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The relative economic status of the aged

They were gone. They had passed out of his life, and he faced the last bitter hour alone. No. The snow crunched beneath a moccasin; a man stood beside him; upon his head a hand rested gently. His son was good to do this thing. He remembered other old men whose sons had not waited after the tribe.

The Law of Life, Jack London[1]

A family must be whole, faithfully keeping the descent line by having sons to feed the old and the dead, who in turn look after the family.

The Woman Warrior, Maxine Hong Kingston[2]

Among animals the human being is unique in living past his usefulness, and different societies have devised widely different means for dealing with their superannuated members. At one extreme have been the nomadic tribes, who abandoned the old to freeze or starve when they could no longer keep up with the rest of the group. Kookoosh, in the Jack London story, feels that his son has done his filial duty by saying a last goodbye and leaving a pile of firewood to stave off the wolves and cold for a time. At the other extreme were the Chinese families who, at least until recently, put the needs of their most ancient members first. It is hard to say where, on this continuum between abandonment and ancestor worship, the United States stands in its treatment of its older citizens, but researchers at the Institute for Research on Poverty can say this much about their status: the aged are now, on average, no more likely to be poor than the nonaged. This despite the fact that fewer of them work after age 65, despite the fact that medical costs have risen faster than any other item in the Consumer Price Index, and despite the fact that the proportion of the aged in the population has grown and is continuing to grow.

Measuring the relative well-being of the aged

Sheldon Danziger, Jacques van der Gaag, Eugene Smolensky, and Michael K. Taussig, in their paper "Implications of the Relative Economic Status of the Elderly" (see box, p. 13), have evaluated the economic status of the aged relative

to the nonaged, taking into account not only money income but a number of other factors that influence relative well-being; their durable assets, the tax laws, the size and composition of their families. The impact of these factors, discussed below, is presented in Table 1.

Money income

Census Bureau data show that the mean money income for all families and unrelated individuals in 1980 was $19,500. The mean money income of households headed by persons 65 and over was $12,226, or about 63 percent of the average. Although in terms of money income, the aged fall far short of the population as a whole, their status is rapidly improving. In 1966 the average money income of the aged was only 49 percent of that for all families. Between 1966 and 1981 the decline in poverty of this group—as measured by their money income—was greater than for all persons, and much greater than that of households headed by women. But money income alone does not accurately reflect economic status.

Durable assets

The aged are more likely than their younger counterparts to own their own homes and other durables. Using data from the Consumer Expenditure Survey of the Department of Labor for 1973, and combining them with data from the Inventory of Consumer Durables, Danziger, van der Gaag, Smolensky, and Taussig estimated the service flows from durables (that is, the contribution the use of a durable made to a family's income in the course of the year—the amount, for example, not spent for rent by a family owning their home). These amounts were added to the reported money incomes of the two groups (aged and nonaged) for 1973, with the result that the mean income of those 65 and older for that year was raised from 48.6 percent of the income of the nonelderly to 52.2 percent.

Tax advantages

The federal personal income tax offers a number of advantages for persons 65 and over. There is no tax at all on Social Security and Railroad Retirement pensions. Personal exemptions for the aged are doubled ($2000 rather than the standard $1000), and a special retirement tax credit reduces the tax of the aged whose total incomes are below a given level. State income and local property taxes also offer advantages to the old. Adjusting for taxes paid increases the mean income of the elderly to 56.2 percent of the mean for the nonelderly.

Household size and composition

Household size varies with age. Households in the prime age group (35–54) contain twice as many persons on average as households headed by those 65 and older. Obviously a household consisting of four persons requires more income than a household of two to achieve the same living standard. Furthermore, income required to maintain a given standard of living varies with household composition. Van der Gaag and Smolensky used consumption data to construct constant utility equivalence scales that equate the well-being of households of differing composition and size.[3] They found that aged couples and women need less money to obtain the same standard of living as a household headed by a nonaged man. Why should a man require more money than a woman, or a young couple more than an elderly couple, at an equivalent standard of living? Surely any difference has to do with the austerity and efficiency of those who manage on less, rather than a difference in *needs*. But the difference does exist in the data. Though one can assume that the difference between men and women will gradually disappear as their domestic and work lives become more similar, that is not the case for the difference between the aged and nonaged. As long as we can expect economic growth, the difference between the aged and nonaged will persist, because the aged will have adapted to smaller incomes.

Danziger, van der Gaag, Smolensky, and Taussig found that using the equivalence scales to account for differences in household size and composition raises the relative well-being of the aged from 56.2 percent of that of the rest of society to 85.3 percent. This is the largest single adjustment to the relative well-being of the aged.

Table 1

Relative Economic Status of the Elderly, 1973: Adjustments to Money Income

Income Concept/Weighting Concept for Recipient Units	Relative Economic Status of Elderly[a] (%)	Change in Relative Status Due to Adjustment (% of Total Change)
Household Weights		
1. Reported money income	48.6%	— —
2. Adjusted for durables	52.2	8.7%
3. Less direct taxes	56.2	9.7
4. Adjusted for household size and composition	85.3	70.3
Person Weights		
5. Each person counted once instead of each household	88.0	6.5
6. Adjusted for classification of persons by their own age	90.0	4.8
7. Total	90.0	100.0

Source: Danziger, van der Gaag, Smolensky, and Taussig, "Implications of the Relative Economic Status of the Elderly for Transfer Policy." Paper prepared for Brookings Institution Conference on Retirement and Aging.

[a]Defined as the mean value of the income concept for the elderly divided by the mean for the nonelderly.

Note: The adjustments are cumulative. For example, the number in line 4 is based on adjusting reported cash income of households for durables, after subtracting taxes paid and dividing by the equivalence scales.

Household income weighted by number of persons in the household

The calculations up to this point have used households as the unit of observation. Thus each household is counted once, regardless of whether it contains one person or ten. To address this problem, they adopt an approach that gives equal weight to each person. This weighting procedure can be applied to any income concept. The authors apply it to income divided by the equivalence scale. This procedure further raises the economic status of the older population, from 85.3 percent of the nonaged to 88.0 percent.

Classification by age of person instead of age of head

Thirteen percent of the aged live in households without any aged members. At the same time, 2.75 percent of the nonaged live in households headed by the aged. When the assumption is maintained that all persons in a household share equally in total household income, the reclassification of persons according to their own age rather than the age of the household head raises the relative well-being of the aged an additional 2 percentage points.

