CLASP
policy solutions that work for low-income people

Measure by Measure:

The Current Poverty Measure v. the National Academy of Sciences Measures

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By Dorothy Smith

INTRODUCTION

During the 2008 presidential campaign, President Obama stated that the nation needs a modern federal poverty measure to "more accurately reflect the costs of living and the economic pressures on American families." Experts have recognized the need for a new measure for some time. The central critique of the current poverty measure is that it is based on outdated assumptions about family expenditures and resources. *Measure by Measure* offers a state-by-state comparison of poverty rates between the current measure and two modern measures based on National Academy of Sciences (NAS) recommendations.

The current measure was developed in the early 1960's by Mollie Orshansky in the Social Security Administration based on survey results from the 1950's regarding American families' food consumption. At that time, families spent one-third of their after-tax income on food. Orshanksy posited a federal poverty level based on three times the subsistence food budget. Since then, the measure only has been updated for inflation. Yet many things have changed in the past four decades. First, food costs comprise about $1/7^{th}$ of an average family's expenditures today while housing, child care, health care, and transportation costs have risen and take up a much larger proportion of family income. Second, the current measure is based solely on cash income and does not consider other resources that are now available to families such as the Earned Income

Tax Credit (EITC), food stamps, housing subsidies, or health programs such as Medicaid, SCHIP (State Children's Health Insurance Program), or Medicare. Thus, the current poverty measure does not count the impact these policies have on poverty reduction. A third major critique is that the current measure does not reflect differences in the cost of living across the nation, particularly housing costs.[i]

An Office of Management and Budget directive establishes the official poverty definition, and the Executive Office of the President is authorized to make changes. A new measure could either be issued through the executive branch or legislated. However, political sensitivities surrounding the rise and fall of poverty rates and the fact that so many federal programs align eligibility to some percentage of the poverty line complicate making these changes.

In the early 1990's, Congress requested that the National Academy of Sciences (NAS) convene an expert panel to examine the federal poverty measure. In 1995, the NAS released recommendations for creating a measure that more adequately reflects the needs and resources of modern families.

More recently, the Measuring American Poverty (MAP) Act of 2009 was introduced in both the House (H.R. 2909) and the Senate (S. 1625). It would require the Census Bureau to develop, in consultation with other experts, a modern poverty measure. Importantly, MAP would not affect existing program eligibility or funding allocations.

States and localities also are giving time and attention to the way the government measures poverty and are questioning how their state poverty rates might be affected under a modernized measure. For example, in New York City, feeling hampered by the current poverty measure for the reasons highlighted, Mayor Michael Bloomberg's Center for Economic Opportunity developed its own poverty measure based primarily on NAS recommendations with specific New York City adjustments.

In this CLASP report, the chart, *State Poverty Rates: Current v. NAS*, compares rates under the current federal measure and under NAS recommendations. The data for the chart is drawn from an updated web tool, *Current Population Survey (CPS) Table Creator II* (Table Creator) that the Census released on September 10, 2009, when it also issued national poverty data for 2008. The Table Creator relies on the CPS and is fully accessible to the public; we encourage others to also use it as a resource in exploring various policy choices for how best to understand and respond to poverty in the United States.

This Census tool is timely given the current debate about how best to understand the state of poverty in America. Using this tool, CLASP provides numbers for each state and the District of Columbia that provide a helpful *hint* of what a future measure might result in. These numbers give only a hint because before either the legislative or the executive branch adopts any new measure, important technical decisions will be made that likely would result in different numbers. In addition, an official measure would probably rely on the American Community Survey (ACS) for state-level reports.

Whether the current federal poverty measure actually provides a realistic understanding of the full dimensions of poverty in America has become a central question. The ability to measure poverty in the United States is important not only for understanding whether individuals and families are meeting their basic needs but also for guiding decisions about which policies can most effectively reduce poverty. The current official measure is a poor gauge for either.

