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

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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.