

Geographic Adjustments In Poverty Thresholds¹

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The first section of the paper discusses the recommendations of the National Academy of Sciences Panel with respect to geographic adjustment of poverty thresholds and the methodology used to implement these recommendations. Second, the paper discusses subsequent research that resulted in modifications to the panel's specific recommendations incorporated in the most recent comprehensive Census Bureau report on alternative poverty measures. Third, the paper discusses limitations of this modified approach. Finally, the paper discusses the effect of geographic adjustment of thresholds on poverty and the geographic distribution of the poverty population, with an illustration of the effect on one federal program's funding.

I. National Academy of Sciences (NAS) Panel Recommendations

The current official poverty measure makes no adjustment for cost-of-living differences by geographic area. The NAS panel's recommendations for handling geographic adjustments in housing costs for calculating poverty thresholds are shown below:

RECOMMENDATION 3.2. *The poverty thresholds should be adjusted for differences in the cost of housing across geographic areas of the country. Available data from the decennial census permit the development of a reasonable cost-of-housing index for nine regions and, within each region, for several population size categories of metropolitan areas. The index should be applied to the housing portion of the poverty thresholds.*

RECOMMENDATION 3.3. *Appropriate agencies should conduct research to determine methods that could be used to update the geographic housing cost component of the poverty thresholds between the decennial censuses.*

RECOMMENDATION 3.4. *Appropriate agencies should conduct research to improve the estimation of geographic cost-of-living differences in housing as well as other components of the poverty budget. Agencies should consider improvements to data series, such as the BLS area price indexes, that have the potential to support improved estimates of cost-of-living differences.*²

In making its recommendations, the panel clearly stated that this first, partial step, would represent a marked improvement over the current official poverty thresholds that make no

¹ This report is released to inform interested parties of ongoing research and to encourage discussion of work in progress.

²Citro and Michael, 1995, p. 183.

adjustment at all for cost-of-living differences. The panel noted that a more comprehensive adjustment (one that took more into account than housing costs) was preferred, but that inadequate data prevented this.³ In the words of the panel, “we do not recommend adjustments for other budget items at this time because good data for such adjustments are lacking and because the available research suggests that variations in the costs of other budget items are not large” (p. 8).

The panel developed a set of indexes to adjust poverty thresholds for metropolitan areas that fall within several population size groups and for non-metropolitan areas in each of the nine Census Bureau divisions of the country. (Divisions include from three to nine contiguous states.) The panel used a modified version of a method used by the Department of Housing and Urban Development (HUD) to create annual Fair Market Rents (FMRs), which are used in the administration of Section 8 rental housing subsidies.⁴ HUD uses a combination of decennial census data, data from the American Housing Survey, and random-digit dialing surveys to develop FMRs each year that vary by geographic location. The NAS indexes used 1990 census data on rents for two-bedroom apartments that had plumbing facilities, kitchen facilities, and electricity and into which the occupant had moved within the last 5 years. Within each division, the panel grouped metropolitan areas into five population-size categories, with non-metropolitan areas included in the smallest category. Indexes were then computed using the cost of housing at the 45th percentile of the value of the distribution for each area (in which the U.S. average was set to 1.0). This resulted in a set of indexes for 41 geographic areas (some categories had no members). The index values were further adjusted for the estimated housing portion of the poverty budget (44 percent). This effectively created a fixed-weight interarea price index with two components, housing and all other items, where the price of all other items was assumed not to vary. Table 1 shows the resulting indexes calculated by the NAS panel for each of the nine Census Bureau divisions.

Housing costs vary widely, even within relatively small areas. To capture housing cost differences accurately, therefore, requires data on housing costs at a fine level of geographic detail. The NAS panel started the calculation of indexes with information from the 1990 decennial census on housing costs for the entire United States by county. However, since the panel was applying these results to a Current Population Survey (CPS) public use file which limits geographic detail to protect respondent confidentiality, the detail was reduced to the 41 areas described above.

³For a discussion of research into broader interarea price indexes, see Kokoski, Cardiff, and Moulton 1994 and Kokoski and Cardiff 2004.

⁴The Section 8 Program, administered by HUD, increases affordable housing choices for very low-income families by allowing families to choose privately owned rental housing. For more information, see <http://www.hud.gov/progdesc/certifi8.cfm>.

The Census Bureau's first report on alternative poverty measures (Short et al., 1999) presented poverty estimates developed by implementing the panel's procedure for adjusting thresholds for geographic differences in the costs of housing using the current official thresholds as well as other recommendations of the panel. Poverty measures were calculated with and without a geographic adjustment applied to the thresholds. In subsequent work, state-level poverty rates were calculated and examined to determine the effect on these estimates of adjusting the thresholds for differences in housing costs (Short, 2001b).

II. Subsequent Research

While the NAS panel report acknowledged the importance of adjusting poverty thresholds for geographic differences in the cost of living, it also acknowledged limitations to their proposed approach. This was particularly apparent when examining poverty rates by state. The NAS indexes were grouped by geographic location rather than by housing costs per se. So for example, all metropolitan areas in the New England division were given the same index value, even though housing costs vary considerably within this area. Maine, for example, has lower housing costs than many other New England states. Examining poverty rates using a variety of price indexes for 1997, Short (2001b) found that, using the NAS indexes (based on the New England Division), the poverty rate for Maine was changed from 10.1 percent to 12.5 percent, while applying five other indexes (based on more specific geography), the rate was lower, from 9.5 percent to 9.9 percent. The result suggested that the indexes for a given division might not adequately reflect differences in the cost of housing for each state within that division.