Understanding the Current Federal Poverty Measure v. NAS Measures

Poverty status is determined by dividing family income by the poverty threshold. The threshold can best be understood as a comparison of what a family needs (its expenses) and its income as the resources the family has to meet those needs. If a family's income is less than 100 percent of the family's poverty threshold, then the family is in poverty. Any measure of poverty includes a variety of technical decisions regarding what to include in the threshold and what to count as income. *Measure by Measure* uses a Census tool, the Table Creator, to compare three measures of poverty:

- The current federal poverty measure.
- A "NAS" measure based on NAS income and poverty threshold recommendations without any geographic adjustment for housing costs.
- The "NAS" measure adjusted for housing costs using the geographic price difference adjustment (GPDA).

In examining the data, it is important to note:

- The Table Creator bases poverty estimates on the Current Population Survey (CPS).[ii]
- The Table Creator does not use the American Community Survey (ACS). The Census considers the ACS the official survey for state and local estimates because its larger sample size reduces statistical error for smaller geographic regions.
- A Census web tool with ACS data is not available; therefore, CLASP uses three-year averaging of CPS data from 2005–2007 to compensate for sample size limitations.[iii]
- Averaging together three years of CPS data reduces but does not eliminate the sample size error concerns; thus, the poverty rates generated by the Table Creator should only be considered rough estimates.

How is the current federal poverty measure defined?

The official poverty threshold is based on methodology developed in the 1960's that used survey data demonstrating that the average family of three spent one-third of its after-tax income on food. Therefore, three times the subsistence food budget provided an estimated poverty threshold. The Consumer Price Index updates the official poverty threshold each year. The 2008 poverty threshold for a family of three is $17,163 per year. Consistent with the definition of the official poverty measure, *State Poverty Rates: Current v. NAS* relies on the pre-defined variables for "official poverty threshold" discussed above and "money income" (all cash income) as the income definition in calculating the current federal poverty rates.[iv]

How is the NAS poverty measure defined?

In 1995, the NAS made several recommendations for improving the poverty measure. The NAS panel suggested a poverty threshold based on median spending by a family of four (two adults and two children) on food *plus* clothing and shelter as measured by the Consumer Expenditure Survey along with a multiplier to cover other needs.[v] This value is then adjusted for family size. The NAS panel recommended an income definition that includes post-tax cash income, tax credits, and in-kind (non-cash) benefits while subtracting costs such as child care that reduce resources available to purchase food, clothing, and shelter. Additionally, the NAS panel recommended accounting for medical out of pocket spending (referred to by the Census as MOOP) by subtracting these costs from income.[vi]

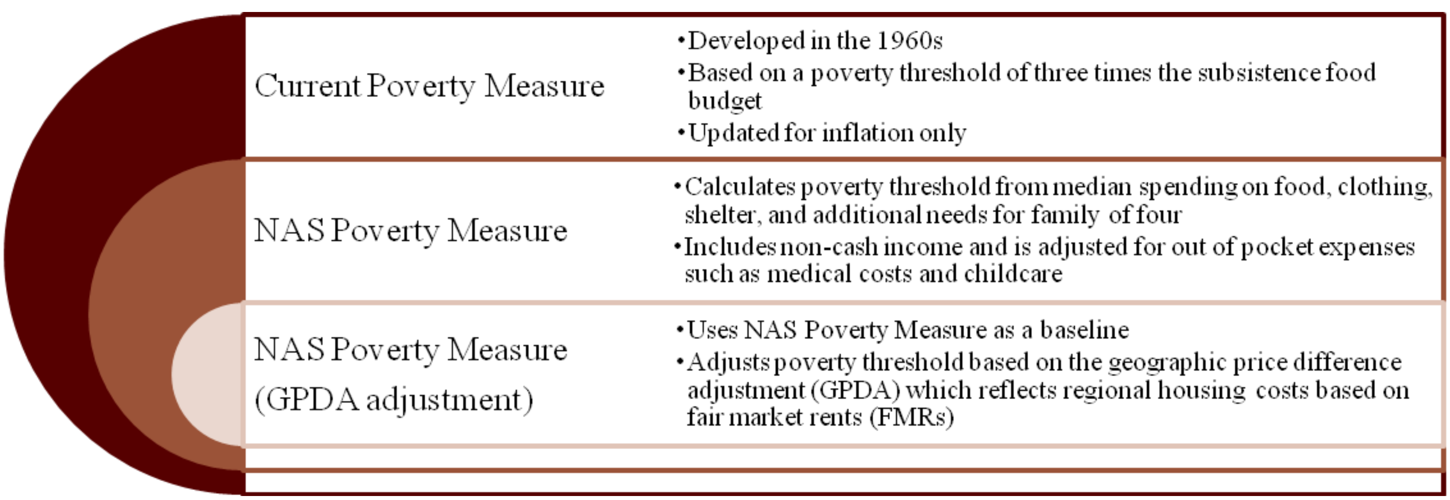
The Census Bureau and other analysts have since experimented with various methods of implementing these recommendations. The Table Creator provides pre-defined variables developed by Census for measuring poverty under these NAS recommendations. *State Poverty Rates: Current v. NAS* uses the "consumer expenditure (CE) based threshold"[vii] and "NAS income minus medical out-of-pocket expenditures" [viii] variables as originally recommended by the NAS to calculate poverty rates.