Further adjustments

These adjustments to 1973 data raise the relative income of the aged to 90 percent of that of the rest of the population. Although more recent data for replicating these adjustments are not available, we can infer how this ratio may have changed in the past ten years. In 1973 Social Security benefits were not yet indexed to the cost of living, and the Supplemental Security Income (SSI) program had not yet gone into effect. These two laws—but chiefly the indexing of Social Security—are responsible for most of the increase in the money income of the elderly since 1973, from .53 of that of all families to .64 in 1981. Yet even these additions to cash programs do not give the whole picture. The aged also receive a disproportionate share of certain government in-kind transfers: Medicare, Medicaid, and Food Stamps. The aged have been found to understate the size of their money incomes in response to Census surveys more than do the rest of society. And there are many community subsidies and services for those 65 and over, such as Independent Living, Meals on Wheels, Visiting Nurses, day care programs, and reductions in bus fares and ticket prices. (The number of community services for the elderly keeps growing in an attempt to forestall the much more expensive alternative—nursing homes.) Thus it can be safely said that today the aged are *at least* as well off economically as the rest of us.

Savings of the aged

Further confirmation of the relative well-being of the aged has been found in evidence that casts doubt on the Life-Cycle Hypothesis of Consumption. It has been an assumption of consumption theory that people save during their working years and dissave during retirement in order to maintain, more or less, their previous standard of living. However, in examining microdata on the incomes and consumption levels of the old relative to the not-yet-old, Danziger and his colleagues found that "the elderly not only do not dissave to finance their consumption during retirement, they spend less on consumption goods and services (save significantly more) than the nonelderly at all levels of income. Moreover, the oldest of the elderly save the most at given levels of income."[4] This finding confirms earlier studies by Institute researchers.[5]

A number of hypotheses have been put forward to explain this finding, so at odds with the expectations of some theorists. It may be that those households of the aged that turn up in studies are the unrepresentative survivors of a much larger group, those who failed to save, or failed to save enough, and therefore no longer maintain separate households, living either with relatives or in nursing homes. Another suggested explanation is that the aged are more efficient consumers than other groups: because they have the time, they can shop more carefully. A somewhat contradictory explanation is that they haven't the mobility and health required either to purchase or to enjoy consumer goods and services. Or it may not be the lack of mobility and health that keeps them from purchasing. They may have detached themselves from the material world, such that their wants are few. Or their saving behavior may be the result of a deeply felt insecurity: They have, after all,

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Written by E. Uhr and Elizabeth Evanson; edited by E. Uhr.

Postdoctoral Funding Opportunity

Funds were obligated to the Institute for Research on Poverty in the Omnibus Funding Bill passed by Congress in December 1982. As a result, IRP in association with the Office of the Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services is sponsoring a Small Grants for Visitors Program for social scientists doing empirical research on a variety of poverty-related topics, including trends in economic status and the efficiency and equity effects of income transfer policies for the nonaged. The program will run from July 1, 1983, to December 31, 1984. Further information can be obtained by writing to Elizabeth Evanson, Institute for Research on Poverty, 3412 Social Science Building, University of Wisconsin, Madison, WI 53706.

watched their savings eroded by inflation, they cannot predict how long they will live, and most of them do not relish the prospect of becoming burdens on their families or on the state. Aged couples have an additional anxiety that, should one of them require more care than can be provided by an aged spouse at home, and therefore have to be put in a nursing home, the other spouse will quickly be reduced to penury. (Nursing home costs are very high and long-term stays are not covered by Medicare. Medicaid will cover bills only for those with very low incomes and virtually no assets.) But whatever the explanation of why the aged continue to save—whether because they feel they have more than they need, or because they are insecure—the fact remains that if they didn't have the money to save, they would not be savers.

Transfers to the aged

To a great extent, the aged owe their relative well-being to government transfers. Based on income measures, their relative mean economic status is raised by about 50 percent by transfers, and transfers reduce inequality among them by 30 percent.[6] The transfers that most affect the well-being of the aged are Social Security, Medicare, Medicaid, Supplemental Security Income, and Food Stamps. Each is briefly discussed below.

Social Security

> In 1935 there was no OASI. Income support for the aged was provided through their own earnings or those of their families, savings for retirement, limited private and public employee pensions, state-administered old-age assistance programs, and private charities. In that year of deep depression and high unemployment the call for political action to provide an adequate income maintenance program for the aged was overwhelming. . . . The final outcome was a compulsory, contributory insurance program containing both insurance and redistributive features.[7]

Social Security was enormously popular and grew rapidly. Originally designed to cover only workers who paid into the system, it was expanded in 1939 to pay benefits to dependents and survivors of these workers. Benefits were raised eight times between 1950 and 1971, as the program expanded, bringing more and more workers in until it now covers 88.5 percent of the work force. In 1972 benefits were increased 20 percent and the automatic cost of living adjustment (COLA) was instituted, tying benefits to the Consumer Price Index beginning in 1974. Social Security (including Medicare) is the largest single item in the government budget and comprises 40 percent of all government spending on social welfare.

In large part, Social Security was popular because all participants received more in benefits than they paid in payroll taxes or could have earned by investing the amount of the taxes in the private market. A major reason for the discrepancy between benefits and contributions was that there were many more people paying into the system than drawing benefits. According to Richard Burkhauser and Jennifer Warlick:

> In 1972 retired individuals and couples received approximately $27.1 billion in OASI benefits. Had their benefits equalled the fair annuity value of their lifetime contributions this sum would have been reduced to $7.4 billion. The remaining $19.7 billion, or 73 percent of reported benefits, represents a large intergenerational transfer from workers to the retired population. . . . The tradition of large intergenerational transfers helps explain the strong support of the system by previous generations of taxpayers. Similarly, the fact that the relative size of the transfers is diminishing may explain the growing lack of confidence in and discontent with OASI voiced by current taxpayers.[8]

A maturing system, longer life spans, the fall in the birthrate, and shorter work lives require that we either reduce benefits in the Social Security system or be willing to spend a much higher proportion of the GNP on the aged than we have in the past. In 1960 the equivalent of 2 percent of the GNP was distributed to the retired via Social Security; in 1970 it was nearly 4 percent; by 1980 it was 6 percent.[9]