The NAS panel stated that these indexes, while an improvement over the current official thresholds that take no account of these differences, could be improved with better data and valuation methods. About the time that the NAS released their report on poverty measurement, a report from the General Accounting Office (GAO) was released focusing specifically on adjusting poverty thresholds for geographic cost-of-living differences (GAO, 1995). This report enlisted experts in the field to rate the feasibility of a long list of possible methods to make these adjustments. Of the listed methods, none was rated by a majority of the experts as showing great promise. Only three of the methods were rated as having at least moderate promise. One of these used housing data (specifically, HUD Fair Market Rent data) to adjust for housing costs. One criticism of housing data as a means of adjusting thresholds for cost-of-living differences was that the quality of housing should be controlled in the measure to prevent downward bias in low-income areas. The other two methods showing at least moderate promise were budgets (see Renwick and Bergman 1993) and norms (see Runzheimer 1994).

The second Census Bureau report on alternative poverty measures (Short, 2001a) presented geographic indexes based explicitly on HUD Fair Market Rents (FMRs). FMRs are available annually for all metropolitan statistical areas and non-metropolitan counties for the entire U.S. At the time of the report they represented the gross rent (with utilities) at the 40th percentile of the rent distribution of standard-quality rental housing. Geographic indexes based on FMRs were used to construct an index by which a portion of the poverty threshold was adjusted to account for differences in shelter costs, along the same lines as the NAS method (see Appendix I for the

procedure used to calculate geographic indexes from FMRs) .

The primary difference between the indexes used by the NAS panel and those used in the second Census Bureau report was that indexes were calculated for smaller areas in the latter. Two indexes were calculated for each state corresponding to metropolitan and non-metropolitan residence. This approach resulted in 100 indexes or two per state (except for metropolitan-only indexes in New Jersey and the District of Columbia). This method allowed for greater variation of housing prices within and among states and appeared to yield more reasonable estimates of poverty at the state level when compared to a variety of other calculated indexes (see Short 2001b). Table 2 (from Short 2001a) compares 1999 normalized mean indexes, by state, as calculated by the NAS method and the FMR method described above. Based on the NAS method, the normalized indexes range from 0.84 (Mississippi, North Dakota, and South Dakota) to 1.15 (Connecticut and New Hampshire). The FMR method shows a somewhat wider dispersion, ranging from 0.83 (Mississippi) to 1.23 (Hawaii).

III. Limitations

Obviously, FMRs are not perfect. As the GAO report pointed out, one problem is that FMRs do not fully control for housing quality since the definition of “standard” is not a strict one. Analysts at HUD have described several reasons why FMRs should not be used to adjust poverty thresholds.⁵ They are reproduced below.

1. FMRs were developed to run HUD’s Section 8 certificates and vouchers program, and for no other purpose. HUD is satisfied that they work satisfactorily for this purpose.
2. FMRs are not intended to reflect levels or changes in owner-occupied housing costs. They measure market rents, not total housing costs.
3. FMRs measure gross rents (rents plus tenant-paid utilities) of recent movers, not of the entire rental housing stock. “Recent movers” are those who had moved into the unit within the past 15 months, not the past 5 years as stated in the [NAS] report. These represent well under one-half of all rental units.
4. All areas are calibrated to the census once a decade (the last was in 1994), and most major metropolitan areas are checked once or twice a decade using Random Digit Dialing surveys (RDDs), but this leaves unevenness in other areas.
5. Rental markets can be quite volatile, and many of these are caught by area RDDs, of which HUD conducts about 50 to 60 a year. For example, a 1997 RDD of Los Angeles resulted in an FMR reduction of almost \$140. While adjustments of this magnitude are

⁵Personal communication from staff at HUD.

very rare, changes can be unpredictable and sudden.

6. For 99 large FMR areas, rents are adjusted using Current Price Index (CPI) rent and utility factors. However, the CPI data are available only for 32 Consolidated Metropolitan Statistical Areas (CMSAs), and they are applied to all primary MSAs within CMSAs.
7. HUD updates FMRs for smaller areas using the results of longitudinal RDDs of the metropolitan and non-metropolitan portions of the ten HUD regions. This is a substantial improvement over the previous system of using CPI rent changes for the four Census Bureau regions, but it still results in generalizations of rent changes that might not be applicable to individual areas.
8. The percentile standard has changed. FMRs were based on the 50th percentile from 1975 to 1983, the 45th percentile from 1985⁶ to 1994, and the 40th percentile starting in 1995. It is possible to splice the series from 1985 onward, using the difference between the 45th and the 40th percentile in 1995, but this produces a rough approximation.
9. The percentile measure is administratively determined; it is doubtful that statisticians, policy makers, and above all, the general public, would call the 45th percentile a good measure of central tendency, much less the 40th percentile.
10. The treatment of non-metropolitan counties has changed over time. Between 1975 and 1983, FMRs were based on county groups of 250,000 or more. From 1984 to 1993, they were based on county groups of 100,000 or more. Only starting in 1994 have FMRs been based on data for individual counties, but with an important adjustment, a state minimum.
11. In 1996, HUD instituted a state minimum FMR. This raised FMRs substantially in many non-metropolitan counties.
12. For all of these reasons, FMRs are published with a 60-day comment period, giving housing authorities and other interested parties a chance to request that HUD alter their FMRs.