What is the geographic price difference adjustment (GPDA)?

Because research indicated that the largest source of disparity in living costs across regions resulted from differences in the cost of housing and utilities, the NAS panel recommended the part of the threshold reflecting housing and utilities expenditures be adjusted for regional disparities. The GPDA is a multiplier used to adjust the cost of housing in the poverty threshold, which is based on median expenditures nationwide. The GPDA reflects *regional* housing costs based on fair market rents (FMRs) annually prepared by the Department of Housing and Urban Development.[ix] In areas with high housing cost, the GPDA is expected to raise the poverty threshold; and in areas with a low housing cost, the GPDA is expected to lower the threshold. Importantly, the national poverty rate remains unchanged when housing costs are considered as the GPDA reflects relative housing cost variations *among states*.

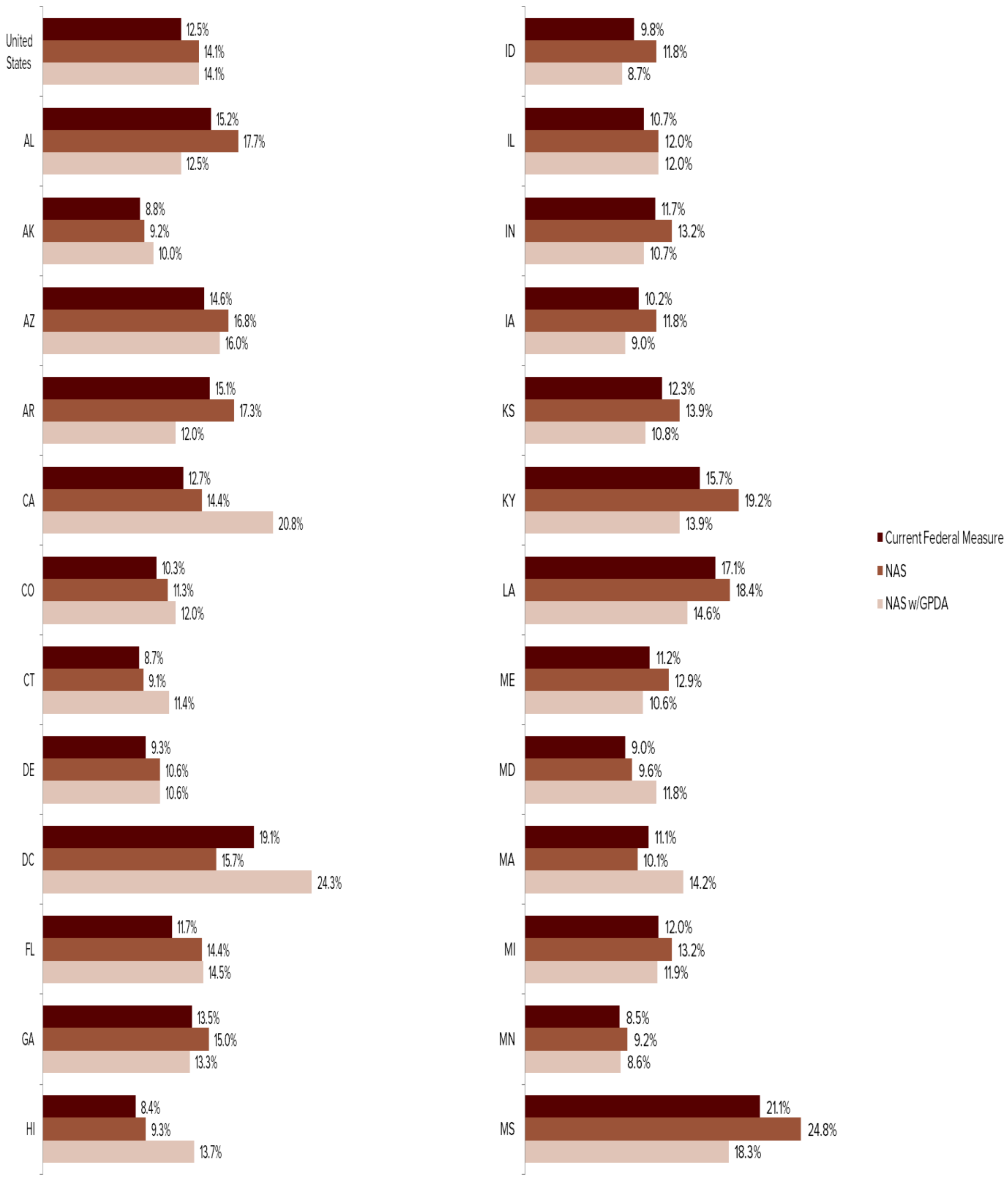
Demonstrating how the GPDA changes the poverty threshold is best done by example. The Census uses 44 percent of the total poverty threshold to represent the shelter and utility expenditures for a family of four (two adults and two children). In 2006, this share equaled $9,600. The FMR in New York City in 2006 was $1,133 per month for a two-bedroom apartment compared to the national average of $783, indicating that rents in New York City are 1.45 times the national average. Adjusting the housing share of the national poverty threshold to New York City by multiplying it by 1.45 results in a housing expenditure of $13,920. This raises the total poverty threshold in New York City to $26,138. This threshold is about 28 percent higher than current poverty threshold and 20 percent higher than the NAS nationwide poverty threshold.[x]