Medicare

Medicare was enacted in 1965 to provide hospital insurance and supplementary medical insurance to all aged persons entitled to Social Security benefits, as well as to some other groups, such as the disabled. Obviously everyone receiving Social Security in 1965 received windfall benefits from this program, since they had not contributed to it through payroll taxes. Participants do pay a certain amount in deductibles, coinsurance, and premiums. Over 26 million people

(continued on p. 11)

Disability benefits and labor supply

Since becoming part of the Social Security package in 1954, Disability Insurance has generated many questions for policymakers and economists. The most pressing problem—how to contain the growth of the program—now appears to be partly solved. Although DI grew dramatically in both caseloads and costs from 1966 to 1975, subsequent legislation served to decrease applications, hold down average benefits, and reduce the replacement rates (the rates at which benefits replace income that would otherwise have been earned). The growth of SSDI has moderated since 1975, and the number of disabled workers receiving benefits has actually dropped in each year since 1978. Indeed, the number of persons receiving SSDI benefits—both workers and their dependents—fell by more than 400,000 from 1978 to 1981. In 1981, the number of new awards per 100,000 insured workers was 357, the lowest in the history of the SSDI program. This may have resulted from a controversial government crackdown on alleged abuse in the program which eliminated several thousand persons from the rolls. Stricter application of the rules for determining disability eligibility also retarded growth.

While the number of participants has shrunk, the cost of SSDI has continued to rise rapidly for the same two reasons that all Social Security costs have gone up: benefits are tied to the Consumer Price Index, and the earnings base on which benefits are calculated has been expanded. SSDI cash benefits more than doubled between 1975 and 1981, rising from $8.4 billion to $17.2 billion.[1]

In any attempt to accurately measure the costs of the program and assess how to reduce them, a further question must be posed: What is the effect of generous benefits on the labor supply? IRP affiliates Robert H. Haveman and Barbara L. Wolfe have studied this question (see box, p. 7) with results that differ markedly from some other studies of the labor supply effects of disability programs.

Labor supply effects of transfer programs

From 1959 to 1980, the labor force participation rate of men aged 45–54 fell from 96 percent to 91.2 percent, and for men aged 55–64 it fell from 87.4 percent to 72.3 percent.[2] Some research results have suggested that the increased generosity of SSDI benefits bears primary responsibility for this decline in work effort.[3] Is SSDI being used by older workers as an early retirement program? In other words, have high benefits brought persons for whom the program was not intended onto the SSDI rolls, thereby inflating total program costs?

Recent studies of the labor supply response to income transfer programs have attempted to measure the extent to which changes in the size of benefits and the benefit reduction rate influence work effort. A review based on these studies estimates that in 1981, the $300 billion spent on the major U.S. government transfer programs, taken together, resulted in a reduced labor supply of about 5 percent.[4] Of this reduction, 1.2 percent was attributed to income transfers in the SSDI program. If one believes this estimate, it means that the $20 billion in the program (6 percent of total income transfers) led to 25 percent of the total labor supply reduction. Indeed, this estimate implies that the work reduction effects of the disability portion of OASDI are equal in size to the effects of OASI, which is a program of $117 billion. Does the Disability Insurance program have such a disproportionate effect? Whether it does or not depends on the studies used for the estimate.

Labor supply effects of disability transfers

There have been few studies of the labor supply effects of disability-related transfers from the various programs that furnish them (SSDI, SSI, Veterans' Compensation, Workers' Compensation, Black Lung). Most of these studies have concentrated on the SSDI program alone. The four studies that directly analyze how the choice between work and disability benefit status is affected by the level of benefits are those of Donald Parsons, Jonathan Leonard, Frederic Slade, and Haveman and Wolfe. The results of these studies are summarized in Table 1.

The Parsons study

The Parsons study[5] is an explicit work-status (labor force participation) choice model in which the individual rationally compares the expected values of being in and being out of the labor force. The value of being in the labor force clearly depends on one's expected wage. The expected value of disability benefits and other transfers determines the value of being a nonparticipant (i.e., not working). Because "true" health status determines the probability of receiving disability benefits, it too is a determinant of the labor force participation decision.

Table 1

Labor Supply Analyses of Disability Transfers

Study	Parsons (1980a, 1980b)	Leonard (1979)	Slade (1982)	Haveman-Wolfe (1982)
Population analyzed	Men, 48-62(a) or 45-59(b)	Men, 45-54	Men, 58-63	Men, 45-62
Data used	NLS[a], 1969(a) or 1966(b)	1972 Social Security Survey of Health and Work Characteristics merged with benefit and earnings records	1964 Retirement History Survey	1978 Michigan Panel Study of Income Dynamics, plus information from prior years
Dependent variable	Participation in work force	DI recipiency	Participation in work force	Participation in work force
Program variables	Potential DI/wage	Expected DI benefits	Potential monthly DI benefits	Expected total income, if a disability transfer recipient
Results	Elasticity of participation with respect to replacement rate = −.09 (1966) or −0.03 (1969)	Elasticity of participation with respect to expected benefits = −0.52	Elasticity of participation with respect to expected benefits = −.023	Elasticity of participation with respect to expected income as a disability transfer recipient = −.0003 to −.0005

Source: Robert H. Haveman, Richard Burkhauser, and Victor Halberstadt, *Public Policy toward Disabled Workers: A Cross-National Analysis of Economic Impacts* (Ithaca: Cornell University Press, forthcoming), Chapter 5, Table 3.
Note: All are cross-section studies.
[a]NLS = National Longitudinal Survey.

Using data for the late 1960s from the National Longitudinal Survey of men aged 45-59, Parsons estimated the extent to which the choice of whether or not to work was affected by the magnitude of the replacement rate after controlling for health status, age, welfare benefits available in the individual's state, and the unemployment experience of the individual.

The results were consistent with the model: the SSDI replacement rate, the generosity of welfare benefits, and prior unemployment experience were statistically significant, as was the mortality variable. Hence poor health as well as the size of probable benefits served to discourage work effort.

The Leonard study

The issue addressed by Leonard[6] involved the reverse of the question asked by Parsons: Do increases in SSDI benefits increase the probability that any given worker will become an SSDI beneficiary (or, equivalently, will leave the labor force)? To answer the question, Leonard fit a statistical model to data on men aged 45-54 in which the probability of becoming an SSDI beneficiary was a function of expected SSDI benefits, expected labor income proxied by a set of individual characteristics, and a set of background characteristics representing differences in taste (personal preference).

