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State poverty rates for whites, blacks, and Hispanics in the late 1980s

by Jon D. Haveman, Sheldon Danziger, and Robert D. Plotnick

Jon D. Haveman is a graduate student in economics at the University of Michigan. Sheldon Danziger is Professor of Social Work and Public Policy at the University of Michigan and an affiliate and former director of the Institute for Research on Poverty. Robert D. Plotnick is Professor and Associate Dean of the Graduate School of Public Affairs, University of Washington. He is also an IRP affiliate.

The fall 1988 issue of *Focus* (11:3) included an article by Plotnick and Danziger presenting state poverty rates for the mid-1980s. This article updates those poverty rates to the late 1980s and, for the first time, provides a breakdown of rates for the three largest racial/ethnic groups: white non-Hispanics, black non-Hispanics, and Hispanics. Poverty rates for minorities are found to be very high in all states. In addition, we present information on the distribution of family income—the mean income for each quintile of families for each state.

We derived poverty rates for the late 1980s by pooling observations from the March 1987, 1988, and 1989 Current Population Survey (CPS) files, which provide income data for calendar years 1986, 1987, and 1988. The poverty rates reported represent an average level of poverty for these three years. Pooling effectively doubles the sample size.[1] This reduces the standard error of each estimate by approximately 30 percent.[2] Nonetheless, the standard errors are quite large for smaller states and for minorities in all states.

Economic conditions were fairly stable over the 1986–1988 period. The unemployment rates for the three years were 7.0, 6.2, and 5.5 percent respectively; median family income was $31,796, $32,251, and $32,191 (in constant 1988 dollars). The national poverty rate was 13.6 percent in 1986, 13.4 percent in 1987, and 13.1 percent in 1988. It is likely, then, that for most states year-to-year changes in poverty were also gradual and moderate. On balance we believe the improvement in precision from the larger sample more than compensates for the lack of year-specific poverty rates. Further, we believe that the large standard errors for each state in every year make year-to-year comparisons by state quite problematic, even in those cases in which state economic trends diverged from the national ones.

The poverty lines used here are the official lines that the U.S. Bureau of the Census maintains and updates. They vary by family size, the number of related children, and the age of the household head. For example, in 1988 the poverty lines ranged from $5,674 for an elderly person living alone to $24,133 for a family of nine or more with at least one child under 18. The poverty line for a family of four was $12,092. The lines increase each year to match the rate of inflation as measured by the Consumer Price Index.

Poverty rates are estimated by comparing the money income of a family (or unrelated individual, a one-person family) to its corresponding poverty line.[3] If income is below the poverty line, then all the *persons* in that family are counted as poor.

Table 1 presents estimates of the percentage of persons in each state who lived in households with incomes below the poverty line. The national poverty rate for the 1986–88 period was 13.4 percent, slightly lower than the 14.0 percent reported for the 1984–86 period. Table 1 also includes a breakdown of the incidence of poverty for the three largest racial/ethnic groups for each state. The 1986–88 national poverty rate for white non-Hispanics was 8.8—4.6 percentage points below the national rate. The poverty rates for black non-Hispanics and Hispanics were 31.7 and 27.2 percent, each more than double the national rate.

The relative position and dispersion of state poverty rates did not vary much between the 1984–86 and 1986–88 periods. The point estimates in column 1 show seven states with rates at least five percentage points above the national rate: Alabama (21.6), Arkansas (21.8), Louisiana (22.5), Mississippi (25.8), New Mexico (20.6), Tennessee (18.4), and West Virginia (21.6). Six of these seven also had rates at least five percentage points above the national average in the 1984–86 period. Tennessee is the addition to the list. As before, four states have poverty rates at least five percentage points below the national average. For the more recent period, they are Connecticut (6.3), Maryland (8.3), New Hampshire (4.6), and New Jersey (8.1), which displaces Massachusetts (now at 8.9).

Although the national average did not decline significantly, several states experienced large reductions. In three states poverty fell by more than three percentage points: Iowa (–3.7), Nevada (–3.3), and Wisconsin (–3.2). In the District of Columbia, the poverty rate fell 6.0 percentage points, moving the nation's capital from more than 5 percentage points above the national poverty rate to almost exactly the national rate. Only four states experienced an increase in the poverty rate of at least one percentage point. Colorado (+1.9) had the largest increase. Given the relatively large standard errors of the poverty rates, these changes are statistically significant only for Iowa, Wisconsin, and the District of Columbia.[4]

Table 1 also includes poverty rates for the three largest racial/ethnic groups.[5] Column 2 reports the percentage of white non-Hispanic persons living in households with incomes below the poverty line; columns 3 and 4 contain the point estimates for black non-Hispanics and Hispanics respectively. Rates for blacks are presented only for 25 states; for Hispanics, only for 13 states.[6] The other states have such small minority populations that estimated rates would be highly unreliable. In fact, the standard errors for most of the states in columns 3 and 4 are quite large.

The point estimates for white non-Hispanics are almost everywhere lower than the state average.[7] Poverty among white non-Hispanics ranges from 4.0 percent in the District of Columbia to 20.9 percent in West Virginia. Poverty among black non-Hispanics ranges from 16.0 percent in the District of Columbia to 52.9 percent in Arkansas. Poverty among Hispanics ranges from 13.1 percent in Nevada to 47.0 percent in Massachusetts.

Table 2 provides mean family income (in constant 1987 dollars) for all families by state as well as the mean family income for each quintile of families. The mean family income for the United States was $35,842. The mean for the states ranged from a low in West Virginia of $24,681 to a high in Connecticut of $46,642.

States also vary considerably in the extent of income inequality. The last column of Table 2 presents a very rough measure of inequality—the ratio of the mean income of the richest quintile to the mean income of the poorest quintile. For the United States, this ratio is 9.5 ($77,365/8,191). Louisiana exhibits the greatest inequality with a mean in the top quintile 15.0 times that in the bottom. New Hampshire has the least dispersion of income with a ratio of 6.2.

Columns 1 and 2 of Table 3 provide a ranking of state poverty rates for all persons and white non-Hispanics. The lowest rankings refer to the states with the lowest poverty rates. A distinct pattern emerges. Because minority poverty rates are so high in all states, the white non-Hispanic rate yields a different ranking. States with large minority populations tend to rank much lower in terms of white poverty than for overall poverty rates. Georgia, for example, is ranked 36th by poverty for all persons and sixth for white

Table 1

State Poverty Rates, Late 1980s
(Standard Errors in Parentheses)