In spite of these problems, the counter-argument is that FMR methodology is relatively straightforward and applicable to all areas of the U.S. The data are updated and calibrated on a regular basis, the information is very detailed, and FMRs provide a good indication of the variability of housing costs across the country.

IV. Effect of Geographic Adjustment

⁶No FMR was published in 1984.

Adjusting poverty thresholds for cost-of-living differences has a noticeable effect on the measured distribution of the poverty population. Table 3 (from Nelson and Short 2003) compares 1999-2002 state poverty rates based on the official poverty measure (with no geographic adjustment) to an alternative measure that includes (among other differences) geographic adjustment.⁷ Though the comparisons are somewhat complicated by the fact that the overall poverty rate differs between the two measures, some of the differences between official and alternative poverty rates are much larger than the overall difference of 0.9 percentage points. As would be expected, poverty rates in states with relatively low housing costs decline the most (for example, the poverty rate in Alabama drops from 14.8 percent to 10.2 percent and the poverty rate in Mississippi drops from 16.8 percent to 12.8 percent). Similarly, the poverty rates in states with relatively high housing costs rise the most under the alternative measure (for example, the poverty rate in California rises from 13.1 percent to 18.4 percent and the poverty rate in New York rises from 14.1 percent to 18.0 percent).

As shown in Table 4, these differences in overall poverty rates translate into differences in the geographic distribution of those in poverty. Using the same four states discussed above as examples, the proportion of the total U.S. poverty population living in Alabama drops from 2.0 percent to 1.3 percent, and the Mississippi share of the total poverty population drops from 1.4 percent to 1.0 percent. California's share of the total U.S. poverty population increases from 13.7 percent to 17.9 percent, and New York's share rises from 8.2 percent to 9.7 percent. Using a difference of 0.2 percentage points or more as a cutoff, 19 states have lower poverty rates and 9 states have higher rates when the alternative measures are used. Poverty rates in the remaining 23 states, including the District of Columbia, are within 0.2 percentage points under the two measures (see Figure 1).

These changes can have a large effect on funding formulas that use poverty-related statistics to ensure that means-tested benefits are efficiently targeted. Nelson and Short (2003) examined this issue by looking at a specific funding formula—the one used to allocate funds to states under the State Children's Health Insurance Program (SCHIP)—to illustrate the potential impact of geographic adjustment on the allocation of funding across states. Under this program, \$3 billion to \$4 billion are allocated to states annually based on a formula that uses the number of low-income (under 200 percent of poverty) children and low-income uninsured children, and it uses 3-year state averages from the CPS to compute these numbers.

Table 5 shows the amount of SCHIP funds that were allocated to each state in FY 2004. They

⁷For a complete description of the alternative measure used for this analysis, see Nelson and Short (2003). While there were other differences in addition to geographic adjustment between the official and alternative poverty estimates, an analysis of the two sets of estimates indicated that geographic adjustment is by far the major contributor to state-level differences in poverty share estimates.

range from \$3.8 million (Vermont) to \$534.0 million (California). Other states with allocations over \$150 million were Texas (\$330.9 million), New York (\$216.5 million), and Florida (\$193.6 million). Table 5 also shows the comparable figures based on the alternative poverty measure that adjusts thresholds geographically. Nine states would see no changes to their allocations (see Figure 2). Of the other 42 states, 17 (including the District of Columbia) would see increases and 25 would see declines to their allocations. Of the 17 states that would have increased allocations, those with the largest dollar amount differences would be California (\$35.3 million), New York (\$25.2 million), and New Jersey (\$17.5 million). In terms of percentage increases in allocations, the states with the largest changes would be New Jersey (27.1 percent), New Hampshire (16.9 percent), New York (11.6 percent), and the District of Columbia (10.3 percent). In terms of dollar declines in allocations, the states with the largest changes would be Texas (\$30.1 million), Louisiana (\$9.4 million), and Alabama (\$7.9 million). In terms of percentage declines in allocations, the states with the largest changes would be Louisiana and Alabama (both at 14.5 percent), Kentucky (13.0 percent), and Arkansas (12.4 percent).

Table 1. Adjustments for Housing Costs in Poverty Thresholds Using the Method Proposed by the National Academy of Sciences	
Area and Population Size	Index Value
<i>Northeast</i>	
<i>New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	1.128
Metropolitan areas 250,000-500,000	1.128
Metropolitan areas 500,000-1,000,000	1.148
Metropolitan areas 1,000,000-2,500,000	1.141
Metropolitan areas 2,500,000 or more	1.209
<i>Middle Atlantic (New Jersey, New York, Pennsylvania)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.908
Metropolitan areas 250,000-500,000	0.997
Metropolitan areas 500,000-1,000,000	1.020
Metropolitan areas 1,000,000-2,500,000	0.975
Metropolitan areas 2,500,000 or more	1.187
<i>Midwest</i>	
<i>East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.896
Metropolitan areas 250,000-500,000	0.959
Metropolitan areas 500,000-1,000,000	0.987
Metropolitan areas 1,000,000-2,500,000	0.995
Metropolitan areas 2,500,000 or more	1.059
<i>West North Central (Iowa Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.861
Metropolitan areas 250,000-500,000	0.962
Metropolitan areas 500,000-1,000,000	0.981
Metropolitan areas 1,000,000-2,500,000	1.028
Metropolitan areas 2,500,000 or more (use areas 1-2.5 million)	N.A.
<i>South</i>	
<i>South Atlantic (Delaware, District of Columbia, Florida,</i>	