In estimating the probability of *being eligible* for SSDI benefits conditional on being an applicant, Leonard found that the health indicators, as well as race, were significant determinants. In estimating the probability of *being a recipient* if eligible, Leonard found that expected SSDI benefits were significantly and positively related to the probability of recipiency and the expected wage was significantly and negatively related to it. According to Leonard, a $180 increase in annual SSDI benefits would increase the proportion of beneficiaries in the entire age cohort by one percentage point.

Both Parsons and Leonard therefore found large significant labor market responses to SSDI benefits. The two other recent studies, completed since the review article mentioned earlier (Danziger, Haveman, and Plotnick, see box), find a much smaller response.

The Slade study

Frederic Slade used a sample of men aged 58-63 from the 1969 Retirement History Survey (RHS) to estimate a labor force participation choice equation.[7] The underlying model again viewed the individual as choosing between income earned in the workplace and income from the SSDI program. The expected income from labor force participation was measured by the individual's wage rate in 1968, while that associated with disability transfers was measured by potential monthly benefits from SSDI, imputed from the individual's earnings record.

Slade found a much smaller response to potential Disability Insurance benefits than did Parsons or Leonard. His estimated elasticity for all men of the responsiveness of labor force participation to increases in benefits, calculated at the mean, was -.023; for married men alone, it was slightly higher, -.026. Moreover, neither estimate was statistically significant at the 5 percent level.

The Haveman and Wolfe study

Haveman and Wolfe have also analyzed the work choice of older men, again using a qualitative choice model.[8] The income flow expected from the labor market and from disability benefits was estimated as a function of each individual's observable characteristics. The model assumes that the individual rationally compares these amounts and selects the option which maximizes expected income. As distinct from the other studies, the income flows were defined as the *total income flows* associated with each option, rather than transfers from only one program, such as SSDI.

A complex two-stage procedure was followed in estimating these two income flows for each individual. This step was required because individuals were observed in only one status, either working or collecting disability benefits, and the income flow in the other status had to be estimated from a group of similar individuals who had, to some extent, self-selected themselves into that category.

The model was estimated for men aged 45–62 in 1978, using data from the Michigan Panel Study of Income Dynamics. The panel character of the data allowed construction of variables related to past earnings, occupational mobility, and the duration of disability status. The disability measures were designed to capture both the duration and intensity of impairment.

The results from this estimation indicated a small, but statistically significant, response of older men to the incentives implicit in disability transfer programs. The elasticity of response was in the -.0003 to -.0005 range, and simulation of the response to the growth in disability benefits using these elasticities indicated that no more than about 20 percent of the observed decrease in labor force participation rates of older men from 1968 to 1978 could be attributed to the growth in the generosity of disability transfers.

Comparing the studies

There is evidence of a statistically significant disincentive effect of disability benefits on the work-status choice—but the effect may be very small (Slade, Haveman and Wolfe) or rather large (Parsons, Leonard). Part of the difference between the Haveman-Wolfe estimate and all the others is that benefits included are not just primary benefits to an individual, but rather the entire income of the household of the individual who is a disability transfer recipient. As argued in their paper, this appears to be the appropriate concept of expected income in the disability-work option. These results suggest that the elasticities of the other studies overestimate the effect of SSDI, because the use of this one program as the only benefit variable makes it a proxy for all disability-related programs.

Selected papers

Robert H. Haveman and Barbara L. Wolfe, "Disability Transfers and Early Retirement: A Causal Relationship?" Institute for Research on Poverty Discussion Paper no. 723-83.

Robert H. Haveman and Barbara L. Wolfe, "Disability Transfers and the Work Effort Response of Older Males: A Reconciliation." NBER Conference on Incentives of Government Spending, Cambridge, Mass., November 1982.

Robert H. Haveman and Barbara L. Wolfe, "The Decline in Male Labor Force Participation: A Comment." *Journal of Political Economy,* forthcoming.

Barbara L. Wolfe, "The Demand for Disability Transfers: Recent Research and Research Needs." Paper presented at the Expert Group Meeting in Disability Research, International Social Security Association, November 1982. (*Proceedings* forthcoming, JAI Press.)

Related reading

Richard V. Burkhauser and Robert H. Haveman, *Disability and Work: The Economics of American Policy* (Baltimore: The Johns Hopkins University Press, 1982).

Sheldon Danziger, Robert H. Haveman, and Robert Plotnick, "How Income Transfer Programs Affect Work, Savings, and the Income Distribution: A Critical Review." *Journal of Economic Literature, 19* (1981), 975–1028. (Institute for Research on Poverty Reprint no. 429.)

Disability and early retirement

Another way of looking at the relationship between disability programs and labor supply is to measure the impact of a change in disability benefits on early retirement. Haveman

Table 2

Simulated Effect of Changes in Social Security Disability Transfer Generosity on the Work Effort Choice

Percentage of Current Predicted Disability Benefits	Labor Force Participation Rate	Disability Recipiency Rate
80%	92.41%	7.39%
100	91.37	8.63
120	90.73	9.27

Source: Haveman and Wolfe, "Disability Transfers and Early Retirement: A Causal Relationship?" Table 5.

and Wolfe simulated the effect of a 20 percent change (up or down) in expected SSDI benefits, including those for dependents, in the transfer option of each individual in their sample. The results, reported in Table 2, show that a 20 percent change in expected disability income would elicit a change in the labor force participation rate of .8 to .94 percentage points.

This response can be placed in historical perspective. From 1968 to 1978, while labor force participation rates of men aged 55–64 decreased by about 10.5 percentage points, the average real SSDI benefit per recipient increased 43 percent.[9] The simulation estimates imply that this increase in benefit generosity would induce a decrease in the labor force participation rate of, at most, 1.81 percentage points. Much of the observed decrease must therefore be attributed to factors other than the increased generosity of disability benefits.

Factors affecting labor supply

It appears that the increasing relative generosity and/or leniency of disability income transfer programs does have a statistically significant (though quantitatively small) effect on the work-effort choices of older workers. However, this is but one of many factors affecting the labor supply. During the period in which older workers have been dropping out of the labor force, women have been entering the labor market in unprecedented numbers. The pressure on family heads to continue working has decreased as their spouses have increased their contributions to household income. Social security benefits have been made ever more generous and available at age 62, freeing savings for earlier retirement. Public attitudes have become far more accepting of retirement prior to age 65. Furthermore, though labor demand rose rapidly, unemployment remained high.