State	All Persons (1)	White Non-Hispanics (2)	Black Non-Hispanics (3)	Hispanics (4)
Alabama	21.6%	12.9%	44.0%	*
	(2.3)	(2.2)	(5.3)	
Alaska	11.0	7.3	*	*
	(1.7)	(1.6)		
Arizona	13.6	9.3	*	26.6%
	(1.9)	(1.8)		(5.6)
Arkansas	21.8	14.7	52.9	*
	(2.2)	(2.1)	(6.2)	
California	12.7	7.4	20.1	22.2
	(0.7)	(0.8)	(3.5)	(1.9)
Colorado	12.7	8.8	*	29.0
	(1.9)	(1.8)		(7.4)
Connecticut	6.3	4.2	*	*
	(1.4)	(1.2)		
Delaware	9.8	6.3	23.7	*
	(1.7)	(1.5)	(6.0)	
District of Columbia	13.2	4.0	16.0	*
	(2.0)	(2.3)	(2.6)	
Florida	12.5	7.5	30.0	19.0
	(0.9)	(0.8)	(3.0)	(2.8)
Georgia	14.4	6.1	31.2	*
	(1.8)	(1.5)	(4.2)	
Hawaii	9.7	10.8	*	*
	(1.6)	(3.2)		
Idaho	15.4	14.2	*	31.8
	(1.9)	(1.9)		(10.0)
Illinois	13.0	7.2	36.8	24.0
	(1.0)	(0.9)	(3.6)	(4.7)
Indiana	11.2	9.3	32.0	*
	(1.6)	(1.5)	(8.0)	
Iowa	12.8	12.5	*	*
	(1.8)	(1.8)		
Kansas	9.7	7.5	*	*
	(1.5)	(1.5)		
Kentucky	17.8	16.5	*	*
	(2.1)	(2.2)		
Louisiana	22.5	10.8	50.0	*
	(2.3)	(2.1)	(5.1)	
Maine	11.6	11.6	*	*
	(1.8)	(1.8)		
Maryland	8.3	4.5	20.0	*
	(1.4)	(1.2)	(4.0)	
Massachusetts	8.9	6.1	22.0	47.0
	(0.8)	(0.7)	(5.8)	(6.9)
Michigan	12.9	8.9	34.2	30.5
	(1.0)	(0.9)	(3.7)	(10.3)
Minnesota	11.4	9.9	*	*
	(1.8)	(1.7)		
Mississippi	25.8	11.4	48.6	*
	(2.3)	(2.2)	(4.3)	
Missouri	14.5	12.1	32.8	*
	(1.8)	(1.8)	(7.4)	
Montana	16.8	14.9	*	*
	(2.0)	(2.0)		
Nebraska	12.5	11.1	*	*
	(1.7)	(1.6)		
Nevada	9.1	6.7	*	13.1
	(1.7)	(1.7)		(6.6)
New Hampshire	4.6	4.6	*	*
	(1.3)	(1.3)		
New Jersey	8.1	4.3	19.7	26.6
	(0.8)	(0.7)	(3.4)	(4.1)
New Mexico	20.6	11.6	*	27.6
	(2.0)	(2.2)		(3.8)
New York	13.6	7.5	25.8	35.0
	(0.8)	(0.7)	(2.7)	(3.1)
North Carolina	13.7	8.8	30.6	*
	(1.0)	(0.9)	(2.8)	
North Dakota	12.3	11.3	*	*
	(1.6)	(1.6)		
Ohio	12.9	10.2	34.9	*
	(0.9)	(0.9)	(4.1)	
Oklahoma	16.6	12.7	38.4	*
	(2.0)	(1.9)	(10.1)	
Oregon	11.8	10.4	*	*
	(1.9)	(1.9)		
Pennsylvania	10.2	8.1	27.4	*
	(0.8)	(0.8)	(4.3)	
Rhode Island	8.8	6.7	*	*
	(1.7)	(1.6)		
South Carolina	16.0	6.9	37.1	*
	(1.8)	(1.5)	(4.4)	
South Dakota	15.9	13.6	*	*
	(1.7)	(1.7)		
Tennessee	18.4	14.1	37.7	*
	(2.1)	(2.1)	(6.0)	
Texas	17.7	7.9	29.6	35.4
	(1.0)	(0.9)	(3.6)	(2.5)
Utah	10.8	10.1	*	*
	(1.6)	(1.6)		
Vermont	10.2	10.2	*	*
	(1.8)	(1.8)		
Virginia	10.4	6.4	24.7	*
	(1.5)	(1.4)	(4.6)	
Washington	11.3	9.4	*	*
	(1.8)	(1.7)		
West Virginia	21.6	20.9	*	*
	(2.3)	(2.3)		
Wisconsin	8.6	6.3	*	*
	(1.5)	(1.3)		
Wyoming	11.8	11.8	*	*
	(2.0)	(2.0)		
United States	13.4	8.8	31.7	27.2
	(0.2)	(0.2)	(0.8)	(1.0)

Note: Each person is counted once. An * indicates that the cell contains fewer than 100 observations. The poverty rates are weighted and reflect a population of about 241 million people.

Table 2

Mean Family Income by Quintile, Late 1980s

State	First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Fifth Quintile	Mean Income for All Families	Inequality: Q5/Q1
Alabama	$5,516	$14,346	$23,603	$34,840	$62,893	$28,240	11.4
Alaska	9,440	22,918	36,532	54,765	90,922	42,915	9.6
Arizona	8,942	19,851	29,830	42,791	79,672	36,217	8.9
Arkansas	5,521	13,450	21,620	31,797	57,811	26,040	10.5
California	9,202	20,927	33,085	47,926	85,069	39,242	9.2
Colorado	8,070	19,652	30,911	45,379	81,075	37,017	10.0
Connecticut	13,241	27,892	40,229	54,840	97,007	46,642	7.3
Delaware	9,002	21,673	32,051	45,062	74,700	36,497	8.3
District of Columbia	7,267	19,667	31,846	50,236	99,877	41,779	13.7
Florida	8,412	18,353	27,869	40,940	75,288	34,172	8.9
Georgia	7,401	18,579	30,389	43,275	76,140	35,157	10.3
Hawaii	11,885	24,874	37,249	52,100	85,648	42,351	7.2
Idaho	7,244	15,644	24,297	34,469	61,045	28,540	8.4
Illinois	8,430	21,620	33,168	46,328	80,152	37,939	9.5
Indiana	8,669	18,646	28,552	39,727	65,283	32,175	7.5
Iowa	8,402	18,669	27,413	37,002	61,585	30,614	7.3
Kansas	10,138	21,188	30,455	42,151	67,394	34,265	6.6
Kentucky	6,502	14,695	23,748	35,298	62,126	28,474	9.6
Louisiana	4,928	14,685	25,633	38,640	73,996	31,576	15.0
Maine	8,611	18,926	28,209	39,179	65,676	32,120	7.6
Maryland	11,418	25,868	38,789	53,355	88,515	43,589	7.8
Massachusetts	10,553	25,204	37,840	52,479	88,677	42,951	8.4
Michigan	8,667	21,182	32,364	46,027	77,848	37,218	9.0
Minnesota	9,156	21,385	32,406	45,535	79,011	37,499	8.6
Mississippi	4,739	12,437	21,385	32,869	59,794	26,245	12.6
Missouri	7,557	17,764	28,190	39,898	70,090	32,700	9.3
Montana	6,626	15,750	25,075	35,920	61,344	28,943	9.3
Nebraska	8,790	18,486	27,171	37,481	64,084	31,203	7.3
Nevada	9,979	20,915	30,167	42,653	70,590	34,861	7.1
New Hampshire	12,700	26,023	37,307	50,509	79,246	41,157	6.2

Table 2 (continued)

State	First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Fifth Quintile	Mean Income for All Families	Inequality: Q5/Q1
New Jersey	11,258	26,628	39,919	55,264	92,713	45,156	8.2
New Mexico	6,167	15,415	23,396	34,354	67,679	29,402	11.0
New York	7,800	20,064	32,129	46,815	85,738	38,509	11.0
North Carolina	7,721	17,719	27,399	39,021	68,685	32,109	8.9
North Dakota	8,130	18,930	27,454	37,171	62,580	30,853	7.7
Ohio	8,531	20,314	31,123	43,288	71,962	35,044	8.4
Oklahoma	6,516	15,938	25,596	37,593	64,489	30,026	9.9
Oregon	9,592	20,848	30,442	40,027	68,545	33,891	7.1
Pennsylvania	9,629	20,330	30,038	42,455	73,137	35,118	7.6
Rhode Island	9,951	22,743	33,593	45,851	75,974	37,622	7.6
South Carolina	7,599	17,976	27,411	39,157	68,716	32,172	9.0
South Dakota	6,681	16,865	25,705	36,207	61,325	29,357	9.2
Tennessee	6,591	15,054	24,498	35,019	63,698	28,972	9.7
Texas	7,101	17,725	29,002	42,639	77,057	34,705	10.9
Utah	10,069	19,731	29,104	40,196	67,807	33,381	6.7
Vermont	9,019	20,531	30,152	41,715	69,735	34,230	7.7
Virginia	9,118	22,133	34,411	50,492	85,808	40,392	9.4
Washington	8,738	20,788	32,105	44,865	76,244	36,548	8.7
West Virginia	4,758	12,787	20,712	30,282	54,865	24,681	11.5
Wisconsin	9,641	21,463	32,166	43,132	69,443	35,169	7.2
Wyoming	8,623	19,665	30,920	43,331	67,711	34,050	7.9
United States	8,191	19,474	30,455	43,726	77,365	35,842	9.5

Note: Each family is counted once. Unrelated individuals are excluded from this table. The means are weighted and reflect a population of approximately 66 million families. Income levels are expressed in 1987 constant dollars. In each state, one-fifth of all families in that state are in each quintile, and the means are averages within the quintiles.

