Poverty Measurement in the United States: History, Current Practice, and Proposed Changes

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April 12, 2010

Congressional Research Service
7-....
www.crs.gov
R41187

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

Nearly a half-century has passed since poverty emerged as a major policy issue in the United States, taking form as a "War on Poverty." As precursors, statistical studies sought to define the scope, depth, and breadth of the poverty problem in the United States, as well as the composition of the population affected, and poverty's social and economic causes and effects. Ultimately, the federal government adopted an "official" U.S. statistical poverty measure, which was to serve as the official benchmark for evaluating progress towards eliminating poverty in the United States.

Many experts consider the "official" poverty measure currently in use as flawed and outmoded. A National Academy of Sciences (NAS) expert panel provided a wide range of specific recommendations to revamp the statistical measure of poverty in its congressionally commissioned 1995 study—*Measuring Poverty: A New Approach.* Now, after some 15 years of study, efforts are being undertaken to incorporate NAS panel recommendations into a new statistical poverty measure to accompany the current "official" measure. House and Senate legislative proposals introduced in both the 110th and 111th Congress (H.R. 2909, S. 1625), if adopted, would instruct the Census Bureau to create a new "modern" poverty measure, following many of the NAS panel's recommendations. More recent developments initiated by the Office of Management and Budget (OMB) propose that the Census Bureau, in coordination with the Bureau of Labor Statistics (BLS), develop a new Supplemental Poverty Measure (SPM), using NAS panel recommendations as a starting point.

A NAS-based poverty measure, like the current "official" measure, would count families' and unrelated individuals' incomes against poverty income cutoffs (i.e., poverty income thresholds) in determining whether they, and their members, are considered poor. Under a NAS-based poverty measure, poverty income thresholds would be higher than under the current measure, and more sources of income (e.g., nutrition assistance and refundable tax credits) would be counted against the thresholds than under the current measure; and, unlike the current measure, work-related expenses, taxes, and out-of-pocket medical expenses would be subtracted from income. NAS-based poverty thresholds, unlike the current "official" thresholds, would adjust for changes in the overall basic standard of living in the society over time. In addition, the NAS panel recommended that adjusting poverty thresholds for area cost-of-living differences should be considered. All in all, a NAS-based poverty measure would be more sensitive than the current poverty measure in assessing the effects of government policy on poverty.

Estimates of the number and composition of the population that would be counted as poor under a NAS-based poverty measure, compared to the current "official" measure, in part depend upon the specific details and methodologies used to construct the alternative measure. However, a NAS-based poverty measure generally results in a greater number of persons being counted as poor than under the current "official" measure. Additionally, persons in working families are more likely to be counted as poor than under the current measure (largely due to the subtraction of taxes and work-related expenses from income), as are older persons (largely due to subtraction of medical expenses from income). Whereas under the current "official" poverty measure, the poverty rate of children is about twice that of persons age 65 and older (19.0% compared to 9.7%, respectively, in 2008), under a NAS-based measure, the age 65 and older poverty rate exceeds the child poverty rate (21.0% compared to 20.2%, respectively). Based on current methodologies, geographic adjustments for area cost-of-living differences result in markedly different poverty rates for some states.

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Overview

The federal government uses two slightly different but related definitions of poverty. One, the statistical definition of poverty, is maintained and updated by the Census Bureau. It is used to arrive at official estimates of the number and characteristics of the poor population. Census Bureau estimates of the number of people with incomes below poverty are also used to distribute federal funds to states under various programs' grant formulas. A second definition of poverty, closely related to the statistical definition and issued as "federal poverty guidelines" by the Department of Health and Human Services (HHS), is used for administrative purposes, such as determining income eligibility of individuals, families, and households for federal and state programs.

The existing U.S. poverty measure evolved well over 40 years ago, in tandem with the advent of the "Great Society" and "War on Poverty" programs. It has served as a yardstick by which the economic progress of the most economically disadvantaged members of society has been gauged, and the effects of social programs assessed. Billions of dollars in federal grant funds are also allotted to states and localities based on their relative share of the nation's poor population.

Many experts consider the measure of poverty currently being used as the "official measure" as flawed and outmoded. A congressionally commissioned study conducted by the National Academy of Sciences (NAS) National Research Council (NRC) panel provided a wide range of specific recommendations to revamp the statistical measure of poverty used in the United States in its 1995 report, *Measuring Poverty: A New Approach.* Since then, an extensive amount of research has been undertaken by statistical agencies, academics, and other researchers to devise and test methods, and evaluate the results of implementing the NAS panel's recommendations. Legislation introduced in the 110th and 111th Congress[1], if adopted, would instruct the Census Bureau to implement many of the NAS panel's recommendations in a new "modern" poverty measure. More recently, the Department of Commerce Economic and Statistics Administration, under an OMB sponsored initiative, announced that the Census Bureau, in coordination with the Bureau of Labor Statistics (BLS), will develop a Supplemental Poverty Measure (SPM), using NAS panel recommendations and subsequent research as a framework. The proposed measure will supplement, rather than replace, the current poverty measure, which will continue to be deemed the "official" statistical measure of poverty in the United States.

This report will provide a brief history of precursor events and studies that led to a rediscovery of poverty in the United States and the development and adoption of an "official" statistical measure to measure the phenomenon and to weigh progress toward its eradication. It will then present the NAS panel's major recommendations to address perceived flaws in the "official" measure and to develop a new U.S. measure of poverty. Some of the conceptual, technical, and methodological issues relating to the implementation of a NAS-based poverty measure are then discussed. Subsequently, alternative estimates to the current poverty measure using variants of the NAS panel's recommendations are presented. Finally, recent House and Senate legislative proposals to create a new "modern" poverty measure, and more recent developments initiated by the Office of Management and Budget (OMB) proposing a new Supplemental Poverty Measure, are reviewed in the context of the current "official" measure and the NAS panel recommendations.

[1] H.R. 6941 (110th) and H.R. 2909 (111th); S. 3636 (110th) and S. 1625 (111th).

The Current "Official" U.S. Poverty Measure

Historical Context—Rediscovery of Poverty

In the period of post-World War II prosperity, the notion of poverty in the United States was but a near-forgotten remnant of the Great Depression. The federal government had no accepted measure of poverty; in both social and economic terms, the scope and magnitude of poverty in the United States was unknown. Without a measure of poverty, the dimensions of the problem were generally not well understood and received little study or attention. By the late 1950s, awareness was mounting about a portion of Americans who seemed cut off from the economic mainstream, and poverty, though undefined, was becoming a matter of public concern.

Harvard University economist John Kenneth Galbraith's widely read economic-social-political essay, *The Affluent Society*[2], first published in 1958, raised issues about economic growth and abundance, private and public investment, income inequality and poverty, and means of striking a social balance within a market-based, capitalist system. In one chapter, Galbraith addressed "The New Position of Poverty" in the context of *The Affluent Society*. Amid an affluent society, Galbraith posited that poverty was no longer *"a universal or massive affliction* [but] *more nearly an afterthought."*[3] Poverty was not limited to "*those...*(who have)*...limited and insufficient food, poor clothing, such crowded, cold and dirty shelter that life is painful as well as comparatively brief....People are poverty-stricken when their income, even if adequate for survival, falls markedly behind that of the community.*"[4] He viewed poverty in the affluent society as falling into two broad categories: *case poverty*, generally related to some characteristic of the afflicted individuals, and *insular poverty*, or "*islands*" of poverty, where the communities themselves may be considered poor. In either case, Galbraith inferred that economic growth alone would be insufficient to eliminate poverty. According to Galbraith, "*the hard core of the very poor was declining but not with great rapidity.*"[5] Galbraith argued that in addition to economic growth, investments in people and communities would be required as a remedy to poverty. Galbraith, a long-time friend of John F. Kennedy, would later serve as an advisor to the senator and eventual president, and to President Lyndon Johnson as well.

A 1959 study conducted by University of Wisconsin economist Robert Lampman for the Joint Economic Committee (JEC) examined the potential effects of economic growth on the low-income population, challenging Galbraith's statement that "*the hard core of the very poor was declining but not with great rapidity.*"[6] Lampman defined an annual low-income cutoff for a family of four as $2,500 in 1957 dollars, and adjusted the scale upwards for larger families and downwards for smaller families and persons living alone. The dollar amount used to define low-income families was well below the $4,000 annual income level designated by BLS family budget standards for an urban family of four to maintain an "adequate standard of living." Lampman estimated that in 1947, over one-fourth (26%) of the population had income below the

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[2] John Kenneth Galbraith, *The Affluent Society*, First ed. (Boston: Houghton Mifflin Company, 1958).

[3] Ibid, p. 323.

[4] Ibid, p. 323.

[5] Ibid., p. 324.

[6] Joint Economic Committee, *The Low Income Population and Economic Growth*, committee print, prepared by Robert J. Lampman, 86th Cong., 1st sess., December 16, 1959, Study Paper No. 12, pp. 3-36.

low-income criterion; by 1957 the portion of the population below the low-income standard had fallen to 19%; and he projected that by 1977, 10% of the population might be expected to fall below the low-income criteria. Walter Heller, who also had ties to the University of Wisconsin[7], used Lampman's JEC study in helping to formulate themes for Hubert Humphrey's presidential campaign.[8] Heller would later head the Council of Economic Advisors in the Kennedy Administration.

Michael Harrington's book, *The Other America: Poverty in the United States,* first published in 1962, helped bring to the public's attention the existence of poverty amid affluence in America. Harrington estimated that 40 to 50 million Americans were poor; somewhere around one-quarter of the nation's population. Official government estimates of the number of poor did not exist at the time. Harrington relied heavily on Lampman's and others' work to arrive at his own estimates of the number of poor. A January 1963 *New Yorker* book review article entitled "Our Invisible Poor," reviewing Harrington's and others' (including Lampman's) work on poverty, brought to a mass audience the idea of poverty existing amid plenty in the United States, though it was largely hidden from view.

While running for his party's nomination for president, Senator John F. Kennedy made several visits to West Virginia, where he spoke about unemployment, hunger, and poverty in West Virginia communities and offered promises of government efforts to address the problem if he was elected president.[9] He personally reflected and commented about the poor living conditions he observed in the coal mining regions of the state.[10] In remarks at the 25th anniversary of the signing of the Social Security Act, Senator Kennedy referred to "*the war against poverty*...[as] *not yet over.*"[11] His remarks, however, were directed not at poverty in general, but on improving the living conditions of the elderly, widows, and child survivors.

The new administration would be taking office amidst a period of economic recession that had begun in April 1960. President-elect Kennedy chose economist Walter Heller to head up the Council of Economic Advisors (CEA). Heller embraced the progressive role of government in promoting social welfare by promoting full employment and promoting the development of "*social capital,*" primarily through greater investment in education and training.[12] Under Heller's direction, work undertaken by the Council provided factual underpinnings relating to poverty, which, over the course of the administration, would gestate into the formulation of a policy framework for an assault upon poverty.

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[7] Heller received his Ph.D. in economics from the University of Wisconsin in 1941.

[8] Alice O'Connor, *Poverty Knowledge: Social Science, Social Policy, and the Poor in Twentieth-Century U.S. History* (Princeton, NJ: Princeton University Press, 2001), p. 153.

[9] See several speeches: *Remarks of Senator John F. Kennedy at St. Albans, West Virginia, April 30, 1960,* http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Speeches/JFK/JFK+Pre-Pres/1960/002PREPRES12SPEECHES_60APR30.htm; *Remarks of Senator John F. Kennedy in Welch, West Virginia, May 3, 1960,* http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Speeches/JFK/JFK+Pre-Pres/1953/002PREPRES12SPEECHES_60MAY03.htm.

[10] See Michael O'Brien, *John F. Kennedy: A Biography* (New York: St. Martin's Press, 2005), pp. 451-452, 475, 580.

[11] See *Remarks of Senator John F. Kennedy at Memorial Program for 25th Anniversary of Signing of Social Security Act, Hyde Park, New York, August 14, 1960,* http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Speeches/JFK/JFK+Pre-Pres/1960/002PREPRES12SPEECHES_60AUG14.htm.

[12] Edward S. Flash, Jr., *Economic Advice and Presidential Leadership: The Council of Economic Advisors* (New York: Columbia University Press, 1965), pp. 175-177.

While the economy had emerged out of recession by February 1961, and had begun to experience a spurt of economic growth, there was concern by mid-1962 that the economy was beginning to falter. The 1962 Economic Report of the President, along with the accompanying Annual Report of the CEA, recognized the importance of economic growth in reducing poverty, but noted that some groups, notably "families headed by women, the elderly, nonwhites, migratory workers, and the physically or mentally handicapped, were shortchanged even during times of prosperity." The CEA report used an annual income of $2,000 to demarcate the 7 million families and individuals (living outside families) who might be considered to have incomes below poverty.[13]

In 1962, discussions of possible tax cuts and/or fiscal stimulus in the form of increased government spending were taking place within the CEA and with the President.[14] During the summer of 1962, the administration decided to go forward with tax cuts in its January 1963 economic proposal to Congress. In December 1962, President Kennedy discussed with Heller the fiscal side of the economic stimulus package, and asked Heller to provide facts and figures relating to the "*poverty problem in the United States*."[15] Heller had brought Robert Lampman onto the council in 1962.[16] Unlike his 1959 JEC study, Lampman's/CEA staff analysis was not as optimistic about the role of economic growth alone in reducing poverty (as it was then loosely defined), as progress against poverty had since slowed. In May 1963, Heller shared Lampman's and the Council's economic and statistical analysis with the President, indicating that there was a "dramatic slowdown in the rate at which the economy is taking people out of poverty."[17] He highlighted "the groups beyond the reach of the tax cut" and offered thoughts on "*an attack on poverty*."[18] The CEA began to put greater emphasis on more targeted approaches to address the problems of those who might not automatically reap the benefits of economic growth.[19]

By the fall of 1963, an anti-poverty program began to take shape. At a cabinet meeting on October 29, the President wrote, encircled, and underlined the word "poverty" on a yellow pad several times. He told Arthur Schleshinger, "The time has come to organize a national assault on the causes of poverty, a comprehensive program, across the board," and indicated that it would be "the centerpiece in his 1964 legislative recommendations." On November 5, Heller asked department heads to submit proposals to address the poverty issue within 10 days. In mid-November, a few days before his trip to Dallas, Kennedy told Heller to continue his antipoverty planning: "First, we'll have your tax cut; then we'll have my expenditures program."[20]

Within the first days of taking office, President Johnson was being lobbied from within the administration about extending and advancing many of the policies in place or being formulated

13 *Economic Report of the President*, Washington, DC, January 1962, pp. 9-10, http://fraser.stlouisfed.org/publications/ERP/issue/1079/download/5733/ERP_1962.pdf.

14 See Walter W. Heller, *New Dimensions of Political Economy* (New York: W. W. Norton, 1967), pp. 22-36. See also, Edward S. Flash, Jr., ibid, pp. 173-275.

15 See Michael O'Brien, op. cit., p. 580.

16 Nobel Economist James Tobin, who served on the CEA at the same time as Lampman, described Lampman as "the intellectual architect of the war on poverty." See Robert Lampman's obituary: Peter Passell "Robert J. Lampman, 76, Economist Who Helped in the War on Poverty" *New York Times*, March 8, 1997, http://www.nytimes.com/1997/03/08/business/robert-lampman-76-economist-who-helped-in-war-on-poverty.html.

17 Michael O'Brien, op. cit., p. 580.

18 Walter Heller, op. cit., p. 20.

19 See, for example, Alice O'Connor, op. cit., pp. 152-156. See also James T. Patterson, *America's Struggle Against Poverty* (Cambridge, MA: Harvard University Press, 1994), pp. 134-135.

20 Michael O'Brien, ibid, p. 510.

in the administration he had just inherited.[21] Among those policies was an "attack on poverty" and the proposed, but unachieved, tax cut of the Kennedy Administration. In his State of the Union Address, 46 days after taking office, President Johnson announced a "War on Poverty... to help the one-fifth of American families with incomes too small to even meet their basic needs."[22] The 1964 Economic Report highlighted both the tax cut and the war on poverty proposed by the President. The 1964 Annual Report of the Council of Economic Advisors, accompanying the Economic Report of the President, provided a statistical description of poverty in America, presented approaches to addressing the problem, and set a national goal of eliminating poverty.[23] Before his 100th day in office, President Johnson would sign the tax cut into law (The Revenue Act of 1964 (P.L. 88-272)) and by late summer (August 20, 1964) the "War on Poverty" would be launched when his signed into law the Economic Opportunity Act of 1964 (P.L. 88- 452).

Adopting a Poverty Measure[24]

The Economic Opportunity Act created a new executive office of the President, the Office of Economic Opportunity (OEO), which was given responsibility for administering and coordinating anti-poverty programs. In order to both administer programs, for purposes of determining applicants' income eligibility, and assess progress towards the national goal of eliminating poverty, the OEO adopted a measure of poverty, but one different than that which appeared in the CEA's 1964 annual report developed by Lampman.

The CEA based its estimates of poverty presented in its 1964 Annual Report on a poverty annual income cutoff of $3,000 for families and $1,500 for persons living alone or with non-family members.[25] Unlike Lampman's 1959 JEC study, the poverty income cutoff was not adjusted for families of varying size (other than the distinction of living alone, or with other family members). The CEA report made reference to a Social Security Administration (SSA) study which employed a poverty standard and included adjustments of varying size and composition, and differed for farm and non-farm families.[26] For a non-farm family of four persons, the SSA study's annual income poverty cutoff was $3,165, which was remarkably close to the CEA's $3,000 poverty income cutoff. The CEA noted that estimates would differ somewhat if a more refined analysis were used to arrive at poverty income cutoffs that would take into account family size, age, location, and other indicators of needs and costs. However, it asserted that the poverty income cutoff used in the CEA study was a reasonable approximation for the dimensions and scope of the poverty population, and for discerning the types of programs that might be needed to address the

[21] Robert Dallek, *Flawed Giant* (New York: Oxford University Press, 1968), pp. 60-61.

[22] See President Lyndon B. Johnson's Annual Message to the Congress on the State of the Union, January 8, 1964, http://www.lbjlib.utexas.edu/johnson/archives.hom/speeches.hom/640108.asp.

[23] See the 1964 Economic Report of the President and accompanying Annual Report of the Council of Economic Advisors, http://fraser.stlouisfed.org/publications/ERP/issue/1208/download/5731/ERP_1964.pdf.

[24] For a history of the development of the official U.S. poverty measure, see Gordon M. Fisher, "The Development and History of the Poverty Thresholds," *Social Security Bulletin*, vol. 55, no. 4 (Winter 1992), pp. 3-14, http://www.ssa.gov/history/fisheronpoverty.html. For a more detailed and expanded version, see Gordon M. Fisher, "The Development of the Orshansky Poverty Thresholds and Their Subsequent History as the Official U.S. Poverty Measure," September 1997, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html. (Hereafter referenced as Gordon M. Fisher, "Development of the Orshansky Poverty Thresholds...")

[25] See 1964 Annual Report of the Council of Economic Advisors, op. cit., pp. 57-59, http://fraser.stlouisfed.org/publications/ERP/issue/1208/download/5731/ERP_1964.pdf.

[26] Mollie Orshansky, "Children of the Poor," *Social Security Bulletin*, vol. 26, no. 3 (July 1963), pp. 3 -13. (Hereafter cited as Mollie Orshansky "Children...")

problems associated with poverty. The CEA conceded that a simple measure such as that used in its report would be unsuitable for use for determining eligibility for benefits or participation in particular programs.

The study referred to in the CEA report was one conducted by Mollie Orshansky, an analyst at SSA. Prior to coming to SSA, she served for 13 years as a family and food economist at the U.S. Department of Agriculture (USDA), where she developed and priced food budgets for low-income families.[27] Such food budgets were based on food plans designed to provide adequate nutrition at minimal cost. The food plans were developed so as to meet contemporary dietary standards which varied by an individual's age and gender. The plans assumed that all food was purchased for home preparation, and involved careful shopping and skillful preparation.[28]

In her 1963 SSA study, Orshansky constructed poverty income cutoffs using the relationship of food spending to other spending needs. Recognizing food as a basic necessity, Orshansky used two different food plans to estimate the cost of what low-income families of varying size and composition might reasonably need to spend in order to meet their basic food needs—one based on the USDA's "*Low Cost*" food plan, and another based on its "*Economy*" food plan, which was valued at 80% of the "Low Cost" plan. Using these two food plans, she developed poverty income cutoffs based on results of a 1955 USDA food consumption survey that found, on average, families spend one-third of their pre-tax income on food, and two-thirds on everything else. Using this finding, Orshansky developed alternative poverty cutoffs based on the cost of estimated "Low Cost" and "Economy" food plans multiplied by a factor of three. The resulting poverty income cutoffs for a two-parent family with two children (in 1962 dollars) were $3,995 under the "Low Cost" plan, and $3,165 under the "Economy" plan (i.e., the amount referenced in the 1964 CEA Annual Report.) Resulting poverty thresholds differed by age and sex for persons living alone, and for families, by the sex of the family head, total number of members, and number of related children under the age of 18. Poverty thresholds were separately defined for the farm and non-farm population, as food costs were determined to be lower for farm families, who grow and raise some of their own food. In all, 124 different poverty income cutoffs were constructed for each of the poverty measures (i.e., "Low Cost" and "Economy" food plan measures), reflecting variation in family size, composition, and farm non-farm residence. Based on her methodology, Orshansky estimated that between one-fourth and one-third of all children in the United States were poor based on their families' pre-tax money income.

In 1965, the OEO adopted the SSA/Orshansky poverty measure for planning and administrative purposes.[29] The adopted measure was based on the lower income thresholds defined by Orshansky using the "Economy" food plan, resulting in a poverty income cutoff of roughly $3,130 for a family of four persons (all types combined) in 1963.[30] In adopting the lower measure, the OEO, while acknowledging that the "Low Cost" plan could not be characterized as

[27] John Cassidy, "Relatively Deprived, How Poor is Poor?" *The New Yorker*, April 3, 2006, http://www.newyorker.com/archive/2006/04/03/060403fa_fact?currentPage=all.

[28] Mollie Orshansky, "Children...," p. 10.

[29] Office of Economic Opportunity, "New Measure of Poverty Announced," press release, May 2, 1965. See also, Office of Research, Plans, Programs & Evaluation, *Second Generation Definition of Poverty*, Office of Economic Opportunity, May 10, 1965.