Haveman and Wolfe conclude that reducing disability benefits and further reducing access to them is unlikely to have marked success in increasing labor supply and total output, in part because other factors play a yet unmeasured role in reducing labor supply and in part because those who choose disability benefits over work tend to be older, disabled men who earn low wages if indeed they can find employment at all. It can be expected therefore that any retrenchment in the disability programs will generate hardship without a substantial gain in efficiency. ■

[1]Statistics are taken from M. E. Lando, A. V. Farley, and M. A. Brown, "Recent Trends in the Social Security Insurance Program," *Social Security Bulletin, 45* (August 1982), 3–14.

[2] *Employment and Training Report of the President* (Washington, D.C.: U.S. Government Printing Office, 1981), p. 126, Table A-5.

[3]Donald Parsons, "The Decline in Male Labor Force Participation," *Journal of Political Economy, 88* (1980), 117–135; "Racial Trends in Male Labor Force Participation," *American Economic Review, 70* (1980), 911–920.

[4]S. Danziger, R. Haveman, and R. Plotnick, "How Income Transfer Programs Affect Work, Savings, and the Income Distribution: A Critical Review" (see box), Table 7.

[5]Parsons, "The Decline in Male Labor Force Participation."

[6]Jonathan Leonard, "The Social Security Disability Program and Labor Force Participation," National Bureau of Economic Research Working Paper no. 392, Cambridge, Mass., 1979.

[7]F. P. Slade, "Labor Supply under Disability Insurance," National Bureau of Economic Research Working Paper no. 860, Cambridge, Mass., 1982.

[8]R. H. Haveman and B. L. Wolfe, "Disability Transfers and Early Retirement: A Causal Relationship?" (see box).

[9]*Employment and Training Report of the President,* and *Statistical Abstract of the United States* (Washington, D.C.: Department of Commerce, Bureau of the Census, 1979).

Valuing education and affording college: Two studies

Recent research by Institute affiliates on the role of education in economic growth has produced two works which run counter to current thought. One study challenges standard measures of the value of schooling and concludes on the optimistic note that its full value has been underrated. The other study analyzes data on college enrollment over the past decade and concludes, on a pessimistic note, that federal aid programs have not reached their goal of expanding the educational opportunities of poorer youth.

On measuring the value of education

An earlier article in *Focus* described the educational revolution that has taken place in the United States during the twentieth century—that the people born in the first five years of this century achieved a median of 8.6 grades of schooling while those born at mid-century reached a median of 12.8 grades. In 1910, little more than half (62.5 percent) of Americans aged 5–19 were in school; by 1974 that figure had risen to 89.4 percent.[1] In describing the sources of this educational growth, the article identified one of the causes of change in educational attainment: "the expected economic advantage to having more education."

In the past, the "expected economic advantage" of increased schooling has been calculated by economists in terms of increased earnings of an individual over the lifetime. Are there not, however, other benefits that accrue from education? Benefits that do not pass through a market, but whose value can nonetheless be measured? In a recent paper, Institute affiliates Robert H. Haveman and Barbara L. Wolfe (see box, p. 10) review past work, then perform their own analysis of marketed and nonmarketed effects of education. By "marketed" they mean that a price can be put on the effect; "nonmarketed" means that the value is not directly reflected in the market.

Their work has particular importance because recent studies have pointed to declining rates of return to additional education as measured by increased lifetime labor market earnings. For example, considerable publicity accompanied Richard Freeman's book, *The Overeducated American,* which noted that in the early 1970s, "for the first time in recent history, the economic value of an investment in college education fell." Freeman forecast that "overall, the period of severe 'overeducation' is likely to last for about a decade," and even after that, "in contrast to the past, higher education will be a 'marginal' investment."[2] Declining rates of return mean that a current student is receiving less profit from investment in higher education than in the past, and would perhaps be better advised to enter the job market and use the funds that would have gone for tuition for other investments.

Haveman and Wolfe argue that schooling generates other effects that have value for the individual as well as for society and which are not registered in earnings differences. "A full accounting must consider all of education's effects, positive and negative, and not simply those recorded in a single market." The authors have reviewed the literature of the last two decades and have compiled a catalogue of twenty different types of educational effects—private and public, marketed and nonmarketed.

Among the private effects (marketed and unmarketed), they list the increased fringe benefits and better working conditions that may be enjoyed by those with higher education. Studies which include these effects show rates of return that are 10 to 40 percent greater than estimates based solely on earnings differences. Schooling also induces changes in the value of leisure—i.e., the quality of leisure experienced. "Child quality" is another element of well-being that is affected by education: parents' educational levels are positively and significantly related to their children's health, cognitive development, education, occupational status, and future earnings. Schooling also has positive and significant effects on the health status of the person who receives more education. And, in terms of what the economists call "choice efficiency," findings indicate that education in the form of information, facts, and ideas enables people with more education to make more efficient choices in the consumer market, labor market, and marriage market.

Among the public effects of education, Haveman and Wolfe cite some evidence that more educated persons are less likely to engage in criminal activity. Other public benefits include greater social cohesion and more technological change.

Their "catalogue of effects" demonstrates that education yields benefits to true economic well-being in ways not reflected in estimates of rates of return to labor market activities. The problem, of course, lies in finding a method to measure those benefits. Haveman and Wolfe outline a technical procedure based on neoclassical demand theory for measuring the marginal value of education in such a way as to capture both marketed and nonmarketed effects. Their estimation is based on "willingness to pay"—i.e., the amount an individual would pay for additional education in view of the dollar value of the expected effect of education.

Haveman and Wolfe apply their procedure to the numerical values reported in previous studies for several nonmarketed items in their catalogue. The results indicate that earlier standard estimates of the benefits of education capture only about three-fifths of the full value—full, in this case, meaning both marketed and nonmarketed effects.

Haveman and Wolfe point out that their analysis is restricted in several ways. First, it uses only those effects for which evidence already exists, and other effects which have not been researched may be positive or negative—perhaps, for example, there is more job-related stress among those with more education. Second, equating education with years of schooling ignores the variation that is bound to exist in the quality of schooling received: "In many cases what passes for schooling may be misplaced, misleading, and useless drudgery." Third, their calculation of dollars is a rough estimate.

Nevertheless, the basic importance of this study is striking, and it engages the public interest. The value of education goes beyond the increases in earnings which it generates; it embraces quality of life, both private and public, in multifaceted ways. And even if we discount their value figure to account for possible overestimation, their approach suggests a far greater economic return to education than other, more narrowly focused, studies have indicated.