<i>Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.899
Metropolitan areas 250,000-500,000	0.961
Metropolitan areas 500,000-1,000,000	1.007
Metropolitan areas 1,000,000-2,500,000	1.043
Metropolitan areas 2,500,000 or more	1.119
<i>East South Central (Alabama, Kentucky, Mississippi, Tennessee)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.827
Metropolitan areas 250,000-500,000	0.935
Metropolitan areas 500,000-1,000,000	0.947
Metropolitan areas 1,000,000-2,500,000	N.A.
Metropolitan areas 2,500,000 or more	N.A.
<i>West South Central (Arkansas, Louisiana, Oklahoma, Texas)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.858
Metropolitan Areas 250,000-500,000	0.911
Metropolitan areas 500,000-1,000,000	0.942
Metropolitan areas 1,000,000-2,500,000	0.962
Metropolitan areas 2,500,000 or more	1.005
West	
<i>Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.888
Metropolitan areas 250,000-500,000	0.976
Metropolitan areas 500,000-1,000,000	1.039
Metropolitan areas 1,000,000-2,500,000	1.003
Metropolitan areas 2,500,000 or more	N.A.
<i>Pacific (Alaska, California, Hawaii, Oregon, Washington)</i>	
Non-metropolitan areas and Metropolitan areas under 250,000	0.969
Metropolitan areas 250,000-500,000	1.018
Metropolitan areas 500,000-1,000,000	1.028
Metropolitan areas 1,000,000-2,500,000	1.104
Metropolitan areas 2,500,000 or more	1.217
N.A. = not applicable	
Source: Citro and Michael 1995, p. 41	

Region	NAS Method	FMR-Based
United States	1.00	1.00
Alabama	0.86	0.84
Alaska	0.95	1.13
Arizona	0.96	0.99
Arkansas	0.85	0.84
California	1.14	1.13
Colorado	0.95	1.02
Connecticut	1.15	1.13
Delaware	1.02	1.02
District of Columbia	1.09	1.17
Florida	0.98	1.01
Georgia	1.00	0.95
Hawaii	0.99	1.23
Idaho	0.89	0.88
Illinois	1.00	1.03
Indiana	0.93	0.90
Iowa	0.87	0.87
Kansas	0.90	0.88
Kentucky	0.86	0.85
Louisiana	0.89	0.87
Maine	1.10	0.94
Maryland	1.07	1.05
Massachusetts	1.16	1.16
Michigan	0.99	0.97
Minnesota	0.92	0.97
Mississippi	0.84	0.83
Missouri	0.94	0.87
Montana	0.87	0.88
Nebraska	0.89	0.89
Nevada	0.98	1.06
New Hampshire	1.15	1.07
New Jersey	1.16	1.18
New Mexico	0.92	0.92
New York	1.09	1.16
North Carolina	0.95	0.92

North Dakota	0.84	0.85
Ohio	0.98	0.92
Oklahoma	0.88	0.85
Oregon	1.02	0.98
Pennsylvania	1.02	0.97
Rhode Island	1.11	1.05
South Carolina	0.94	0.89
South Dakota	0.84	0.89
Tennessee	0.89	0.89
Texas	0.92	0.95
Utah	0.95	0.98
Vermont	1.10	0.99
Virginia	0.99	1.00
Washington	1.10	1.01
West Virginia	0.91	0.86
Wisconsin	0.92	0.92
Wyoming	0.87	0.88
Source: U.S. Census Bureau tabulations of March 2000 Current Population Survey.		
FMR = Fair Market Rent		