[30] For further discussion of the derivation of the SSA/Orshansky poverty measure, and statistical estimates of the size and composition of the poverty population, see Mollie Orshansky, "Counting the Poor: Another Look at the Poverty Profile," *Social Security Bulletin*, vol. 28, no. 1 (January 1965), pp. 3-29. See also, Mollie Orshansky, "Who's Who Among the Poor: A Demographic View of Poverty," *Social Security Bulletin*, vol. 28, no. 7 (July 1965), pp. 3-32.

excessive, noted that the thresholds based on the lower "Economy" plan better addressed "the first order task of the War Against Poverty...to get at the hard-core poor." The adopted measure was referred to by the OEO as the "*Second Generation Definition*" of poverty, differentiating it from the definition that had been used by the CEA. By 1967, OEO began using uniform guidelines based on the SSA/Orshansky poverty definition for determining income eligibility under all its funded programs.[31]

Beginning in 1966, the CEA began using the SSA/Orshansky poverty measure in presenting statistical analysis of the poor in its annual report.[32] The measure, like that adopted by OEO, was based on the lower "Economy" food plan. The CEA provided estimates of the number and percent of poor persons from 1959 to 1964, using the new measure, and highlighted a decrease in the percent of persons considered poor under the measure from 22.1% in 1959, to 18.0% in 1964.

Today, the federal government uses two slightly different but related definitions of poverty. One, the statistical definition of poverty, as noted above, is maintained and updated by the Census Bureau. A second definition of poverty, closely related to the statistical definition and issued as *"poverty guidelines"* by the Department of Health and Human Services (HHS), is used for administrative purposes, such as determining the income eligibility of individuals, families, and households for various federal need-tested programs.

Designation of the "Official" Statistical Definition of Poverty

The Census Bureau also began using the SSA/Orshansky poverty definition based on the lower "Economy" food plan in its statistical reports on the number and characteristics of persons and families considered poor, issuing its first report using the new measure in 1968.[33] In 1969, the Bureau of the Budget (BoB) (now, the Office of Management and Budget (OMB)) issued a policy statement which directed all federal executive branch agencies to adopt the Census Bureau poverty statistics and thresholds for statistical purposes, and ordered the Census Bureau to continue to classify income according to the SSA poverty definition, with some modifications based on recommendations from an interagency task force.[34] The policy directive stated that "*other measures of poverty may be developed* for particular research purposes, and published, *so long as they are clearly distinguished from the standard data series*." (Emphasis added). Additionally, it clarified that "the poverty levels used by the Bureau of the Census were *developed as rough statistical measures* to record changes in the numbers of persons and families

[31] Poverty Studies Task Force, *The Measure of Poverty: Administrative and Legislative Uses of the Terms "Poverty," "Low-Income," and other Related Items*, U.S. Department of Health, Education, and Welfare, Technical Paper II, September 1, 1976, p. 4, http://www.census.gov/hhes/www/povmeas/pdf/tp_ii.pdf.

[32] See the 1966 Economic Report of the President and accompanying Annual Report of the Council of Economic Advisors, http://fraser.stlouisfed.org/publications/ERP/issue/1199/download/5729/ERP_1966.pdf.

[33] U.S Bureau of the Census, *The Extent of Poverty in the United States: 1959 to 1966*, Current Population Reports, Series P-20, No. 54, U.S. Government Printing Office, Washington, DC, May 31, 1968, http://www.census.gov/hhes/www/poverty/prevcps/p60-54.pdf.

[34] See Gordon M. Fisher, "Development of the Orshansky Poverty Thresholds..." op. cit., http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C4. The policy directive was issued as Exhibit L to BoB Circular No. A-46, (Transmittal Memorandum No. 9, dated August 29, 1969), which presented standards and recommendations for improved statistical procedures. The new procedures adopted the Consumer Price Index (CPI) as the basis for adjusting poverty thresholds over time, rather than the change in cost of food in the economy food plan. They also raised the farm poverty thresholds from 70% to 85% of the corresponding nonfarm levels. Exhibit L to Circular No. A-46 was published in Bureau of the Budget, Office of Statistical Policy, *Definition of Poverty for Statistical Purposes*, Statistical Reporter, Washington, DC, September 1969, p. 37, and ibid, *Revision of the Poverty Definition*, p. 39.

in poverty, and their characteristics, over time. While they have relevance to a concept of poverty, these...*were not developed for administrative use in any specific program* and nothing in this Circular should be construed as requiring that they should be applied for such a purpose." (Emphasis added).

The BoB policy directive thus established the Census Bureau poverty measure as the "official" U.S. statistical measure of poverty. The directive was reissued in 1978, with only slight (nonsubstantive) modification, as OMB Statistical Policy Directive No. 14.[35] The Census poverty measure is used to arrive at official estimates of the number and characteristics of the poor population. Census Bureau poverty estimates are also used as factors to distribute federal funds to states under various programs' grant formulas.

Administrative Definition of Poverty

As noted above, by 1967 some version of poverty income guidelines was being used to determine income eligibility for individuals and families for federal programs under OEO's jurisdiction. Although OEO's poverty income guidelines and the Census Bureau's poverty income thresholds were both being developed off the same basic measure (Orshansky/SSA poverty measure), they were otherwise not necessarily tied to one another.

The Economic Opportunity Act Amendments of 1972 (P.L. 92-424) contain the first legislative reference to a "poverty line." The Act implicitly links the derivation of poverty guidelines, used for administering programs, with the "*official poverty line*" (i.e., thresholds) developed by the Census Bureau for statistical purposes (i.e., the slightly modified SSA/Orshansky poverty thresholds). The law required all agencies administering programs authorized under the act that used the poverty line as a criterion of eligibility to revise the poverty line, at least annually, for changes in consumer prices. The act makes reference to "the official poverty line (as defined by the OMB)" as the measure to which the price index is to be applied (i.e., the Census Bureau poverty thresholds are recognized as the "official poverty line," as established by the OMB, which currently is OMB Statistical Policy Directive No. 14).

Subsequently, in 1973, the Office of Economic Opportunity developed the basic procedure for computing the poverty income guidelines that is used today. The procedure was continued by its successor agency, the Community Services Administration (CSA), and upon CSA's abolishment under the Omnibus Budget Reconciliation Act of 1981 (OBRA; P.L. 97-35), authority for maintaining and updating the poverty guidelines was transferred to the HHS. That law maintained the basic language in the 1972 Economic Opportunity Act Amendments, requiring the HHS Secretary to revise at least annually "the official poverty line (as defined by the Office of Management and Budget (OMB))."[36]

The HHS poverty income guidelines, or multiples of them (e.g., 130% of poverty, 185% of poverty), are used to determine eligibility for some federal programs.[37] The guidelines are

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[35] Available at http://www.census.gov/hhes/www/povmeas/ombdir14.html.

[36] Department of Health and Human Services suggests the following phrase when making statutory reference to the poverty guidelines: "the poverty guidelines updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2)." See http://aspe.hhs.gov/poverty/faq.shtml#official.

[37] For the most recent HHS poverty guidelines, see http://aspe.hhs.gov/poverty/index.shtml. For a detailed discussion as (continued...)

simplified versions of the Census Bureau's poverty thresholds, and are derived directly from them. They are based on the population weighted average Census Bureau poverty threshold for poor families with four persons, which is then indexed for price inflation by the Consumer Price Index for all Urban Consumers (CPI-U) and rounded up to the nearest whole multiple of $50. The poverty guidelines are scaled up for larger families, and down for smaller families, from the four-person guideline by a constant scale, whereas the Census Bureau's poverty threshold scaling varies by family size. One major difference between the HHS poverty guidelines and the Census Bureau's poverty thresholds is that the HHS poverty guidelines are adjusted upwards for Hawaii and Alaska—115% and 125%, respectively, of the guidelines that apply for the 48 contiguous states and the District of Columbia. In contrast, Census Bureau poverty thresholds do not vary by geography. HHS poverty income guidelines for 2009[38] are shown in **Table 1**, below.

Table 1. 2009 HHS Poverty Guidelines

(in dollars)

Persons in Family	48 Contiguous States and the District of Columbia[a]	Hawaii[b]	Alaska[c]
1	$10,830	$12,460	$13,530
2	14,570	16,760	18,210
3	18,310	21,060	22,890
4	22,050	25,360	27,570
5	25,790	29,660	32,250
6	29,530	33,960	36,930
7	33,270	38,260	41,610
8	37,010	42,560	42,290

Source: U.S. Department of Health and Human Services, http://aspe.hhs.gov/poverty/index.shtml.

a. For families with more than eight persons, add $3,740 for each additional person.

b. For families with more than eight persons, add $4,300 for each additional person.

c. For families with more than eight persons, add $4,680 for each additional person.

Changes to the "Official" Statistical Poverty Measure

The statistical definition of poverty has changed little from the original SSA/Orshansky definition developed in the early 1960s. Changes to the measure have largely been technical in nature, based

(...continued)

to how the HHS poverty guidelines are derived from Census Bureau poverty income thresholds, see Gordon M. Fisher, "Poverty Guidelines for 1992," *Social Security Bulletin*, vol. 55, no. 1 (Spring 1992), pp. 43-46, http://aspe.hhs.gov/poverty/papers/background-paper92.shtml. For computations for deriving the 2009 HHS poverty guidelines, see http://aspe.hhs.gov/poverty/09computations.shtml.

[38] At the time of this report, 2009 Poverty Guidelines were the most recent available. Congressional action (P.L. 111-118) instructed HHS to extend the 2009 guidelines until at least March 1, 2010, and P.L. 111-144 further extended the 2009 guidelines until at least March 31, 2010. In 2009, the economic recession resulted in price deflation from 2008 to 2009, which, without extension of the 2009 guidelines, would have resulted in lower guidelines in 2010 and potential reductions in income eligibility levels for certain means-tested programs.

on recommendations of interagency statistical committees. Since originally developed, the following changes have been adopted:

- Selection of the *Economy Food Plan,* as opposed to the higher-priced *Low Cost Food Plan* as the basis for establishing poverty thresholds (1965).
- Annual adjustment of non-farm poverty thresholds to be based on the change in Consumer Price Index (CPI) rather than the changes in cost of food included in the Economy Food Plan (1969).[39]
- Raise the farm poverty thresholds from 70% to 85% of the corresponding nonfarm levels (1969).[40]
- Replace the CPI index used for annually updating poverty thresholds from the CPI for Urban Wage Earners and Clerical Workers (CPI-W) to the then-newly developed Consumer Price Index for all Urban Consumers (CPI-U) (1979).[41]
- Eliminate differences in poverty thresholds based on farm non-farm residence through the use of non-farm thresholds for all families and unrelated individuals (1981).[42]
- Eliminate the separate poverty thresholds for families headed by a "female head, no husband present" and "all other families" by using the population-weighted average of the two sets of thresholds for all families (1981).[43]
- Extend the maximum family size of the poverty matrix from seven or more persons to nine or more persons (1981).[44]

The Current Statistical Definition of Poverty

Today, the Census Bureau measures poverty based on 48 separate poverty thresholds, for families of varying size and age-composition. For example, in 2008 the poverty threshold for a four-person family, consisting of two adults and two children, was $21,834; for a single parent under age 65 with one child, $14,840; and for a single adult age 65 or older living alone or with no other family members, $10,326 (see **Table 2**).[45] Weighted average poverty thresholds are based on the average poverty thresholds for families of varying size and composition, and unrelated individuals, based on their relative number in the U.S. population for whom poverty status is determined. The weighted average poverty thresholds provide a summary of the 48 separate thresholds, but are not used for computing poverty estimates. However, the weighted average poverty threshold for a four-person family is used as the basis for developing HHS poverty income guidelines.

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[39] Gordon M. Fisher, "Development of the Orshansky Poverty Thresholds...", op.cit., http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C4.

[40] Ibid, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C4.

[41] Ibid, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C8.

[42] Ibid, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C9.

[43] Ibid, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C9.

[44] Ibid, http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C9.

[45] For current and historical U.S. Census poverty thresholds, see http://www.census.gov/hhes/www/poverty/threshld.html.

Except for minor changes described above, the poverty thresholds used today are the same as those developed by Dr. Orshansky well over 40 years ago, adjusted only for changes in prices. They represent a near "absolute" measure of poverty, based on standards of living in the mid-1950s to early 1960s, rather than contemporary standards. Under the "official" Census Bureau poverty measure, a family is considered poor if its pre-tax cash income is below its corresponding poverty threshold, based on size and composition.

The "official" measure of poverty for counting the poor is based on families' total cash, pre-tax income. Federal government assistance to low-income families, in the form of food stamps,[46] medical assistance, housing subsidies, and other types of noncash benefits are not counted under the "official" measure, nor are the taxes they pay.

[46] Renamed Supplemental Nutrition Assistance Program (SNAP) beginning in FY2009.

Table 2. Poverty Thresholds in 2008 by Size of Family and Number of Related Children Under 18 Years

(in dollars)

Size of family unit	Weighted average thresholds[a]	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven	Eight
One person (unrelated individual)	10,991									
Under 65 years	11,201	11,201								
65 years and over	10,326	10,326								
Two persons	14,051									
Householder under 65 years	14,489	14,417	14,840							
Householder 65 years and over	13,030	13,014	14,784							
Three persons	17,163	16,841	17,330	17,346						
Four persons	22,025	22,207	22,570	21,834	21,910					
Five persons	26,049	26,781	27,170	26,338	25,694	25,301				
Six persons	29,456	30,803	30,925	30,288	29,677	28,769	28,230			
Seven persons	33,529	35,442	35,664	34,901	34,369	33,379	32,223	30,955		
Eight persons	37,220	39,640	39,990	39,270	38,639	37,744	36,608	35,426	35,125	
Nine persons or more	44,346	47,684	47,915	47,278	46,743	45,864	44,656	43,563	43,292	41,624

Source: U.S. Census Bureau, http://www.census.gov/hhes/www/poverty/threshld/thresh08.html.

a. Weighted average poverty thresholds are based on the average poverty thresholds for families of varying size and composition, and unrelated individuals, based on their relative number in the U.S. population for whom poverty status is determined. The weighted average poverty thresholds provide a summary of the 48 separate thresholds, but are not used for computing poverty estimates. However, the weighted average poverty threshold for a four-person family is used as the basis for developing HHS poverty income guidelines.

"Experimental" Poverty Measures

Since the early 1980s, under instruction from Congress,[47] the Census Bureau has developed and published several "*experimental*" measures of poverty for research purposes. These "experimental" measures attempt to gauge the effect that counting noncash benefits and taxes might have on family income and poverty. Census Bureau estimates of the number and characteristics of the poor under these "experimental" measures exist in tandem with the "official" measure, based on pre-tax cash income. However, federal programs that allot funds to states or other jurisdictions based on poverty use the "official" measure.

Efforts to Develop and Adopt a New Poverty Measure

Although federal legislation makes reference to the Census Bureau and HHS definitions of poverty, for purposes of allotting funds, and as a factor for determining eligibility for federal programs, the methods of defining poverty have largely been relegated by Congress to the executive branch. OBRA of 1981 (P.L. 97-35) refers to the "poverty line ... as the official poverty line established the Director of the Office of Management and Budget." It requires the Secretary of Health and Human Services to update poverty income guidelines used for administrative purposes at least annually from the "official poverty line" (i.e., Census Bureau poverty thresholds) established as the official statistical measure of poverty by OMB. Thus, Congress has recognized OMB as being responsible for setting the "official poverty line" and required the Secretary of HHS to issue revised guidelines, derived from the "official statistical measure" at least annually, for administrative purposes. As noted above, most changes to the poverty measure initiated by the OMB have been largely of a technical nature based on recommendations of interagency statistical committees.

Other than binding the administrative HHS Poverty Income Guidelines to the Census Bureau Statistical measure, and requiring at least annual indexing for price inflation, Congress for the most part has not exercised its authority to adopt a new poverty measure. Congress has, however, initiated studies of how poverty measurement might be improved. For example, an amendment to Title I of the Elementary and Secondary Education Act of 1965, under the Education Amendments of 1974 (P.L. 93-380, Section 23) required the Assistant Secretary of Education in the Department of Health, Education and Welfare (HEW) to supervise a study of the manner in which the "relative measure of poverty for use in financial assistance authorized by Title I ... may be more accurately and currently developed." An interagency task force submitted its final report

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[47] Senate report language in the House and Senate Conference Committee to the Department of Commerce and other agencies 1981 appropriation bill instructed the Secretary of Commerce to expedite research on collecting, through surveys, data on benefits received and on participation in federally funded, in-kind benefit programs. Additionally, the language instructed the Secretary to continue research and testing of techniques for assigning monetary values to in-kind benefits, and for calculating the impact of such benefits on income and poverty estimates. The Secretary was further instructed to include in survey reports beginning no later than October 1, 1981, appropriate summaries of data on in-kind benefits and estimates of the effect of in-kind benefits on the number of families and individuals below the poverty level. See U.S. Congress, Senate Committee on Appropriations, *Departments of State, Justice, and Commerce, The Judiciary, and Related Agencies Appropriation Bill, 1981*, report, 96th Cong., 2nd sess., September 16, 1980, Report No. 96-949, pp. 33-34; and U.S. Congress, House Committee of Conference to H.R. 7584, *Making Appropriations for the Departments of State, Justice, and Commerce, the Judiciary, and Related Agencies*, conference report, 96th Cong., 2nd sess., November 20, 1980, Report No. 96-1472, pp. 8-9.

along with 16 technical papers to Congress in 1976.[48] The report provided a thorough evaluation of the methods for developing and revising a poverty measure, but stopped short of making specific recommendations to change the current poverty measure.

As noted above, in the section on "“Experimental” Poverty Measures” Congress instructed the Department of Commerce to conduct research on the monetary value of noncash benefits and to include estimates of such benefits on the number of families and individuals below poverty.

A congressionally commissioned report issued in 1995 by the National Research Council (NRC) of the National Academy of Sciences (NAS) recommended fundamental as well as technical changes in how poverty should be measured in the United States.[49] The 12-member NAS panel on Poverty and Family Assistance grew out of concerns of the Joint Economic Committee and the House Subcommittee on Census, Statistics, and Postal Personnel, which called for an independent review of the U.S. poverty measure.[50] The scope of the study was broadened to include an examination of the conceptual and methodological issues for establishing welfare payment standards for families with children, which emanated from provisions in the Family Support Act of 1988 (P.L. 100-485). The NAS recommendations and work that has been conducted since their issuance are discussed in the next section.

House and Senate legislative proposals introduced in both the 110th and 111th Congress, if adopted, would instruct the Census Bureau to create a new “modern” poverty measure, following many of the NAS panel’s recommendations. More recent developments initiated by the Office of Management and Budget (OMB) propose that the Census Bureau develop a new Supplemental Poverty Measure (SPM), using NAS panel recommendations as a starting point. These initiatives are presented at the end of this report.

National Academy of Sciences—Measuring Poverty: A New Approach

Many experts and interested observers believe that the current measure of poverty is outmoded and needs to be revised to better measure social conditions and the effects of social and economic policies on the low-income population. As noted above, in the early 1990s Congress commissioned an independent review of the U.S. poverty measure, which culminated in a study issued by the National Research Council (NRC) of the National Academy of Sciences (NAS) entitled *Measuring Poverty: A New Approach.*[51] The 12-member NAS panel on Poverty and Family Assistance made 27 specific recommendations for revising the poverty measure. (One panel member dissented from the majority view and disagreed with specifics of some of the panel’s recommendations.) In arriving at its recommendations, the panel was guided by three

[48] Technical papers from the interagency task force are available at http://www.census.gov/hhes/www/povmeas/measureofpov75.html.

[49] National Research Council, Panel on Poverty and Family Assistance, “Measuring Poverty: A New Approach,” Constance F. Citro and Robert T. Michael, eds. Washington, DC: National Academy Press, 1995. (Hereafter cited as Citro and Michael, *Measuring Poverty…*)

[50] Gordon M. Fisher, “Development of the Orshansky Poverty Thresholds...” op.cit., http://www.census.gov/hhes/www/povmeas/papers/orshansky.html#C11.

[51] Op., cit., Citro and Michael, *Measuring Poverty…*

principles: the measure should be acceptable and understandable to the public; the measure should be statistically defensible; and, the measure should be feasible to implement with available or readily obtainable data. The panel's major recommendations focused on setting, updating, and adjusting poverty thresholds, and defining family resources to be counted against poverty thresholds for determining families' and individuals' poverty status. Since the NAS panel issued its recommendations, an extensive amount of research has been undertaken by statistical agencies, academics, and other researchers to devise and test methods, and evaluate results of implementing the panel's recommendations. A 2004 NRC-sponsored workshop by the NAS Committee on National Statistics (CNSTAT) reviewed much of the research undertaken since the 1995 NAS report was issued; workshop members identified areas in which consensus among experts appears to have emerged, and others where experts believe more work needs to done in order to devise a new poverty measure that conforms to the NAS panel recommendations. [52]

Setting, Updating, and Adjusting Poverty Thresholds

As detailed earlier, the current official U.S. poverty measure was developed in the early 1960s, using data available at the time. It was based on the concept of a minimal standard of food consumption, derived from research that used data from the U.S. Department of Agriculture's (USDA) 1955 Food Consumption Survey. That research showed that the average U.S. family spent one-third of its pre-tax income on food. A standard of food adequacy was set by pricing out the USDA's Economy Food Plan—a bare-bones plan designed to provide a healthy diet for a temporary period when funds are low. An overall poverty income level was then set by multiplying the food plan by three, to correspond to the findings from the 1955 USDA Survey showing that an average family spent one-third of its pre-tax income on food and two-thirds on everything else.

Since originally being adopted in 1969 as the "official" U.S. poverty measure, it has changed little, with the exception of annual adjustments for overall price changes in the economy, as measured by the Consumer Price Index for all Urban Consumers (CPI-U). Thus, the poverty line reflects a measure of economic need based on living standards that prevailed in the mid-1950s. It is often characterized as an "absolute" poverty measure, in that it is not adjusted to reflect changes in needs associated with improved standards of living that have occurred over the decades since the measure was first developed. If the same basic methodology developed in the early 1960s were applied today, the poverty thresholds would be considerably higher than the current thresholds.[53]

[52] See National Research Council, *Experimental Poverty Measures: Summary of a Workshop*, John Iceland, Rapporteur, Planning Group for the Workshop to Assess the Current Status of Actions Taken in Response to Measuring Poverty: A New Approach, Committee on National Statistics, Division of Behavioral and Social Sciences and Education (Washington, DC: The National Academies Press, 2005), pp. 14-16, http://www.nap.edu/catalog.php?record_id=11166. (Hereafter cited as National Research Council (2005), *Experimental Poverty Measures: Summary of a Workshop*.)

