of living—about 7 percentage points below the projected annual inflation rate.

Two methods of indexing children's allowances have been suggested.

1. The allowances could be tied to other social security benefits, which are adjusted annually in November. Although the adjustment has been keyed to either prices or wages, whichever is higher, the new social security bill, which has just been passed and will determine the November 1980 uprating, changes the indexing formula to follow prices only.

2. Benefits could be indexed in line with the personal tax allowances—that is, tax deductions for single persons and married men, which are increased annually in April in line with the retail price index.

The success of the reform depends on the extent to which the value of family support is maintained over time. With the structure of the program now fully in place, it remains to be seen whether or not the government will demonstrate its commitment to the substance of the reform as well.

## **Research Grants Studies**

Sections 702 and 1110 of the Social Security Act authorize extramural research projects in the broad areas of social security. The Social Security Administration provides funding through grants to nonprofit organizations and through contracts with both nonprofit and profitmaking organizations. From time to time, as projects are completed, the **Bulletin** publishes summaries of research findings. A summary of a completed project (Grant No. 90612) is presented below.

## Retirement Patterns for Self-Employed Workers

This research project concentrates on the 1969 and 1971 waves of the Social Security Administration's Retirement History Study (RHS). Data from the RHS are used to analyze the retirement patterns of selfemployed workers and to contrast those patterns with the patterns among wage and salary workers. The research was conducted by Joseph F. Quinn, Boston College, Department of Economics.

Two motives underlie this research. First, the selfemployed sector is an important, though declining segment of the labor force and therefore deserves study. This sector is particularly important among older workers, since the proportion of workers who are selfemployed increases steadily with age. In previous research, the self-employed are either excluded from the

## Conclusion

Originally children's allowances programs, not only in the United Kingdom but also in other countries, were designed as an income supplement for families with children, particularly lower-income families, and secondarily for such reasons as encouraging population growth. A parallel development was the creation of a number of means-tested programs aimed at helping the needy, including needy families. Better-off families also had the advantage of tax deductions for their children.

This multiplicity of programs led to discussions on how to combine various supplementing and competing benefits. In the early 1970's, for example, one proposal in the United Kingdom was that a negative income tax replace virtually all of the benefits. It included a "child credit," which in large part guided the reform of children's allowances.

The integration of income tax and family benefits represents a step in the direction of rationalizing the various government programs. Several other countries have also taken this approach, setting a trend for future developments in family policy.

analysis or are included in the much larger number of wage and salary workers. In the former case, nothing is learned about the retirement decisions of the selfemployed. In the latter, any unique relationships are swamped by the rest of the sample. In this research, the retirement patterns of the self-employed are concentrated on specifically and the focus is on how they differ from the rest of the population.

The second reason for studying the self-employed is that they work in an institutional environment substantially different from that of wage and salary workers. The self-employed generally are not affected by compulsory retirement and are much less likely to be covered by pension plans. In addition, they are less constrained by institutional rules concerning vacation time and length of the work week and should be better able to vary the amount and kind of labor supplied.

The lack of compulsory retirement provisions and the relative flexibility with respect to hours suggest that the self-employed may more easily be able to withdraw gradually from the labor force than their wage and salary counterparts. Given the psychological and financial trauma that often accompanies sudden and complete retirement, the option to withdraw slowly may be an important advantage of self-employed status. These advantages may induce 'career self-employed individuals to remain in the labor force longer than those in wage and salary jobs. They also may induce some of the wage and salary workers to shift to the self-employed sector in later years.

The sample for this research, drawn from the RHS, consists of 836 white married men aged 58-63 in 1969.

Each man was either self-employed in 1969 or out of the labor force but self-employed on his last job. The wage and salary sample, used for comparison purposes, includes 4,845 white married men. In both subsamples, workers in agricultural occupations and those who were bedridden or housebound have been excluded.

The research has two parts. In the first, the results of cross-sectional work (tables, regressions, and logit analysis) are presented, utilizing the 1969 wave only. The retirement patterns of self-employed and wage and salary workers are compared and contrasted. In the second part, the longitudinal nature of the data is used to investigate the correlates of labor-force and retirement transitions among the self-employed over a 2-year interval (1969–71).