Table 3. Percent of People in Poverty by State, Under Official and Alternative Poverty Definitions: 3-Year Averages for 1999, 2000, and 2001					
State	Official 3-year average 1999-2001 Percent	90-pct. C.I.(+/-)	Alternative 3-year average 1999-2001 Percent	90-pct. C.I.(+/-)	Percentage Point Difference (Alternative Minus Official Measure)
United States	11.6	0.2	12.5	0.2	0.9
Alabama	14.8	1.5	10.2	1.3	-4.7
Alaska	7.9	1.2	9.3	1.2	1.4
Arizona	12.9	1.5	13.6	1.5	0.8
Arkansas	16.3	1.7	11.4	1.5	-4.9
California	13.1	0.7	18.4	0.8	5.3
Colorado	9.0	1.1	10.5	1.2	1.5
Connecticut	7.4	1.1	9.8	1.3	2.4
Delaware	8.5	1.3	9.6	1.4	1.1
District of Columbia	16.1	1.8	20.5	2.0	4.5
Florida	12.0	0.8	13.7	0.9	1.6
Georgia	12.6	1.4	13.2	1.4	0.6
Hawaii	10.4	1.4	16.9	1.7	6.5
Idaho	12.7	1.5	9.0	1.3	-3.6
Illinois	10.2	0.9	11.3	0.9	1.1
Indiana	7.9	1.1	7.6	1.0	-0.3
Iowa	7.7	1.1	6.6	1.1	-1.1
Kansas	10.1	1.3	8.5	1.2	-1.6
Kentucky	12.4	1.4	10.3	1.4	-2.1
Louisiana	17.5	1.7	13.5	1.6	-4.0
Maine	10.3	1.3	10.0	1.3	-0.3
Maryland	7.3	1.1	9.4	1.3	2.1
Massachusetts	10.2	1.1	13.3	1.2	3.1
Michigan	9.7	0.9	9.6	0.9	0.0
Minnesota	6.8	1.0	6.3	1.0	-0.4
Mississippi	16.8	1.8	12.8	1.6	-4.0
Missouri	10.2	1.3	8.2	1.2	-2.1
Montana	14.4	1.7	13.0	1.6	-1.4
Nebraska	9.7	1.3	7.8	1.2	-1.9
Nevada	9.0	1.2	11.0	1.3	1.9
New Hampshire	6.2	1.1	7.3	1.2	1.1
New Jersey	7.7	0.8	12.5	1.0	4.8
New Mexico	18.8	1.9	17.1	1.9	-1.7
New York	14.1	0.8	18.0	0.8	3.9
North Carolina	12.9	1.2	12.0	1.1	-0.9
North Dakota	12.4	1.5	9.2	1.3	-3.2

Ohio	10.8	0.9	9.1	0.8	-1.7
		Oklahoma	14.3	1.5	10.3
Oregon	11.8	1.4	12.3	1.4	0.6
Pennsylvania	9.2	0.8	9.6	0.8	0.4
Rhode Island	10.0	1.3	9.3	1.2	-0.6
South Carolina	12.7	1.5	10.8	1.4	-1.8
South Dakota	9.0	1.2	7.6	1.1	-1.4
Tennessee	13.2	1.5	10.9	1.4	-2.2
Texas	15.2	0.9	15.3	0.9	0.1
Utah	8.0	1.1	8.0	1.1	0.0
Vermont	9.8	1.3	9.6	1.3	-0.2
Virginia	8.0	1.1	9.5	1.2	1.4
Washington	10.4	1.3	11.1	1.4	0.8
West Virginia	15.6	1.5	11.5	1.3	-4.1
Wisconsin	8.6	1.1	8.0	1.1	-0.6
Wyoming	10.3	1.4	8.5	1.3	-1.9
Note: For explanation of confidence intervals (C.I.), see "Standard errors and their use"					
at www.census.gov/hhes/poverty/poverty01/pov01src.pdf					
Source: U.S. Census Bureau, Current Population Survey, 2000, 2001, and 2002 Annual					
Social and Economic Supplements.					

Table 4. Number of People and Share of the Total Population at or Below Official and Alternative Poverty Thresholds, by State: Three-Year Averages for 1999, 2000, 2001

							Percentage Point Difference (Alternative Minus Official Measure)
	Total Population		Poverty Population				
States		Percent of Total	Official	Percent of Total	Alternative	Percent of Total	
United States.....	278,875,715	100.0	32,426,290	100.0	34,896,493	100.00	
Alabama.....	4,380,235	1.6	649,225	2.0	445,003	1.3	-0.7
Alaska.....	627,280	0.2	49,727	0.2	58,336	0.2	0.0
Arizona.....	5,183,820	1.9	667,021	2.1	706,496	2.0	0.0
Arkansas.....	2,638,553	0.9	430,890	1.3	301,655	0.9	-0.5
California.....	33,996,163	12.2	4,449,035	13.7	6,249,371	17.9	4.2
Colorado.....	4,351,439	1.6	391,242	1.2	457,262	1.3	0.1
Connecticut.....	3,389,454	1.2	250,936	0.8	332,419	1.0	0.2
Delaware.....	778,218	0.3	66,216	0.2	74,719	0.2	0.0
District of Columbia.	550,473	0.2	88,451	0.3	113,118	0.3	0.1
Florida.....	15,957,513	5.7	1,922,800	5.9	2,183,536	6.3	0.3
Georgia.....	8,083,118	2.9	1,020,933	3.1	1,066,662	3.1	-0.1
Hawaii.....	1,208,438	0.4	125,556	0.4	204,661	0.6	0.2
Idaho.....	1,280,635	0.5	162,274	0.5	115,723	0.3	-0.2
Illinois.....	12,277,131	4.4	1,257,298	3.9	1,386,246	4.0	0.1
Indiana.....	5,983,604	2.1	473,271	1.5	456,585	1.3	-0.2
Iowa.....	2,857,119	1.0	219,604	0.7	188,088	0.5	0.1
Kansas.....	2,629,634	0.9	266,552	0.8	224,450	0.6	-0.2
Kentucky.....	3,947,779	1.4	490,705	1.5	406,204	1.2	-0.3
Louisiana.....	4,338,613	1.6	760,726	2.3	585,464	1.7	-0.7
Maine.....	1,268,146	0.5	131,158	0.4	127,219	0.4	0.0
Maryland.....	5,202,763	1.9	379,520	1.2	490,815	1.4	0.2
Massachusetts.....	6,282,787	2.3	639,113	2.0	832,858	2.4	0.4
Michigan.....	9,914,966	3.6	957,290	3.0	952,962	2.7	-0.2
Minnesota.....	4,889,413	1.8	330,561	1.0	309,108	0.9	-0.1
Mississippi.....	2,780,843	1.0	467,506	1.4	356,679	1.0	-0.4
Missouri.....	5,513,698	2.0	562,858	1.7	449,434	1.3	-0.4
Montana.....	890,061	0.3	128,348	0.4	115,973	0.3	-0.1
Nebraska.....	1,680,448	0.6	162,320	0.5	130,832	0.4	-0.1
Nevada.....	2,069,142	0.7	186,990	0.6	226,863	0.7	0.1
New Hampshire.....	1,246,492	0.4	77,547	0.2	91,291	0.3	0.0
New Jersey.....	8,357,421	3.0	646,971	2.0	1,047,023	3.0	1.0
New Mexico.....	1,805,128	0.6	339,498	1.0	308,331	0.9	-0.2