Three Measures of Poverty



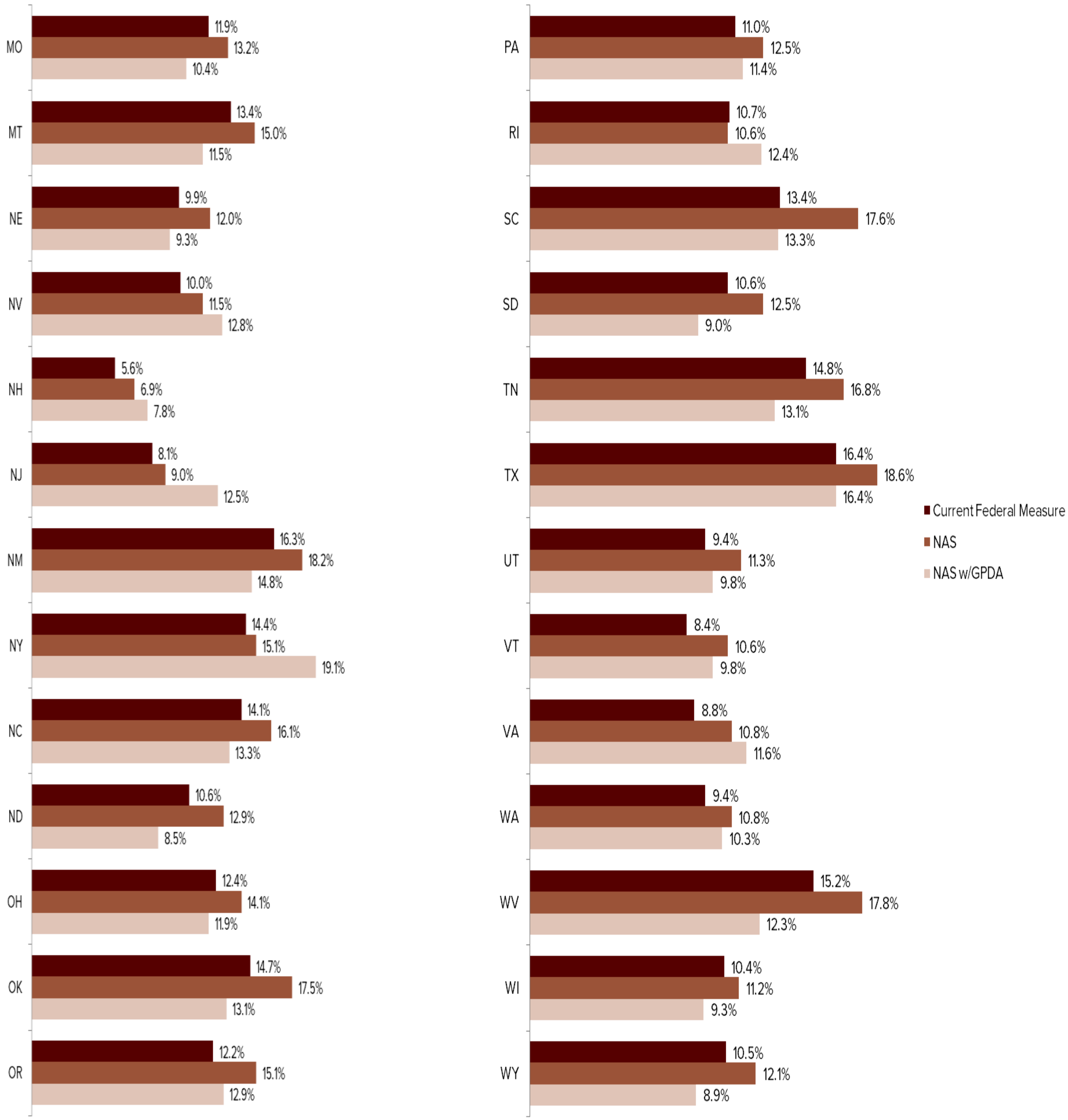
State Poverty Rates: Current v. NAS

Source: CPS Table Creator II, 2005–2007 CPS data (averaged)



State Poverty Rates: Current v. NAS

Source: CPS Table Creator II, 2005–2007 CPS data (averaged)