Table 3

Rankings of States, Late 1980s

State	Poverty Rank: All Persons (1)	Poverty Rank: White Non-Hispanics (2)	Mean Income Rank (3)	Inequality Rank (Q5/Q1) (4)
Alabama	48	44	48	47
Alaska	16	15	5	37
Arizona	33	25	19	26
Arkansas	49	48	50	43
California	26	16	10	31
Colorado	26	22	16	41
Connecticut	2	2	1	8
Delaware	11	8	18	20
District of Columbia	32	1	7	50
Florida	24	17	28	26
Georgia	36	6	21	42
Hawaii	10	33	6	6
Idaho	38	47	46	21
Illinois	31	14	12	36
Indiana	17	25	33	11
Iowa	28	42	40	8
Kansas	9	17	26	2
Kentucky	44	50	47	37
Louisiana	50	33	37	51
Maine	20	38	35	12
Maryland	4	4	3	17
Massachusetts	7	6	4	21
Michigan	29	24	15	29
Minnesota	19	28	14	24
Mississippi	51	37	49	49
Missouri	37	41	32	33
Montana	42	49	45	33
Nebraska	24	35	38	8
Nevada	8	11	24	4
New Hampshire	1	5	8	1
New Jersey	3	3	2	19
New Mexico	46	38	42	45
New York	33	17	11	45
North Carolina	35	22	36	26
North Dakota	23	36	39	15
Ohio	29	30	23	21
Oklahoma	41	43	41	40
Oregon	21	32	30	4
Pennsylvania	12	21	22	12
Rhode Island	6	11	13	12
South Carolina	40	13	34	29
South Dakota	39	45	43	31
Tennessee	45	46	44	39
Texas	43	20	25	44
Utah	15	29	31	3
Vermont	12	30	27	15
Virginia	14	10	9	35
Washington	18	27	17	25
West Virginia	47	51	51	48
Wisconsin	5	8	20	6
Wyoming	21	40	29	18

Note: Poverty rates are ranked from 1, the lowest rate, to 51, the highest rate. Mean incomes are ranked from 1, the highest level, to 51, the lowest. Inequality is ranked from 1, the lowest ratio, to 51, the highest ratio.

non-Hispanics. The District of Columbia is ranked first for white non-Hispanics and 32nd overall. Utah and Vermont, which have very small minority populations, rank much higher on the white non-Hispanic poverty rate than on the overall rate.

Columns 3 and 4 of Table 3 provide a ranking of the states by mean family income and by the measure of income inequality used in Table 2. In general, higher-income states tend to have less inequality and lower-income states higher inequality. For example, Hawaii, Maryland, and New Hampshire exemplify higher-income, less unequal states, whereas Alabama, Arkansas, Mississippi, and West Virginia have low income and are among the most unequal states.

Standard errors of estimated state poverty rates

The state poverty rates in Table 1 are subject to error from two sources: first, because a sample is taken to represent all persons; and second, because of nonsampling errors in response, processing, and systematic bias in the data. The extent of nonsampling error is not known, but the standard errors shown in Table 1 indicate the extent of sampling error and the effect of some responses and processing errors. One should exercise caution in the interpretations of small differences between states.

The formula for computing standard errors of state estimates from the usual one-year CPS sample is

$$\sigma_{x,p} = \sqrt{f(b/x) \cdot p(100 - p)}$$

where x = estimated number of persons in the state, taken from the CPS data, p = estimated percentage of persons who are poor in the state, f = the state-specific factor given by the Census Bureau,[8] and b = a parameter given by the Census Bureau to be used in computing standard errors of percentages. Since the sample in this work is double the usual one-year size, we doubled x in calculating the standard errors in Table 1.[9]

If one were to compute the standard error of the difference between two of the estimated state poverty rates, one would use the following formula:

$$\sigma_{x-y} = \sqrt{(\sigma_x)^2 + (\sigma_y)^2 - 2\rho(\sigma_x\sigma_y)}$$

where σ_x and σ_y = standard errors of the poverty rates of the two states, and rho, the correlation coefficient, = 0 because poverty rates for two different areas are being compared. ■

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[1] We do not triple the sample because of the nature of the CPS sample frame. Each sample household is interviewed for four consecutive months, omitted from interviews for the next eight months, again interviewed for four months, then dropped from the sample. Thus, half of the households interviewed in March 1987 would be in their first four months and would again be interviewed in March 1988, during their last four months. Similarly, half of the households in the March 1989 CPS would have also been interviewed in the March 1988 CPS.

To obtain a data set in which all observations are independent of one another, we dropped from the March 1987 data all households that were also interviewed in March 1988. We also dropped from the March 1989 data households that already appeared in the March 1988 CPS. As a result, the March 1987 and 1989 CPSs each added half of their samples to the complete 1988 CPS.

[2] The formula for computing the standard error of a poverty rate from the CPS shows that doubling the sample size reduces its standard error by a factor equal to the inverse of the square root of 2, or by 29 percent. The formula is the first that appears at the end of this article.

[3] "Money income" includes all cash income from labor market earnings, dividends, interest, rent, pensions, government income support programs, and any other periodic income source. Taxes are not deducted. Noncash forms of income such as fringe benefits or government benefits from food stamps or Medicare are not counted.

[4] For discussion on how to use the standard errors to construct confidence intervals around each point estimate, see Christine M. Ross and Sheldon Danziger, "Poverty Rates by State, 1979 and 1985," *Focus* 10:1, Fall 1987.

[5] Asians, Native Americans, and other persons who are not white, black, or Hispanic are included in column 1 but are not included in columns 2, 3, or 4.

[6] Poverty rates are excluded for cells with a raw sample size of less than 100.

[7] The poverty rates in columns 2, 3, and 4 can all be greater than the poverty rates for all races owing to the exclusion of Asians, Native Americans, and other groups, as discussed in note 5.

[8] The state-specific factors are the same for 1987 and 1988, but are different for the 1989 CPS. Our sample composition is one-quarter from 1987, one-half from 1988, and one-quarter from 1989. The state factors used are, therefore, a weighted average of the pre-1989 and 1989 state factors—three-fourths pre-1989 and one-fourth 1989.

[9] The formula was provided by the Bureau of the Census. It differs from the one published in the appendix to the Bureau's P-60 reports by inclusion of the state-specific factor.

Announcements

Workshops on Exploratory Data Analysis Using Microcomputers

The National Science Foundation, under its Faculty Enhancement Program, has funded two one-week workshops on exploratory data analysis using microcomputers, to be held at California State University-Fullerton, during the weeks of July 28–August 2 and August 4–9, 1991.

The workshops are open to all social science faculty, priority being given to those who have had sufficient quantitative training to be familiar with statistical methods through multiple regression; those who teach undergraduate statistics and data analysis courses; and those who are familiar with MS-DOS microcomputers for statistical analysis.

Subject matter will include techniques of exploratory data analysis, robust statistics, analytical graphics, and data transformations; as well as techniques of using STATA to accomplish exploratory data analysis, robust regression, and regression diagnostics.

Participants will be housed in the Marriott Hotel on the Fullerton campus, and all meals and materials will be provided.

Instructors will be Ted Anagnoson, Department of Political Science, California State University-Los Angeles; Rich DeLeon, Department of Political Science, San Francisco State University; and Richard Serpe, Director of the Social Science Research Center at California State University-Fullerton.

For applications, write or call Ted Anagnoson, Department of Political Science, California State University, Los Angeles, CA 90032-8226; (213) 343-2230.

Application deadline: April 1, 1991.

