

**Options for Setting and Updating a Reference
Family Threshold for a Revised Poverty Measure**

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INTRODUCTION

A panel of the National Academies' Committee on National Statistics issued a report in 1995, *Measuring Poverty: A New Approach* (National Research Council, 1995), which recommended that the official U.S. income-based measure of poverty be revised so that it could better inform the public and support research and policy making.¹ Since the publication of the Academies' report, staff of the U.S. Census Bureau and Bureau of Labor Statistics have conducted extensive research on the feasibility and implications of implementing the report's recommendations and variations of them. This conference has the goal of reviewing the two Bureaus' research to determine what aspects of a revised poverty measure may be ready for prime time and what aspects require further research.

A poverty measure requires a standard of need, or poverty threshold, and a definition of family or household resources to compare to the threshold to determine if the members of the family or household are poor. The panel's report stressed that for a poverty measure to be statistically defensible, the need standard and the resource definition must be internally consistent.

This paper addresses the standard of need for an income-based poverty measure—how a reference family threshold could be established on which to base a revised poverty measure and how such a threshold could be updated over time. The paper begins with background on the current official poverty threshold for a family of two adults and two children, which is the reference family used in the panel's 1995 report. It summarizes the report's recommendations for a revised reference family threshold and a method for updating that threshold and the

subsequent research conducted by Census Bureau and BLS staff (and others) on those recommendations. The paper then discusses pros and cons of alternative methods of setting and updating a revised reference family threshold. Not considered in this paper are threshold issues addressed in other sessions of this conference, such as adjustments to the reference family threshold for differences in family composition and residence. Also, while other than income-based measures of poverty and economic well-being are well worth consideration, this paper is limited to issues of the reference family threshold for income-based poverty measures like the current official U.S. measure and the revised measure recommended by the panel.

BACKGROUND

Official Poverty Measure

The original U.S. poverty thresholds were those developed by Mollie Orshansky in the 1960s on the basis of the Economy Food Plan, the least expensive of four food plans designed by the U.S. Department of Agriculture (USDA). Orshansky also developed a set of thresholds on the basis of the third least expensive plan (the Low Cost Food Plan), but the lower set of thresholds was adopted for government use. (See Fisher, 1992, revised 1997, for a comprehensive history of the development and subsequent history of the original thresholds.)

The Economy Food Plan was developed in 1961 as a plan for temporary or emergency use with data from the USDA 1955 Household Food Consumption Survey. The method used was to examine the food-buying patterns of lower income households from the survey data,

¹The author served as the study director for the panel.

modify these preferences to achieve a nutritionally balanced food plan, and cost out the items in the plan. Orshansky calculated the cost of the Economy Food Plan for families of various sizes and composition. To get from minimum food costs to estimates of minimum total living costs for families of three or more people, she multiplied the food budget by three. This multiplier derived from estimates from the 1955 survey that the average family of three or more people spent one-third of its after-tax income on food. Orshansky used somewhat different procedures to develop thresholds for families of one and two persons (see National Research Council, 1995:163).

The base year for which Orshansky developed poverty thresholds was 1963. From 1963 to 1969, when the U.S. Bureau of the Budget (now the Office of Management and Budget, OMB) adopted the thresholds for official use, they were updated by changes in the cost of the Economy Food Plan. Since 1969, they have been updated by the annual average change in the Consumer Price Index-U (CPI-U). Such updating reflects an absolute concept of poverty, in which the thresholds are not increased (or decreased) in real terms. However, as Bavier (1999) points out, because of measurement flaws in the CPI-U, especially the overestimate of price increases for housing in the late 1970s and early 1980s, the current thresholds represent a real increase from the 1963 thresholds. Thus, when the CPI-U-X index is used, the 1992 thresholds, featured in the 1995 report, are about 9 percent higher in real terms than the original 1963 thresholds (National Research Council, 1995:124). When the CPI-U-RS index is used, which reflects yet further revisions to the CPI methodology, the thresholds for 1997 are more than 14 percent higher in real terms than the thresholds for 1967 (Bavier, 1999:2).