Two dimensions are used to describe retirement status. The first is a dichotomous variable denoting labor-force participation status-the individual is either in (1) or out (0) of the labor force. This variable has the advantage of objectivity but the disadvantage of missing the partial retirement (or gradual labor-force withdrawal) dimension that it is suspected may be important. The second proxy is a three-way subjective description of retirement status that is derived from a question in which the respondent describes himself as either completely retired, partly retired, or not retired. Though this variable has the potential of capturing gradual withdrawal, it suffers from the fact that it is a totally subjective response. It is encouraging that it correlates very well with more objective measures, such as labor-force status and annual hours of work.

Cross-sectional analysis of the data reveals differences between the labor-supply and retirement patterns of older self-employed persons and wage and salary workers. The self-employed are less likely than wage and salary workers to be out of the labor force (9.7 percent, compared with 12.9 percent). This difference is particularly evident for those respondents old enough to be eligible for social security benefits. Among those who are working, the estimated distribution of annual hours worked is much higher for the self-employed, with more than 40 percent reporting 2,500 hours or more per year. Among those not retired, the proportion is 50 percent. Multivariate analysis on labor-force status (0,1) suggests that health and current eligibility for social security benefits are the most significant determinants for the self-employed, and that the wage rate, asset income, and perhaps pension eligibility status (via an interaction effect with social security) are also important. Health appears important both as an explanatory variable and as an interactive term. When the sample was disaggregated by health-limitation status, it was found that those with any health limitation are more responsive to the other explanatory variables. This finding is consistent with previous research on the wage and salary population.

Similar conclusions are reached when equations explaining subjective retirement status are used. Health and current social security status are important, as are asset income and the presence of dependents. The major new result (which appears in tables, regressions, and logit results) is the influence of pension eligibility, which appears to induce movement from the "not retired" status to partial retirement. This action may be the true labor supply effect (that pension income permits a reduction of one's labor supply) or merely a labeling effect (that those receiving a pension are more likely to call themselves "partly retired" regardless of their level of labor supply).

In the longitudinal section, matrices are used to describe the transitions possible between 1969 and 1971. When the dichotomous labor-force participation variable is used, the matrix is 2 x 2; with subjectives retirement status, it is 3 x 3. In this analysis, the sample is first disaggregated by 1969 (labor-force or retirement) status, and only changes in that status are analyzed. The explanatory power of these equations is generally less than the cross-sectional equations, since effects prior to 1969 are clouded by the initial disaggregation.

The explanatory variables used to predict these individual transitions are the same as the base year (1969) variables used in the cross-sectional work, with the addition of certain variables indicating change of status -that is, health or social security benefit statusduring the transition interval. The focus is on the transitions from "in" to "out" of the labor force, and on the transition from "not retired" to "partly retired" or "completely retired" status. In general, the change variables (deterioration of health and new eligibility for social security benefits) were more important than the base year terms, suggesting that the effect of these variables takes place quickly. The large effect of pensions on the probability of partial retirement did not show up in the longitudinal results, perhaps because those eligible for a pension were already partly retired by 1969. Therefore, the effect was not included in the not retired to partly retired equation.

Much of the cross-sectional and longitudinal analysis was done with regression, a simple and inexpensive multivariate tool, but one which is not particularly well suited to dichotomous dependent variables. For this reason, the final equations were always reestimated with a nonlinear technique (logit), which automatically constrains the predicted probabilities to the (0,1) range. In general, the signs and significance levels of the coefficients were the same, and the predicted probabilities for certain hypothetical individuals were very close.

In summary, the labor-force and retirement patterns of the self-employed are influenced by many of the (Continued on page 47)

Table M-27.—Supplemental security income for the aged, blind, and disabled: Number of persons receiving Stateadministered State supplementation only and total and average amount, by reason for eligibility and State, April 1980 <sup>1</sup>