State Poverty Rates: Rankings by Poverty Measure

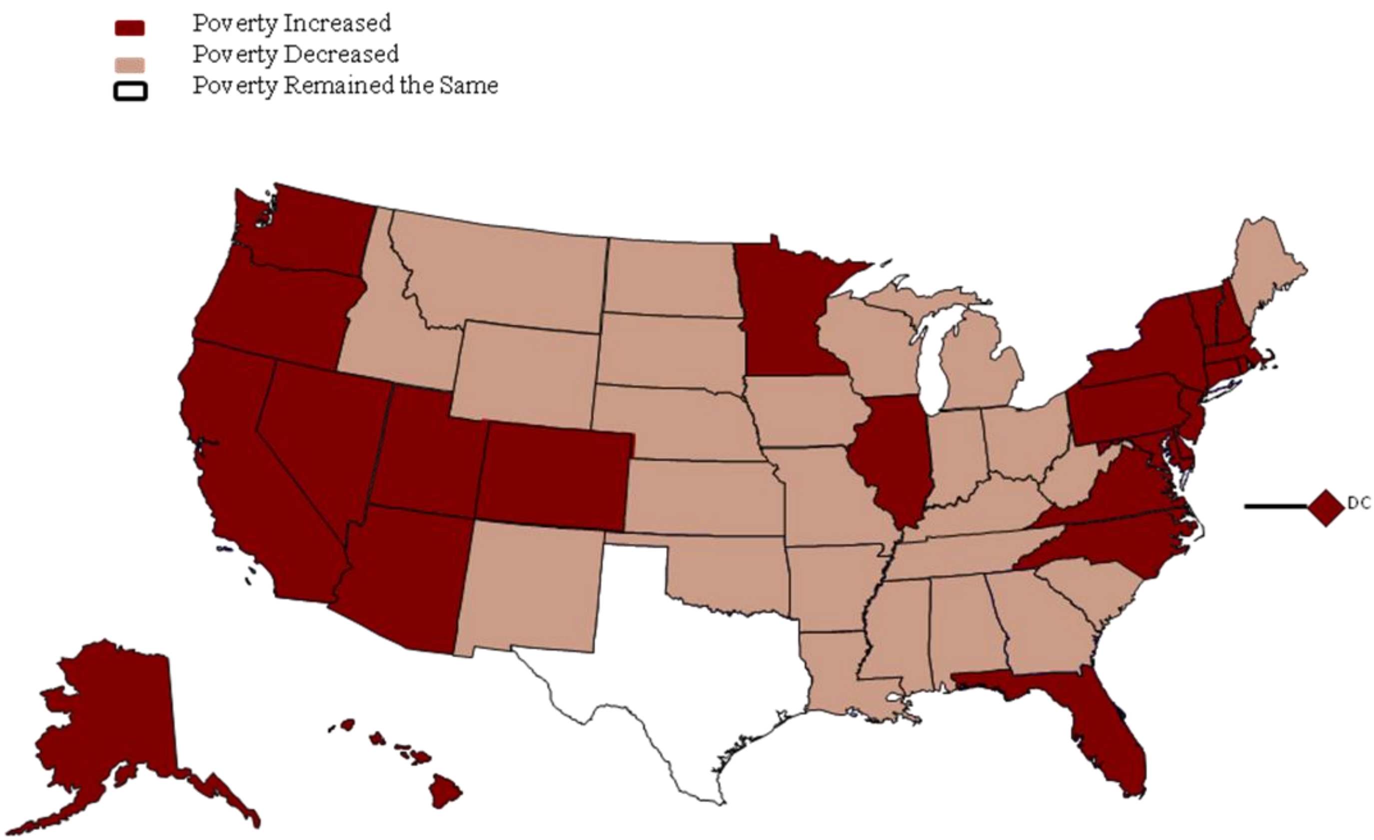
(1=lowest poverty rate)

	CURRENT	NAS	NAS W/GPDA
NH	1	1	1
NJ	2	2	31
HI	3	6	40
VT	3	9	10
MN	5	4	3
CT	6	3	19
AK	7	4	12
VA	7	12	22
MD	9	7	23
DE	10	9	15
UT	11	15	10
WA	11	12	13
ID	13	18	4
NE	14	20	8
NV	15	17	33
IA	16	18	6
CO	17	15	26
WI	18	14	8
WY	19	22	5
ND	20	25	2
SD	20	23	6
IL	22	20	26
RI	22	9	30
PA	24	23	19
MA	25	8	42
ME	26	25	15

	CURRENT	NAS	NAS w/GPDA
FL	27	32	43
IN	27	27	17
MO	29	27	14
MI	30	27	24
OR	31	36	34
KS	32	30	18
OH	33	31	24
CA	34	32	50
MT	35	34	21
SC	35	44	37
GA	37	34	37
NC	38	39	37
NY	39	36	49
AZ	40	40	46
OK	41	43	35
TN	42	40	35
AR	43	42	26
AL	44	45	31
WV	44	46	29
KY	46	50	41
NM	47	47	45
TX	48	49	47
LA	49	48	44
DC	50	38	51
MS	51	51	48

Source: CLASP Calculations based on CPS Table Creator II, 2005–2007 CPS data (averaged)

State Poverty Rate Changes: Current v. NAS Measure with GPDA



Source: CLASP Calculations of Data using Census CPS Table Creator II, 2005-2007 CPS data (averaged)

Interpreting the Data: Key Takeaway Points

Moving from the current official poverty measure to the NAS-recommended poverty measure generally increases the poverty rate.