[53] Based on U.S. Department of Labor Bureau of Labor Statistics Consumer Expenditure Survey data, in 2008 the average family spent about 10.1% of pre-tax income on food (including food consumed at home and away from home), or about one-tenth of total income, as opposed to one-third in the mid-1950s (see http://www.bls.gov/cex/2008/Standard/income.pdf, Table 2). This implies that the multiplier for updating poverty thresholds based on food consumption would be 9.9 (i.e., 1/.101), or more than triple the multiplier of 3 subsumed under poverty thresholds developed in the 1960s. As this multiplier includes both food consumed at home and away from home, if some adjustment were made with a restraining condition that only food consumed at home be considered, the multiplier would be even higher.

Setting Thresholds

The NAS panel majority recommended that a new approach be adopted for setting poverty thresholds. The panel majority recommended that poverty thresholds be established based on a budget standard that includes food, clothing, shelter (including utilities), plus a multiplier for other needs (e.g., household supplies, personal care, non-work-related transportation). The panel majority recommended that poverty thresholds be set within a specified percentage (ranging from 78% to 83% of the *median* of what "reference families" (families of four persons, comprised of two adults and two related children) spend on food, clothing, shelter, and utilities (FCSU). Empirically, these amounts convert to an initial poverty threshold for a reference family of four persons that ranged from the 30th to 35th *percentiles* of spending on the basic FCSU market basket. The NAS panel recommended that spending on the basic FCSU market basket be recalibrated each year based on the three most recent years of data on consumer spending.

Based on an analysis of three years of BLS Consumer Expenditure Survey (CEX) data, the median reference family spent $15,344 (in 1992 dollars) on FCSU. At the NAS-panel's recommended range of 78% to 83% of the *median,* spending on FCSU for the reference families was $11,950 and $12,719, respectively, which empirically corresponded to the 30th and 35th percentiles of the FCSU spending distribution among reference families. To these derived amounts, the NAS panel majority recommended that a multiplier ranging from 1.15 to 1.25 be applied to account for other needs. Based on these recommendations, the poverty threshold for a four-person reference family in 1992 dollars would range from $13,742 (i.e., 1.15 x $11,950) to $15,899 (i.e., 1.25 x $12,719), compared to an official poverty threshold of $14,228 for a reference family of four in 1992.

Under a joint project undertaken by BLS and Census researchers, poverty thresholds consistent with NAS recommendations have been constructed at the BLS as far back as 1989.[54] The poverty thresholds, developed as part of a research project, should not be construed as "official" BLS thresholds. These estimates include mortgage interest payments as part of shelter expenses, but until recently they excluded mortgage principal payments; interest payments are considered under the official BLS expenditure definition to be expenses, while payments towards principal are considered to be a form of savings or investment. More recently, the argument has been made that mortgage principal payments should be included in setting poverty thresholds that include shelter expenses, as payment of mortgage principal is a nondiscretionary expenditure many homeowners face, representing funds that cannot be used to meet other household needs such as food, clothing, or utilities. Moreover, homeownership is a common means by which families meet their shelter needs. Recognizing this issue, an alternate set of NAS-based poverty thresholds constructed at the BLS, going back as far as 1996, include mortgage principal payments as part of shelter expenses.[55] Poverty thresholds under the official definition, and two alternative NAS-based definitions based on FCSU developed at the BLS, one excluding mortgage principal payments (shown back to 1989) and the other including mortgage principal payments (shown back to 1996), are depicted in **Figure 1**.

[54] The thresholds are based on spending of a reference family of four persons (two adults with two children) on Food, Clothing, Shelter, and Utilities (FCSU), set at the average of NAS threshold recommendation: ((1.15*Median FCSU*.78) + (1.25*Median FCSU*.83))/2 .

[55] See Thesia I. Garner and Kathleen S. Short, *Creating a Consistent Poverty Measure over Time Using NAS Procedures: 1996-2005* (Working Paper), May 20, 2008, http://www.census.gov/hhes/www/povmeas/papers/experimental_measures_96_05v8.pdf.

Poverty Thresholds over Time

Figure 1 shows that NAS-based poverty thresholds rose faster in the 2000 to 2008 period than did official poverty thresholds. The chart shows that alternative poverty thresholds based on the NAS methodology for a four-person reference family in which payments towards mortgage principal were excluded tracked very close to the official poverty threshold over the 1989 to 2000 period. After 2000, the NAS-based FCSU (no mortgage principal) thresholds diverge from the official thresholds, reaching $24,755 in 2008, or 13.4% above the official poverty threshold of $21,834 in 2008. The earliest available alternative poverty threshold based on FCSU that includes mortgage principal payments is for 1996, at which point the threshold was estimated at $16,749 for a reference family of four persons, or 5.3% above the official threshold of $15,911 in that year. By 2008, the alternative FCSU poverty threshold with mortgage principal payments included was estimated at $27,043, or 23.8% above the official poverty threshold of $21,834, and 9.2% above the FCSU threshold that excluded mortgage principal from its calculation ($24,755).

NAS-based poverty thresholds are likely to be more sensitive to the effects of price changes of necessities on family consumption than are the official poverty thresholds, even though the NAS-based thresholds would not directly be adjusted for price changes. To the extent that changes in prices for food, clothing, shelter, and utilities affect the spending patterns of reference families, the effects of such price changes would be reflected in the NAS-based poverty thresholds. For example, an increase in home energy prices would be captured by the NAS-based thresholds to the extent that reference families at the threshold level increase their net spending on heating, cooling, or lighting their homes in excess of any possible reductions in spending on other necessities (i.e., food, clothing, shelter). To the extent that reference families shift spending from non-necessities, the poverty thresholds would be expected to increase. If spending on necessities were to decline overall, poverty thresholds would decrease.

Figure 2 shows changes in relative prices from 1989-2008 for food (food consumed at home), clothing (apparel), shelter, and utilities (home energy), as well as changes in overall prices for all urban consumers (CPI-U), changes in prices for all goods and services other than food, shelter, and utilities, and changes in NAS-based poverty thresholds (with and without mortgage principal factored into their calculation). Note that the change in the official poverty thresholds is exactly the same as the change in the CPI-U, as the CPI-U is the official index for annually adjusting official poverty thresholds. The chart shows that relative price changes for basic needs (food, shelter, home energy, and clothing) all (with the exception of food in 1990) were below those of all other items until 1996, when shelter prices began to increase. This helped keep the NAS-based poverty threshold (excluding mortgage principal) on close par with the official poverty threshold over the 1989-1996 period, as the two thresholds started out at near the same level in 1989 (see **Figure 1**). After 1996, shelter costs rose faster than non-necessities. More recently, food prices and home energy costs also have increased more than non-necessities. Resulting changes in families' spending on the basic necessities of shelter, utilities, and food have contributed to a faster increase in NAS-based poverty thresholds than in the official poverty threshold in recent years.

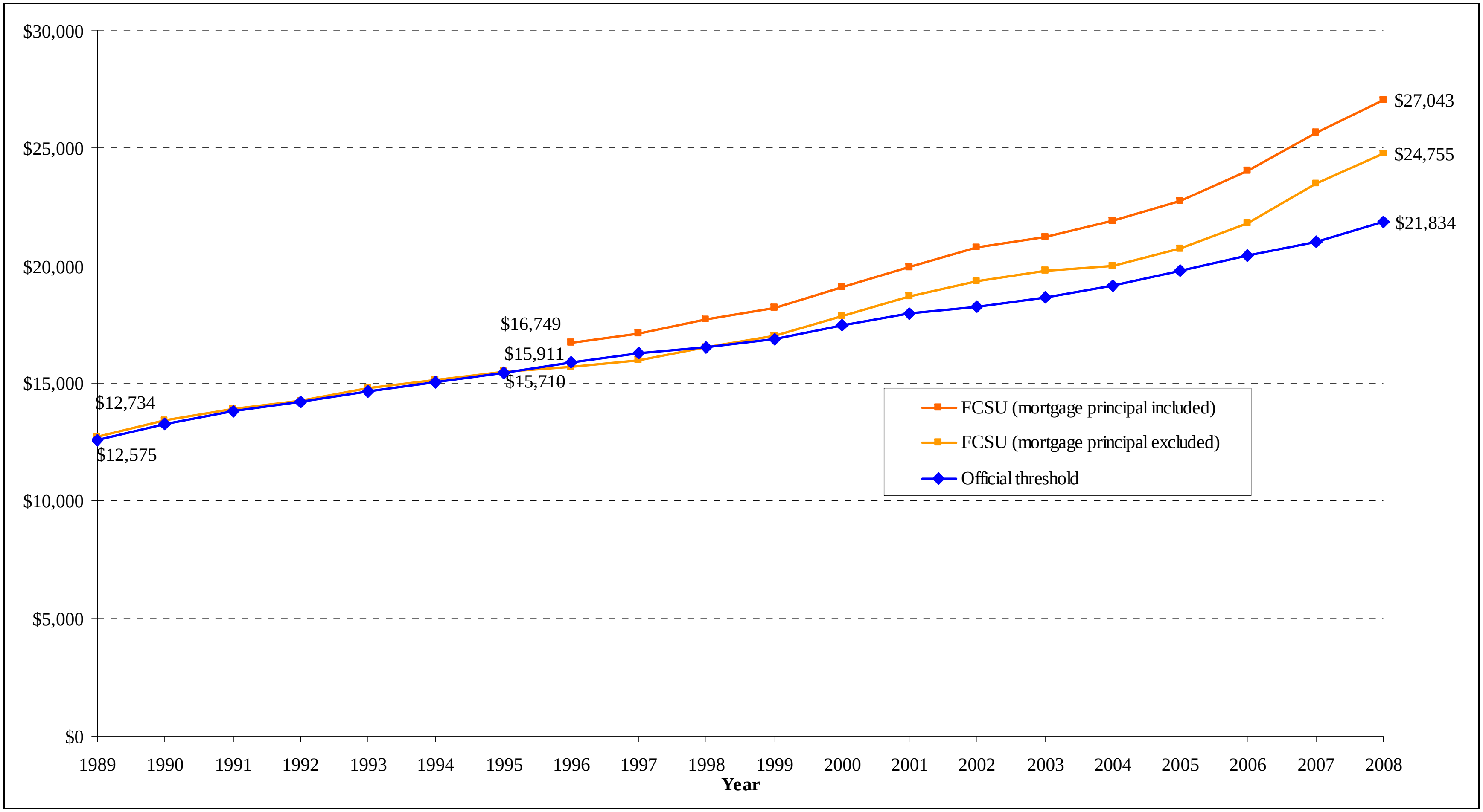
Medical Needs

The NAS panel struggled with whether and how medical need should be addressed in devising a poverty measure.[56] The panel recognized that individuals' medical needs vary widely, more widely than other basic needs such as food and shelter. The panel considered developing a "two-index" poverty measure, in which individuals would need sufficient resources to obtain non-medical necessities (i.e., food, clothing, shelter, utilities) and have adequate medical care, or sufficient resources to purchase health insurance, in order to not be considered poor. However, the panel was concerned about the operational difficulty of determining "adequate" health insurance for different groups. Also, the panel recognized an inconsistency in a measure that factors in medical risk as a component of poverty. By this account, the need for insurance against a risk (e.g., an expensive illness) that may or may not occur over the course of a year (the period for which poverty is being measured) is fundamentally different than the immediate, non-deferrable needs of food, clothing, and shelter. The panel majority recommended that a "medical care risk index" be developed separate from a measure of economic poverty. The proposed index would serve as a measure of the economic risk of not being able to afford needed medical care, accounting for the lack of insurance, or underinsurance.

Although the NAS panel did not explicitly factor medical need into a proposed new poverty measure, it did not completely ignore the effect of medical expenses on economic poverty. The panel recommended that medical out-of-pocket expenses, referred to in shorthand as MOOP, be considered in the new poverty measure, and be subtracted from resources. This issue is discussed later in the section on "Defining Family Resources."

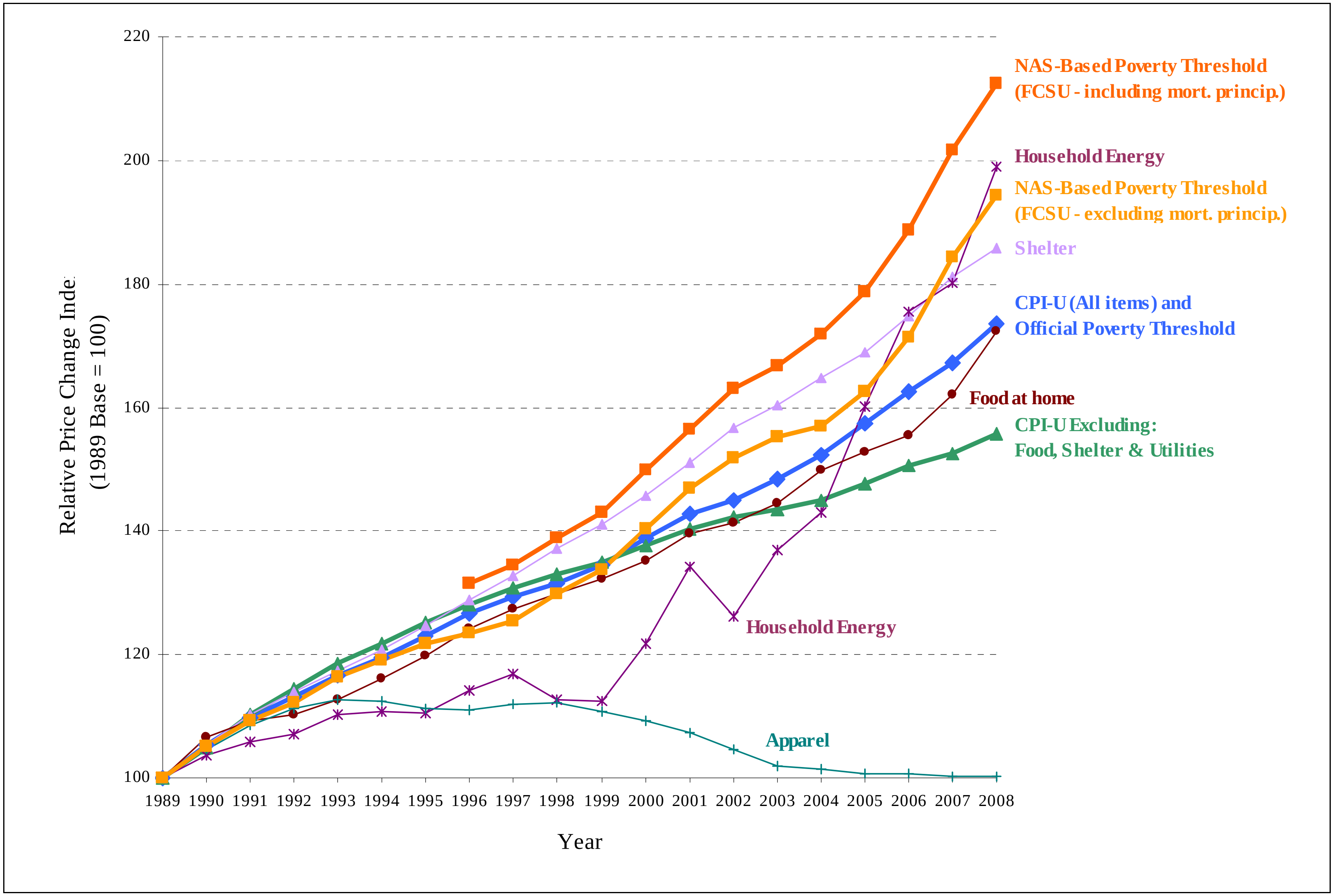
[56] Citro and Michael, *Measuring Poverty*…,op. cit., pp. 67-69, pp. 223-237.

Figure 1. Poverty Thresholds for a Reference Family of Four Persons Under the "Official" Definition and Under Alternative Definitions Based on Food, Clothing, Shelter, and Utilities (FCSU) With and Without Mortgage Principal Payments Included: 1989-2008



Source: Figure prepared by the Congressional Research Service. Alternative poverty thresholds based on Food, Clothing, Shelter, and Utilities (FCSU) with mortgage principal excluded are primarily from Kathleen Short, Experimental Poverty Measures: 1999, U.S. Census Bureau Reports, P60-216, Table A-1, and from threshold tables available on the Internet at http://www.census.gov/hhes/www/povmeas/tables.html. Alternative FCSU thresholds with mortgage principal included are primarily from Thesia I. Garner and Kathleen S. Short, Creating a Consistent Poverty Measure over Time Using NAS Procedures: 1996-2000, and threshold tables available on the same Internet site referenced above.

Figure 2. Change in Relative Prices for Food, Clothing, Shelter, and Utilities and "Official" and NAS-Based Poverty Thresholds: 1989-2008



Source: Figure prepared by the Congressional Research Service based on Bureau of Labor Statistics consumer price indices for indicated items.

Adjustments of Poverty Thresholds for Family Size

Under the approach recommended by the NAS panel, poverty thresholds would be developed based on expenditures among reference families of four persons (comprised of two adults and two related children), for food, clothing, shelter, and utilities (FCSU), as described earlier. Once obtained, those thresholds would be scaled to account for the relative costs of living in families of varying size and composition, accounting for differences in economies of scale among various family types. The approach recognizes, for example, that two persons can typically live more cheaply when living jointly rather than separately. In similar fashion, it recognizes that while household total consumption expenditures increase as the number of household members increases, marginal increases in expenditures diminish with each additional member. For example, while home energy costs might be higher for a family of four than for a family of three, they would not be expected to be directly proportionately higher, on a per person basis, as household members occupy shared living space that is heated, cooled, and lit regardless of whether one or more persons occupy the space.

After reviewing a variety of approaches for scaling poverty thresholds, the NAS panel recommended a two parameter scaling procedure, based on the number of adults and number of children living in a family. Under the procedure, children under 18 were treated as consuming 70% as much as adults. The threshold adjustments were obtained by summing the number of adults in the family plus the number of "adult-equivalent" children (i.e., 0.7 times the number of children) and then raising the result to a power ranging from 0.65 to 0.75.[57] The result of raising the resultant number of adult equivalents to a power less than 1.0 has the effect of scaling poverty thresholds such that a family requires fewer additional resources for each additional person in order to maintain an equivalent standard of living. [58]

The Census Bureau has adopted modifications to the NAS panel recommendation for adjusting experimental poverty thresholds, using a refined methodology developed by one researcher who was a member of the original NAS panel. The method of adjustment attempts to reconcile a perceived weakness in the original NAS recommendation that didn't account for differences between singles and childless couples, and single- and two-parent families; the refined methodology attempts to address these issues using a three-parameter scale (number of adults, number of related children, and family type (i.e., childless singles and couples, single parents, all other families)). [59] Some experts believe further research should be undertaken to explore other factors that might be taken into account for making such adjustments, such as ages of children and the value of household production by stay-at-home parents.[60]

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[57] See NAS Recommendation 3.1, in Citro and Michael, *Measuring Poverty…*, op. cit., pp. 159-182.

[58] For example, for the four-person reference family, the scale would be: $(2 + (0.7 \times 2))^{0.7}$ (assuming the mid-point of the recommended exponent range) yielding a value of 2.355. For a three-person family (two parents, with one child) the value would be calculated as $(2 + 0.7)^{0.7}$, yielding a value of 2.004. Consequently, the resultant scale-adjustment to arrive at the poverty threshold for the three-person family would be (2.004/2.355), or 0.851 times the poverty threshold of the four-person reference family.

[59] For a discussion, see Kathleen Short, *Experimental Poverty Measures: 1999*, ibid, p. 3 and p. A-2. The refined procedure was developed by Dr. David Betson of the University of Notre Dame, a member of the NAS panel. For one and two adults the scale is $(\text{Number of Adults})^{0.5}$; for single-parent families the scale is $(\text{Number of Adults} + (0.8 \times \text{First Child}) + (0.5 \times \text{Number of Other Children}))^{0.7}$, for all other families the scale is $(\text{Number of Adults} + (0.5 \times \text{Number of Children}))^{0.7}$.

[60] See National Research Council (2005). *Experimental Poverty Measures: Summary of a Workshop*, ibid, pp 11-13.

Table 2, shown earlier, depicts official poverty thresholds by family size and composition for 2008. **Table 3** and **Table 4** depict alternate poverty thresholds using the NAS-based methodology, which sets poverty thresholds for a reference family of four persons based on FCSU, respectively excluding (**Table 3**) and including (**Table 4**) mortgage principal in the calculation. In both cases, poverty thresholds for other families are scaled according to the refined NAS-based methodology adopted by the Census Bureau for adjusting experimental poverty thresholds. Poverty thresholds for families with one less related child than the size of the family unit are scaled according to the procedure that would apply to single-parent families. The applicable poverty thresholds for the four person reference family (two adults with two related children), from which all other poverty thresholds are derived, are highlighted in the two NAS-based tables.

Geographic Adjustments

The NAS panel recommended that poverty thresholds should be adjusted for differences in the cost of living across geographic areas for the components in the poverty budget.[61] However, the panel noted that lack of data, as well as conceptual and measurement issues, had made the development of such a measure practically difficult. For example, CPI data are collected for a limited number of metropolitan areas, but not for rural areas. Additionally, CPI data measure only differences in changes in prices within areas over time, rather than differences in levels of prices across areas. Other issues to be considered are whether a fixed market basket of goods should be used across all areas, or whether market baskets should reflect differences in needs or consumer preferences (i.e., tastes), and how to account for differences in quality of goods across areas. Recognizing these and other issues, the NAS panel recommended that housing costs, which represent the largest component of the poverty budget and the component that varies most across geographic areas, be used to adjust the housing component of the poverty thresholds. Based on an assessment of available data, the panel recommended that housing-cost indexes be developed for nine geographic regions and, within regions, for several population size categories of metropolitan areas. The panel recommended that appropriate agencies conduct research into improving the estimation of geographic cost-of-living differences in housing and other components of the poverty budget.

[61] Citro and Michael, *Measuring Poverty…*,op. cit., pp. 182-201.

Table 3. NAS-Based Poverty Thresholds Based on Food, Clothing, Shelter, and Utilities (FCSU) Excluding Mortgage Principal, by Family Size and Number of Related Children: 2008

(dollars)

	Number of Related Children								
Size of family unit	**None**	**One**	**Two**	**Three**	**Four**	**Five**	**Six**	**Seven**	**Eight**
One person (unrelated individual)	11,743								
Two persons	16,177	17,313							
Three persons	24,755	21,789	20,554						
Four persons	30,277	27,576	**24,755**	23,588					
Five persons	35,396	32,880	30,277	27,576	26,463				
Six persons	40,215	37,838	35,396	32,880	30,277	29,210			
Seven persons	44,797	42,532	40,215	37,838	35,396	32,880	31,850		
Eight persons	49,186	47,013	44,797	42,532	40,215	37,838	35,396	34,399	
Nine persons or more	53,413	51,318	49,186	47,013	44,797	42,532	40,215	37,838	36,870

Source: Estimates developed by the Congressional Research Service.