Food and Nutrition Service Research Grants

The Food and Nutrition Service (FNS) of the U.S. Department of Agriculture is continuing its program of **Research Grants for Analytic Studies of the Food Stamp Program** in 1991. Grants are available for conceptual or empirical studies, based on existing data, of a wide range of research issues currently or potentially facing the Food Stamp Program. Applicants are encouraged to describe and propose those research areas and topics that they believe are important to improve current understanding of basic program, policy, and research issues related to Food Stamps.

Examples include the following:

- Trends and factors influencing program need, eligibility, participation, benefit levels, and multiple-program participation.
- Impacts of the Food Stamp Program on food spending, food choices, diet quality, and general household consumption patterns.
- Consequences of participation in the Food Stamp Program and/or availability of the program for labor force participation, household composition, family dynamics, behaviors, and other effects—both intended and unintended.
- Impacts for key population subgroups: the elderly, the homeless, young children, the working poor, etc.
- Effect of administrative practices on program cost, effectiveness, accessibility, outreach, and the accuracy and efficiency of benefit delivery.
- Development or improvement of social science methods needed to improve analyses of issues related to the Food Stamp Program.

Proposals are invited at three levels of support: up to $25,000, $50,000, and $100,000.

The 1991 competition opens in late March. For information or to request application forms write to Food Stamp Small Grants, Contract Management Branch, 3101 Park Center Drive, Alexandria, VA 22302; (703) 756-3250. Requests for application forms should be written.

Tentative application deadline: end of May, 1991.

Dimensions of vulnerability

On June 8, 1934, the President sent to Congress a special message giving notice that in January 1935 he would present for its consideration a series of proposals intended to ward off in future years the corroding insecurity which economic collapse had made evident. The time was ripe for more positive and systematic programs for the prevention *of poverty than the American people would have thought necessary five years before.*

J. Douglas Brown[1]

For all the defects of the Act, it still meant a tremendous break with the inhibitions of the past. The Federal government was at last charged with the obligation to provide its citizens a measure of protection from the hazards and vicissitudes of life.

Arthur M. Schlesinger, Jr.[2]

The legislation referred to is, of course, the Social Security Act of 1935, the foundation of our present social welfare system. Extremely controversial at the time, it marked a fundamental change in the relationship between government and the well-being of its citizens, for it permanently committed the federal government to make cash payments to individuals who faced economic adversity.[3] The controversial question addressed by the act was, and remains: Where should the line be drawn between personal and public responsibility for protection against economic uncertainty? A recent policy forum at the Institute took a fresh look at this subject. Its presentations (see box, p. 12) explored areas of vulnerability in our society today, a half century after enactment of this landmark legislation.

In his opening remarks Charles Manski, IRP Director, stated that the objective of the forum was to encourage new thinking on economic insecurity and its consequences. He identified four particular topics that deserve investigation.

- *Multiple risks.* The usual practice is to examine dimensions of vulnerability one by one: health risks, or job insecurity, or precarious financial standing through lack of access to loans. Manski suggested that we move a step further by asking how these dimensions interact within a household and by identifying which people are vulnerable to multiple risks.
- *The effect of uncertainty on behavior.* An individual's sense of well-being and present behavior depend not only on that person's current condition but also on expectations regarding the future. We know little, Manski asserted, about how people cope with insecurity, particularly when social or private insurance is unavailable. Uncertainty can influence important life-course decisions, including educational, occupational, and family choices.
- *The effect of public programs.* We lack understanding of how to evaluate the worth of public programs that seek to reduce insecurity. One cannot measure the value of a program by simply observing who receives benefits, for a social insurance system has value in the potential benefits that it offers to those who never use the system but are protected by it.
- *Measurement.* Although the nation has invested heavily in the regular measurement of current social problems, Manski noted that we do not have in place any system of statistics to monitor the likelihood of future problems. Development of a system of vulnerability statistics could provide "leading indicators" of future problems, much as our current economic indicators inform us as to the health of the nation's economy.

The speakers that followed each touched in varying ways on particular aspects of these topics. Some of the presentations were based on ex post (or after-the-fact) evidence. Greg Duncan, for example, used the record of the past to portray income changes over the life cycle, as did Peter Gottschalk to examine volatility in earnings. Others used ex ante (before-the-fact) evidence to assess the ability of individuals to deal with future misfortune. Karen Holden and Timothy Smeeding, for example, measured the potential of the elderly to cope with unexpected physical and economic setbacks; John Karl Scholz and Nancy Maritato gauged income security among young families; and Barbara Wolfe examined the capacity of single-mother families to cope with health-threatening events.

The forum marked the inauguration of IRP work on the subject of vulnerability. As this project progresses, it will receive further attention in the pages of *Focus*. Meanwhile, to provide a sample of approaches to the topic, two of the presentations, one dealing with ex post evidence and the other with ex ante circumstances, have been selected for description here, along with a discussant's comments that have particular bearing on public policy.

The life-cycle view

Greg Duncan drew on data from the Michigan Panel Study of Income Dynamics, which has since 1968 followed the fortunes of five thousand families representative of the U.S. population. With this information he analyzed the nature of income losses and their relation to various life events experienced by the family members over the decade of the 1970s. A surprising degree of volatility in family incomes was revealed: nearly one-third of the households experienced a 50 percent drop at least once during the decade. Most of these losses were not anticipated, according to respondents' own reports; most were not the results of voluntary events, such as retirement; and more women than men were affected by them.[4]

Duncan also reported on another study, coauthored with Richard Burkhauser, which followed the same lines of inquiry with PSID data for the period 1974–83.[5] The authors first grouped men and women into ten-year age cohorts based on their ages in 1974, and then measured income levels and changes during the ensuing decade. The results are presented in Table 1. The first column shows, as might be expected, that family incomes rose during prime earning years and declined in retirement years. The second column indicates that the ratio of average family income of women to that of men fell substantially over the life cycle, a decline that can be attributed to the increasing proportion of women without spouses who head their own households as they age. Column 3 displays income-to-needs ratios, which take into account family size; they demonstrate that the older

Table 1

Average Family Income, Income-to-Needs Ratio, and Percentage Experiencing Drops in Income-to-Needs Ratio between 1974 and 1983

	Family Income		Family Income/Needs Ratio		Percentage with Drop in Income/Needs Ratio			
Age in 1974	1974–83 Average (thousands of 1985 $) (1)	Ratio of Women to Men (2)	1974–83 Average (3)	Ratio of Women to Men (4)	Falling by 50% or More at Least Once (5)	Ratio of Women to Men (6)	Falling by 50% or More and to a Level of 1.5 Poverty Line or Less (7)	Ratio of Women to Men (8)
26–35 years old								
Women	39.3	1.03	4.0	0.98	28%	1.27	18%	1.50
Men	38.1		4.1		22		12	
36–45 years old								
Women	43.1	0.91	4.4	0.92	26	1.23	17	1.55
Men	47.2		4.8		21		11	
46–55 years old								
Women	35.6	0.78	4.6	0.88	34	1.36	16	1.33
Men	45.4		5.2		25		12	
56–65 years old								
Women	23.5	0.79	3.6	0.84	31	0.97	17	1.21
Men	29.8		4.3		32		14	
66 or more years old								
Women	15.8	0.72	2.6	0.87	26	0.83	17	0.94
Men	21.9		3.0		31		18	

Source: Richard V. Burkhauser and Greg J. Duncan, "Economic Risks of Gender Roles: Income Loss and Life Events over the Life Course," *Social Science Quarterly*, 70, no. 1 (1989), 3–23. Reprinted with permission from the University of Texas Press. Data from the Panel Study of Income Dynamics.

Note: The sample is restricted to individuals who were present in the sample every year between 1975 and 1984 and is weighted by the 1984 individual weight.

groups were somewhat better off than family income alone would indicate, because as households are emptied of children, who mature and leave, fewer people remain to share the income. Women, however, were still consistently worse off than men (column 4) under this income-to-needs measure.