New York.....	18,796,512	6.7	2,648,215	8.2	3,380,367	9.7	1.5
North Carolina.....	7,944,276	2.8	1,027,100	3.2	951,909	2.7	-0.4
North Dakota.....	620,941	0.2	77,166	0.2	57,411	0.2	-0.1
Ohio.....	11,186,902	4.0	1,211,431	3.7	1,020,256	2.9	-0.8
Oklahoma.....	3,350,085	1.2	478,245	1.5	344,841	1.0	-0.5
Oregon.....	3,427,502	1.2	403,422	1.2	422,634	1.2	0.0
Pennsylvania.....	12,026,530	4.3	1,102,450	3.4	1,155,750	3.3	-0.1
Rhode Island.....	1,036,732	0.4	103,244	0.3	96,815	0.3	0.0
South Carolina.....	3,919,871	1.4	496,106	1.5	424,563	1.2	-0.3
South Dakota.....	727,546	0.3	65,242	0.2	55,244	0.2	0.0
Tennessee.....	5,627,553	2.0	740,923	2.3	614,786	1.8	-0.5
Texas.....	20,632,671	7.4	3,134,796	9.7	3,160,575	9.1	-0.6
Utah.....	2,230,082	0.8	178,083	0.5	178,390	0.5	0.0
Vermont.....	601,120	0.2	58,842	0.2	57,610	0.2	0.0
Virginia.....	6,962,739	2.5	559,251	1.7	659,880	1.9	0.2
Washington.....	5,826,900	2.1	604,300	1.9	649,038	1.9	0.0
West Virginia.....	1,758,591	0.6	274,640	0.8	201,820	0.6	-0.3
Wisconsin.....	5,353,105	1.9	460,515	1.4	428,039	1.2	-0.2
Wyoming.....	485,529	0.2	50,181	0.2	41,179	0.1	0.0

Source: U.S. Census Bureau, Current Population Survey, 2000, 2001, and 2002 Annual Social and Economic Supplements.

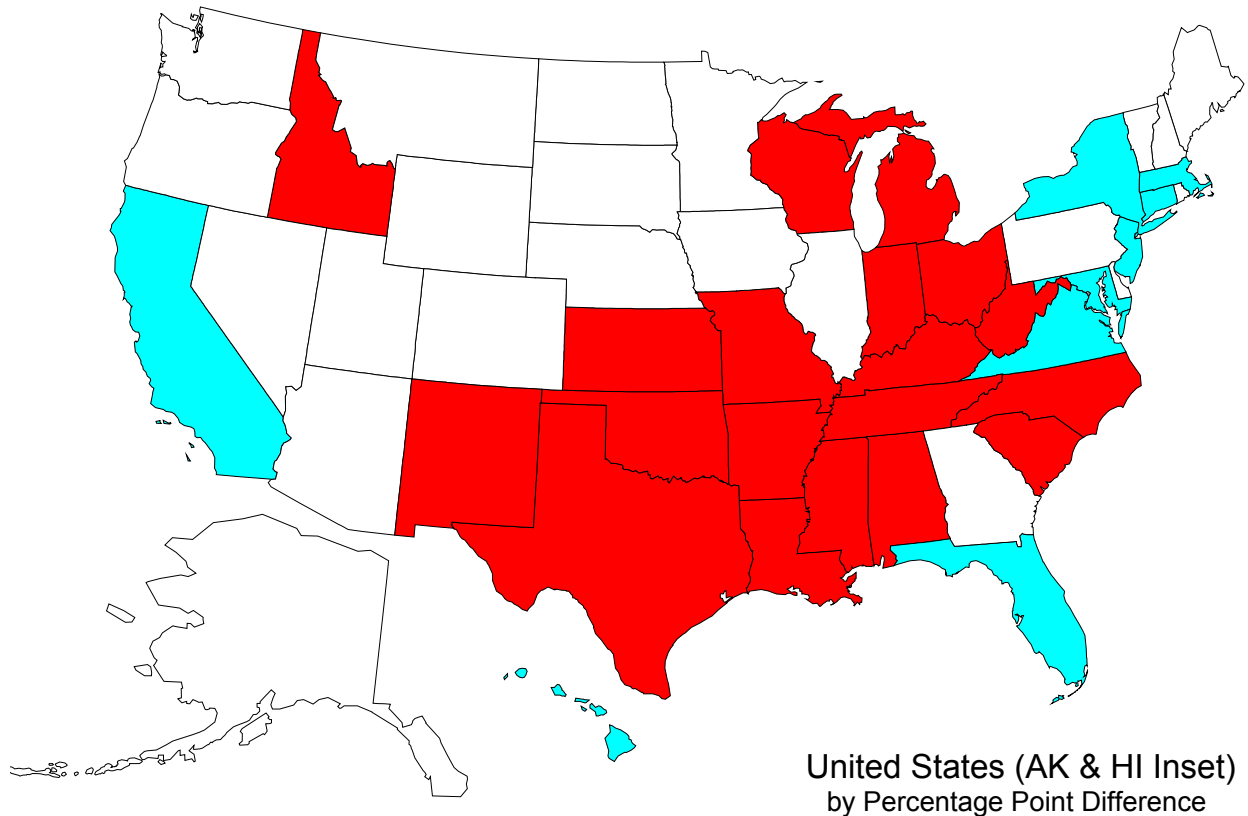
Table 5: Summary of Differences between Official and Hypothetical Alternative Fiscal Year 2004 State Children's Health Insurance Program Allotments (dollars)