Notes: Estimated poverty threshold for a four-person reference family with two related children using NAS-based FCSU procedures excluding mortgage principal from its calculation is available on the Internet at http://www.census.gov/hhes/www/povmeas/tables.html.

Poverty thresholds are adjusted for family size and composition using scaling factors according to a revised three-parameter scale described in Kathleen Short, Experimental Poverty Measures: 1999, U.S. Census Bureau, Current Population Reports, Consumer Income, P60-216, U.S. Government Printing Office, Washington, DC, (2001). Family units with one less related child than the size of the family are scaled according to the procedure applicable to single-parent families.

Table 4. NAS-Based Poverty Thresholds Based on Food, Clothing, Shelter, and Utilities (FCSU) Including Mortgage Principal, by Family Size and Number of Related Children: 2008

(dollars)

	Number of Related Children								
Size of family unit	**None**	**One**	**Two**	**Three**	**Four**	**Five**	**Six**	**Seven**	**Eight**
One person (unrelated individual)	12,533								
Two persons	17,672	18,913							
Three persons	27,043	23,803	20,554						
Four persons	33,076	30,124	**27,043**	25,768					
Five persons	38,668	35,919	33,076	30,124	28,909				
Six persons	43,931	41,336	38,668	35,919	33,076	31,909			
Seven persons	48,937	46,463	43,931	41,336	38,668	35,919	34,793		
Eight persons	53,732	51,359	48,937	46,463	43,931	41,336	38,668	37,578	
Nine persons or more	58,350	56,061	53,732	51,359	48,937	46,463	43,931	41,336	40,278

Source: Estimates developed by the Congressional Research Service.

Notes: Estimated poverty threshold for a four-person reference family with two related children using NAS-based FCSU procedures including mortgage principal in its calculation is available on the Internet at http://www.census.gov/hhes/www/povmeas/tables.html.

Poverty thresholds are adjusted for family size and composition using scaling factors according to a revised three-parameter scale described in Kathleen Short, Experimental Poverty Measures: 1999, U.S. Census Bureau, Current Population Reports, Consumer Income, P60-216, U.S. Government Printing Office, Washington, DC, (2001). Family units with one less related child than the size of the family are scaled according to the procedure applicable to single-parent families.

Defining Family Resources

As noted at the beginning of this section, poverty status is determined by setting poverty income thresholds and comparing families' income and resources against those thresholds. Up to this point, only issues related to setting and adjusting poverty thresholds have been addressed. Here, issues in measuring family income and resources to be counted against established poverty thresholds are discussed.

The official method of counting the poor is based on families' total cash pre-tax income, measured against poverty thresholds corresponding to families' size and composition. The current definition of poverty counts most sources of money income received by families (e.g., earnings, social security, pensions, cash public assistance, interest and dividends, alimony and child support, among others). A major criticism of the current measure is that it fails to account for a variety of forms of government assistance to low-income families or for federal or state income and payroll taxes on families. As such, the current poverty definition is unable to measure the effects of a host of government programs and policies on poverty. Non-cash benefits and tax credits represent a growing share of assistance to the poor, yet the official measure does not count them. For example, in FY2008 the federal government provided an estimated $33.6 billion in food stamp benefits, most of which went to poor households. The Earned Income Tax Credit (EITC) is the fastest growing form of cash aid for children, providing an estimated $39.5 billion in 2008 to families with relatively low earnings who owed no income tax. Neither food stamp benefits nor the EITC, however, are counted as income under the official poverty definition.

The NAS panel recommended that an expanded definition of resources be developed for the purpose of defining poverty.[62] In addition to cash income defined in the current measure, the NAS panel recommended that the value of near-money non-medical in-kind benefits, such as food stamps, subsidized housing, school lunches, and home energy assistance be added to resources. The panel recommended that out-of-pocket medical expenditures, including health insurance premiums, be deducted from resources, and that income taxes and social security payroll taxes be deducted as well. For families in which there is no nonworking parent, the panel recommended deducting actual child care costs per week worked, not to exceed the earnings of the parent with the lower earnings or a cap that is adjusted annually for inflation. The panel recommended that an allowance for work-related and transportation expenses be deducted for each working adult, as well. The panel also recommended that child support payments be deducted from the income of the payer.

The official measure of poverty is based on family units, consisting of household members related to one another by birth, marriage, or adoption. The NAS panel recommended that the definition of "family" should be expanded to include unmarried cohabiting couples (and presumably the co-residing relatives of each member). The NAS panel also recommended that research should be conducted on resource sharing among roommates and other household and family members to determine whether the unit of analysis for poverty measurement should be modified in the future.

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[62] See recommendation 4.2, and discussion of defining resources in Citro and Michael, *Measuring Poverty…*,op. cit., pp. 203-246.

Expanded Definition of Resources

The question of how to value non-cash benefits raises a variety of substantive and technical issues. The Census Bureau has been working on these issues, consulting with academic experts, sponsoring conferences, and issuing technical reports since the early 1980s—well before the NAS panel was commissioned to undertake its work of developing a new approach for measuring poverty.[63] In 1992, the Bureau published a consistent historical data series, covering the years 1979-1991, to trace the impact of a variety of taxes and non-cash benefits on poverty and income.[64] This report marked the last in its series of technical and research and development reports on alternative poverty measures using an expanded definition of resources. The Census Bureau has continued to publish *"experimental"* and *"alternative"* poverty estimates in many of its reports, and as unpublished tables available on the Internet, using the basic methods developed in its 1992 report. These "experimental" and "alternative" poverty measures included state and federal taxes, government non-cash programs, as well as means-tested non-cash benefits, including food stamps, housing, and school lunches, as well as the fungible value of Medicaid. Some measures extended beyond government spending for the poor to include government spending programs that are not means tested, such as Medicare, as well as employer-provided benefits, such as contributions to employee health plans. However, these experimental or alternative poverty measures were all based on an expanded definition of resources using the official poverty thresholds.

Consistency Between Poverty Thresholds and Resources

In its 1995 report, the NAS panel recommended that in developing a new poverty measure, family resources should be included to the extent those resources were considered in developing and adjusting poverty thresholds.[65] They noted that the current measure of poverty violates this principle of consistency, as did the inclusion of expanded income definitions in Census Bureau technical reports on "experimental" and "alternative" poverty measures that had been issued up to that time. The NAS report said that such measures should be discontinued (absent the development of consistent poverty thresholds), but that expression was not conveyed as a specific, formal recommendation.

Poverty Measurement in Practice—Methods and Issues

The Census Bureau continues to publish a wide variety of alternative and experimental poverty measures, reflecting different conceptual approaches and methodologies. Some of these measures now incorporate NAS-based poverty thresholds, and allow comparisons of poverty using current "official" thresholds, and alternative definitions of income and resources. No single measure has emerged as a preferred measure. A variety of conceptual, methodological, and data issues have

[63] For the earliest of such work, see U.S. Bureau of the Census, Technical Paper No. 50, *Alternative Methods for Valuing Selected In-Kind Transfer Benefits and Measuring Their Effect on Poverty*, U.S. Government Printing Office, Washington, DC, 1982, http://www.census.gov/hhes/www/poverty/prevcps/tp-50.pdf.

[64] U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 182, *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1979 to 1991*, U.S. Government Printing Office, Washington, DC, 1982; available on the Internet at http://www.census.gov/hhes/www/poverty/prevcps/p60-182rd.pdf.

[65] See recommendation 4.1, and discussion of defining resources in Citro and Michael, *Measuring Poverty…*,op. cit., pp. 9-10 and pp. 203-246.

been identified, and in some cases addressed, in developing a preferred measure. The following section describes some of these issues, and approaches taken thus far by the Census Bureau in developing alternative poverty measures. "Official" poverty estimates, as well as experimental and NAS-based poverty estimates produced by the Census Bureau, are based on the Census Bureau's Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS), hereafter referred to as the CPS/ASEC.[66]

Owner-Occupied Housing

As noted above, the basic poverty thresholds recommended by the NAS panel are based on a reference family of four persons. In some respects, the basic needs for FCSU of reference families with children may differ in substantive ways from the needs of other family types. For example, poverty thresholds based on reference families' spending may be inappropriately high for families or individuals who own their homes outright, and who are able to use resources budgeted for shelter for other needs (e.g., food, clothing, and utilities). The aged (age 65 and over), for example, are more likely than reference families with two adults and two children to own their homes outright; not taking into account differences in resources implicitly budgeted for shelter in developing poverty thresholds could unduly result in more aged persons being counted as poor than is justified.

The NAS panel recognized that economic resources available to homeowners should be taken into account in developing poverty measures. As opposed to developing alternative poverty thresholds for homeowners versus others, the panel recommended that homeownership be valued as a service, equivalent to the rent people would otherwise have to pay if they were to rent rather than own their home. The panel recognized a number of difficulties in developing a rental equivalency measure to adjust resources of homeowners, however, and that more research was needed in order to develop an appropriate adjustment.[67] Alternative approaches for valuing homeownership in a poverty measure have been developed and used, such as the Census Bureau's estimates of net return on home equity that have been published as part of its *"alternative"* and *"experimental"* income and poverty estimates over the past several decades, and new methods are being explored.[68] While there is general recognition that homeownership should be incorporated into a new poverty measure, a clear consensus among experts as to the best way to proceed has yet to materialize.[69]

[66] The CPS is a monthly household survey conducted by the Census Bureau for the Bureau of Labor Statistics, designed primarily to collect information about the labor force status of the population. On an annual basis, the Census Bureau administers a supplemental questionnaire to the core CPS, asking additional questions about relationships of family members to one another, educational attainment, citizenship and country of origin, health insurance coverage, and a battery of questions relating to income receipt and amounts received from a wide range of income sources. The annual supplement, formerly administered in March of each year and thus named the March Supplement to the CPS, is now conducted from February through April of each year, with the bulk of interviews still being conducted in March (thus the reason for renaming the supplement as the Annual Social and Economic Supplement to the CPS). Demographic characteristics are those at the time of the survey, whereas the income questions relate to the previous year's annual income. Thus, for example, the 2009 CPS/ASEC captures income for 2008 and is the basis for 2008 poverty estimates.

[67] Citro and Michael, *Measuring Poverty…*, ibid, p. 71, pp. 244-246.

[68] See, for example, Kathleen S. Short and Amy O'Hara, Valuing Housing in Measures of Household and Family Economic Well-Being, March 2008, available on the U.S. Census Bureau's internet site at http://www.census.gov/hhes/www/housing/ahs/valuing_housing.pdf.

[69] See National Research Council (2005), *Experimental Poverty Measures: Summary of a Workshop*, op. cit., pp 25-27.

Work-Related Expenses

The NAS panel recommended that work-related expenses and work-related child care expenses be subtracted from family resources for purposes of estimating poverty. Subtracting work-related expenses (driving, other transportation costs, and other work-related costs, such as uniforms) and work-related child care expenses from income for purposes of estimating families' and their members' poverty status recognizes such expenses as a basic need for securing labor market income; it also allows for better comparison between workers and nonworkers in terms of net resources available to meet the basic needs of food, clothing, shelter, and utilities that underpin NAS-based poverty thresholds.

Child Care Costs

The CPS/ASEC asks whether anyone in the household paid for child care while that person worked, and which children in the household needed paid care while their parent(s) worked. However, the survey does not ask how much parents paid for child care.[70] In its effort to address the NAS panel recommendations, the Census Bureau has developed an approach of imputing child care expenses to families that have no nonworking parent and that reported having paid for child care. The approach assigns 85% of weekly median child care expenses based on the number of children under age 12 and under age five who are in paid child care, based on estimated expenses derived from the 1993 Survey of Income and Program Participation (SIPP), indexed for inflation. Annual child care expenses are calculated based on the number of weeks worked by the parent working the fewest weeks during the year, and are capped so as to not exceed the annual earnings of the parent having the least earnings.

Other Work-Related Expenses

The NAS panel recommended that a flat amount rather than actual work-related expenses be deducted, because of tradeoffs people often make between housing and commuting costs.[71] However, this reasoning was paired with the assumption that poverty thresholds would be geographically adjusted for area cost-of-living differences (i.e., housing costs). Within a metropolitan area the housing cost adjustment would be the same for all families, regardless of whether they lived in a high housing-cost or low housing-cost (e.g., suburban fringe) part of that area. For those in the low housing-cost suburb, therefore, the assumed housing cost component in their poverty thresholds would be based on the average cost for the metropolitan area, which could be higher than their actual housing costs. However, by assigning a flat expense for work-related transportation, the assumed transportation component in their geographically adjusted poverty threshold could be less than their actual expenses, helping to even out the discrepancy between housing and transportation costs within a metropolitan area. Conversely, for those living in a high-cost area close to their place of employment (e.g., close-in suburb or downtown condominium), their implied housing allowance for purposes of determining poverty based on an average for the metropolitan area could be lower than actual housing expenses in the area in which they live, but they would be assigned a higher transportation allowance for poverty determination purposes than would be warranted based on their actual commuting expenses.

[70] Beginning in 2010, the CPS/ASEC will have a question on what families paid for child care.

[71] Citro and Michael, *Measuring Poverty…*, op. cit., pp. 242-243.

The CPS/ASEC does not ask about work-related expenses. In estimating experimental poverty measures, the Census Bureau applies a flat weekly deduction for work-related expenses, and estimates annual expenses based on the number of weeks worked during the year. These expenses are then subtracted from income for purposes of estimating poverty under alternative measures. While the work expense deduction helps to adjust resources for workers compared to non-workers for poverty determination purposes, it may not fully adjust for expenses among workers within or across geographic areas of the country.

Federal and State Income Taxes and FICA Taxes

As noted above, the NAS panel recommended that federal and state income taxes should be subtracted from family resources, as should social security payroll (FICA) taxes, for purposes of determining poverty. The CPS/ASEC does not ask about taxes families pay or tax benefits families receive, such as the EITC. Consequently, the Census Bureau estimates families' taxes through application of a tax model, which creates tax units based on relationships of household members to one another and determines tax filing status by applying Internal Revenue Service (IRS) rules to CPS relationship codes. The model uses statistically matched IRS Statistics of Income (SOI) data from federal income tax returns to impute necessary variables for tax simulation that are not collected on the CPS. Additionally, it uses estimated property taxes for homeowners, derived from a statistical match with American Housing Survey (AHS) data, for purposes of estimating tax deductions. A two-stage process is used whereby initial federal income taxes are computed for purposes of estimating state income taxes; the state income tax estimates are then used along with other variables (e.g., estimated property taxes for homeowners), to estimate tax deductions and determine whether the CPS tax unit would itemize or take a standard deduction. After filing status is assigned, adjusted gross income (AGI) is calculated, and taxable income is estimated after applying estimated exemptions and deductions; regular tax liability is then calculated and final tax liability is estimated, after simulating several tax credits (EITC, Child Tax Credit, and the Dependent Care Tax Credit). In estimating state income taxes, the model takes into account a wide variety of state income tax provisions affecting lower income families, such as state EITC, child care expense credits, pension exemptions and exclusions, disability exemptions, and the like.

States differ in the ways they raise revenue and in the mix of tax policies they employ. For example, some states impose personal property taxes on vehicles and other property. States vary in terms of sales taxes they impose; real estate property tax rates vary widely across jurisdictions, and some states (seven) don't have an income tax. With the exception of estimated real estate property taxes, the effects of these other taxes, including local taxes, are not accounted for in Census Bureau after-tax income poverty measures.

Medical Needs and Medical Expenses

Issues remain as to whether and how medical needs and expenses should be incorporated into a new poverty measure. As noted earlier, the NAS panel recommended that a separate measure of medical risk be developed apart from the economic definition of poverty. The panel recommended, however, that medical out-of-pocket expenses (MOOP) be subtracted from families' resources when determining poverty status, as medical expenses can affect resources available to meet other basic needs (food, clothing, shelter, and utilities). Yet, issues remain in terms of how to account for medical expenses when estimating poverty using Census Bureau surveys. Most Census Bureau surveys, such as the CPS/ASEC used for estimating the "official" definition of poverty, do not contain questions on families' medical spending. The CPS/ASEC does have questions on health insurance coverage and a basic question on individuals' health status.[72] Dedicated complex surveys are required to adequately capture the medical spending and medical care utilization of the population, such as the Medical Expenditure Panel Survey (MEPS) conducted by the Census Bureau for the HHS Agency on Healthcare Research and Quality (AHRQ).

In lieu of directly collecting information on families' medical expenses on the CPS/ASEC, Census Bureau researchers have applied two different methods intended to incorporate medical out-of-pocket (MOOP) spending into experimental poverty measures. One approach has been to follow the NAS majority panel recommendation of subtracting out-of-pocket medical expenses from family income when estimating poverty and has been designated as MOOP-MSI (medical subtracted from income). This approach relies on a statistical imputation methodology based on 1996 CEX data (adjusted for inflation) to assign estimated medical expenditures to CPS/ASEC families based on their family characteristics (i.e., age, health insurance coverage, family size, race, and income level). The approach, however, differs from the NAS majority panel recommendation in that it relies on estimated, rather than actual, medical spending of families. The other approach has been to incorporate some basic level of medical need, based on families' out-of-pocket medical spending, into poverty thresholds. This approach, referred to as MOOP-MIT (medical in thresholds), deviates from the NAS majority panel recommendation that medical expenses be subtracted from income, rather than being incorporated into poverty thresholds. Under the MOOP-MIT approach, the Census Bureau uses estimated median medical out-of-pocket spending based on family health insurance coverage, family members' health status, family size, and presence of members age 65 and older from the MEPS and adjusts CEX-derived poverty thresholds that include medical spending for different family types based on MEPS health spending patterns. This approach basically adjusts poverty thresholds for differences in expected medical costs (i.e., "medical risk") for various segments of the population. In its approach, the Census Bureau includes an adjustment for individuals without health insurance, by adding the cost of a standard unsubsidized health insurance package to reported out-of-pocket medical spending by such families, recognizing that their need for health care may exceed their actual spending.

Area Cost-of-Living Adjustments

Issues remain as to whether and how area cost-of-living adjustments should be applied in a poverty measure. Since the NAS panel made its recommendations, the U.S. Census Bureau has published a variety of experimental poverty estimates, both with and without geographic cost-of-living adjustments.[73]

Originally following the NAS-panel recommendations, the Census Bureau constructed cost-of-living indices by computing index values for each of 341 metropolitan areas, using a modified method developed by the Department of Housing and Urban Development (HUD) to develop Fair Market Rents (FMRs). (FMRs are used by HUD to administer Section 8 rental housing.) Index values were based on the cost of housing at the 45th percentile of the value of the distribution for each area. The results were then grouped into six population size categories within each of nine

[72] In 2010, the Census Bureau is adding one question to the CPS/ASEC relating to families' medical out-of-pocket expenses.

[73] See Kathleen Short, *Experimental Poverty Measures: 1999*, ibid, pp. A-2 to A-6.

Census divisions (New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific) to arrive at a set of 41 index values (some Census divisions had fewer than six population-size categories). Index values were further adjusted for the estimated share that housing (including utilities) represented (44%) in the FCSU budget developed for the four-person reference family. Finally, the index values were adjusted such that the average index across all people had a value of 1.00, so that national estimates for the total poor population would be the same, either with or without the application of a geographic adjustment, in spite of differences in sub-national poverty estimates that result from the application of geographic adjustments.

One identified problem in applying the NAS panel's cost-of-living adjustment recommendation was the much wider variation in housing costs within Census divisions than expected. For example, all areas in New England receive the same cost-of-living adjustment according to metropolitan status and population. However, Maine, for example, has much lower housing costs than the rest of New England. Raising poverty thresholds in Maine up to the New England standard unduly increases the number of poor in the state above what would have been obtained if Maine's poverty thresholds were separately adjusted for its housing costs and not those of the Census division to which it belongs.[74]

The Census Bureau has refined its approach in developing area cost-of-living adjustments by using HUD FMRs for 2,416 non-metropolitan counties outside of metropolitan areas and for all 341 metropolitan areas. FMRs are defined to be gross rent (with utilities) at the 40th percentile for the rent distribution of a standard quality of rental housing. The Census Bureau aggregates FMRs to arrive at average indexes by state and metropolitan status, resulting in 100 indexes (New Jersey and the District of Columbia have only metropolitan area indexes). The Census Bureau aggregates the indexes in order to adhere to data disclosure restrictions that are designed to protect survey respondents' anonymity, while at the same time allowing for survey microdata to be made available publicly.

A summary of the 2004 NRC-sponsored CNSTAT workshop noted that many experts believe that geographic adjustments should not be made to poverty calculations, given the state of (the then current) research.[75] The use of FMRs to adjust poverty thresholds for area cost-of-living differences has been criticized on a variety of technical and substantive grounds.[76] For example, HUD FMRs measure only market rents and not total housing costs. They are based on rent paid by "recent movers" (moved into the rental unit within the past 15 months) which reflects only a fraction of the rental market, and may bias rents; recent movers may also pay higher rents than long-term renters. Also, HUD institutes state minimum FMRs, which have the effect of raising FMRs substantially in some non-metropolitan counties. Furthermore, FMRs do not reflect differences in the quality of housing from one housing market to another. On other substantive grounds, analysts have argued that more work is needed to construct area cost-of-living adjustments that incorporate costs other than just rental housing. Some have argued that, to some extent, rents reflect the relative amenities and desirability of geographic areas. The question then arises as to whether persons living in low-rent, less-desirable areas should have lower poverty thresholds than persons living in high-rent, more-desirable areas, and thus be less likely to be counted as poor.

[74] See National Research Council (2005), *Experimental Poverty Measures: Summary of a Workshop*, op. cit, pp. 14-16.

[75] See National Research Council (2005), *Experimental Poverty Measures: Summary of a Workshop*, op. cit., p. 16.

[76] See Kathleen Short, *Experimental Poverty Measures: 1999,* ibid, pp. A-4 to A-5.

Two alternate approaches to the use of FMRs for making area cost-of-living adjustments to a poverty measure have been explored by Census Bureau and BLS researchers. One approach uses U.S. Census Bureau American Community Survey (ACS) data to estimate the relationship between median gross rent in states and metropolitan areas relative to the national median gross rent to derive a geographic cost index for 99 locations (i.e., metropolitan areas, and balance of areas outside metropolitan areas within states).[77] The ACS geographic housing adjustment, like the FMR adjustment, is applied to just the 44% of the poverty threshold representing shelter and utility costs. Another approach uses BLS consumer price index (CPI) data for 38 large metropolitan areas and housing cost estimates from the ACS to estimate Regional Price Parities (RPPs) for metropolitan areas and counties outside metropolitan areas.[78] The RPP index adjusts for geographic characteristics of regional consumer market baskets of goods and services, and is applied to the entire poverty threshold. Comparisons of state poverty estimates under the current "official" poverty measure and an alternative NAS-based poverty measure, with and without area cost-of-living adjustments, are presented later in this report (see "Effect of Area Cost-of-Living Adjustments on State Poverty Rates").