The rest of the table describes income losses, first estimating the proportion of persons whose income-to-needs ratios dropped by half or more at least once in the ten-year period. A large fraction, over one-quarter of all groups except men aged 26–45, were so affected; for most, the incidence was close to one-third.

To focus on cases in which such drops resulted in privation, column 7 shows the proportion of persons whose income loss brought them to within 150 percent of the poverty line. These experiences were less frequent, but still surprisingly widespread. The gender ratios (columns 6 and 8) underline the fact that at most ages women face higher risks of income loss than men, and that the risk to women of poverty-threatening declines in well-being is fairly constant across their life span, whereas for men it increases with age.

The authors then correlated these sharp declines in incomes with nine types of demographic and labor market events. Table 2 displays these results for the years 1968 through 1983.

The events clearly pose quite different risks of income loss to men and to women over a lifetime. Divorce or separation is prominently associated with economic adversity among

Table 2

Percentage of Various Life Events Associated with Decreases in Income-to-Needs Ratio of 50 Percent or More, 1968–1983

	Family Composition Events				Labor Market/Health Events				
Age in Year Prior to the Event	Divorce/ Separation of Spouse	Death of Spouse	Birth of Child to Head	Departure of Other Family Members	Major Reduction in Work Hours of Head Due to Retirement or Disability	Major Unemployment of Household Head	Major Work Loss Due to Illness of Head	Fall in Work Hours of Wife	Large Decrease in Asset Income
26–35 years old									
Women	23%	12%[a]	4%	5%	28%[b]	11%	7%	5%	2%[b]
Men	4	–	1	6	32[a]	9	7	4	2[b]
36–45 years old									
Women	12	11[a]	6	3	12	7	3	4	2
Men	4	–	3	1	11[b]	8	4	4	1
46–55 years old									
Women	15[b]	14[b]	8[a]	1	12	7	3	5	3
Men	6[b]	0[a]	4[a]	1	16	6	3	4	3
56–65 years old									
Women	–	8	–	7	10	4[b]	4	4	8
Men	–	5[a]	–	2	8	10[b]	3	6	2
66 or more years old									
Women	–	7	–	19[b]	13[b]	–	0[a]	–	13
Men	–	8[b]	–	6[b]	7[b]	–	0[a]	2[b]	10

Source: Richard V. Burkhauser and Greg J. Duncan, "Economic Risks of Gender Roles: Income Loss and Life Events over the Life Course," *Social Science Quarterly*, 70, no. 1 (1989), 3–23. Reprinted with permission from the University of Texas Press. Data from the Panel Study of Income Dynamics.

Note: Decreases in income-to-needs ratio of 50 percent or more are restricted to those for which the final level of income-to-needs ratio was 1.5 or less. The sample is restricted to individuals present in sample households during the three-year period over which the life event is measured. The data are weighted by the individual weight in the most recent of the three years. Empty cells (denoted "–") represent categories with fewer than 25 instances of the event.

[a] Estimate is based on 25–49 instances of the event.

[b] Estimate is based on 50–99 instances of the event.

young and middle-aged women. Death of a spouse is a weaker but still distinguishable link to decline in well-being. The birth of a child has less association with income loss—perhaps, the authors suggest, because births are more likely to be planned events, whereas divorce or death of a spouse is much less predictable.

Among labor market changes, disability has the strongest association with income loss among young heads of household, but it is an event much less likely to occur (as the authors found in separate calculations) than the other work-related experiences. Large losses of asset income are more often associated with sharp declines in well-being among the oldest age group.

Duncan underlined the gravity of the fact that, overall, one-quarter of the studied population suffered at least one large income loss in a decade. Moreover, these losses were not often linked with predictable life-course events such as giving birth or retiring from work. His conclusion was that whereas, on average, incomes and living standards rise until retirement and then gradually decline, the average masks severe declines in well-being for a substantial minority of the population at every point in the life cycle, and women run a much higher risk than men of experiencing such declines.

The vulnerability of the elderly

Karen Holden and Timothy Smeeding described the precarious circumstances of particular groups within the elderly population.[6] In place of standard measures of well-being that look mainly at current income and assets, they employed measures of adequacy—ex ante conditions: "The most volatile potential sources of economic insecurity for the elderly concern the adequacy of their health insurance vis-à-vis their health condition and the adequacy of their incomes and assets to meet potential but uninsured exigencies" (pp. 192–193). Five dimensions of vulnerability were defined. Data from the 1984 Panel of the Survey of Income and Program Participation (SIPP) were used to determine the extent of vulnerability among three economic strata within the elderly population: the poor,[7] the lower middle class, and the middle and upper class. The five areas of vulnerability follow.

1. Medicare as the only subsidy for costs of acute health care.

Holden and Smeeding underscored the importance of having resources other than Medicare to pay for health needs by noting that in 1984 Medicare paid less than 44 percent of total health care outlays of the elderly. To fill the gap, Medicaid is available for the very poor, veterans assistance is available to those who qualify, and employer-based health insurance is available for those fortunate enough to have such coverage. The proportion of all elderly persons

IRP Public Policy Forum:
"Dimensions of Vulnerability:
Economic Insecurity within the U.S. Population"

September 21-22, 1990

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Charles F. Manski, Director, IRP

Economic Insecurity over the Life Cycle
Greg Duncan, Institute for Social Research, University of Michigan

Discussant: Robert Haveman, La Follette Institute of Public Affairs, University of Wisconsin-Madison

Wage Inequality and the Vulnerability of Young Workers
Peter Gottschalk, Department of Economics, Boston College

Discussant: Glen Cain, Department of Economics, University of Wisconsin-Madison

Discussion of the repercussions of economic policies in the 1980s and implications for the 1990s
David Obey, U.S. Congress

Economic Insecurity among the Elderly
Timothy Smeeding, Maxwell School of Citizenship and Public Affairs, Syracuse University
and
Karen Holden, School of Family Resources and Consumer Sciences, University of Wisconsin-Madison

Discussant: Michael Hurd, Department of Economics, State University of New York at Stony Brook

Dimensions of Vulnerability: Young Families
John Karl Scholz and Nancy Maritato, Department of Economics, University of Wisconsin-Madison

Discussant: Gary Sandefur, Department of Sociology, University of Wisconsin-Madison

Health Care for the Vulnerable: Rural Residents, the Low-Income Uninsured, and Those Requiring Long-Term Care
Barbara Wolfe, Departments of Economics and Preventive Medicine, University of Wisconsin-Madison
and
David Kindig, Department of Preventive Medicine, University of Wisconsin-Madison

Discussant: Linda Reivitz, Department of Preventive Medicine, University of Wisconsin-Madison

who lacked any subsidized health insurance beyond Medicare was 42 percent. Among the elderly poor, 28 percent lacked other resources, as did 51 percent of the near poor and 40 percent of the middle and upper class. Those in the last category may have sufficient funds to pay the extra amount needed for health care expenses, but the near poor seem to be at severe economic risk when they require medical care.

2. Insufficient financial resources to pay for two years (the median length of stay) in a long-term care facility.

Holden and Smeeding identified as "vulnerable" those elderly persons who were at risk of having virtually all of their assets wiped out by a nursing-home stay of two years (the median length of stay). Single persons were considered at risk if all assets (including their home) were insufficient to cover this cost. Married couples were considered at risk if the cost of nursing-home care for one spouse would leave insufficient assets to cover a two-year stay in a nursing home for the other spouse. In this vulnerable category were 26 percent of the elderly poor, 36 percent of the near poor, and 16 percent of the middle and upper class. Overall, 23 percent of the elderly were in this category.

3. Ineligibility for Supplemental Security Income (SSI) even if all income except social security benefits should cease.

Although receipt of social security benefits (Old Age and Survivors Insurance, OASI) would seem to confer a degree of economic security, the authors noted that in some cases beneficiaries have just enough OASI to keep them above eligibility for SSI (which brings with it eligibility for Medicaid), but lack any other resources to draw upon in case of unexpected income needs. The investigators identified those at risk on three counts: social security constituted more than 65 percent of their income; they had no earnings; and they were not eligible for SSI. This group constituted 26 percent of all the elderly, 34 percent of the poor, 54 percent of the near poor, and 10 percent of the remainder.

