minus marginal effects).

Program Operations

(Continued from page 2)

Only six of the 28 States implementing the unemployed-father option reported increases (5 percent or less) in the number of recipients. Among the 22 States with declining caseloads, only six reduced the number of recipients more than 5 percent.

In the basic program a drop of 4,487 recipients was reported for the Nation. Twenty-eight States showed increases in the number of recipients that were offset by the declines in 26 States.

Payments under AFDC totaled \$897.7 million in August 1978—an increase of \$2.6 million (0.3 percent) above the July figure. The average payment per recipient (\$83.06) was 36 cents higher than the average in the previous month; the average per family (\$257.18) was 56 cents higher. Though the average family payment for the Nation showed a slight increase, in 15 States the average amount paid was from 31 cents to \$9.56 lower than it had been in July. Special supplements in Idaho and Minnesota and school and clothing allowances in Nevada, Oregon, and West Virginia affected the August average payment level. South Carolina's higher AFDC payments, retroactive to July, also affected the national average.

Twelve months earlier, 511,975 more recipients were on the rolls than were counted in August 1978. The recipient count for the entire program had declined 5 percent since August 1977, and the caseload for the unemployed-father segment had dropped about 15 percent. Total AFDC payments rose by \$200,000 in the 12-month period, and the average payment per recipient went up \$4.04.

Emergency assistance. The emergency assistance programs, which provide temporary assistance for criti-

cal needs to AFDC and other needy families with children, aided 4,000 or 14 percent more families in August 1978 than in the preceding month. The total number of families helped in the 22 States that furnish such assistance was 32,000. Sixteen of these States reported aiding more families than they had in July.

Payments under the emergency assistance programs totaled \$6.6 million in August—\$1.2 million or 23 percent higher than the July total; they averaged \$207.22 per family. The August 1978 payments were going to about the same number of families as those in August 1977, but the total cost in the later month was \$1.9 million or 40 percent greater.

Emergency assistance is the most volatile of the Federal programs aiding families with children. From July to August, for example, Massachusetts reported an increase in the number of families assisted that was greater than 200 percent. A family may be helped either by a vendor payment to the provider of a service or by a cash payment, but this type of assistance can be received only once in a 12-month period and the need for aid must result from an unforeseen crisis.

General assistance. The State and locally financed general assistance programs aided 773,000 persons in August—1,500 or 0.2 percent fewer recipients than in July. Twenty-one of the 42 reporting States showed increases in the number receiving payments.

Nationwide, general assistance payments totaled \$99.9 million—\$724,000 or 0.7 percent below July's total. The average payment per case (\$159.16) was 90 cents less than the July average; per recipient, the average payment (\$129.21) was 68 cents less.

The August 1978 figures for these nonfederally aided programs show a decline in the number of recipients
(Continued on page 51)