- The poverty rate for the United States increases by 1.6 percent from the current measure.
- All states' poverty rates increase (ranging from 0.4 percent in Connecticut to 4.4 percent in South Carolina) except the District of Columbia (-3.4 percent), Massachusetts (-1.0 percent), and Rhode Island (-0.1 percent).
- Nearly half of all states' (23) poverty rates increase between 1 to 2 percent.
- Poverty rates increase by more than 3 percent in Kentucky (3.5 percent), Mississippi (3.7 percent), and South Carolina (4.2 percent).

Reflecting housing costs in the NAS poverty measure through the GPDA decreases poverty rates in states where housings costs are relatively low and increases poverty rates considerably in states with high housing.

- In total, when compared to the current measure, poverty rates decrease for 26 states and increase for 24 states when accounting for housing costs. The poverty rate in Texas remains the same.
- Poverty rates decrease the most in Alabama (-2.7 percent), Arkansas (-3.1 percet), Louisiana (-2.5 percent), Mississippi (-2.8 percent), and West Virginia (-2.9 percent) from the current measure when the relative cost of housing is reflected.
- The poverty rate in California increases the most, by 8.1 percent from the current measure. The poverty rates also increase significantly in the District of Columbia (5.2 percent), Hawaii (5.3 percent), and New York (4.7 percent) when adjusted for relative housing costs.

The rankings of states do not drastically differ between the current poverty measure and the NAS measure.

- Most states' (36) rankings shift by just a few places (0 to 3) when moving from the current poverty measure to the NAS measure.
- Rankings increase in 25 states, decrease in 20 states, and remain the same in 6 states when moving from the current measure to the NAS measure.

Adding the relative cost of housing adjustment to the NAS measure significantly changes state rankings as compared to rankings under the current poverty measure.

- The rankings of all states except Georgia and New Hampshire change in moving from the current measure to the NAS measure reflecting housing costs.
- The rankings increase in 28 states and decrease in 21 states in moving from the current measure to the NAS measure reflecting housing costs.
- The rankings of five states (HI, MA, NV, NJ, RI) shift from the top half (lowest poverty rates) to the bottom half (highest poverty rates) in moving from the current measure to the NAS measure reflecting housing costs.
- The rankings of six states (KS, MI, MT, ND, OH, WV) shift from the bottom half of poverty rankings to the top half.

Using *Measure by Measure*

A key question for those seeking to increase economic opportunity is whether a policy intervention helps to reduce poverty. Answering this question necessitates a realistic poverty measure that incorporates the value of a range of programs and reflects the everyday expenses of American families. As advocacy continues for a new measure, the comparisons here and the Table Creator are useful tools for policy makers and advocates in shedding light on state poverty and the potential impact of strategies to reduce poverty in several ways:

- Informing state officials and the media about the importance of having a measure that captures the full dimensions of poverty. The NAS number concretizes a concept that has been floating in research and political circles; the number provokes conversation about how the current federal poverty measure compares to a fuller measure.
- Augmenting the current official rate with a modernized one that particularly helps the 12 states that have set a poverty reduction target—a goal and timeline for achieving it.[xi] As these states fashion plans to meet their goal, the current poverty measure reveals only the role of cash income and leaves unknown the effect on the rate of such interventions as tax credits and child care subsidies. Yet for states to determine whether their interventions matter to their goal, the metric must include them. While state poverty reduction plans may include strategies not incorporated into the NAS measure (e.g. investments in education), the NAS measure is at least more inclusive than the current poverty measure.
- Enabling states to assess the impact of particular interventions such as a state earned income tax credits and child care subsidies. The NAS measure in the Table Creator is based on federal policies and can generate information on, for example, how much the federal earned income tax credit reduced poverty in a state. However, a state might be able to use that data to get a rough guide on the effect of a state policy that mimics the federal one.

To increase economic opportunity, states must understand the full dimensions of poverty in their communities. We encourage advocates to use the information provided here to support efforts to develop a new poverty measure that more effectively gauges poverty in the U.S. and how it can ultimately be reduced through targeted interventions.