4. Housing costs as a percentage of income beyond an acceptable maximum.

The elderly facing very high housing costs were defined as those who paid more than 33 percent of income on housing and had little housing equity. Overall, 19 percent of the elderly were in this at-risk population; as were 35 percent of the elderly poor, 24 percent of the near poor, and 13 percent of the remaining income groups.

5. Experiencing one or more physical disabilities that require assistance in daily living activities.

Physical vulnerability, meaning the need for assistance in performing one or more of three daily tasks—getting in and out of bed, preparing meals and doing housework, and taking care of such essential needs as eating, dressing, and performing personal hygiene—constituted the last risk category. Sixteen percent of the elderly had at least one of these conditions; of the poor, 24 percent did so; of the near poor, 20 percent; of the middle and upper class, 13 percent.

Holden and Smeeding then calculated the multiple incidence of these five types of vulnerability. Elderly persons subject to two or more of the five they deemed "insecure"; those facing three or more were considered "extremely insecure." The insecure made up 35 percent—one in three—of all the elderly; 43 percent of the poor; 61 percent—two out of three—of the near poor; and 21 percent of the middle and upper class. Fourteen percent of all the elderly could be classified as extremely insecure: 23 percent of the poor, 28 percent of the near poor, 6 percent of the remainder.

The near poor are more likely than the elderly as a whole to belong in one of the following categories: female, disabled,

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Unsigned articles written by Elizabeth Evanson and E. Uhr. Edited by E. Uhr.

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over 75, or unmarried. Because they were clearly so much more vulnerable than the groups above and below them on the income scale, the authors ended by recounting the extent of their insecurity: 75 percent were at risk owing to dependence on social security, 70 percent lacked insurance for acute health care, 57 percent lacked adequate ability to pay for long-term care, 32 percent faced unduly high housing costs, and 24 percent had disabilities requiring high costs of daily living.

The concept of vulnerability and its policy implications

Robert Haveman augmented the discussion of vulnerability by turning attention to considerations beyond income loss alone.[8] Also relevant, he stated, are the different abilities of individuals to adjust to or recover from income shocks and the degree to which the events causing the loss can be anticipated or predicted. For example, although Duncan demonstrated (Table 1, col. 7) that young women face a higher risk of poverty-threatening income losses than all others, with the exception of old men, such women may have advantages—youth, recent labor market experiences, parental resources—permitting them to recover more easily than other groups. And men who experience income losses may suffer to a greater extent than women in nonmonetary terms from loss of status as breadwinners or as parental role models.

Both individuals and government, in Haveman's view, can take action to reduce income variability and to mitigate the loss of well-being from drops in income. Individuals can endeavor to make choices that balance returns and risks; they can acquire information that makes income variability more predictable or less difficult to adjust to; they can make investments to enable smoother adjustment or recovery; and they can purchase insurance to buffer the effects of remaining risks. To the extent that insecurity still persists in our imperfect world, however, a role remains for public policy intervention.

Haveman offered guidelines, in the form of questions, to judge when the public sector should play a role. Are the income losses due to involuntary events? Can the losses be anticipated? Is private insurance available to protect against the loss? Does the private market compensate for choices that entail higher probabilities of income losses (e.g., higher wages for physically high-risk occupations)? Does the individual have the resources for self-protection against the income loss? Does the provision of social protection against the loss induce adverse behavioral responses (e.g., family breakup or undue reduction in work effort)? Does the income loss carry with it additional undesirable side effects (loss of self-esteem, reduced parenting abilities)?

The guidelines led Haveman to several policy conclusions. First, considerations of predictability, avoidance, affordability, and insurability all point to a need for social insurance to protect children, who cannot take protective measures unaided. Universal public health insurance for children as well as a universal child support system with an assured benefit would seem to have merit. And for adults, social policies to protect against income loss need not always take the form of insurance. Alternative measures might include providing information (about savings plans for retirement, to take one example) so that individuals can make more informed choices; and subsidizing human capital investment, to increase economic security as well as knowledge. Even though, Haveman noted, one could scarcely imagine a public insurance program to cover divorce or abandonment and thereby protect the group that Duncan found so vulnerable, one could envision social measures to enhance women's income security: encouragement of norms in support of women's market work; more equal division of assets and child care responsibilities in the event of divorce; investment of resources in employment training for women.

Future directions of inquiry

Over the course of the two-day forum the points contained in Charles Manski's introductory remarks were taken up in discussions accompanying each presentation. Two examples follow.

The Effect of Uncertainty on Behavior. This topic received attention in reference to those at either end of the life cycle: the elderly, and children. Timothy Smeeding listed some of the socially undesirable behavior patterns that might result from the vulnerability of the insecure elderly. Asset hiding was one—to gain eligibility to such safety-net programs as Supplemental Security Income. Another was excessive and overlapping purchase of private "Medigap" policies to pay for deductibles and coinsurance. Or, other elderly persons might deliberately choose to live in uncomfortable circumstances, skimping on daily needs to harbor resources in case a costly health disaster might strike. Designers of social policies need firm information on such behavior in order to temper its effects.

Duncan's portrayal of income variability over the life cycle raised the question of its effects on children who grow up in the households afflicted with this form of uncertainty. Does it multiply the risks they face, denying them fair life chances? To what extent does it reduce their educational prospects and hence occupational opportunities? Will it make them less likely to form and maintain the stable personal relationships, including marital ones, that are needed for the well-being of their own children?

Measurement and Social Indicators. Duncan noted that longitudinal data sets are now beginning to provide us with cumulative information on personal experiences over a number of years. These data offer promise of analyses that can disentangle different types of vulnerability—the risks associated, for example, with living in a particular neighborhood or household type as opposed to those associated solely with a particular level of income. A new frontier of empirical analysis may thus be opening up, permitting more accurate identification of the different risks faced by individuals in contemporary society and, perhaps, also facilitating construction of a system of social indicators of problems to be faced in the future.

These, among other comments offered during the forum, indicate that the topic of vulnerability offers a rich agenda for future research. ■

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[1]*An American Philosophy of Social Security* (Princeton: Princeton University Press, 1972), p. 5.

[2]*The Coming of the New Deal* (Boston: Houghton Mifflin, 1958), p. 315.

[3]See, in addition to the works cited above, Arthur J. Altschuler, *The Formative Years of Social Security* (Madison: University of Wisconsin Press, 1966), Chap. 1; Michael E. Schiltz, *Public Attitudes toward Social Security, 1935–1965* (Washington, D.C.: GPO, 1970), pp. 10–14.

[4]Duncan, "The Volatility of Family Income over the Life Course," in *Life-Span Development and Behavior*, Vol. 9, ed. Paul B. Baltes, David L. Featherman, and Richard M. Lerner (Hillsdale, N.J.: Lawrence Erlbaum Associates, 1988).

[5]Duncan and Burkhauser, "Economic Risks of Gender Roles: Income Loss and Life Events over the Life Course," *Social Science Quarterly*, 70 (March 1989), 3–23.

[6]Holden and Smeeding, "The Poor, the Rich, and the Insecure Elderly Caught in Between," *Milbank Quarterly*, 68, no. 2 (1990), 191–219. Also available as IRP Reprint no. 637.

[7]Holden and Smeeding used a "welfare ratio"—i.e., ratio of money income plus food stamps to the official poverty threshold; a ratio of one or less was considered poor; between 1.0 and 2.0, near poor or lower middle class; over 2.0, middle and upper class.

[8]Haveman's remarks were contained in his comment on Greg Duncan's presentation.