Selected papers

W. L. Hansen, "Economic Growth and Equal Opportunity: Conflicting or Complementary Goals in Higher Education?" Institute for Research on Poverty Discussion Paper no. 706-82.

Robert H. Haveman and Barbara L. Wolfe, "Education and Economic Well-Being: The Role of Non-Market Effects." Institute for Research on Poverty Discussion Paper no. 716-82.

On financial aid to college students

Lee Hansen traces the growth of federal student financial aid programs over the 1970s, when loan and grant programs for college students expanded considerably in an effort to increase the enrollment of low-income students. To assess the effectiveness of aid programs in widening access to higher education, Hansen compares enrollment rates of dependent (not self-supporting) college-age youths, dividing them into categories of black and white, men and women; in each category he compares those from families of above-median income with those of below-median income. The data are for the early 1970s (an average for October 1971 and 1972) and the late 1970s (an average for October 1978 and 1979), and come from the Census Bureau's annual Current Population Reports.

His comparison of enrollment rates in that period shows that, overall, college enrollment went down slightly. While, as described below, the ratio of students from lower-income families to students from higher-income families did not rise, neither did enrollment rates change appreciably in absolute terms for either income class. Among the groups there was considerable variation. For whites the enrollment rate declined half a percentage point, but for blacks it rose 1.5 percentage points. The rates went down for men, but up for women.

To address the question of whether a greater proportion of low-income students enrolled at the end of the decade than at the beginning, that is, whether the aid programs served their purpose, Hansen calculates for each group the ratio of youth aged 18-24 attending college from below-median-income families to those of above-median-income families. In all cases the ratios declined, leading to the pessimistic conclusion: "Once again the trends run counter to our expectations that student financial aid would increase enrollment opportunities for lower-income youth."

Hansen also analyzes data from two surveys of high school seniors in 1972 and 1980 that contain information on whether the students planned to go to college.[3] The ratios over time of students expecting to earn a four-year college degree who came from below-median-income families rela-

tive to those from above-median-income families varied with race and sex. The ratios went down among whites and men, but went up for blacks and women. Because the first two groups are larger than the second two, the overall ratios went down by a small amount. The decline again leads to a somewhat gloomy conclusion, namely, that educational aspirations have not changed to any significant extent for youths from lower-income families.

These findings have proved controversial. Critics have pointed out that college enrollment figures for the early 1970s are inflated because young men in those years chose college rather than military service in Vietnam, whereas the figures for the late 1970s may be depressed because deteriorating economic conditions discouraged college attendance. Moreover, the author himself offers two qualifications to the pessimism of his conclusion. First, he speculates that student aid may not have been sufficiently generous to attract into college additional young people from lower-income groups. The implication that could be drawn from that point (Hansen does not explicitly do so) is that the programs deserve to be expanded, not abandoned. Second, Hansen states that perhaps, if no financial aid had been available, enrollment rates would have declined more than they did. If so, the programs could be regarded as a success in the sense that without them fewer low-income students would have attended college. Finally, since they did provide aid to low-income students, Hansen concludes that they operated as transfers rather than as human investment programs.

The two studies that have been described here share the quality of going against what many have accepted as common knowledge: that rates of return to education have gone down; that federal student aid programs have expanded post-secondary educational opportunities for young people from poorer families. And they both call for economists to refine their tools of analysis, especially their measures of the effects of education – on the country's economic growth, on personal well-being, and on the well-being of the nation. ■

[1] Robert Mare, "Sources of Educational Growth in America," *Focus*, 3:2 (Winter 1978–79), 5–6, 12.

[2] Richard Freeman, *The Overeducated American* (New York: Academic Press, 1976), pp. 184, 188.

[3] The National Longitudinal Study of the High School Class of 1972; High School and Beyond – A National Longitudinal Study of the 1980s, 1980 Baseline Study.

Economic status of the aged
continued from page 4

are now enrolled in the program, and the cost continues to mount, not only because of the increasing number of aged, but because the cost of medical care has risen so fast. In 1967 Medicare expenditures were $3 billion a year; in 1981 they were over $37 billion. According to Karen Davis, the program has greatly increased the care available to the elderly and has been a major source of relief of the burden of excessive bills.[10]

Medicaid

At the same time that Medicare was enacted for Social Security beneficiaries, Medicaid, an income-tested program, was established for the needy. Because the aged are the group most likely to be in need of prolonged and expensive medical care, this program aids them more than other groups. About 70 percent of all Medicaid expenditures go for hospital and nursing-home care. In 1981 the expenses for this program, shared by the federal government and the states, came to $27.6 billion, and it served 22.1 million people.

SSI

Supplemental Security Income is an inflation-indexed negative income tax for the aged, blind, and disabled, which in 1974 replaced state-run Old Age Assistance and programs for the aged, blind, and disabled. It provides a national uniform cash benefit to all the aged whose income and assets are below a certain amount, with benefits reduced as income rises. States have the option to supplement the benefit level. In 1981 expenditures for SSI were estimated at $8.5 billion.

Oddly enough it has been estimated that only 50 percent of those eligible for SSI are enrolled. Jennifer Warlick found that although the amount of the benefit is positively related to the decision to participate in SSI, many people eligible for large benefits do not participate. The reasons why they do not apply are not easy to pinpoint, and therefore will not be easy to rectify.[11]

Food Stamps

Food Stamps is an inflation-indexed negative income tax which provides benefits in kind for low-income households. Forty-one percent of food stamp recipients are either receiving OASDI or SSI. This includes the elderly, survivors, and the disabled. The budgetary cost of Food Stamps was estimated to be $9.7 billion in 1981.

Comparing the aged poor to the nonaged poor

Mean incomes include both extremes, the very wealthy and the very poor. No category of citizens is more diverse than the aged, who have in common primarily their longevity.

They include the couple in their sixties playing tennis outside their retirement condominium in the Sunbelt as well as the senile nonagenarian barricaded in an unheated tenement in the Snowbelt. Those who are both old and poor have been thought to be much worse off than those who are merely poor, since they cannot work and are more likely to need medical care. But since all the aged poor are now eligible for SSI and Medicaid, they have the means—if not to live luxuriously—at least to scrape along. Not so the nonaged poor. According to Danziger and Robert Plotnick, "The aged, who constituted 48 percent of all pretransfer poor households [in 1978] received 62 percent of the pretransfer poor's total cash transfers. . . . Almost all the elderly [poor] received enough to escape poverty."[12] By comparison, all categories of the nonaged (white, black, Hispanic, male, and female) were less likely to receive transfers, and if they received them, were less likely to be removed from poverty by them. With SSI nationally available, and Medicaid available—though at differing levels of generosity—in all states except Arizona, what is surprising to these researchers is not that the aged are so well off, but that there should be any aged poor at all.