State	Allotment Under Official Poverty Definition	Allotment Under Alternative Poverty Definition	Dollar Change In Allotment (Alternative Minus Official)	Percent Change in Allotment (Alternative Minus Official)
Alabama	54,679,333	46,775,427	-7,903,906	-14.46%
Alaska	7,156,891	7,430,455	273,564	3.82%
Arizona	87,023,654	81,381,159	-5,642,495	-6.48%
Arkansas	35,073,372	30,739,050	-4,334,322	-12.36%
California	533,990,797	569,275,528	35,284,731	6.61%
Colorado	44,865,429	44,750,127	-115,302	-0.26%
Connecticut	27,975,129	28,753,554	778,425	2.78%
Delaware	7,817,461	8,028,018	210,557	2.69%
District of Columbia	7,198,952	7,937,542	738,590	10.26%
Florida	193,614,837	188,491,700	-5,123,137	-2.65%
Georgia	103,892,954	100,473,288	-3,419,666	-3.29%
Hawaii	9,647,963	9,647,963	0	0.00%
Idaho	16,958,002	15,115,931	-1,842,071	-10.86%
Illinois	120,969,643	125,623,444	4,653,801	3.85%
Indiana	54,026,680	48,986,132	-5,040,548	-9.33%
Iowa	19,703,423	19,231,441	-471,982	-2.40%
Kansas	23,541,920	21,999,315	-1,542,605	-6.55%
Kentucky	39,286,749	34,186,015	-5,100,734	-12.98%
Louisiana	64,523,178	55,161,566	-9,361,612	-14.51%
Maine	9,474,540	9,257,301	-217,239	-2.29%
Maryland	36,121,348	39,715,060	3,593,712	9.95%
Massachusetts	46,201,047	46,201,047	0	0.00%
Michigan	89,138,280	89,610,392	472,112	0.53%
Minnesota	30,626,504	30,626,504	0	0.00%
Mississippi	36,897,326	33,905,608	-2,991,718	-8.11%
Missouri	41,923,481	39,082,411	-2,841,070	-6.78%
Montana	10,193,881	10,193,881	0	0.00%
Nebraska	13,872,884	13,872,884	0	0.00%
Nevada	31,163,957	32,795,563	1,631,606	5.24%
New Hampshire	8,013,366	9,364,434	1,351,068	16.86%
New Jersey	64,389,677	81,848,499	17,458,822	27.11%

New Mexico	32,788,606	32,788,606	0	0.00%
New York	216,455,790	241,641,263	25,185,473	11.64%
North Carolina	85,753,907	85,070,055	-683,852	-0.80%
North Dakota	5,436,695	4,893,025	-543,670	-10.00%
Ohio	103,803,316	103,152,819	-650,497	-0.63%
Oklahoma	44,621,756	44,621,756	0	0.00%
Oregon	38,056,795	40,041,105	1,984,310	5.21%
Pennsylvania	98,747,809	99,344,447	596,638	0.60%
Rhode Island	7,379,988	7,945,094	565,106	7.66%
South Carolina	43,355,057	40,390,229	-2,964,828	-6.84%
South Dakota	5,790,144	5,536,551	-253,593	-4.38%
Tennessee	57,957,983	52,519,061	-5,438,922	-9.38%
Texas	330,851,514	300,735,755	-30,115,759	-9.10%
Utah	24,091,106	24,672,862	581,756	2.41%
Vermont	3,813,156	3,813,156	0	0.00%
Virginia	55,714,814	61,271,288	5,556,474	9.97%
Washington	50,326,484	50,326,484	0	0.00%
West Virginia	18,760,354	16,695,709	-2,064,645	-11.01%
Wisconsin	43,504,958	41,271,821	-2,233,137	-5.13%
Wyoming	4,952,110	4,932,675	-19,435	-0.39%
TOTAL STATES	3,142,125,000	3,142,125,000	0	0.00%

Source: Computations prepared by staff from the Center for Medicare and Medicaid Services (CMS)