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The increasing role of the Earned Income Tax Credit

The Earned Income Tax Credit (EITC) is one of the major federal programs providing assistance to the working poor. Administered by the Internal Revenue Service, it is a tax credit on the federal income tax that is available to certain workers with low earnings who have a "qualified child."[1]

The EITC has been described both as a tax reform and as a welfare program.[2] It is a tax reform in that it mitigates the regressive social security tax for low-income workers who pay little or no federal income taxes.[3] It is a welfare program because it supplements wages for low-income households. Thus, it is an attractive policy for those who wish to redesign the welfare system to give greater work incentives to low-income households.

The EITC does not serve the entire population of working poor because it excludes those without a "qualified child." It also requires that an income tax return be filed. Because the Tax Reform Act of 1986 effectively eliminated those with incomes below the poverty line from the federal income tax rolls, there is concern that some households that are eligible for the EITC will fail to obtain it.

Description of the EITC

The credit is available to parents having at least one "qualified child," who file a joint return or a "head-of-household" return. Until 1991, the law required that for the purpose of obtaining the EITC, over half of the support for the child had to come from the taxpayer's own income and not from sources such as Aid to Families with Dependent Children (AFDC). The credit is indexed for inflation.

In 1990 the credit consisted of 14 percent of earnings up to $6,810 (for a maximum rebate of $953 if no tax was owed). No adjustment was made for family size. The rebate remained at the maximum until adjusted gross income reached $10,740, at which point it was reduced by 10 cents per dollar of adjusted gross income, until it was entirely phased out at $20,270.

The budget law passed in October 1990 (OBRA-90) adds $18 billion to the EITC over the next five years. It both expands the credit and to some extent adjusts it for family size. In 1991 the phase-in rate (the rate of the credit up to an earned income of $6,810) will be 16.7 percent for families with one child and 17.3 percent for families with two or more children. This means the maximum credit will rise to $1,137 for families with one child and $1,178 for larger families. The EITC will also incorporate a 6 percent credit on the first $6,810 for families who buy health insurance and a 5 percent credit for families with infants under a year old. The EITC phase-in rate will continue to rise through 1994, when the new provisions are fully in place. At that time, the phase-in rate will be 25 percent for a family with more than one child, and the phase-out rate will be 17.9 percent. In 1995, when the new EITC provisions are fully implemented, total yearly EITC expenditures are expected to *increase* by over $7 billion as a consequence of the new budget law. To provide a comparison, total outlays in the Food Stamp program were roughly $15 billion in 1990.[4]

The increased budgetary expenses for the EITC and the change in its design—the fact that the credit differs for families of different size and special credits provide a rebate for health insurance and the care of infants—suggest that it has become a major policy tool of the federal government to increase the incentives to work among those whose incomes are below the poverty line. It is hoped that it will increase these incentives among those who have the option of receiving AFDC. If, however, the EITC is to take its place as a major program, it must reach the population to whom it is targeted, and participation could be a serious problem because, as mentioned above, those entitled to the EITC must file a federal income tax return, even though their income may be low enough to exempt them from any filing requirement.

The important issue of the participation (or take-up) rate of the EITC has been explored by Institute researcher John Karl Scholz (see box, p. 20). The rest of this article is a description of his research.

Calculating the EITC participation rate

The participation rate in any government program is defined as the number of participants divided by the number eligible for the program. These rates are not, however, easy to estimate, since both the numerator and the denominator are often hard to come by. The rates vary for the different

Institute Publications on Tax Policy and the Poor

This article is drawn from the work of John Karl Scholz, "The Participation Rate of the Earned Income Tax Credit," IRP Discussion Paper no. 928-90.

Related Institute publications are the following:

Gary Burtless and Robert Haveman, "Taxes, Transfers, and Labor Supply: The Evolving Views of U.S. Economists," in *The Relevance of Public Finance for Policy-Making*, Proceedings of the 41st Congress of the International Institute of Public Finance (Detroit: Wayne State University Press, 1987). IRP Reprint no. 583.

Howard Chernick and Andrew Reschovsky, "The Taxation of the Poor," *Journal of Human Resources*, 25, no. 4 (Fall 1990), 712-735. IRP Reprint no. 639.

Sheldon Danziger, "Tax Reform, Poverty, and Inequality," in *The Economics of Tax Reform*, ed. Bassam Harik (Kalamazoo, Mich.: W.E. Upjohn Institute, 1988). IRP Discussion Paper no. 829-87, 1987.

Sheldon Danziger, "Antipoverty Policies and Child Poverty," *Social Work Research Abstracts*, 26 (December 1990), 17-34. IRP Discussion Paper no. 884-89, 1989.

Irwin Garfinkel, Daniel Meyer, and Patrick Wong, "The Potential of Child Care Tax Credits to Reduce Poverty and Welfare Recipiency," *Population Research and Policy Review*, 9, no. 1 (January 1990), 45-63. IRP Reprint no. 626.

Joseph A. Pechman, "Tax Treatment of Families in Modern Industrial Countries: The Role of the NIT," *Focus*, 12:3 (Spring 1990).

Philip K. Robins, "Federal Financing of Child Care: Alternative Approaches and Economic Implications," *Population Research and Policy Review*, 9, no. 1 (January 1990), 65-90. IRP Reprint no. 628.

Eugene Steuerle and Paul Wilson, "The Earned Income Tax Credit," *Focus*, 10:1 (Spring 1987).

Eugene Steuerle, "Uses of the NIT Framework," *Focus*, 12:3 (Spring 1990).

programs and for the same program in different locales. Such factors as stigma, the generosity of the benefits, the attitudes of caseworkers, and changes in the regulations affect participation rates over time, as does the state of the economy. In 1975-76, the participation rate in the AFDC program was estimated to range from 95 percent in the District of Columbia to 56 percent in Arizona; the estimated range for participation in Supplemental Security Income was from 77 percent in Louisiana to 20 percent in Nebraska. Estimates of Food Stamp participation rates ranged between 58 percent in California and 12 percent in North Dakota. In general, estimates of the national participation rates for Food Stamps and SSI ranged between 50 and 60 percent in the 1970s, far below the rates for AFDC.[5] More recent data on Food Stamps, using as the denominator the poor population, provide an estimated participation rate of 58.7 percent in 1988 and a high of 68.1 percent in 1976.[6]

In calculating the participation rates for the EITC, Scholz used the numbers given in the *Green Book*[7] and IRS microdata[8] as two measures of the number of recipients of the EITC, and he used data from the March 1980 and March 1985 Current Population Surveys (covering the years 1979 and 1984) to estimate the number of eligibles.[9] The years 1980 and 1985 were chosen to allow Scholz to benchmark the 1980 CPS against the 1979 IRS tax data and to benchmark the 1985 CPS against data for 1984 from the Survey of Income and Program Participation (SIPP),[10] as well as 1984 IRS data. To calculate EITC-eligible households, he used CPS individual, family, and household data to simulate the income tax returns that family units in the CPS could have filed.[11]

To account for possible biases caused by discrepancies in reported income from self-employment, two measures were used to estimate the number of EITC-eligible taxpayers. The first reflected the provisions of the law. Families (with dependents in the household) who had an earned income of between $.01 and $10,000 and had less than $10,000 adjusted gross income (AGI) were considered eligible for the EITC in the years 1979 and 1984.[12] The second included taxpayers with dependents and either wages and salaries or earned income (which includes income from self-employment) between $.01 and $10,000. (This is an upper-bound definition, since taxpayers may have either earned income or AGI above $10,000 by this measure.)

Table 1 provides the participation rates in the EITC based on these alternate calculations. As can be seen, the EITC participation rate was between 97 and 120 percent in 1979 and between 104 and 144 percent in 1984. Such numbers are puzzling, to say the least, since they suggest that under the statutory definition of eligibility, in any case, more people received the credit than were entitled to it.