Recommendations in 1995 Report

Setting an Initial Threshold

The Panel on Poverty and Family Assistance recommended that the official U.S. poverty threshold for a reference family should comprise a budget for food, clothing, shelter, and utilities, and a small additional amount to allow for other common needs (e.g., expenditures for personal care, household supplies, and nonwork-related transportation). Actual expenditure data, rather than expert judgment about diets or other needs, should be used to develop a threshold for a reference family of four—two adults and two children. The reference threshold should *exclude* nondiscretionary expenses that are incurred by certain types of families or that are too variable to be included in the threshold—these expenses include taxes, out-of-pocket medical care expenditures (including health insurance premiums), day care for working parents, other work-related expenses, and child support payments, all of which the panel recommended be subtracted from gross income.²

The panel's specific recommendation for an initial reference family threshold called for specifying a percentage of median annual expenditures for two-adult/two-child families on food, clothing, shelter, and utilities and applying a specified multiplier to the corresponding dollar level so as to add a small amount for other needs. The panel recommended a threshold concept that incorporated a basic expenditure bundle in preference to such concepts as a detailed budget, a relative threshold (e.g., one-half median after-tax income), or a subjective threshold derived

²Other sessions of this conference are treating nondiscretionary expenses and alternatives for taking account of them in a revised poverty measure. This paper assumes that a revised threshold would represent the panel's recommended bundle of food, clothing, shelter, utilities, and a little more.

from survey responses to such questions as the minimum expenditure required for a family in the respondent's neighborhood to "get along." The panel believed that estimates of subjective poverty thresholds were too variable for use for an official poverty measure and that a completely relative measure would not attract public support. A detailed budget would require too many judgmental decisions, while the "food times three" basis of the original 1963 thresholds put too much weight on the multiplier, which, today, would be almost five times a minimum food budget (U.S. Census Bureau, 2003:Table 679).

Because of the element of judgment that necessarily enters into the selection of an initial poverty threshold, the panel did not recommend specific values for the percentage of median expenditures on basic needs or the multiplier to be used for the reference family threshold. It did recommend that the reference family threshold be updated to reflect the real growth in consumption since the official thresholds were first developed, and it suggested a range of values for such an updating. That range was \$13,700 to \$15,900 in 1992 dollars. The value of the lower (upper) bound represented 1.15 (1.25) times the spending on food, clothing, shelter, and utilities of two-adult/two-child families at the 30th (35th) percentile of the distribution of such spending from tabulations of Consumer Expenditure Survey data for 1989-1991 (National Research Council, 1995:146-152). These percentile levels, in turn, represented 78-83 percent of the median of such expenditures. The suggested range was 14 to 33 percent above the value of the official 1992 threshold, when that threshold was converted in a very approximate way from a budget for total expenditures to a budget for food, clothing, shelter, utilities, and a small additional amount (see National Research Council, 1995:Table 1-4).

Updating a New Threshold

The panel recommended a quasi-relative method of updating the reference family threshold. In simplest terms, this method would each year multiply the initial reference family threshold by the change in median expenditures on food, clothing, shelter, and utilities by such families. (This is the mathematical equivalent of determining the percentage of median expenditures and applying the designated multiplier each year.) To smooth out year-to-year fluctuations and to lag the adjustment to some extent, the panel recommended that the calculations for each year average the most recent 3 years' worth of data from the Consumer Expenditure Survey, with the data for each of those years brought forward to the current period by using the change in the Consumer Price Index.

The panel argued that its recommended updating procedure had two desirable properties for official poverty measurement. First, the thresholds would be updated in real terms on an automatic, regular basis, and, second, the updating would be linked to spending on basic goods and services instead of total expenditures.

RESEARCH ON THRESHOLDS

The 1995 panel recommended that a revised reference family poverty threshold be developed from Consumer Expenditure Survey (CE) data, which are published by the Bureau of Labor Statistics (BLS). Analysts at the BLS and the Census Bureau have collaborated in a series of innovative, probing papers to implement and evaluate the panel's recommended concepts and

procedures for expenditure-based poverty thresholds (see Garner et al., 1998; Garner and Rozaklis, 2001; Johnson, Shipp, and Garner, 1997; Short et al., 1999; Short, 2001; Short and Garner, 2002). The work has covered measurement of the budget components of the panel's concept (food, clothing, shelter, and utilities, or FCSU), selection of the multiplier for other commonly needed expenditures, the use of a two-adult/two-child reference family, the updating method, and the inclusion of some kinds of expenditures (e.g., medical out-of-pocket, or MOOP) in the thresholds that the panel had proposed be subtracted from income instead. Bavier (1997, 1999) has investigated the properties of the panel's proposed updating method compared with price adjustments, justification for updating the reference family threshold in real terms, and the inclusion of MOOP in the thresholds. The discussion below is limited to the panel's proposals for the reference family, the basic bundle (FCSU) and multiplier, and the updating method.