The size of the aged population

In the United States in 1980 there were 24,928,000 persons aged 65 and older. In 2000 there will be 31,822,000 persons in that age group.[13] The number of extremely old persons (80 years and older) will increase 56.1 percent, and will constitute 24.4 percent of the aged.[14] The reasons for this dramatic increase are simple enough. More and more people live to old age, and the life span has been extended by medical technology and health care. The World War II baby boom that created ripples in the education system and waves in the job market will create a tidal wave when it hits retirement age after 2010. No wonder there is worry that the working population will be overburdened by taxes to support the aged.

The working population is already being called upon to increase traditional types of support. Middle-aged couples are now likely to have not one or two but four aged parents to look after. Furthermore the fact that aged parents are better off financially than ever before means that they are less likely than in the past to share a household with their middle-aged children. This is a mixed blessing. The services they require when living alone, the shopping, laundry, meals, transportation, and occasional nursing care, make their financial independence costly to their families at a time when "housewives," who used to do these domestic chores for the aged, are increasingly scarce. And the inevitable crises in their lives, brought on by illness and death, mean that more than one household is disrupted.

Irwin Garfinkel and Karen Holden are more sanguine about the future. In their examination of the Social Security system, they point out that although the aged in the United States are increasing in number, there are fewer children, with the result that the ratio of dependents (those under 20 and over 65) to the rest of the population is unlikely to change over the next fifty years. According to them, "there will be more grandparents but fewer children, more dollars spent on retirement benefits and nursing homes but fewer dollars spent on schools and day care."[15]

Fiscal retrenchment and the aged

Data show that the aged are no worse off economically than the rest of the population and that they are disproportionately aided by social programs. They will suffer less from reductions in programs directed at them than will some other groups—such as women who head households and nonaged minorities. Furthermore, the aged are increasing, both in number and in age, raising doubts about the extent to which they should be supported by increasing transfers from the working population. Should their share of the GNP be reduced? The answer to that question is not readily apparent. In a paper attempting to evaluate some of the benefits (such as increased security and reduced poverty) and costs (such as collection, administration, compliance costs, and the loss of work time) of our retirement policy, Robert Lampman writes:

> There are, of course, enormous difficulties in measuring the several social benefits that may have been achieved by the recent expansion of organized cash transfers [retirement transfers]. To do so requires that we perform the mental experiment of imagining what the world would have been like without that expansion. In any event there have been few attempts to quantify these benefits. But there is also the problem of weighting the achievement of the several goals. Here we find considerable disagreement even among experts in evaluation of retirement programs, who tend to start from conflicting value sets or mentalities. . . . A similar procedure is called for in evaluating the social costs that may have been incurred by the expansion of cash transfers.[16]

Implications for Social Security reform

In one respect the Greenspan Commission reached a consensus: "The National Commission has agreed that there is a financing problem for the OASDI program for both the short-run, 1983–89. . . . and the long range, 1983–2056. . . . and that action should be taken to strengthen the financial status of the program."[17] Social Security will be expected to continue to operate on insurance principles, i.e., to pay its own way. Disagreement seems to have arisen in deciding whether to make the reductions in benefits or increases in taxes: whom to hurt and how much.

In an attempt to compare the financial and equity effect of two widely discussed Social Security reforms, Danziger and his colleagues have simulated the effects of two changes, holding the savings for the first year constant: (1) subjecting

one-half of benefits to the federal income tax, and (2) reducing the cost-of-living adjustment (COLA). They found that the financial effects of the two changes would vary greatly as time went on. The reduction in COLA would have cumulative effects because each subsequent year's cost-of-living adjustment would be applied to a permanently lower base. This would escalate savings relative to a tax on benefits. In terms of equity, however, the tax on benefits would be superior. An income tax applied to half of benefits would apply only to the top half of all consumer units receiving Social Security. It would be progressive with respect to Social Security benefits (but not with respect to total income). The cutback in COLA, on the other hand, would be a proportional tax on benefits, and hence would be regressive with respect to income.

Other proposals supported by the Greenspan Commission include expanding the tax base by covering all new federal civil service employees and raising the taxes current workers pay to support the aged. Their recommended solution is a compromise: reducing the growth in benefits while increasing taxes.

Gray power

The aged are a potent political force. Not only are their numbers great in proportion to the rest of the population, they also vote.[18] To a great extent their self-interest is also ours, since most of us, though we may escape the hardship of belonging to some other minority, do anticipate, barring unforeseen circumstances, to be aged one day. It will not be an easy matter to redistribute shrinking government transfers in such a way that the aged get less while those in greater need receive a larger share. It may not even be wise. Other nations—such as West Germany—contribute a greater proportion of their GNP to the aged via cash transfers than we do (12 percent as opposed to 7.6 in 1978).[19] The extent to which we shall continue to provide for the economic well-being of our older citizens will depend upon the relative prosperity of the nation as a whole and upon the political process. ■