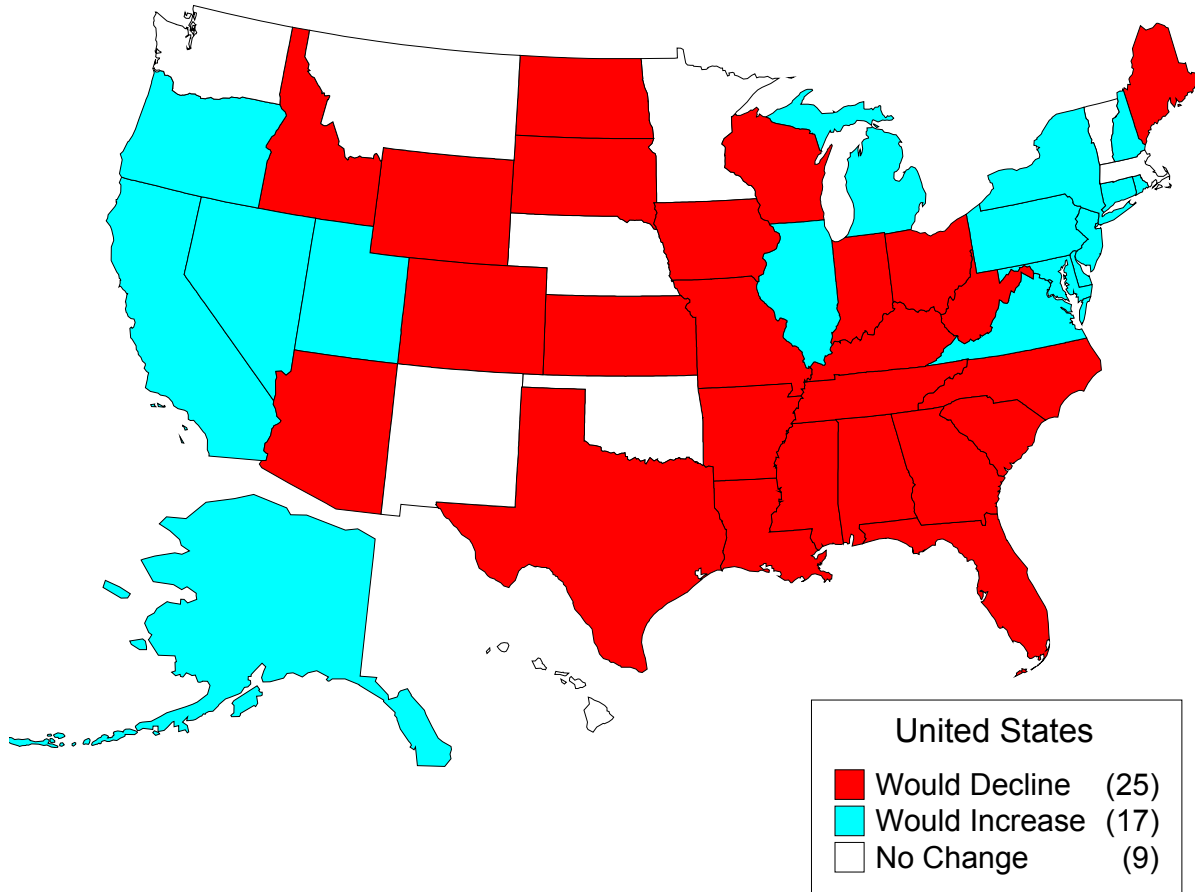
Figure 1: States by Changes in Shares of All People in Poverty Between Official and Alternative Poverty Measures: 3-Year Average, 1999-2001



Note: The numbers in the text box include Washington, DC whose share increased by 0.05 percentage points between the official and alternative measures.

Sources: Table 3: Number of People and Share of the Total Population At or Below Official and Alternative Poverty Thresholds, by State: 3-Year Averages for 1999, 2000, 2001; U.S. Census Bureau, Current Population Survey, 2000, 2001, and 2002 Annual Social and Economic Supplements.

Figure 2: States by Hypothetical Percent Change in Fiscal Year 2004 State Children’s Health Insurance Program Allotments Based on Official and Alternative Measures.



Note: The numbers in the text box include Washington, DC whose allotment would increase by 10.26 percent between the official and alternative measures.

Sources: Table 4: Summary of Differences between Official and Alternative Fiscal Year 2004 State Children’s Health Insurance Program Allotments; U.S. Census Bureau, Current Population Survey, 2000, 2001, and 2002 Annual Social and Economic Supplements.

Appendix 1

Procedure used to construct normalized geographic indexes using Fair Market Rents (FMRs)

1. Download FMR file from internet for specific year.
2. Calculate grand mean US two-bedroom FMR (***FMR2***).
3. Create a matchkey to merge to CPS (MSA/county identifier).
4. Calculate household weighted means by state and metro status using two-bedroom FMR (***fmr2***).
5. For each state/metro area divide area mean by grand mean.

$$\mathbf{index} = \mathbf{fmr2/FMR2}$$

6. Create fixed weight index for application to thresholds where housing represents 44 percent of basic bundle.

$$\mathbf{mindex} = \mathbf{(index*.44) + .56}$$

7. Normalize index by calculating weighted mean of this index across CPS sample (***mfmr***) and dividing index by sample mean. Now the mean of the index equals one.

$$\mathbf{GEO} = \mathbf{mindex/mfmr}$$

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