Incorporating NAS-Based Poverty Measures in Government Surveys

The CPS/ASEC has been the source for official poverty estimates for the past half century. Over the years, improvements have been made to the survey to support the estimation of poverty under a variety of experimental measures. Questions relating to the receipt of in-kind benefits, such as nutrition and housing assistance, have been added to the survey, as have questions relating to insurance coverage and health status of individuals. In 2010, additional questions relating to families' child care spending and medical out-of-pocket spending as well as homeownership and mortgage status are being added to the survey. The quality and utility of information resulting from these new questions has yet to be assessed. Whether a single question on families' medical out-of-pocket expenses will accurately capture such spending is uncertain. In lieu of direct responses to survey questions, or in adjunct to direct survey questions, the Census Bureau employs a variety of imputation techniques to address shortcomings in survey content. Examples include the imputation of medical out-of-pocket spending, child care expenses, the value of housing subsidies, and other components in the NAS-recommended poverty measures. It is uncertain whether added survey questions alone will suffice to address NAS-based poverty estimation requirements; however, they will likely help improve upon the imputation methodologies currently used to construct NAS-based poverty estimates.

Whereas a range of federal population surveys other than the CPS/ASEC can readily estimate poverty using the official poverty measure (i.e., pre-tax cash income relative to Census poverty thresholds), developing NAS-based estimates from many of these surveys is likely to be problematic. Currently, no federal population survey collects all the information required to directly generate NAS-based estimates, and few collect comparable information to the

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[77] This approach, developed by Alemayehu Bishaw of the Census Bureau, is described in Trudi Renwick, "Alternative Geographic Adjustments of U.S. Poverty Thresholds: Impact on State Poverty Rates," paper presented at the Annual Meeting of the American Statistical Association Section on Social Statistics, Washington, DC, August 2009, http://www.census.gov/hhes/www/povmeas/papers/Geo-Adj-Pov-Thld8.pdf. (Hereafter cited as Renwick, "Alternative Geographic Adjustments...".)

[78] This approach, developed by Betina Aten of the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, expands on research conducted by BLS researchers (Mary Kokoski, Patrick Cardiff, Brent Moulton, and Kim Zieschange), described in Renwick, "Alternative Geographic Adjustments...," ibid.

CPS/ASEC that would allow for ready application of CPS/ASEC-based imputation methodologies to the information they collect. For example, the American Community Survey (ACS) has emerged as the preferable data source for state and substate estimation of poverty using the official poverty measure. Implementing NAS-based methodologies on the ACS will be a challenge, perhaps limiting the ability to develop NAS-based poverty estimates at state and substate levels.

Estimates of Poverty Under Official Poverty and Selected Alternative Measures

Table 5 presents poverty estimates for 2008 under the official poverty definition and selected alternative poverty measures, by age and income concept, using two versions of NAS-based poverty thresholds. The first set of NAS-based estimates is based on poverty thresholds that do not take mortgage principal payments into account, while the second set of estimates is based on poverty thresholds that do. These thresholds are the same as those shown earlier in **Table 3** and **Table 4**, respectively. The estimates shown here illustrate the effects of selected approaches to devising a NAS-based poverty measure. As discussed earlier, there is no clear consensus as to what might constitute a preferred measure, and about the precise methods that should be adopted in its construction.

The table shows the sequential effects of adding specified sources to income, or subtracting specified expenses from income, in estimating individuals' poverty status based on their families' net income relative to specified poverty thresholds. The first row of the table shows poverty based on the current official income concept (i.e., pre-tax money income). The subsequent lines indicate the effects on the number of poor and percent of the population of poor (poverty rates) when resources are added, and expenses subtracted, from income. The change in number of poor relative to the "official" poverty measure (demarcated in **framed bold type**) is also shown. The effects of subtracting FICA payroll and federal income taxes (before refundable tax credits) on poverty are shown, followed by the inclusion of federal refundable tax credits (i.e., the Earned Income Tax Credit (EITC) and the partially refundable Child Tax Credit (CTC)). Next, the effect of one-time federal stimulus payments on poverty is estimated.[79] Subsequently, the estimated net effect of state income taxes and tax credits is shown, followed by the subtraction of estimated work-related expenses (including child care expenses), inclusion of Supplemental Nutrition Assistance Benefits (SNAP, formerly named food stamps), and subtraction of imputed medical out-of-pocket expenses. *The last two rows, which include the addition of housing subsidies, school lunch, and energy assistance, are demarcated from the measures above, as these benefits are not adequately accounted for in the developed poverty thresholds, and thus do not adhere to the NAS-panel's principle that any measure of resources or expenses counted against poverty thresholds should be consistent with those included in their development.* **Figure 3** through **Figure 6** show the effects of counting income and expenses from sources described above against current "official" poverty thresholds, and against two NAS-based alternatives, one with mortgage principal payments excluded, and the other with such payments included, in the calculation of the thresholds.

[79] Federal stimulus payments in 2008 amounted up to $600 for individuals, up to $1,200 for married couples, and up to $300 for each qualifying child, based on having had earned income in the previous year.

Table 5 shows that in 2008, an estimated 39.8 million people, or 13.2% of the population for whom poverty status was determined, were poor under the official poverty definition. Estimated poverty based on alternative poverty thresholds, and using the current "official" pre-tax money income measure, results in an estimated 47.1 million people (15.6%) who would be considered poor based on the NAS-based FCSU poverty thresholds with mortgage payments excluded in their calculation, and 53.3 million poor (17.7%) with mortgage principal included. The two alternative poverty thresholds result in substantial increases in measured poverty among persons age 65 and older. Under the official measure, 9.7% of aged persons were poor in 2008, compared to 13.8% under the FCSU thresholds without mortgage principal factored in, and 16.7% with it included. Note that no adjustment has been made in these estimates for the value of owner-occupied housing, discussed earlier, which would tend to reduce poverty rates somewhat from those shown here, and probably more so for the elderly.

The table and figures show that on net, federal tax credits more than offset the effects of federal and state income and FICA taxes, leading to lower poverty rates. After taxes and tax credits, the poverty rate under the official poverty thresholds is estimated at 12.6%; under the FCSU thresholds with mortgage principal excluded, 15.1%; and with mortgage principal included, 17.3%. The effect of taxes on elderly poverty, both before and after credits, under the three poverty thresholds is virtually nil, whereas children and non-aged adults see net declines in after-tax poverty under all three threshold measures. One-time federal stimulus payments received in 2008 as a rebate to taxes paid in 2007 further helped to reduce poverty among children and non-aged adults. Subtraction of work-related expenses (including child care) from income results in an increased number of poor persons, and inclusion of SNAP (food stamp) benefits, results in a decreased number of poor persons.

Under the NAS-based FCSU thresholds with an expanded resource definition (one which includes taxes, tax credits, stimulus payments, work-related expenses including child care, and SNAP benefits, but excludes medical expenses), children continue to be the group most likely to be poor. Under the FCSU measure with expanded resources (excepting medical expenses) and excluding mortgage principal, 19.3% of children are estimated to be poor—a rate not much different than the official poverty rate based on pre-tax cash income alone (19.0%). Under the FCSU measure with mortgage principal factored in, 22.3% of children are estimated to be poor—somewhat higher than the official poverty rate. In contrast, the aged poverty rate under an expanded resource definition that excludes medical expenses is 13.7% under the FCSU measure excluding mortgage principal, and 16.7% with mortgage principal factored in, which compares to a poverty rate of 9.7% under the official measure based on pre-tax money income.

Inclusion of medical expenses into a poverty measure especially affects the aged, particularly when compared to children. **Table 5** shows the effect of subtracting estimated out-of-pocket medical expenses (MOOP) from income using Census Bureau imputation procedures described earlier. Under the NAS-based FCSU measure excluding mortgage principal, elderly poverty increases from 13.7% before counting MOOP to 21.0% after subtracting MOOP from income (see **Figure 6**), slightly surpassing the child poverty rate (19.3% before counting MOOP, and 20.2% after; see **Figure 4**). Under the FCSU thresholds with mortgage principal included, counting MOOP increases the aged poverty rate from 16.7% to 24.9%, again eclipsing the child poverty rate (22.3% before counting MOOP, and 23.5% after). Under either measure that includes MOOP, the elderly poverty rate is higher than that of children and is more than double the current official rate of 9.7%.

Heretofore, poverty reduction among the aged has been heralded as a major policy accomplishment, as the incidence of poverty among the aged under the official measure was the highest of any age group a half century ago (35.2%, compared to 26.9% for children, and 17.0% for adults ages 18 to 64 in 1959), but in 2008 was the lowest (9.7%, compared to 18.5% for children, and 11.7% for non-aged adults). The incorporation of out-of-pocket medical expenses under a NAS-based poverty measure markedly increases the incidence of poverty among the aged, giving pause to previously heralded accomplishments and raising new social policy concerns.

Table 5. Estimated Number of Poor and Poverty Rates Under Current "Official" Census Poverty Thresholds and Census Bureau NAS-Based Poverty Thresholds Based on Food, Clothing, Shelter, and Utilities (FCSU) With and Without Mortgage Principal Included, by Age and Income Concept: 2008

(numbers in thousands)

				Poverty based on Census Bureau NAS-based FCSU poverty thresholds					
	Poverty Based on official Census poverty thresholds			Mortgage principal excluded in threshold calculation			Mortgage principal included in threshold calculation		
Age and income concept	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**
All persons:									
Cash income (current "official" Census poverty income definition)	**39,806**	13.2	0	47,069	15.6	7,263	53,280	17.7	13,475
Less FICA and federal income taxes (before refundable credits)	43,352	14.4	3,546	51,397	17.1	11,592	58,355	19.4	18,549
Plus federal refundable tax credits	38,071	12.6	-1,735	45,516	15.1	5,711	52,065	17.3	12,260
Plus federal stimulus payments	36,476	12.1	-3,330	43,546	14.5	3,740	50,028	16.6	10,222
Plus or minus state income taxes and tax credits	36,497	12.1	-3,309	43,589	14.5	3,784	50,130	16.7	10,324
Less work-related expenses (including child care expenses)	40,074	13.3	269	48,384	16.1	8,578	55,586	18.5	15,781
Plus SNAP (food stamp) benefits	37,629	12.5	-2,176	46,045	15.3	6,239	53,695	17.8	13,889
Less imputed out-of-pocket medical expenses	41,979	13.9	2,173	51,794	17.2	11,988	60,598	20.1	20,793
Plus subsidized housing assistance	*38,534*	*12.8*	*-1,271*	*48,653*	*16.2*	*8,847*	*57,664*	*19.2*	*17,859*
Plus free and reduced-price school lunch and energy assistance	*37,556*	*12.5*	*-2,250*	*47,372*	*15.7*	*7,566*	*56,479*	*18.8*	*16,673*

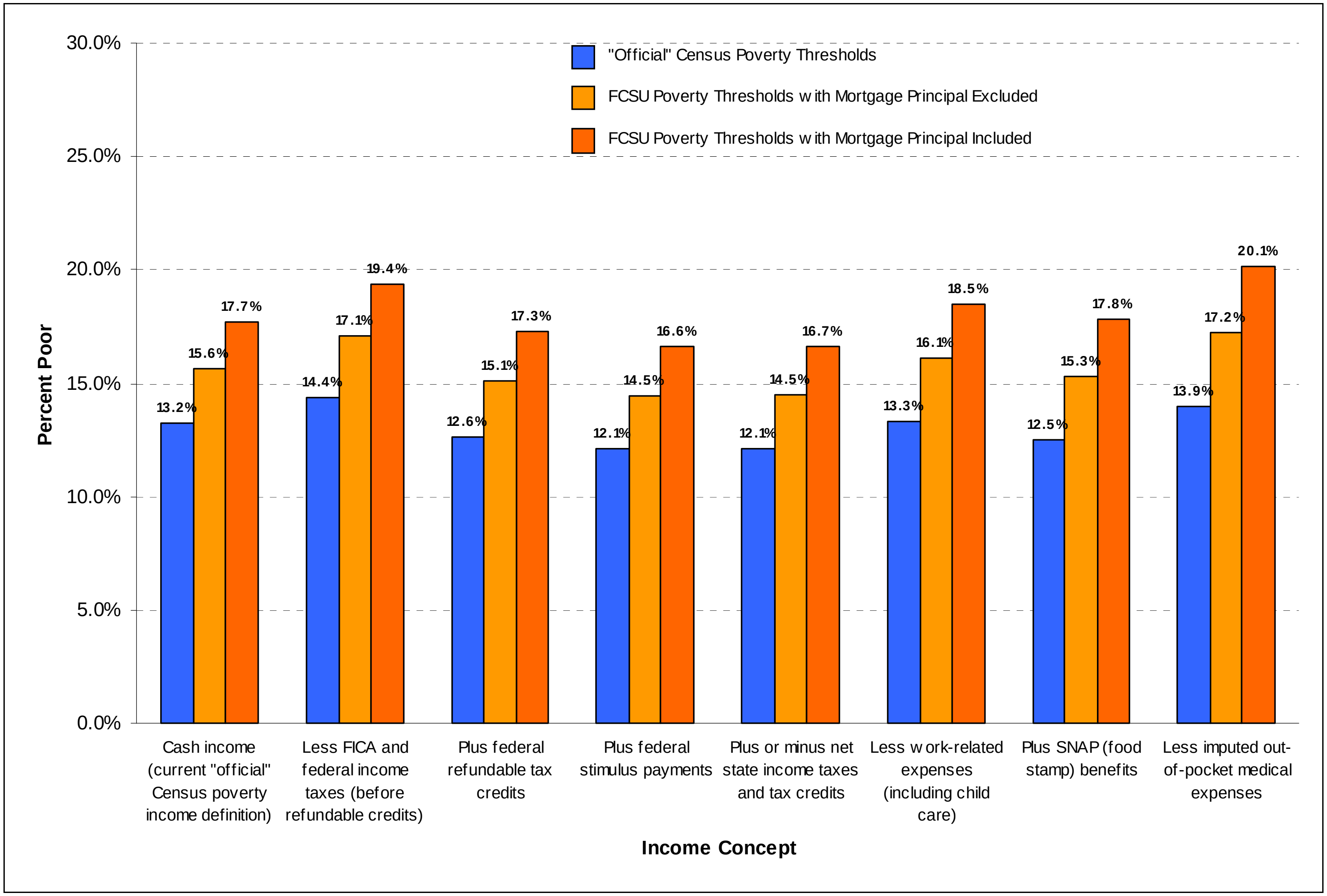
Age and income concept	Poverty Based on official Census poverty thresholds			Poverty based on Census Bureau NAS-based FCSU poverty thresholds: Mortgage principal excluded in threshold calculation			Poverty based on Census Bureau NAS-based FCSU poverty thresholds: Mortgage principal included in threshold calculation		
	Number	Poverty rate	Change compared to current "official" Census poverty measure	Number	Poverty rate	Change compared to current "official" Census poverty measure	Number	Poverty rate	Change compared to current "official" Census poverty measure
Persons Under Age 18:									
Cash income (current "official" Census poverty income definition)	**14,050**	19.0	0	16,088	21.7	2,038	17,916	24.2	3,866
Less FICA and federal income taxes (before refundable credits)	15,372	20.8	1,322	17,642	23.8	3,592	19,671	26.6	5,621
Plus federal refundable tax credits	12,565	17.0	-1,485	14,528	19.6	478	16,321	22.0	2,271
Plus federal stimulus payments	11,798	15.9	-2,252	13,664	18.4	-386	15,584	21.0	1,534
Plus or minus state income taxes and tax credits	11,759	15.9	-2,291	13,591	18.3	-459	15,540	21.0	1,490
Less work-related expenses (including child care expenses)	13,190	17.8	-860	15,380	20.8	1,330	17,397	23.5	3,347
Plus SNAP (food stamp) benefits	12,009	16.2	-2,041	14,258	19.3	208	16,508	22.3	2,458
Less imputed out-of-pocket medical expenses	12,583	17.0	-1,467	14,948	20.2	898	17,441	23.5	3,391
Plus subsidized housing assistance	*11,334*	*15.3*	*-2,716*	*13,883*	*18.7*	*-167*	*16,484*	*22.3*	*2,434*
Plus free and reduced-price school lunch and energy assistance	*10,793*	*14.6*	*-3,257*	*13,185*	*17.8*	*-865*	*15,848*	*21.4*	*1,798*
Persons Age 18 to 64:									
Cash income (current "official" Census poverty income definition)	**22,100**	11.7	0	25,757	13.6	3,658	29,062	15.4	6,962
Less FICA and federal income taxes (before refundable credits)	24,244	12.8	2,144	28,407	15.0	6,307	32,236	17.0	10,136
Plus federal refundable tax credits	21,808	11.5	-292	25,700	13.6	3,601	29,357	15.5	7,258
Plus federal stimulus payments	21,028	11.1	-1,072	24,658	13.0	2,558	28,132	14.9	6,032
Plus or minus state income taxes and tax credits	21,084	11.1	-1,016	24,748	13.1	2,648	28,277	14.9	6,177

	Poverty Based on official Census poverty thresholds			Poverty based on Census Bureau NAS-based FCSU poverty thresholds: Mortgage principal excluded in threshold calculation			Poverty based on Census Bureau NAS-based FCSU poverty thresholds: Mortgage principal included in threshold calculation		
Age and income concept	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**	**Number**	**Poverty rate**	**Change compared to current "official" Census poverty measure**
Less work-related expenses (including child care expenses)	23,155	12.2	1,055	27,671	14.6	5,571	31,748	16.8	9,648
Plus SNAP (food stamp) benefits	22,060	11.7	-40	26,628	14.1	4,528	30,863	16.3	8,763
Less imputed out-of-pocket medical expenses	23,516	12.4	1,416	28,924	15.3	6,824	33,742	17.8	11,642
Plus subsidized housing assistance	*21,913*	*11.6*	*-187*	*27,441*	*14.5*	*5,342*	*32,347*	*17.1*	*10,247*
Plus free and reduced-price school lunch and energy assistance	*21,517*	*11.4*	*-583*	*26,888*	*14.2*	*4,788*	*31,837*	*16.8*	*9,737*
Persons age 65 and older:									
Cash income (current "official" Census poverty income definition)	**3,656**	9.7	0	5,223	13.8	1,568	6,302	16.7	2,647
Less FICA and federal income taxes (before refundable credits)	3,735	9.9	79	5,348	14.2	1,692	6,448	17.1	2,792
Plus federal refundable tax credits	3,698	9.8	42	5,288	14.0	1,632	6,386	16.9	2,731
Plus federal stimulus payments	3,650	9.7	-6	5,224	13.8	1,568	6,312	16.7	2,657
Plus or minus state income taxes and tax credits	3,653	9.7	-2	5,250	13.9	1,594	6,312	16.7	2,657
Less work-related expenses (including child care)	3,730	9.9	74	5,333	14.1	1,677	6,442	17.0	2,786
Plus SNAP (food stamp) benefits	3,560	9.4	-95	5,159	13.7	1,503	6,324	16.7	2,668
Less imputed out-of-pocket medical expenses	5,880	15.6	2,224	7,921	21.0	4,265	9,416	24.9	5,760
Plus subsidized housing assistance	*5,287*	*14.0*	*1,632*	*7,328*	*19.4*	*3,672*	*8,833*	*23.4*	*5,178*
Plus free and reduced-price school lunch and energy assistance	*5,246*	*13.9*	*1,590*	*7,298*	*19.3*	*3,642*	*8,794*	*23.3*	*5,138*

Source: CRS analysis of U.S. Census Bureau data from the 2009 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

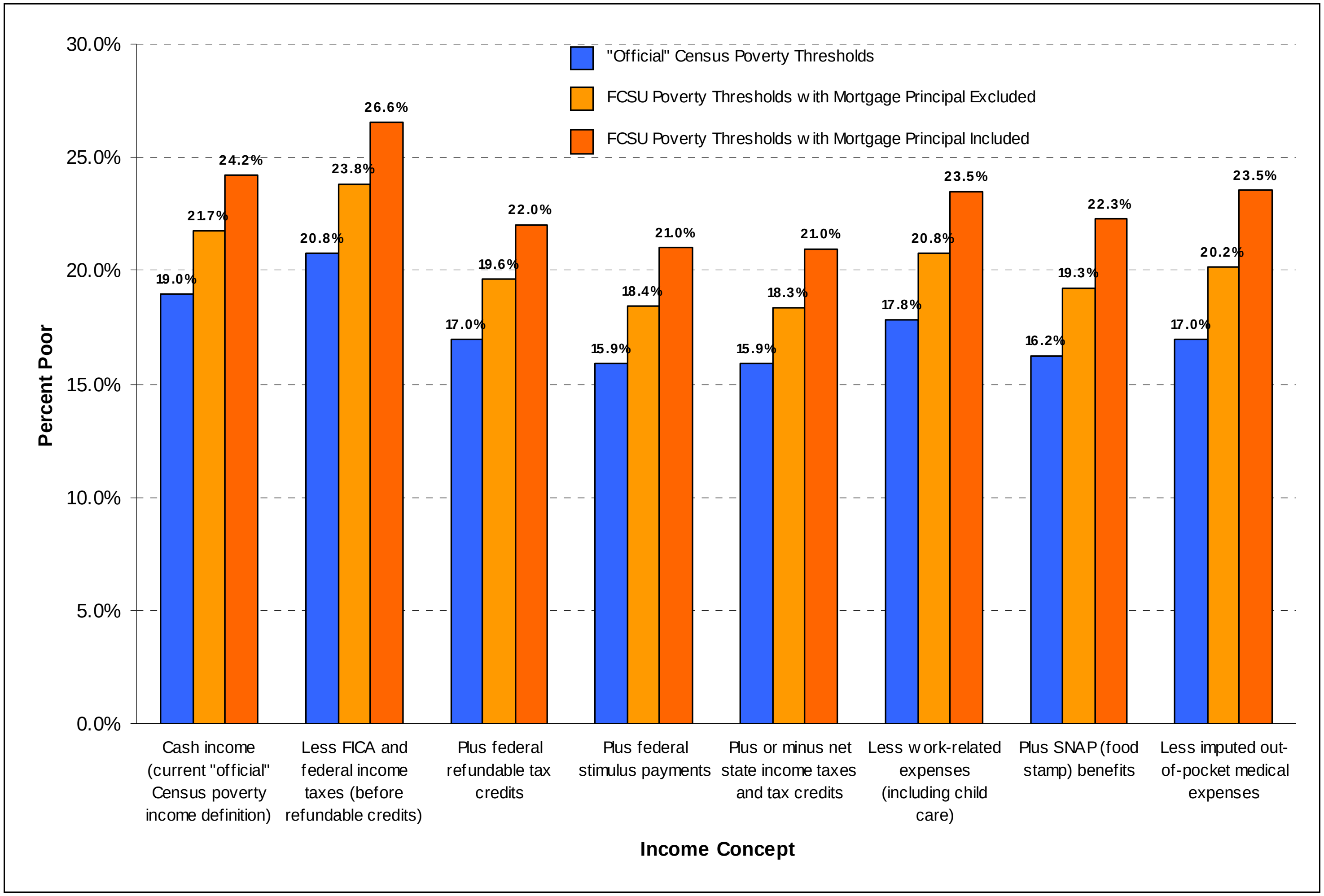
Notes: Poverty rates for all persons based on a total population of 301.041 million; for persons under age 18, based on a total population of 74.068 million; for persons age 18 to 64, based on a total population of 189.185 million; and for persons age 65 and older, based on 37.788 million.