The cause of the discrepancy

In an effort to determine why more people appeared to receive the EITC than were eligible for it, Scholz explored

Table 1

Participation Rate of the EITC, 1979 and 1984

Year	Statutory Definition of Eligibility[a] (in 1000's)	Upper-Bound Definition of Eligibility[b] (in 1000's)
Number of taxpayers eligible		
1979 (CPS)	5,800	6,986
1984 (CPS)	4,435	5,528
1984 (SIPP)	5,272	6,968
	Green Book	IRS Microdata
Number of taxpayers taking the EITC		
1979	6,954	6,798
1984	6,376	5,758
Range of implied participation rates		
1979 (CPS)	97.3%-120.0%	
1984 (CPS)	104.2%-143.8%	
1984 (SIPP)	82.6%-120.9%	

Source: John Karl Scholz, "The Participation Rate of the Earned Income Tax Credit," IRP Discussion Paper no. 928-90, p. 6. Data for this table come from the 1980 and 1985 Current Population Survey; the 1984 Survey of Income and Program Participation; U.S. House of Representatives, Committee on Ways and Means, *1989 Green Book*, pp. 790-795; and the Arthur Young Tax Research Database, University of Michigan.

[a] \$0 < earned income < \$10,000, and AGI < \$10,000.
[b] \$0 < wages and salaries or earned income < \$10,000.

Table 2

Taxpayer Compliance Measurement Program: Data on the Earned Income Tax Credit, 1982 and 1985

	1982	1985
Number of returns (millions) claiming the EITC	6.014	6.424
Had EITC increased	.214	.253
Had EITC decreased	2.248	2.953
Had EITC decreased to zero	1.722	2.496
Total returns entitled to EITC[a]	4.366	4.004
Total EITC claimed (millions of \$)	\$1,749	\$2,091
Amount that should have been claimed	\$1,236	\$1,325

Source: John Karl Scholz, "The Participation Rate of the Earned Income Tax Credit," IRP Discussion Paper no. 928-90, p. 15. These data are from unpublished worksheets of the Internal Revenue Service, Taxpayer Compliance Measurement Program, 1982 and 1985. The 1982 figures come from TCMP, Phase III, Cycle 8, 2/27/86. The 1985 figures come from TCMP, Phase III, Cycle 9, 4/11/89.

[a] An additional category is excluded from the table, taxpayers who made a mistake elsewhere in their return and thus were entitled to the EITC but failed to claim the credit. This category, which contains a small number of taxpayers, is labeled "not reported but established." This accounts for the slight difference between the figures in the table.

four possibilities: that he had made inappropriate assumptions when constructing tax-filing units from the CPS; that there were inconsistencies in the data used to examine the working poor (the CPS, the SIPP, and the IRS data); that improper imputations were performed in the CPS in adjusting for missing data on the number of households with low wages and salaries; and finally that taxpayers were not complying with the tax code. He examined each of these possible sources of error and found that adjusting participation rates based on evidence of noncompliance substantially lowered these rates.

Table 2 presents evidence from two cycles of the Taxpayer Compliance Measurement Program of the IRS on the degree of EITC noncompliance in 1982 and 1985. The magnitude of noncompliance was strikingly large in both years. In 1985, 46 percent of those who claimed the credit claimed too much (39 percent had their credit decreased to zero), and \$766 million was claimed inappropriately.

Among the possible causes of the noncompliance is that taxpayers filed head-of-household returns to which they were not entitled. (For example, a mother living with her parents may not be considered to be providing shelter and therefore may not be entitled to head-of-household filing status.) Another problem may have been the provision of the law that required more than one-half of one's support be from sources other than public assistance when determining EITC eligibility. This requirement was difficult to enforce, since information on public transfers is not collected on tax returns. (The requirement has been dropped in the current law.) It has also been suggested that children have been claimed as dependents by more than one taxpayer and that fictitious children have been claimed. The 1986 tax reform required parents to include social security numbers for dependents over age 5. This requirement substantially reduced the number of dependents being claimed on tax returns. New regulations in OBRA-90 require parents to obtain tax identification numbers for children over the age of one, which will further reduce problems associated with inappropriate claims of EITC eligibility.

Reevaluating the participation rate

Data from the 1984 SIPP, where roughly 5.5 million taxpayers appeared eligible for the EITC, adjusted for a noncompliance rate of 33 percent (between the 29 percent of 1982 and the 39 percent of 1985), yield an EITC participation rate of 70 percent in 1984. Although it might have been expected that the tax reform of 1986 would have lowered this participation rate by eliminating the tax-filing requirement for a large number of low-income families, Scholz's simulations suggest a relatively large number of taxpayers

took the EITC following the 1986 tax reform. He estimates that the participation rate of eligibles was 76 percent in 1988—rather high as participation rates go. Yet even this figure implies that roughly 2.1 million low-income families who were entitled to the credit failed to receive it. He suggests, therefore, that efforts be made to publicize the credit, particularly among the employers of low-wage workers. If it is possible to simplify the determination of head-of-household filing status, such a course should be pursued, as this may also ease the problem of noncompliance.

The reform contained in OBRA-90, eliminating the requirement that more than one-half of one's support be from sources other than public assistance when determining EITC eligibility, is important, since the amount of transfer income received has little bearing on the objectives of the EITC—to relieve the regressive burden of the payroll tax for social security and to encourage work among the poor. Given these objectives, extending the EITC to poor childless couples and individuals may be a possibility for the future.

Conclusion

The recent consensus embodied in the Family Support Act of 1988 is that welfare should serve only as a temporary expedient for the needy. The thrust of the new legislation is to provide training and assistance in job search to enable those on welfare to become self-sufficient. The Earned Income Tax Credit is an increasingly important component of this approach. If the EITC is to be effective in enhancing work as opposed to welfare, knowledge about it must be widespread so that it is available to all of those to whom it is targeted. ■

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[1]For taxpayers filing joint returns, a qualified child is any dependent. Those filing head-of-household returns must provide at least half the support for a child for at least half the year to be eligible for the credit. Thus, a custodial parent can claim the EITC, for example, even if the custody agreement grants the other parent the dependency exemption.

[2]See Eugene Steuerle and Paul Wilson, "The Earned Income Tax Credit," *Focus*, 10:1 (Spring 1987), for a description of the various rationales for the EITC.

[3]The social security tax is a uniform payroll tax of 6.2 percent levied on covered earnings up to the annual maximum taxable wage base of $51,000 for Old Age, Survivors, and Disability Insurance and 1.45 percent up to $125,000 for Medicare hospital insurance. This 7.65 percent employee share is matched by the employer for a combined contribution of 15.3 percent. Self-employed workers pay the full 15.3 percent.

[4]Calculations in this paragraph are by John Karl Scholz.

[5]Much of this discussion of participation rates is drawn from Robert H. Haveman, *Poverty Policy and Poverty Research: The Great Society and the Social Sciences* (Madison: The University of Wisconsin Press, 1987), pp. 87–88.

[6]U.S. House of Representatives, Committee on Ways and Means, *1990 Green Book* (Washington, D.C.: U.S. Government Printing Office, 1990), p. 1269. This yearly publication was formerly called *Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means*. In this article it is consistently referred to as *Green Book*, preceded by the appropriate year.

[7]*1989 Green Book*, pp. 790–795.

[8]The tax data are from the University of Michigan, Arthur Young Tax Research Database, a panel of individual income tax returns from 1979 through 1984. They are described in Joel Slemrod, "The 1979–84 Linked Panel of Tax Return Data: Sampling and Linking Methodology," University of Michigan, Ann Arbor, November 1988 (photocopy).

[9]The CPS is a survey conducted monthly by the U.S. Bureau of the Census. The sample consists of approximately 60,000 households nationwide and collects primarily labor force data about the civilian noninstitutional population. The March supplement collects additional information, including money income received in the previous calendar year.

[10]The SIPP is a series of panel surveys conducted by the U.S. Bureau of the Census in the 1980s to monitor short-term changes in the economic situations of persons, households, and families in the United States. It has a more frequent sampling frame than the CPS and greater targeting of low-income families.

[11]The simulation does not account for the roughly 500,000 married couples who file separate returns. For the most part, these taxpayers would not be eligible for the EITC even if they filed joint returns.

[12]The criterion that over half of the taxpayer's support for a dependent must come from sources other than an income maintenance program (such as AFDC) was ignored in this simulation.

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