[1] *Bodley Head Jack London, 4* (London: Bodley Head, 1966), 33.
[2] New York, Vintage, 1977, p. 15.
[3] Jacques van der Gaag and Eugene Smolensky, "True Household Equivalence Scales and Characteristics of the Poor in the United States" (see box).
[4] Danziger, van der Gaag, Smolensky, and Taussig, "Life-Cycle Hypothesis" (see box), pp. 2–3.
[5] See *Focus* 6:1, "From Person to Person: Studies of Nongovernmental Transfers."
[6] Danziger, van der Gaag, Smolensky, and Taussig, "Income Transfers and the Economic Status of the Elderly" (see box), pp. 21–23.
[7] Richard V. Burkhauser and Karen C. Holden, eds., *A Challenge to Social Security* (New York: Academic Press, 1982), p. 7.
[8] Burkhauser and Warlick, "Disentangling the Annuity from the Redistributive Aspects of Social Security in the United States," *Review of Income and Wealth, 27* (1981), pp. 407–408.
[9] Burton Weisbrod, "Social Security: The Real Crisis," IRP Notes and Comments, 1981.
[10] Davis, "A Decade of Policy Developments in Providing Health Care for Low-Income Families," in Robert H. Haveman, ed., *A Decade of Federal Antipoverty Programs* (New York: Academic Press, 1977), p. 213.
[11] See Warlick, "Participation of the Aged in SSI," IRP Discussion Paper no. 618-80. Among the significant demographic variables were the following: The probability of participation (for those living in their own homes) decreases with each additional year of age. Southerners are more likely to participate than are individuals from other parts of the country. Educational attainment is inversely related to probability of participation. It should be noted that this study was done using 1975 data. The probability of participation in SSI may have increased substantially since then.
[12] Danziger and Plotnick, "The Receipt and Antipoverty Effectiveness of Cash Income Maintenance Transfers: Differences among White, Nonwhite and Hispanic Households," IRP Discussion Paper no. 683-81, pp. 14–15.
[13] George C. Myers, "The Aging of Populations," in Robert H. Binstock, Wing-Sun Chow, and James H. Schultz, eds., *International Perspectives on Aging: Population and Policy Challenges* (New York: United Nations, 1982), p. 18.
[14] Ibid., p. 26.
[15] Irwin Garfinkel and Karen Holden, "A Crisis in Social Security and the Welfare State?" *Israeli Social Security Bulletin.* Forthcoming.
[16] Lampman, "The Social Interest in Retirement Income," IRP Notes and Comments, 1983.
[17] *Report of the National Commission on Social Security Reform* (Washington, D.C.: U.S. Government Printing Office, 1983).
[18] Robert B. Hudson and Robert H. Binstock, "Political Systems and Aging," in Binstock and Ethel Shanas, eds., *Handbook of Aging and the Social Sciences* (New York: Van Nostrand, 1976).
[19] Lampman, "The Social Interest."

Selected papers

Sheldon Danziger, Jacques van der Gaag, Eugene Smolensky, and Michael K. Taussig, "Implications of the Relative Economic Status of the Elderly for Transfer Policy." Paper prepared for Brookings Institution Conference on Retirement and Aging, Washington, D.C., December 1982.

Sheldon Danziger, Jacques van der Gaag, Eugene Smolensky, and Michael K. Taussig, "Income Transfers and the Economic Status of the Elderly." Institute for Research on Poverty Discussion Paper no. 695-82.

Sheldon Danziger, Jacques van der Gaag, Eugene Smolensky, and Michael K. Taussig, "The Life-Cycle Hypothesis and the Consumption Behavior of the Elderly." Institute for Research on Poverty Reprint no. 461.

Robert Lampman, "The Social Interest in Retirement Income." Institute for Research on Poverty Notes and Comments, 1983.

Jacques van der Gaag and Eugene Smolensky, "True Household Equivalence Scales and Characteristics of the Poor in the United States." Institute for Research on Poverty Reprint no. 453.

New plans at the Institute

Robert H. Haveman and Barbara L. Wolfe of IRP and Jennifer Warlick (at Notre Dame) have submitted a proposal for a contract to the Assistant Secretary for Planning and Evaluation of the U.S. Department of Health and Human Services to carry out three studies related to disability. The first will compare the economic well-being of disabled and nondisabled working-age individuals over time, will measure the extent to which economic well-being in the two groups is related to various individual characteristics (such as age, race, sex, education, marital status), and will examine the role of the public transfer system in reducing inequities, including uncertainty, between the disabled and the nondisabled and among the various categories of the disabled.

The second study will attempt to model true disability status. The measure of disability will incorporate the three factors that are indicative of work-related disability: functional limitations, severity of limitations, and the occupational tasks related to these limitations. By emphasizing the ability to perform a job, this definition will be consistent with the intent of SSDI and other disability-related transfer programs.

The third study will explore the relationship between disability transfers and the labor market behavior of women. This is a major extension of ongoing work by the investigators to identify the determinants of the work decision of older workers and the role disability transfers and health status play in that decision (see "Disability Benefits and Labor Supply" in this issue). The increasing labor force participation rate of women and the increasing likelihood that women will head families mean that any attempt to design programs for the disabled must take the labor force behavior of women into account.

Another new item on the IRP research agenda concerns the economic status and labor market experience of two new population groups: Hispanic immigrants and refugees from Southeast Asia. Marta Tienda (IRP), with Robert Bach of the State University of New York at Binghamton and George Borjas of the University of California-Santa Barbara, has submitted a research proposal to ASPE to explore ways of maximizing the economic well-being of these new groups while minimizing the negative effects that immigration may have on the native work force.

The research would cover three areas. First, the investigators intend to study the impact of the labor market structure on Hispanic immigrants and Southeast Asian refugees by addressing the following questions: (1) How has the economic well-being of these different nationality groups changed over the past decade? (2) What are the causes of the various patterns in hardship, between groups and for individuals? and (3) How do these groups deal with labor-market dislocations?

They will also explore the question of whether Hispanic immigrants "take jobs away" from natives, or whether blacks, Hispanics, and non-Hispanic whites are complementary in the labor force. They propose to examine the impact of immigration on the earnings of natives, on particular cohorts of the native labor force, and on particular geographical areas that have experienced a large influx of immigrant labor.

Finally, the investigators intend to ask and answer a number of questions about the utilization of social programs by new Americans: Can the high dependency rates be expected to decline over time, or do they reflect significantly lower rates of employability among immigrants? What individual factors determine dependency? How do the cultural background and patterns of regional concentration of immigrants affect both their obtaining employment and their becoming public assistance recipients?

Additional Discussion Papers available at IRP

Glen Cain, "The Economic Analysis of Labor Supply: An Essay on Developments since Mincer." DP 717-82.

Aage Sørensen, "Conceptual and Methodological Issues in Sociological Research on the Labor Market." DP 718-83.

Peter Gottschalk and Tim Maloney, "Involuntary Terminations and Unemployment: One Test of an Implication of Job Search Theory." DP 719-83.

Martin David and Paul Menchik, "Non-Earned Income, Income Stability, and Inequality—A Life Cycle Interpretation." DP 720-83.

Sheldon Danziger, Jacques van der Gaag, Michael Taussig, and Eugene Smolensky, "The Direct Measurement of Welfare Levels: How Much Does It Cost to Make Ends Meet?" DP 721-83.

Aage Sørensen, "Processes of Allocation to Open and Closed Positions in the Social Structure." DP 722-83.

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