Figure 3. All Persons—Estimated Poverty Rates Based on "Official" Census Poverty Thresholds and NAS-Based (FCSU) Poverty Thresholds (with and without Mortgage Principal), by Income Concept: 2008



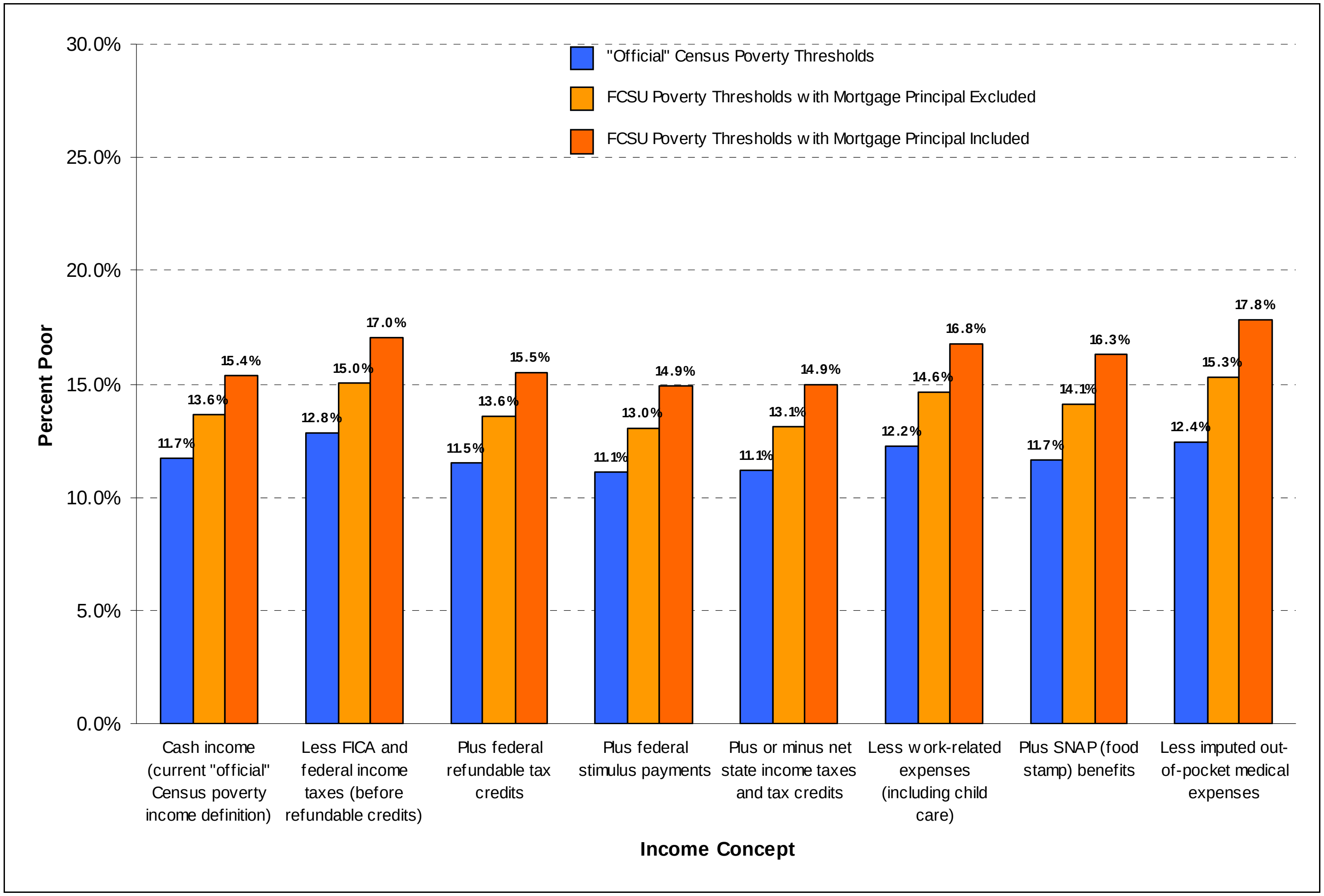
Source: Congressional Research Service analysis of U.S. Census Bureau 2009 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

Figure 4. Persons Under Age 18—Estimated Poverty Rates Based on "Official" Census Poverty Thresholds and NAS-Based (FCSU) Poverty Thresholds (With and Without Mortgage Principal), by Income Concept: 2008



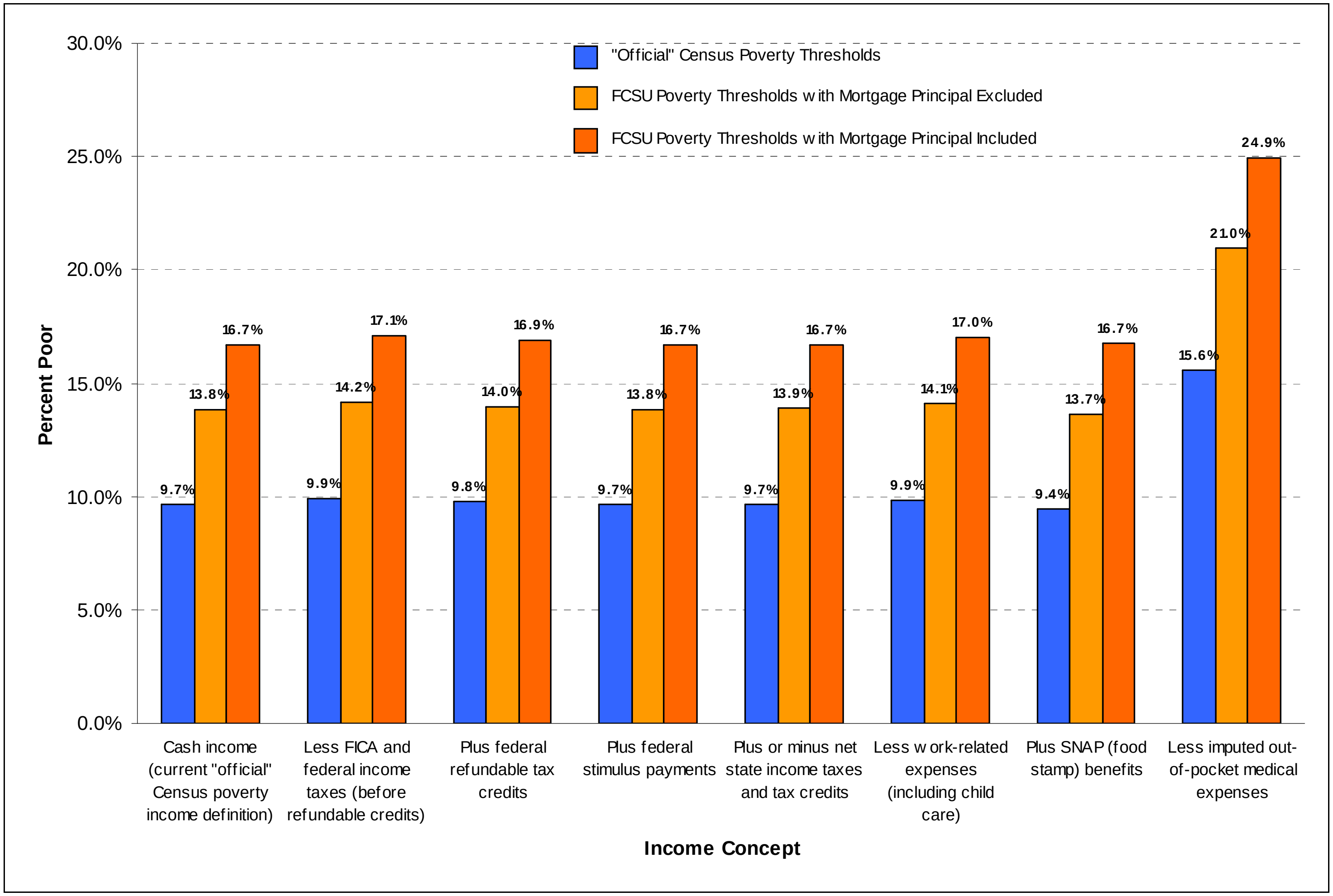
Source: Congressional Research Service analysis of U.S. Census Bureau 2009 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

Figure 5. Persons Under Age 18 to 64—Estimated Poverty Rates Based on "Official" Census Poverty Thresholds and NAS-Based (FCSU) Poverty Thresholds (With and Without Mortgage Principal), by Income Concept: 2008



Source: Congressional Research Service analysis of U.S. Census Bureau 2009 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

Figure 6. Persons Under Age 65 and Over—Estimated Poverty Rates Based on "Official" Census Poverty Thresholds and NAS-Based (FCSU) Poverty Thresholds (With and Without Mortgage Principal), by Income Concept: 2008



Source: Congressional Research Service analysis of U.S. Census Bureau 2009 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

Effect of Area Cost-of-Living Adjustments on State Poverty Rates

Table 6 depicts poverty rates by state under the current "official" poverty measure compared to NAS-based poverty rates with and without geographic adjustments for area cost-of-living differences using the Census Bureau's current experimental methods based on FMR. Similar tables using ACS median gross rent (**Table A-1**) and the Regional Price Parities (RPP) (**Table A-2**) methodologies for adjusting for cost-of-living differences are shown in the **Appendix**. The estimates are based on 2008 CPS/ASEC data and represent poverty rates for 2007.[80] Estimated poverty rates under each measure are shown, as well as each state's relative rank, and change in rank from the official or non-geographically adjusted NAS-based measure, for each measure. The NAS-based measures are based on NAS panel recommendations updated by the Consumer Expenditure Survey with out-of-pocket medical expenses subtracted from income (NAS-CE-MSI). The NAS-based measures subtract taxes and work-related expenses from family income, and add the value of noncash benefits. Apparent differences in states' poverty rates and rank relative to each other for each measure may not be statistically significant. Comparisons should be made across measures by state, as illustration of the relative effects of alternative measures on each state's poverty rate.

Table 6 shows that before application of area-cost-of living adjustments, poverty rates under the NAS-based definition are higher than under the "official" definition in most all states. The depicted poverty rates are lower under the NAS-based definition (prior to area cost-of-living adjustments) than under the "official" definition in only two jurisdictions (District of Columbia and Massachusetts), ostensibly due to a greater role played by in-kind or tax benefits in these two jurisdictions than in others in reducing poverty—such benefits are not counted under the "official" definition.

Table 6 shows that use of FMR as a basis for adjusting for area cost-of-living differences markedly affects some states' poverty rates relative to their rate under their unadjusted poverty rates under the "official" measure, as well as an unadjusted NAS-based measure. States' poverty rates and rank are approximate, subject to CPS/ASEC sampling error. The table shows, for example, that California's "official" poverty rate is estimated at 12.7%, but nearly doubles to 23.5% under the illustrated FMR-adjusted NAS-based measure, resulting in California moving from 21st place to 2nd place in terms of the jurisdiction with the highest poverty rate. In contrast, under the "official" measure, West Virginia has an estimated poverty rate of 14.8%, but under the FMR-adjusted NAS-based measure, its estimated poverty rate is 11.5%, resulting in West Virginia going from being ranked as having the 7th highest poverty rate to being ranked as having the 35th highest poverty rate.

[80] The NAS-based geographic adjustments are from Renwick, "Alternative Geographic Adjustments...," ibid. "Official" poverty and NAS-based poverty rates without geographic adjustment are CRS estimates from U.S. Census Bureau 2008 CPS/ASEC data. The estimates are based on a single year of CPS/ASEC data, rather than the convention of using three years of CPS/ASEC data for estimating state poverty rates, and conform to Renwick's approach, which is intended not to make comparisons over time nor among states, but to compare most directly the effect of the various indices.

Table 6. State Poverty Rates Based on "Official" Poverty Measure and NAS-Based Poverty Measure With and Without Area Cost-of-Living Adjustment (ACOLA), ACOLA Based on Fair Market Rent (FMR), 2007

	"Official" poverty measure			NAS-Based poverty measure (NAS-CE-MSI): No Area Cost-of-Living Adjustment					NAS-Based poverty measure (NAS-CE-MSI): Area Cost-of-Living Adjustment (ACOLA) based on Fair Market Rent (FMR)			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from "official" poverty measure	Change in rank from "official" poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	"Official" poverty measure	NAS-based poverty measure with no ACOLA
Highest Quintile	Mississippi	22.6	1	Mississippi	28.1	1	5.5	0	Dist. of Col.	24.8	1	1	16
	Dist. of Col.	18.0	2	Kentucky	21.5	2	5.9	3	California	23.5	2	19	17
	Texas	16.5	3	South Carolina	19.6	3	5.6	9	New York	21.4	3	6	13
	Louisiana	16.1	4	Texas	19.3	4	2.8	-1	Mississippi	19.6	4	-3	-3
	Kentucky	15.5	5	Tennessee	19.2	5	4.4	3	Texas	16.9	5	-2	-1
	North Carolina	15.5	6	North Carolina	18.2	6	2.7	0	Arizona	16.3	6	5	5
	West Virginia	14.8	7	West Virginia	18.2	7	3.4	0	Florida	16.1	7	15	11
	Tennessee	14.8	8	Oklahoma	17.9	8	4.5	8	Massachusetts	16.1	8	17	35
	New York	14.5	9	Alabama	17.9	9	3.4	1	New Jersey	15.5	9	38	36
	Alabama	14.5	10	Louisiana	17.8	10	1.7	-6	South Carolina	15.5	10	2	-7
Second Highest Quintile	Arizona	14.3	11	Arizona	17.8	11	3.5	0	Kentucky	15.4	11	-6	-9
	South Carolina	14.1	12	New Mexico	17.2	12	3.2	1	Louisiana	15.1	12	-8	-2
	New Mexico	14.0	13	Georgia	16.9	13	3.3	2	North Carolina	15.0	13	-7	-7
	Arkansas	13.8	14	Arkansas	16.7	14	2.9	0	Tennessee	14.9	14	-6	-9
	Georgia	13.6	15	Oregon	16.7	15	3.9	5	Georgia	14.4	15	0	-2
	Oklahoma	13.4	16	New York	16.6	16	2.1	-7	New Mexico	14.3	16	-3	-4
	Montana	13.0	17	Dist. of Col.	16.2	17	-1.8	-15	Oregon	14.2	17	3	-2
	Missouri	12.8	18	Florida	16.0	18	3.5	4	Hawaii	14.2	18	32	31
	Ohio	12.8	19	California	15.6	19	3.0	2	Alabama	13.4	19	-9	-10
	Oregon	12.8	20	Ohio	15.4	20	2.5	-1	Oklahoma	13.3	20	-4	-12
Middle Quintile	California	12.7	21	Montana	15.3	21	2.4	-4	Montana	12.7	21	-4	0
	Florida	12.5	22	Indiana	14.3	22	2.5	1	Ohio	12.7	22	-3	-2
	Indiana	11.8	23	Kansas	14.1	23	2.3	1	Rhode Island	12.6	23	16	21
	Kansas	11.7	24	Missouri	13.9	24	1.1	-6	Vermont	12.5	24	11	1
	Massachusetts	11.2	25	Vermont	13.3	25	3.5	10	Colorado	12.3	25	11	14
	Wisconsin	11.0	26	Nebraska	13.3	26	3.3	8	Nevada	12.3	26	11	16
	Wyoming	10.9	27	Wyoming	13.3	27	2.4	0	Illinois	12.2	27	5	10

	"Official" poverty measure			NAS-Based poverty measure (NAS-CE-MSI)									
				No Area Cost-of-Living Adjustment					Area Cost-of-Living Adjustment (ACOLA) based on Fair Market Rent (FMR)			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from "official" poverty measure	Change in rank from "official" poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	"Official" poverty measure	NAS-based poverty measure with no ACOLA
	Maine	10.9	28	Maine	13.2	28	2.4	0	Delaware	12.2	28	14	5
	Michigan	10.8	29	Pennsylvania	13.2	29	2.9	1	Pennsylvania	12.2	29	1	0
	Pennsylvania	10.4	30	Michigan	13.0	30	2.1	-1	Virginia	12.2	30	18	11
	Washington	10.2	31	North Dakota	12.8	31	3.5	10	Maryland	12.1	31	15	16
Second Lowest Quintile	Illinois	10.0	32	Utah	12.8	32	3.2	6	Connecticut	12.1	32	13	16
	Idaho	9.9	33	Delaware	12.5	33	3.2	9	Indiana	11.8	33	-10	-11
	Nebraska	9.9	34	Idaho	12.5	34	2.6	-1	Michigan	11.8	34	-5	-4
	Vermont	9.9	35	South Dakota	12.4	35	3.0	5	West Virginia	11.5	35	-28	-28
	Colorado	9.8	36	Wisconsin	12.3	36	1.3	-10	Washington	11.3	36	-5	4
	Nevada	9.7	37	Illinois	12.2	37	2.2	-5	Missouri	11.2	37	-19	-13
	Utah	9.6	38	Iowa	12.0	38	3.1	6	Arkansas	11.0	38	-24	-24
	Rhode Island	9.5	39	Colorado	12.0	39	2.2	-3	Maine	10.7	39	-11	-11
	South Dakota	9.4	40	Washington	11.6	40	1.5	-9	Utah	10.6	40	-2	-8
	North Dakota	9.3	41	Virginia	11.2	41	2.6	7	Wisconsin	10.4	41	-15	-5
Lowest Quintile	Delaware	9.3	42	Nevada	11.0	42	1.3	-5	Kansas	10.3	42	-18	-19
	Minnesota	9.3	43	Massachusetts	10.6	43	-0.6	-18	Nebraska	10.0	43	-9	-17
	Iowa	8.9	44	Rhode Island	10.6	44	1.1	-5	Wyoming	9.8	44	-17	-17
	Connecticut	8.9	45	New Jersey	10.5	45	1.8	2	Idaho	9.6	45	-12	-11
	Maryland	8.8	46	Minnesota	10.3	46	1.0	-3	New Hampshire	9.4	46	5	5
	New Jersey	8.7	47	Maryland	9.8	47	1.0	-1	Minnesota	9.2	47	-4	-1
	Virginia	8.6	48	Connecticut	9.7	48	0.8	-3	Alaska	9.2	48	1	2
	Alaska	7.6	49	Hawaii	9.6	49	2.1	1	Iowa	8.6	49	-5	-11
	Hawaii	7.5	50	Alaska	8.6	50	1.0	-1	North Dakota	8.2	50	-9	-19
	New Hampshire	5.8	51	New Hampshire	8.2	51	2.4	0	South Dakota	7.8	51	-11	-16
	United States	12.5		United States	15.1		2.6		United States	15.3			

Source: Congressional Research Service analysis of U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) and NAS-based poverty rates from Trudi Renwick, "Alternative Geographic Adjustments of U.S. Poverty Thresholds: Impact on State Poverty Rates," paper presented at the Annual Meeting of the American Statistical Association Section on Social Statistics, Washington, DC, August 2009, http://www.census.gov/hhes/www/povmeas/papers/Geo-Adj-Pov-Thld8.pdf.

Notes: States' poverty rates and rank are approximate, subject to CPS ASEC sampling error. Apparent differences in states' poverty rates and rank relative to each other for each measure may not be statistically significant. Comparisons should be made across measures by state, as illustration of the relative effects of alternative measures on each state's poverty rate.

a. Congressional Research Service (CRS) estimates from the U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

b. NAS-based poverty estimates from Renwick, "Alternative Geographic Adjustments… ."

State Poverty Rates With and Without Geographic Adjustment and Other State-Based Measures of Individual Well-Being

The use of FMRs as a basis for geographically adjusting poverty thresholds has been questioned when compared to other measures of individual well-being. For example, one researcher (Fremsted) has found that a NAS-based poverty measure with geographic adjustment correlates less well with other measures of well-being (a health and education index and food insecurity rates) at the state level than does the official poverty measure with no geographic adjustment.[81] In this regard, the NAS-based poverty measure appears to have lower "external consistency" than the current "official" measure, when viewed in terms of other indicators of well-being.

Expanding on Fremsted's research, **Table 7** presents a CRS analysis of correlations among the "official" and NAS-based poverty measures (with and without geographic adjustment) with other indicators of well-being. The poverty measures are those discussed above, presented in **Table 6**, **Table A-1** and **Table A-2**. Correlations (r) of each poverty measure with the others, and each measure with composite and individual indices relating to education and health of states' populations are presented.[82] Correlation coefficients can range from +1.0 to -1.0. A correlation close to 0 means there is little or no relationship between two variables. The closer a correlation is to +1.0 or -1.0, the more closely two variables are related. A positive correlation means that as the value of one variable tends to increase, so does the value of the other. A negative, or inverse correlation, means that as one variable tends to increase, the other tends to decrease. The table also presents coefficients of determination (r^2), which measures the percent of total variation in one measure captured by another measure. Differences in variation explained relative to the "official" measure of poverty are also shown.

Table 7 shows that at the state level, the NAS-based measure with no geographic cost-of-living adjustment correlates highly with the "official" poverty measure (0.94). The correlation of the geographically adjusted NAS-based measures with the "official" measure is lower than the unadjusted measure, ranging from 0.75 for the NAS measure adjusted by ACS median gross rent to 0.65 for that adjusted by FMR and 0.40 for that adjusted by RPP.