	Number of persons				Total amount (in thousands)				Average payment			
State	Total	Aged	Blind	Disabled	Total	Aged	Blind	Disabled	Total	Aged	Blind	Disabled
Total	<sup>2</sup> 53,468	31,946	841	20,215	2 \$5,021	\$2,591	\$110	\$2,273	2 \$93.91	\$81.11	\$127.98	\$112.43
Alabama	6,879	5,165	54	1,660	417	310	3	104	60.59	59.96	63.35	62.46
Alaska	260	128	2	130	21	10	(3)	10	80.29	79.22	(4)	79.92
Arizona	245	196	2	47	26	24	(3)	2	107.27	124.05	(4)	38.89
Colorado	9,428	8,058	9	1,361	1,109	891	1	217	117.59	110.55	142.56	159.09
Connecticut	8,162	2,856	43	5,263	1,093	356	4	732	133.87	124.72	100.23	139.11
Florida <sup>5</sup>												
Idaho	722	416	7	299	47	25	(3)	21	65.28	60.84	(4)	71.43
Illinois	6,474	1,249	46	5,179	788	99	4	685	121.71	78.98	92.04	132.28
Kentucky	1,798	1.398	7	393	217	168	1	49	120.81	119.92	136.00	123.73
Maryland	2 466	(6)	(6)	(6)	<sup>2</sup> 50	(6)	(6)	(6)	<sup>2</sup> 106.31	(6)	(6)	(6)
Minnesota 7	1,490	502	30	958	189	62	4	114	127.03	123.69	121.13	128.96
Missouri	7,520	5,700	479	1,341	358	214	77	67	47.64	37.59	160.92	49.88
Nebraska	1,514	639	17	858	106	27	1	79	70.22	41.53	67.24	91.65
New Mexico	1			1	(3)			(3)	(4)			(4)
North Carolina	2,190	1,473	36	681	289	196	5	88	131.81	132.85	138.64	129.19
North Dakota	2	1		1	(3)	(3)		(3)	(4)	(4)		(4)
Oklahoma	3,880	2,755	14	1,111	217	157	1	60	55.97	56.92	58.36	53.59
Oregon		1,410	95	932	94	53	5	37	38.75	37.62	50.67	39.24
South Carolina 5	· ·	,,										
Utah <sup>5</sup>												
West Virginia 5												
Wyoming <sup>5</sup>												

<sup>1</sup> Data reported to the Social Security Administration by individual States. All data subject to revision. Excludes data for mandatory and optional programs in New Hampshire, South Dakota, and Virginia; for optional programs in North Dakota.

<sup>2</sup> Includes data not distributed by reason for eligibility.

<sup>3</sup> Less than \$500.

<sup>4</sup> Not computed on base of less than \$500.

<sup>5</sup> No persons receiving State supplementation only.

<sup>6</sup> Data not available.

7 Represents data for January 1980; data not available for April.

## Research Grants (Continued from page 25)

same factors that are important in the wage and salary sector—health, eligibility for retirement benefits, the individual's market wage rate, asset income, and the presence of dependents. The retirement patterns differ primarily in the extent of partial retirement—a phenomenon that is much more common among the self-employed than among wage and salary workers. It is tempting to extrapolate from the experience of the relatively unconstrained self-employed to the preferences of wage and salary workers. If one were to do so, one would conclude that more of the latter would prefer a period of partial retirement. Although such extrapolations are dangerous, since the two groups may have very different preferences, it is suspected that older workers have an unmet demand for more flexible employment opportunities and that the retirement process would be more enjoyable and less traumatic if gradual rather than abrupt labor-market withdrawal were the norm.

Copies of the final report of this completed research project are in the Social Security Administration Library, 571 Altmeyer Building, 6401 Security Blvd., Baltimore, Md. 21235, and in the Library of the Office of Research and Statistics, Room 320-0, Universal North Building, 1875 Connecticut Ave., N. W., Washington, D. C. 20009. Copies of the report may be obtained through interlibrary loan. (Also in these libraries are copies of more than 100 other project reports that have been completed since 1963. Earlier reports were listed in the May 1974 and February 1980 issues of the **Bulletin**.)

Cooperative research grants program: Final reports available as of July 1, 1980

Number	Title	Grantee and project director
6094		Ohio State University, Saad Nagi
6103		University of Vermont, Gene Laber
7811	The Anti-Poverty Effectiveness of Income Transfer Programs	University of Utah, Timothy Smeeding
0151	A Study of Security, Health and Social Support Systems and Adjustments of Residents in	
	Selected Congregate Living Setting	University of Missouri-Kansas, Warren A. Peterson
0335	Economic Analysis of Health Maintenance Organizations	Stanford University Medical School, Harold Luft
)544	The Effect of Social Security Benefits on Labor Supply	Columbia University, Majorie Honig
)607	The Optimal and the Majority Equilibrium Levels of Social Insurance	Purdue University, Sheng Cheng Hu
0612	Retirement Patterns of Self-Employed Workers	Boston College, Joseph Quinn