Endnotes

[i] While not addressed here, other broader critiques call for a paradigm shift in the way poverty is examined in United States. For example, the United Nations Development Programme (UNDP) commissions global reports annually based on the human development index, a measurement that combines indicators of life expectancy, educational attainment, and income. Additionally, others advocate for adopting a "tiered" poverty and economic-inclusion measure that is modeled on the child poverty measure adopted in 2003 by the United Kingdom.

[ii] The most recent CPS poverty data available in the Census Table Creator II is from 2007.

[iii] The multi-year averaging capacity is an option available in the Table Creator.

[iv] "Money Income" includes 23 components: earnings (wages, salaries, and self-employment income); interest income; dividend income; rents, royalties, estate, and trust income; non-government retirement pensions and annuities; non-government survivor pensions and annuities; non-government disability pensions and annuities; Social Security; unemployment compensation; workers' compensation; veterans' payments other than pensions; government retirement pensions and annuities; government survivor pensions and annuities; government disability pensions and annuities ; public assistance (includes TANF and other cash welfare); Supplemental Security Income (SSI); Veterans' pensions; government educational assistance; non-government educational assistance; child support; alimony; regular contributions from persons not living in the household; and money income not elsewhere classified.

[v] Specifically, the NAS panel recommended a threshold based on expenditures between the 30th and 35th percentiles of family costs as measured in the Consumer Expenditure Survey along with a multiplier of 15 to 25 percent for other necessary expenses.

[vi] While there is broad agreement that medical out of pocket (MOOP) expenses should be accounted for in an alternative poverty measure, there is some debate on whether it should be included in the threshold as an expenditure or subtracted from income resources. Proponents for having MOOP included in the threshold argue that it is a basic need like food and shelter; subtracting from income does not reflect the fact that those who need health care may not have the resources to spend for it. Those who advocate for subtracting MOOP from income argue that it best reflects actual costs and having it in the threshold will over- and under-estimate costs for particular families. Subtracting medical expenses from income generally results in lower poverty rates; however, the difference is modest (median of 0.6%). For particular groups, variations could be more significant. For example, it appears that elderly poverty rates are relatively higher when MOOP is subtracted from income and poverty rates are relatively lower. See John Iceland, Experimental *Poverty Measures: Summary of a Workshop* (National Research Council, 2005); Rebecca Blank and Mark Greenberg, *Improving the Measurement of Poverty* (Brookings 2008).

[vii] As the NAS did not recommend an exact value for the poverty threshold, but rather suggested a range of possible thresholds (30–35th percentile of families expenditures on food, clothing, and shelter plus a multiplier of 15–25% for other necessary expenses), the Census uses a mid-point of the values recommended by the NAS to calculate the poverty threshold. See Kathleen Short, U.S. *Bureau of the Census: Experimental Poverty Measures: 1999* (2001).

[viii] Specifically, the pre-defined Census NAS income definition includes the components of "money income" that the current federal measurement is based on *plus* realized capital gains (losses), federal earned income credit (EIC), the Supplemental Nutritional Assistance Program (SNAP), free and reduced-price school lunches, regular-price school lunches, low-income energy assistance, and public housing and rental subsidies (based on fair market rent estimates) *minus* work-related expenses including child care, federal income taxes after refundable credits (except EIC), state income taxes after all refundable credits, and payroll taxes (FICA and other mandatory deductions). Using data from the Medical Expenditures Panel Survey, the Census Bureau estimates expected MOOP based on the family's size, the presence of elderly family members, the self-reported health status of the family members, and differences in health insurance coverage across families.

[ix] While experts agree that cost of living should be reflected in a poverty measure, many have pointed out the limitations of using FMR data which include: 1) FMR data is by definition limited as it only incorporates rental costs and not home ownership; 2) FMRs measure the gross rent of recent movers, not the entire rental stock; 3) Rental markets can be volatile; and 4) methods for determining FMRs can vary across areas. See John Iceland, Experimental *Poverty Measures: Summary of a Workshop* (National Research Council, 2005).

[x] See The CEO Poverty Measure: A Working Paper by The New York City Center for Economic Opportunity (2008).

[xi] See Poverty and Opportunity: State Government Task Forces (CLASP 2009).