Among the various poverty measures, the "official" poverty measure and the NAS-based measure with no geographic cost-of-living adjustment appear to bear a stronger relationship to health and education indicators of well-being at the state level than do the NAS-based measures with geographic adjustments. Moreover, correlations for the measures without area cost-of-living adjustments are in the expected direction, whereas many of the measures with area cost-of-living adjustments are not. For example, life expectancy at birth shows a relatively high inverse correlation under the "official" poverty measure (r = -0.74), and the NAS-based measure without geographic adjustment (r = -0.71). In other words, persons in states with higher poverty rates tend to have lower life expectancy than persons in states with lower poverty rates. Over half the

[81] Shawn Fremstad, Measuring Poverty and Economic Inclusion: The Current Poverty Measure, the NAS Alternative, and the Case for a Truly New Approach, Center for Economic and Policy Research, Washington, DC, December 2008, pp. 22-28, http://www.cepr.net/documents/publications/2008-12-Measuring-Poverty-and-Economic-Inclusion.pdf.

[82] Education and health indicators are from *The Measure of America: American Human Development Report, 2008-2009*, written, compiled, and edited by Sarah Burd-Sharps, Kristen Lewis, and Eduardo Borges Martins (New York: Columbia University Press, 2008). For selected tables and source notes for these indicators, see http://www.measureofamerica.org/data/.

variance in life expectancy across states can be accounted for by states' poverty rates under the "official" measure ($r^2 = 0.55$). In contrast, the correlation between state poverty and life expectancy is -0.44 for the NAS-based measure adjusted by ACS gross median rent, and -0.31 for the measure adjusted by FMR; these measures respectively account for 19% and 9% of the variation in life expectancy across states (i.e., $r^2 = 0.19$ and 0.09, respectively). There is virtually no correlation between the RPP-adjusted NAS poverty rates and life expectancy in a state. In fact, none of the NAS-based measures adjusted for area cost-of-living differences do as well as the "official" or unadjusted NAS-based measure in terms of their correlation with other indicators of well-being.

The principle of adjusting a poverty measure for area cost of living differences may seem appealing at first blush. However, in applying such adjustments, the empirical relationship of poverty to other indicators of individual well-being appears to be weaker than when such adjustments are not made. These somewhat paradoxical findings seem worthy of further research into the relationship of poverty and other social indicators at the state level.

Table 7. Correlation and Explained Variance Under the "Official" and NAS-Based State Poverty Rates (With and Without Geographic Adjustment) in 2007 with Other State Indicators Related to Well-Being

	Correlation (r)					Explained Variance (r^2)					Difference in Variance Explained Compared to Official Poverty Measure with No Geographic Adjustment				
		NAS-Based Poverty Rate					NAS-Based Poverty Rate					NAS-Based Poverty Rate			
	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj. [a]	FMR Geog. Adj.[b]	ACS Median Geog. Adj.[b]	RPP Geog. Adj. [b]	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj. [a]	FMR Geog. Adj.[b]	ACS Median Geog. Adj.[b]	RPP Geog. Adj. [b]	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj.[a]	FMR Geog. Adj. [b]	ACS Median Geog. Adj. [b]	RPP Geog. Adj. [b]
Official Poverty Rate (No Geog. Adj.)[a]	1.00	0.94	0.65	0.75	0.40	1.00	0.88	0.42	0.56	0.16	0.00	-0.12	-0.58	-0.44	-0.84
NAS-Based Poverty Rate No Geog. Adj.[b]	0.94	1.00	0.52	0.71	0.31	0.88	1.00	0.28	0.51	0.10	0.00	0.12	-0.60	-0.37	-0.78
NAS-Based Poverty Rate FMR Geog. Adj.[b]	0.65	0.52	1.00	0.91	0.89	0.42	0.28	1.00	0.83	0.80	0.00	-0.14	0.58	0.41	0.38
NAS-Based Poverty Rate ACS Median Geog. Adj.[b]	0.75	0.71	0.91	1.00	0.80	0.56	0.51	0.83	1.00	0.64	0.00	-0.05	0.28	0.44	0.09
NAS-Based Poverty Rate RPP Geog. Adj. [b]	0.40	0.31	0.89	0.80	1.00	0.16	0.10	0.80	0.64	1.00	0.00	-0.06	0.64	0.49	0.84
Education Index[c]	-0.32	-0.51	0.27	-0.06	0.30	0.10	0.26	0.07	0.00	0.09	0.00	0.16	-0.03	-0.10	-0.01
School Enrollment[c]	-0.09	-0.28	0.47	0.15	0.46	0.01	0.08	0.22	0.02	0.21	0.00	0.07	0.21	0.01	0.20

	Correlation (r)					Explained Variance (r^2)					Difference in Variance Explained Compared to Official Poverty Measure with No Geographic Adjustment				
		NAS-Based Poverty Rate					NAS-Based Poverty Rate					NAS-Based Poverty Rate			
	Official Poverty Rate (No Geog. Adj.)[a]	**No Geog. Adj. [a]**	**FMR Geog. Adj.[b]**	**ACS Median Geog. Adj.[b]**	**RPP Geog. Adj. [b]**	**Official Poverty Rate (No Geog. Adj.)[a]**	**No Geog. Adj. [a]**	**FMR Geog. Adj.[b]**	**ACS Median Geog. Adj.[b]**	**RPP Geog. Adj. [b]**	**Official Poverty Rate (No Geog. Adj.)[a]**	**No Geog. Adj.[a]**	**FMR Geog. Adj. [b]**	**ACS Median Geog. Adj. [b]**	**RPP Geog. Adj. [b]**
Educational Attainment Score[c]	-0.48	-0.64	0.05	-0.25	0.11	0.23	0.41	0.00	0.06	0.01	0.00	0.18	-0.22	-0.16	-0.21
Less Than High School[c]	0.74	0.75	0.61	0.72	0.43	0.55	0.56	0.37	0.52	0.18	0.00	0.00	-0.18	-0.03	-0.37
At Least Bachelor's Degree[c]	-0.34	-0.51	0.25	-0.06	0.28	0.12	0.26	0.06	0.00	0.08	0.00	0.15	-0.05	-0.11	-0.04
Graduate Degree[c]	-0.09	-0.31	0.44	0.11	0.37	0.01	0.10	0.19	0.01	0.13	0.00	0.09	0.18	0.00	0.13
Health Index[c]	-0.75	-0.70	-0.31	-0.44	0.01	0.56	0.49	0.10	0.19	0.00	0.00	-0.06	-0.46	-0.37	-0.56
Life Expectancy at Birth[c]	-0.74	-0.71	-0.31	-0.44	0.01	0.55	0.50	0.09	0.19	0.00	0.00	-0.05	-0.46	-0.37	-0.55
Infant Mortality Rate[c]	0.61	0.55	0.33	0.41	0.05	0.37	0.30	0.11	0.16	0.00	0.00	-0.07	-0.26	-0.21	-0.37
Age-specific Death Rate, 1-4 Year-Olds[c]	0.39	0.47	-0.14	0.11	-0.25	0.15	0.23	0.02	0.01	0.06	0.00	0.07	-0.13	-0.14	-0.09
Child Immunization Rate[c]	-0.19	-0.18	-0.03	-0.18	0.01	0.04	0.03	0.00	0.03	0.00	0.00	0.00	-0.04	-0.01	-0.04
Teenage Pregnancy Rate[c]	0.73	0.70	0.41	0.58	0.12	0.54	0.49	0.17	0.33	0.01	0.00	-0.05	-0.37	-0.20	-0.52

	Correlation (r)					Explained Variance (r^2)					Difference in Variance Explained Compared to Official Poverty Measure with No Geographic Adjustment				
		NAS-Based Poverty Rate					NAS-Based Poverty Rate					NAS-Based Poverty Rate			
	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj. [a]	FMR Geog. Adj.[b]	ACS Median Geog. Adj.[b]	RPP Geog. Adj. [b]	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj. [a]	FMR Geog. Adj.[b]	ACS Median Geog. Adj.[b]	RPP Geog. Adj. [b]	Official Poverty Rate (No Geog. Adj.)[a]	No Geog. Adj.[a]	FMR Geog. Adj. [b]	ACS Median Geog. Adj. [b]	RPP Geog. Adj. [b]
Food-Insecure Households[c]	0.64	0.67	0.26	0.42	0.10	0.41	0.44	0.07	0.18	0.01	0.00	0.04	-0.34	-0.23	-0.40
Diabetes (age 18 and older[c]*)*	0.70	0.72	0.50	0.63	0.30	0.48	0.52	0.25	0.40	0.09	0.00	0.04	-0.24	-0.09	-0.39
Obesity (age 20 and older)[c]	0.53	0.60	-0.02	0.18	-0.17	0.28	0.36	0.00	0.03	0.03	0.00	0.08	-0.28	-0.24	-0.25
Tobacco Consumption (18 and older)[c]	0.36	0.41	-0.07	0.05	-0.20	0.13	0.17	0.00	0.00	0.04	0.00	0.04	-0.12	-0.13	-0.09
People without Health Insurance[c]	0.54	0.59	0.23	0.48	0.14	0.29	0.35	0.05	0.23	0.02	0.00	0.06	-0.23	-0.06	-0.27
Practicing Physicians per 100,000 population[c]	0.03	-0.21	0.47	0.13	0.36	0.00	0.04	0.22	0.02	0.13	0.00	0.04	0.22	0.01	0.13

Source: Congressional Research Service (CRS) analysis based on U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC), estimated state poverty rates adjusted by FMR, ACS Median Gross Rent, and RPP, from Trudi Renwick, "Alternative Geographic Adjustments of U.S. Poverty Thresholds: Impact on State Poverty Rates," paper presented at the annual meeting of the American Statistical Association Section on Social Statistics, Washington, DC, August 2009, http://www.census.gov/hhes/www/povmeas/papers/Geo-Adj-Pov-Thld8.pdf, and indicators of well-being from: *The Measure of America: American human development report, 2008-2009*, written, compiled and edited by Sarah Burd-Sharps, Kristen Lewis, Eduardo Borges Martins (New York: Columbia University Press, 2008).

a. Based on CRS analysis of U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

b. Based on CRS analysis of estimates from Renwick, "Alternative Geographic Adjustments… ."

c. Based on CRS analysis of indicators from *The Measure of America: American Human Development Report, 2008-2009*, written, compiled, and edited by Sarah Burd-Sharps, Kristen Lewis, Eduardo Borges Martins (New York: Columbia University Press, 2008). Indicators and source notes available at: http://www.measureofamerica.org/data/.

Recent Efforts to Adopt a NAS-Based Poverty Measure in the United States

As noted earlier, since the NAS panel issued its recommendations for a new U.S. poverty measure some 15 years ago, extensive research has been undertaken by federal statistical agencies, academics, and other researchers to devise and test methods, and to evaluate the results of implementing the NAS panel's recommendations. A number of working papers and journal articles have been published by Census Bureau and BLS analysts and others, and a variety of "experimental" poverty measures based on variations of NAS panel recommendations and methodologies have been published by the Census Bureau in a number of its official reports. Estimates of poverty under the various "experimental" NAS-based measures may vary markedly from one another and from the current "official" poverty measure, both in terms of the total numbers of persons estimated as having income below poverty, but also in terms of their demographic composition of the poor, and where they live. In part, as a consequence, none of the "experimental" NAS-based measures has emerged as a preferred alternative or supplemental measure to the "official" poverty measure.

A bill introduced in the 111th Congress by Representative McDermott, The Measuring American Poverty Act of 2009 (MAP Act, H.R. 2909), and a companion bill introduced by Senator Dodd (S. 1625) would instruct the Census Bureau and the BLS to adopt many of the NAS recommendations as a new ("modern") poverty measure.[83] The legislation, if adopted, would result in a new "modern" poverty measure that would coexist with the current "official" poverty measure, and redesignate the current "official" measure as the "traditional" poverty measure. The new "modern" poverty measure would not affect programs that use poverty as a criterion for either determining eligibility or allocating funds, but would stand as an additional statistical indicator to measure the effects of programs on poverty.

More recently, the Department of Commerce announced that the Census Bureau, in cooperation with the BLS, is preparing to develop a Supplemental Poverty Measure (SPM) designed to implement many of the NAS panel recommendations.[84] President Obama's Office of Management and Budget (OMB) Chief Statistician formed a Technical Working Group[85] charged with developing a set of initial starting points to help the Census Bureau, in consultation with the BLS, develop the new statistic. Observations from the Working Group are based on much of what has been learned over the past 15 years on developing data and methods to implement the NAS panel's recommendations, as well as from conceptual discussions as to how to best estimate economic need.[86] The President's FY2011 budget proposal includes $5 million to assist the Census Bureau in creating the new statistic, and $2.5 million for the BLS to modify the Consumer Expenditure Survey and to continue research to develop supplemental poverty thresholds to be used by the Census Bureau. Statistics based on the SPM, which has yet to be developed, are to

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[83] Earlier versions of the MAP Act were introduced in the 110th Congress by Representative McDermott (H.R. 6941) and Senator Dodd (S. 3636).

[84] See http://www.esa.doc.gov/.

[85] The working group includes representatives from the Census Bureau, BLS, the Council of Economic Advisors, the Department of Commerce, HHS, and OMB.

[86] See http://www.census.gov/hhes/www/poverty/SPM_TWGObservations.pdf.

accompany the Census Bureau's fall 2011 scheduled release of 2010 income and poverty statistics under the "official" measure.

The SPM would not replace the "official" poverty measure, as it would be considered an experimental measure. According to the Working Group, the SPM should be considered a "work in progress," as improvements in data and methods are made over time. The Working Group's observations serve as an initial starting point intended to assist the Census Bureau, in collaboration with the BLS and other data agencies, in developing the new statistical measure. Ultimately, the Census Bureau is responsible for the development and final decisions relating to the development and initial publication of the SPM, as well as making improvements to the measure over time.

As noted above, the proposed new poverty measure is intended to supplement the "official" statistical measure of poverty in current use. Used in conjunction with the "official" poverty measure, the SPM would help in assessing the effects of economic and social conditions and government programs and policies on individuals and families in ways not possible with the "official" measure. In addition to the SPM, the Census Bureau would continue to publish estimates based on other NAS-based "experimental" poverty measures, though the SPM would be the preferred alternative NAS-based measure highlighted by the Bureau. The "official" statistical poverty measure would continue to be used by programs that use it as the basis for allocating funds under formula and matching grant programs. Additionally, HHS poverty guidelines would continue to be derived from the "official" statistical poverty measure and continue to be used as a basis for determining income eligibility of individuals, families, and households for federal and state programs.

Table 8 summarizes features of the current "official" poverty measure and three proposals (NAS, MAP Act, and SPM) for the development of a new poverty measure.

Table 8. Comparison of Current "Official" Poverty Measure, NAS Recommendations, Proposed "Modern" Poverty Measure Under H.R. 2909 and S. 1625 (MAP Act), and OMB Technical Working Group Observations for the Development of Supplemental Poverty Measure (SPM)

	Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a]: NAS Recommendations	NAS Approach for a New Poverty Measure[a]: NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
Establishing Poverty Income Thresholds					
Definition of basic needs	Based on the cost of the U.S. Department of Agriculture (USDA) "emergency food plan" for families of varying size and composition. The food plan was multiplied by a factor of three, based on a USDA 1955 Food Consumption Survey, which found that on average, families spent one-third of their after tax income on food, and two-thirds on other items.	Based on spending on food, clothing, shelter, and utilities (FCSU) for "reference families" plus a multiplier for other needs. That poverty thresholds be set within a specified percentage (ranging from 78% to 83% of the *median*) of what "reference families" spend on FCSU. (Empirically, this threshold range resulted in range from the 30^{th} to 35^{th} percentile of spending on FCSU.) That the multiplier for other needs (e.g., household supplies) range from between 1.15 and 1.25 of the amount determined for basic necessities (i.e., FCSU).	Food, clothing, shelter, and utilities represent four broad, widely accepted categories of necessary goods. The NAS panel did not recommend a specific threshold, but rather a range it deemed reasonable, based on analysis of other commonly used concepts such as expert budgets, relative thresholds expressed as one-half median income or expenditures, and thresholds derived from public responses to survey questions about the poverty line. Setting a specific threshold is ultimately a matter of judgment. A multiplier for other needs is preferable to designating particular goods and services as necessary or unnecessary.	Based on spending on food, clothing, shelter, and utilities (FCSU) for "reference families" plus a multiplier for other needs. That poverty thresholds be set at the 33^{rd} percentile of what "reference families" spend on FCSU *(roughly the mid-point of the 30^{th} and 35^{th} percentile range empirically derived from the NAS-based range of 78% to 83% of the median on FCSU spending)* multiplied by 1.2 to account for other needs. That separate sets of thresholds be developed considering the shelter component costs of FCSU for (1) families who own their own residence and do not have a mortgage secured by the residence, and (2) all other families *(e.g., renters and homeowners with mortgage payments).*	Based on spending on food, clothing, shelter, and utilities (FCSU) for "reference families" plus a multiplier for other needs. That poverty thresholds be set at the 33^{rd} percentile of what "reference families" spend on FCSU multiplied by 1.2 to account for other needs. That thresholds be adjusted up or down depending on the relative shelter expenditures for each of three family types: (1) renters, (2) homeowners with a mortgage, and (2) homeowners without a mortgage.

	Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a] NAS Recommendations	NAS Approach for a New Poverty Measure[a] NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
Definition of reference family for establishing initial thresholds	Initial thresholds separately developed based on cost of "emergency food plan" for families of varying size and composition.	Initial poverty threshold based on distribution of spending on FCSU for reference families of four persons, comprised of two adults and two related children.	Considered , but rejected, development of thresholds for families of varying size, composition, and circumstance (e.g. working and non-working families). Settled on establishing initial thresholds for a "reference family" of four persons, consisting of two adults and two children. (Four-person families, while not the predominant household type at the time, represented the living arrangement in which the greatest number of people lived.)	The Census Bureau and the BLS shall define the "reference family" and choose the most appropriate distribution of consumption expenditures for FCSU for such families. Calculations for "reference families" shall be made separately for homeowners who do not have a mortgage secured by the residence and for all other families.	Use a reference sample that includes all family units with exactly two children. Include in the definition of "family unit" all related individuals who live at the same address, any co-resident unrelated children who are cared for by the family (e.g., foster children), and any cohabitors and their children.
Adjusting poverty thresholds for varying family size and composition	Separately developed poverty thresholds for unrelated individuals and families based originally on the cost of "emergency food plans" for families of varying size and composition. Lower poverty thresholds for unrelated individuals or couples with a head age 65 or older.	Adjust poverty threshold for reference family of two adults and two children, upwards and downwards, to account for economies of scale for families of varying size and composition.	Equivalence scale adjustment is based on number of adults and number of children, which assumes children need less than adults, and economies of scale for larger families.	The Census Bureau, in collaboration with the BLS and Bureau of Economic Analysis (BEA) and in consultation with other relevant statistical agencies, shall adjust poverty thresholds for reference families for other family sizes and compositions, using the best available equivalence scales that consider economies of scale and any special needs of children, including young children.	Use a "three parameter equivalence scale" generally used in alternative poverty measures by the Census Bureau to adjust the reference thresholds for the number of adults and children in the family. *(The three parameter scale adjusts thresholds by the number of adults and children in the family, but gives the first child in a single parent family greater weight than the first child in a family with two parents).*

	Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a]: NAS Recommendations	NAS Approach for a New Poverty Measure[a]: NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
Adjusting poverty thresholds for area cost-of-living differences	No geographic adjustment.	Adjust shelter component of poverty thresholds by housing cost differences by region and metropolitan area from decennial census data. Appropriate agencies should conduct research to determine methods that could be used to update the geographic housing cost component of the poverty thresholds between decennial censuses. 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.	The current "official" poverty thresholds are regularly updated for changes in the Consumer Price Index (CPI) to keep them constant in real terms. No adjustment has been made for spatial differences in prices, not because the adjustment is necessarily undesirable in principle, but because of the practical difficulties in adequately measuring those differences. The substantial empirical research on the issues indicates that housing (including utilities) is the item for which prices vary most across the country. Considerable effort has been devoted to estimating inter-area housing cost indexes. Given the existing state of knowledge, adjustment should be made for the housing component of the poverty thresholds.	To the maximum extent possible, and not later than five years after enactment, the Census Bureau, in collaboration with the BLS and BEA and in consultation with other relevant statistical agencies, shall adjust poverty thresholds for differences in costs for the goods and services included in the threshold among states, sub-state non-metropolitan areas, and metropolitan areas.	The Census Bureau, in consultation with the BLS and other relevant data agencies, should adjust poverty thresholds for price differences across geographic areas using the best available data and statistical methodologies. American Community Survey (ACS) data appear to be the best data currently available, from which a housing price index might be constructed, taking into account differences in quality-equivalent rental prices across areas. If possible, the area price index should differentiate between Metropolitan Statistical Areas (MSAs) and non-MSA areas in each state. If these estimates vary substantially on a year-to-year basis, a five-year moving average of the data should be used for each year. If based only on inter-area housing price differences, the price index should only be applied to the shelter component of the

		NAS Approach for a New Poverty Measure[a]			
	Current Practice Under "Official Poverty Measure"	**NAS Recommendations**	**NAS Justification or Reasoning**	**Proposed MAP Act[b] (H.R. 2909/S. 1625)**	**OMB Technical Working Group (SPM)[c]**
					poverty thresholds; the dollar value of other items in the threshold would remain unchanged across areas. If more data become available, it would be attractive to move toward an index that covers all items in the threshold. With different thresholds for renters, homeowners with mortgages, and homeowners without mortgages, better data and future research might lead to the utilization of different price weights for different groups.
Estimating Family Resources	Pre-tax money income (excluding capital gains or losses).	In developing poverty statistics, any significant change in the definition of family resources should be accompanied by a consistent adjustment of poverty thresholds. The definition of family resources for comparison with the appropriate poverty threshold should be disposable money and near-money income. Resources should be defined as: Gross money income, as under the	The definition of gross (pre-tax) money income for determining poverty status is seriously flawed and should be changed. A defensible measure of poverty requires that resources and needs (i.e., poverty thresholds) be defined consistently. Family resources, should be defined as disposable money and near-money income that is available for consumption of goods and services in the poverty budget.	***Adjusted Market Income (AMI):*** the total amounts received by any member of the family during a calendar year from wages, salaries, and self-employment income; interest dividends, realized capital gains, rents, royalties, estate and trust income; income from a qualified retirement plan, or any other plan, contract, annuity, or account payments or distributions from which are in the nature of a	The resource definition should indicate the resources the family has available to meet its food, shelter, clothing, and utilities needs, plus a little more. The family unit should be consistent with the way in which family units are constructed for defining poverty thresholds (i.e., include all related individuals who live at the same address, any co-resident unrelated children who are cared for

Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a]: NAS Recommendations	NAS Approach for a New Poverty Measure[a]: NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
	current measure) plus value of near-money income (e.g., food stamps, subsidized housing, school lunches, and home energy assistance); minus income and payroll taxes; minus work-related expenses (e.g., child care expenses in which there is no non-working parent, and other work-related expenses); minus other nondiscretionary expenses to members outside the household (e.g., child support payments); minus out-of-pocket medical care expenses, including health insurance premiums.		retirement benefit; survivor and disability pensions and annuities; paid-up insurance policies, alimony payments, child support payments, private workers' compensation, regular contributions from persons not living with the family, and other relevant income as determined by the Census Bureau, except for income described below. **Subtracted from above:** amounts paid by any family member during the calendar year for alimony or child support or maintenance of a noncustodial child, medical expenses, and necessary work-related expenses (including dependent care expenses, transportation expenses, and if there is reliable data, work-search expenses). ***Adjusted Disposable Income***: The ***Adjusted Market Income*** of the family ***minus*** the total of the amounts paid by any member of the family during the calendar year to cover federal income tax liability or federal	by the family (e.g., foster children), plus cohabitors and their children. Family resources should be estimated as the sum of cash income, plus any federal government in-kind benefits that families can use to meet their food, clothing, shelter, and utility needs, minus taxes (or plus tax credits, minus work expenses, minus out-of-pocket medical expenditures for medical expenses). The Census Bureau should continue to improve estimates of in-kind benefits and taxes. Along with taxes, payments for child support should also be included in subtractions from income, to the extent that data are available. Work expenses, including those associated with commuting as well as child care, should be subtracted from earnings, to calculate a "net wage" that indicates the resources families actually have to spend from their work income. Ideally, child care expenses for this

		NAS Approach for a New Poverty Measure[a]			
	Current Practice Under "Official Poverty Measure"	NAS Recommendations	NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
				payroll tax liability; ***plus*** the amounts received by any member of the family during the year from refundable federal tax credits; ***plus*** the amounts received by any family member during the year which may be used to meet food, clothing, or shelter (including utility) needs: cash welfare payments; food assistance (i.e., SNAP benefits);Low-Income Home Energy Assistance; plus any government-funded nonmedical in-kind, cash and near cash benefits that help families meet food, clothing, and shelter (including utilities) needs and are not intended to reimburse or subsidize other expenses, including nutrition programs, housing subsidies, and the value of public housing, not to exceed the lesser of the share designated in their threshold towards which the benefit might be used or the estimated monetary value of the benefit to the recipient. Within five years after the	adjustment should be based on actual reported expenses. In the absence of these data, the Census Bureau should make the best imputation possible of actual expenses. For other work expenses, the Census Bureau should investigate the comparative advantages and disadvantages of trying to measure actual expenses versus assigning an average amount to all working adults. The level of total work expenses subtracted from income should be capped by the earning level of the lowest-earning adult. Medical out-of-pocket expenses (MOOP) should be subtracted from income in calculating the resources available to a family. Self-reported MOOP should be used as the adjustment for each family should these data be deemed reliable for statistical adjustment purposes. Otherwise, MOOP should be imputed in a way that takes into account the skew in

		NAS Approach for a New Poverty Measure[a]			
	Current Practice Under "Official Poverty Measure"	**NAS Recommendations**	**NAS Justification or Reasoning**	**Proposed MAP Act[b] (H.R. 2909/S. 1625)**	**OMB Technical Working Group (SPM)[c]**
				date of enactment, the Census Bureau, in collaboration with the BLS and after consultation with other relevant statistical agencies, shall take into account state and local taxes and transfers in calculating family resources.	medical expenses within demographic groups. In either case, capping medical expenses above a certain level should be considered. The Census Bureau should investigate the pros and cons of making adjustments to MOOP for those who may be spending less than is customary because they lack health insurance and cannot pay for health services. If more universal health insurance were to become available, this adjustment may seem less necessary.
Updating Poverty Measures over Time	Poverty thresholds from 1963 are updated annually for changes in the Consumer Price Index for all Urban Consumers (CPI-U).	Update each year by the change in spending on food, clothing, shelter and utilities over the previous three years by "reference families" (i.e., families of two adults and two children), brought forward using the change in the Consumer Price Index. The Statistical Policy Office of the Office of Management and Budget should institute a regular review, on a 10-year cycle, of all aspects of the	Poverty thresholds should be updated on an automatic, regular basis, and the updating should be linked to spending on basic goods and services (food, clothing, shelter, and utilities) instead of total consumption. Three years of expenditure data should be used to smooth out year-to-year fluctuations and to lag the adjustment somewhat.	Poverty thresholds shall be updated no less than annually based on four or more of the most recent years' spending by "reference families" for which expenditure data are available. From time to time, and no less frequently than every five years, the Census Bureau, in collaboration with the BLS, shall consult with other relevant federal statistical agencies and outside experts on	The resource calculations should be redone each year as new data are released on the income available to families in the most recent year. Techniques that impute the value of family unit resources, such as estimation of in-kind benefits, work expenses, taxes, etc., should be updated as often as possible. The measure should change smoothly, and this requires regular

	Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a] NAS Recommendations	NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
		poverty measure: reassessing the procedure for updating the thresholds, the family resource definition, etc.		whether the method of, and sources of data for, calculating the modern poverty thresholds or modern poverty rates could be improved so as to better measure, including through adjustments for any underreporting or other misreporting of income and adjustments for families with greater income needs (such as those including persons with disabilities), the extent to which families in the United States are able to secure sufficient income to allow a minimal level of consumption that meets their basic physical needs, including food, clothing, shelter (including utilities), and other necessary items, and report to Congress on any need for any such improvement.	updating of as many components as possible. The thresholds should be recalculated each year by adding in the latest year of available data and dropping the oldest year of data, so that the thresholds are always based on the latest five years of expenditure data. One reason to utilize five years of data to calculate the thresholds is to reduce the risk that they might change significantly from year-to-year. Adjustment factors used in the thresholds to calculate differences by housing status and for inter-area price differences should also be recomputed regularly. These factors should also be based on multiple years of data so that they change more smoothly from year-to-year. After an initial experimental period, any definitional changes to this measure should be weighed against the effect on historical consistency. As definitional changes are made to the SPM in the

	Current Practice Under "Official Poverty Measure"	NAS Approach for a New Poverty Measure[a]: NAS Recommendations	NAS Approach for a New Poverty Measure[a]: NAS Justification or Reasoning	Proposed MAP Act[b] (H.R. 2909/S. 1625)	OMB Technical Working Group (SPM)[c]
					future, creating a historical series should be considered if this is possible with available historical data.

Source: Congressional Research Service (CRS).

a. National Research Council, Panel on Poverty and Family Assistance. Measuring Poverty: A New Approach, Constance F. Citro and Robert T. Michael, eds. Washington, DC: National Academy Press, 1995.

b. For bill status and full text, see H.R. 2909 and S. 1625.

c. See http://www.census.gov/hhes/www/poverty/SPM_TWGObservations.pdf.

Appendix. Supplementary Tables

Table A-1. State Poverty Rates Based on "Official" Poverty Measure and NAS-Based Poverty Measure With and Without Area Cost-of-Living Adjustment (ACOLA), ACOLA Based on American Community Survey (ACS) Median Gross Rent, 2007

	"Official" Poverty Measure			NAS-Based Poverty Measure (NAS-CE-MSI): No Area Cost-of-Living Adjustment					NAS-Based Poverty Measure (NAS-CE-MSI): Area Cost-of-Living Adjustment (ACOLA) based on ACS Median Gross Rent			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from "official" poverty measure	Change in rank from "official" poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	"Official" Poverty Measure	NAS-based poverty measure with no ACOLA
Highest Quintile	Mississippi	22.6	1	Mississippi	28.1	1	5.5	0	California	21.6	1	20	18
	Dist. of Col.	18.0	2	Kentucky	21.5	2	5.9	3	Mississippi	21.5	2	-1	-1
	Texas	16.5	3	South Carolina	19.6	3	5.6	9	New York	18.5	3	6	13
	Louisiana	16.1	4	Texas	19.3	4	2.8	-1	Dist. of Col.	18.5	4	-2	13
	Kentucky	15.5	5	Tennessee	19.2	5	4.4	3	Florida	18.1	5	17	13
	North Carolina	15.5	6	North Carolina	18.2	6	2.7	0	Texas	18.0	6	-3	-2
	West Virginia	14.8	7	West Virginia	18.2	7	3.4	0	Arizona	17.1	7	4	4
	Tennessee	14.8	8	Oklahoma	17.9	8	4.5	8	South Carolina	16.6	8	4	-5
	New York	14.5	9	Alabama	17.9	9	3.4	1	Georgia	16.1	9	6	4
	Alabama	14.5	10	Louisiana	17.8	10	1.7	-6	Tennessee	15.8	10	-2	-5
Second Highest Quintile	Arizona	14.3	11	Arizona	17.8	11	3.5	0	North Carolina	15.8	11	-5	-5
	South Carolina	14.1	12	New Mexico	17.2	12	3.2	1	Kentucky	15.6	12	-7	-10
	New Mexico	14.0	13	Georgia	16.9	13	3.3	2	Louisiana	15.6	13	-9	-3
	Arkansas	13.8	14	Arkansas	16.7	14	2.9	0	Oregon	15.1	14	6	1
	Georgia	13.6	15	Oregon	16.7	15	3.9	5	Oklahoma	14.9	15	1	-7
	Oklahoma	13.4	16	New York	16.6	16	2.1	-7	Alabama	14.8	16	-6	-7
	Montana	13.0	17	Dist. of Col.	16.2	17	-1.8	-15	New Mexico	14.5	17	-4	-5
	Missouri	12.8	18	Florida	16.0	18	3.5	4	Nevada	14.2	18	19	24
	Ohio	12.8	19	California	15.6	19	3.0	2	Hawaii	14.1	19	31	30
	Oregon	12.8	20	Ohio	15.4	20	2.5	-1	New Jersey	13.8	20	27	25
Middle Quintile	California	12.7	21	Montana	15.3	21	2.4	-4	Ohio	13.7	21	-2	-1
	Florida	12.5	22	Indiana	14.3	22	2.5	1	Delaware	13.3	22	20	11
	Indiana	11.8	23	Kansas	14.1	23	2.3	1	Montana	12.9	23	-6	-2
	Kansas	11.7	24	Missouri	13.9	24	1.1	-6	Massachusetts	12.7	24	1	19
	Massachusetts	11.2	25	Vermont	13.3	25	3.5	10	Arkansas	12.5	25	-11	-11

	"Official" Poverty Measure			NAS-Based Poverty Measure (NAS-CE-MSI): No Area Cost-of-Living Adjustment					NAS-Based Poverty Measure (NAS-CE-MSI): Area Cost-of-Living Adjustment (ACOLA) based on ACS Median Gross Rent			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from "official" poverty measure	Change in rank from "official" poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	"Official" Poverty Measure	NAS-based poverty measure with no ACOLA
	Wisconsin	11.0	26	Nebraska	13.3	26	3.3	8	Vermont	12.4	26	9	-1
	Wyoming	10.9	27	Wyoming	13.3	27	2.4	0	Virginia	12.2	27	21	14
	Maine	10.9	28	Maine	13.2	28	2.4	0	Indiana	12.2	28	-5	-6
	Michigan	10.8	29	Pennsylvania	13.2	29	2.9	1	Washington	12.1	29	2	11
	Pennsylvania	10.4	30	Michigan	13.0	30	2.1	-1	Illinois	12.0	30	2	7
	Washington	10.2	31	North Dakota	12.8	31	3.5	10	Utah	12.0	30	8	2
Second Lowest Quintile	Illinois	10.0	32	Utah	12.8	32	3.2	6	West Virginia	11.9	32	-25	-25
	Idaho	9.9	33	Delaware	12.5	33	3.2	9	Colorado	11.8	33	3	6
	Nebraska	9.9	34	Idaho	12.5	34	2.6	-1	Pennsylvania	11.8	34	-4	-5
	Vermont	9.9	35	South Dakota	12.4	35	3.0	5	Michigan	11.8	35	-6	-5
	Colorado	9.8	36	Wisconsin	12.3	36	1.3	-10	Maryland	11.7	36	10	11
	Nevada	9.7	37	Illinois	12.2	37	2.2	-5	Missouri	11.2	37	-19	-13
	Utah	9.6	38	Iowa	12.0	38	3.1	6	Wisconsin	11.2	38	-12	-2
	Rhode Island	9.5	39	Colorado	12.0	39	2.2	-3	Wyoming	11.2	38	-11	-11
	South Dakota	9.4	40	Washington	11.6	40	1.5	-9	Kansas	10.9	40	-16	-17
	North Dakota	9.3	41	Virginia	11.2	41	2.6	7	Connecticut	10.8	41	4	7
Lowest Quintile	Delaware	9.3	42	Nevada	11.0	42	1.3	-5	Nebraska	10.8	42	-8	-16
	Minnesota	9.3	43	Massachusetts	10.6	43	-0.6	-18	Rhode Island	10.7	43	-4	1
	Iowa	8.9	44	Rhode Island	10.6	44	1.1	-5	Maine	10.4	44	-16	-16
	Connecticut	8.9	45	New Jersey	10.5	45	1.8	2	Idaho	10.1	45	-12	-11
	Maryland	8.8	46	Minnesota	10.3	46	1.0	-3	Alaska	9.8	46	3	4
	New Jersey	8.7	47	Maryland	9.8	47	1.0	-1	New Hampshire	9.3	47	4	4
	Virginia	8.6	48	Connecticut	9.7	48	0.8	-3	Minnesota	9.0	48	-5	-2
	Alaska	7.6	49	Hawaii	9.6	49	2.1	1	Iowa	8.6	49	-5	-11
	Hawaii	7.5	50	Alaska	8.6	50	1.0	-1	North Dakota	8.3	50	-9	-19
	New Hampshire	5.8	51	New Hampshire	8.2	51	2.4	0	South Dakota	7.9	51	-11	-16
	United States	12.5		United States	15.1		2.6		United States	15.2			

Source: Congressional Research Service (CRS) analysis of U.S. Census Bureau 2008 Annual Social and Economic Supplement to the Current Population Survey (CPS) and NAS-based poverty rates from Trudi Renwick, "Alternative Geographic Adjustments of U.S. Poverty Thresholds: Impact on State Poverty Rates," paper presented at the Annual Meeting of the American Statistical Association Section on Social Statistics, Washington, DC, August 2009, http://www.census.gov/hhes/www/povmeas/papers/Geo-Adj-Pov-Thld8.pdf.

Notes: States' poverty rates and rank are approximate, subject to CPS ASEC sampling error. Apparent differences in states' poverty rates and rank relative to each other for each measure may not be statistically significant. Comparisons should be made across measures by state, as illustration of the relative effects of alternative measures on each state's poverty rate.

a. Congressional Research Service (CRS) estimates from the U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

b. NAS-based poverty estimates from Renwick, "Alternative Geographic Adjustments… ."

Table A-2. State Poverty Rates Based on "Official" Poverty Measure and NAS-Based Poverty Measure With and Without Area Cost-of-Living Adjustment (ACOLA), ACOLA Based on Regional Price Parities (RPP), 2007

	"Official" Poverty Measure			NAS-Based Poverty Measure (NAS-CE-MSI)									
				No Area Cost-of-Living Adjustment					Area Cost-of-Living Adjustment (ACOLA) based on Regional Price Parities (RPP)			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from "official" poverty measure	Change in rank from "official" poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	"Official" Poverty Measure	NAS-based poverty measure with no ACOLA
Highest Quintile	Mississippi	22.6	1	Mississippi	28.1	1	5.5	0	New York	27.5	1	8	15
	Dist. of Col.	18.0	2	Kentucky	21.5	2	5.9	3	California	26.3	2	19	17
	Texas	16.5	3	South Carolina	19.6	3	5.6	9	Dist. of Col.	18.1	3	-1	14
	Louisiana	16.1	4	Texas	19.3	4	2.8	-1	Mississippi	18.0	4	-3	-3
	Kentucky	15.5	5	Tennessee	19.2	5	4.4	3	New Jersey	17.7	5	42	40
	North Carolina	15.5	6	North Carolina	18.2	6	2.7	0	Hawaii	16.8	6	44	43
	West Virginia	14.8	7	West Virginia	18.2	7	3.4	0	Texas	16.2	7	-4	-3
	Tennessee	14.8	8	Oklahoma	17.9	8	4.5	8	Massachusetts	16.1	8	17	35
	New York	14.5	9	Alabama	17.9	9	3.4	1	Florida	15.6	9	13	9
	Alabama	14.5	10	Louisiana	17.8	10	1.7	-6	Arizona	15.2	10	1	1
Second Highest Quintile	Arizona	14.3	11	Arizona	17.8	11	3.5	0	Oregon	14.7	11	9	4
	South Carolina	14.1	12	New Mexico	17.2	12	3.2	1	Louisiana	14.0	12	-8	-2
	New Mexico	14.0	13	Georgia	16.9	13	3.3	2	Connecticut	13.6	13	32	35
	Arkansas	13.8	14	Arkansas	16.7	14	2.9	0	Tennessee	13.6	14	-6	-9
	Georgia	13.6	15	Oregon	16.7	15	3.9	5	South Carolina	13.4	15	-3	-12
	Oklahoma	13.4	16	New York	16.6	16	2.1	-7	Rhode Island	13.2	16	23	28
	Montana	13.0	17	Dist. of Col.	16.2	17	-1.8	-15	Georgia	13.0	17	-2	-4
	Missouri	12.8	18	Florida	16.0	18	3.5	4	Kentucky	13.0	18	-13	-16
	Ohio	12.8	19	California	15.6	19	3.0	2	North Carolina	12.9	19	-13	-13
	Oregon	12.8	20	Ohio	15.4	20	2.5	-1	Oklahoma	12.8	20	-4	-12
Middle Quintile	California	12.7	21	Montana	15.3	21	2.4	-4	Washington	12.5	21	10	19
	Florida	12.5	22	Indiana	14.3	22	2.5	1	Vermont	12.5	22	13	3
	Indiana	11.8	23	Kansas	14.1	23	2.3	1	New Mexico	12.2	23	-10	-11
	Kansas	11.7	24	Missouri	13.9	24	1.1	-6	Illinois	12.1	24	8	13
	Massachusetts	11.2	25	Vermont	13.3	25	3.5	10	Ohio	11.9	25	-6	-5
	Wisconsin	11.0	26	Nebraska	13.3	26	3.3	8	Michigan	11.7	26	3	4
	Wyoming	10.9	27	Wyoming	13.3	27	2.4	0	Alabama	11.5	27	-17	-18

	“Official” Poverty Measure			NAS-Based Poverty Measure (NAS-CE-MSI): No Area Cost-of-Living Adjustment					NAS-Based Poverty Measure (NAS-CE-MSI): Area Cost-of-Living Adjustment (ACOLA) based on Regional Price Parities (RPP)			Change in rank from:	
	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Area sorted by poverty rate (descending order)	Rate[a]	Rank	Change in rate from “official” poverty measure	Change in rank from “official” poverty measure	Area sorted by poverty rate (descending order)	Rate[b]	Rank	“Official” Poverty Measure	NAS-based poverty measure with no ACOLA
	Maine	10.9	28	Maine	13.2	28	2.4	0	Nevada	11.5	28	9	14
	Michigan	10.8	29	Pennsylvania	13.2	29	2.9	1	Pennsylvania	11.3	29	1	0
	Pennsylvania	10.4	30	Michigan	13.0	30	2.1	-1	Delaware	11.2	30	12	3
	Washington	10.2	31	North Dakota	12.8	31	3.5	10	Colorado	11.1	31	5	8
Second Lowest Quintile	Illinois	10.0	32	Utah	12.8	32	3.2	6	Maryland	10.9	32	14	15
	Idaho	9.9	33	Delaware	12.5	33	3.2	9	Virginia	10.7	33	15	8
	Nebraska	9.9	34	Idaho	12.5	34	2.6	-1	Wisconsin	10.7	34	-8	2
	Vermont	9.9	35	South Dakota	12.4	35	3.0	5	Montana	10.6	35	-18	-14
	Colorado	9.8	36	Wisconsin	12.3	36	1.3	-10	Wyoming	10.5	36	-9	-9
	Nevada	9.7	37	Illinois	12.2	37	2.2	-5	Indiana	10.2	37	-14	-15
	Utah	9.6	38	Iowa	12.0	38	3.1	6	Alaska	10.2	37	12	13
	Rhode Island	9.5	39	Colorado	12.0	39	2.2	-3	Maine	10.1	39	-11	-11
	South Dakota	9.4	40	Washington	11.6	40	1.5	-9	New Hampshire	10.0	40	11	11
	North Dakota	9.3	41	Virginia	11.2	41	2.6	7	Nebraska	9.9	41	-7	-15
Lowest Quintile	Delaware	9.3	42	Nevada	11.0	42	1.3	-5	Missouri	9.5	42	-24	-18
	Minnesota	9.3	43	Massachusetts	10.6	43	-0.6	-18	Arkansas	9.3	43	-29	-29
	Iowa	8.9	44	Rhode Island	10.6	44	1.1	-5	Utah	9.1	44	-6	-12
	Connecticut	8.9	45	New Jersey	10.5	45	1.8	2	Kansas	9.0	45	-21	-22
	Maryland	8.8	46	Minnesota	10.3	46	1.0	-3	West Virginia	8.9	46	-39	-39
	New Jersey	8.7	47	Maryland	9.8	47	1.0	-1	Idaho	8.6	47	-14	-13
	Virginia	8.6	48	Connecticut	9.7	48	0.8	-3	Minnesota	8.5	48	-5	-2
	Alaska	7.6	49	Hawaii	9.6	49	2.1	1	Iowa	8.0	49	-5	-11
	Hawaii	7.5	50	Alaska	8.6	50	1.0	-1	South Dakota	7.9	50	-10	-15
	New Hampshire	5.8	51	New Hampshire	8.2	51	2.4	0	North Dakota	7.3	51	-10	-20
	United States	12.5		United States	15.1		2.6		United States	15.4			

Source: Congressional Research Service (CRS) analysis of U.S. Census Bureau 2008 Annual Social and Economic Supplement to the Current Population Survey (CPS) and NAS-based poverty rates from Trudi Renwick, “Alternative Geographic Adjustments of U.S. Poverty Thresholds: Impact on State Poverty Rates,” paper presented at the Annual Meeting of the American Statistical Association Section on Social Statistics, Washington, DC, August 2009, http://www.census.gov/hhes/www/povmeas/papers/Geo-Adj-Pov-Thld8.pdf.

Notes: States' poverty rates and rank are approximate, subject to CPS ASEC sampling error. Apparent differences in states' poverty rates and rank relative to each other for each measure may not be statistically significant. Comparisons should be made across measures by state, as illustration of the relative effects of alternative measures on each state's poverty rate.

a. Congressional Research Service (CRS) estimates from the U.S. Census Bureau 2008 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

b. NAS-based poverty estimates from Renwick, "Alternative Geographic Adjustments… ."

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