Reference Family Research

The panel recommended the use of expenditures by two-adult/two-child reference families as the basis for a reference family threshold, with the use of an equivalence scale to adjust that threshold for different family types. From Current Population Survey data, two-adult/two-child families comprised only 10 percent of all families (and 15 percent of all people) in 2002, down from 13 percent (and 20 percent) in 1992 (including single individuals as one-person "families"). Two-adult families with no children were 28 percent of all families (and 22 percent of all people) in 2002, followed by single-person families at 26 percent of all families (and 10 percent of all people). However, of families with children, a group of considerable

concern for poverty measurement, two-adult/two-child families remained the largest subgroup (calculated from U.S. Census Bureau, 2003:Tables 73, 75).

Looking at spending patterns on FCSU from 1990 to 2000 with CE data, Short and Garner (2002:Table 3) find little variation in current dollar increases in such spending by families with different combinations of adults and children. For families with one to three adults and no children, two adults and one child, or two or three adults and two children, spending increased by 29-33 percent over this period. For families with three adults and more than three children, spending increased by only 24 percent, while for families with one adult and one or two children, spending increased by 36-39 percent.

Short and Garner (2002:5-6) point out some problems with using a reference family and an equivalence scale for other family types, such as the implicit assumption that spending on housing—a major component of the FCSU bundle—is the same proportion of FCSU expenditures for each family type. This assumption affects the use of geographic indexes of housing costs and, more generally, may not well reflect differing shelter needs by family types. Nonetheless, upon consideration of the pluses and minuses of the two-adult/two-child reference family concept, Short and Garner (2002:7) concluded: “Overall, an examination of the Panel’s choice of reference family seems a reasonable one. Across the decade, FCSUM [food, clothing, shelter, utilities, medical out-of-pocket expenditures] increased similarly as other family types and patterns of spending over the period changed only slightly.”

Research on Measuring the Basic Bundle

BLS and Census Bureau staff have carried out extensive work on estimating the basic bundle recommended by the panel for the poverty thresholds (food, clothing, shelter, and utilities) from CE data. Complicating the treatment of some elements of the basic bundle, in particular housing (and similarly the treatment of some nondiscretionary expenses, such as MOOP and day care for work), is a lack of conceptual clarity in the 1995 report regarding what the thresholds are to represent. As Short and Garner (2002:11) note, the 1995 report often uses the terms expenditures, consumption, and needs interchangeably, when these concepts are not the same. For food and utilities, the three concepts are very close, but for shelter, homeowners with paid-up mortgages in the measurement period will have housing consumption but not housing expenditures in that period.

Having observed the panel's deliberations, I can say that the consensus was to have an expenditure concept for the thresholds. The panel wanted to let actual expenditure data carry more of the burden of designating thresholds than expert judgment about a series of budgetary needs. For this reason, the panel recommended that actual MOOP and work-related day care costs be deducted from income. One can argue against that view—for example, argue that, for families with no health insurance, a basic MOOP amount should be subtracted from income (or added to the thresholds), so that such families are not deemed to be not poor because they skimp on needed medical care. The treatment of MOOP is being handled in another session, so I will not comment further on that topic.

With regard to the basic bundle, there is a problem of how to handle the shelter component. For practical reasons of data processing convenience, the panel recommended that shelter costs be the dollar amount of rent or the dollar amount of mortgage interest, property taxes, insurance, and maintenance and repairs. A preferable definition would, in addition,

impute an amount for the estimated rental value of the home, net of outlays on interest, etc. Such a definition would treat homeowners with low or no mortgage payments in a comparable manner with other homeowners and renters in determining the threshold value.

However, this approach for treating shelter in the threshold does not address the issue of determining poverty status for homeowners with low or no mortgage payments, who have more resources available for non-shelter expenditures compared with others. Appropriate treatment of these homeowners would require either lowering their thresholds or imputing housing consumption in some manner to their income. Again, these issues are discussed in another session.

Research on the Percent of Median FCSU and the Multiplier

The Census Bureau and BLS staff have followed the panel's lead in basing the main set of experimental poverty thresholds on reported expenditures for FCSU with a small multiplier to account for other needs, using the midpoint of the panel's suggested range for the percentage of median FCSU (78-83 percent) and, similarly, the midpoint of the panel's suggested range for the multiplier (1.15-1.25). Evaluation showed that these ranges were stable throughout the 1990s. Short and Garner (2002:12) report that the use of the midpoint of the FCSU percentage and multiplier (combined, they are 96.725 percent of median FCSU expenditures) "has met with little controversy and seems a reasonable choice." They point out that the value of the multiplier is tied to the composition of the basic bundle. If other expenditure components, such as MOOP, were added to FCSU, then the multiplier would need to be recalculated appropriately so as to add

a small amount for other needed expenditures, such as personal care, household supplies, and nonwork-related transportation.

Of course, the use of the panel's midpoint values for the percentage of median FCSU expenditures and the multiplier begs the question of the justification for those values in the first place. I return to this matter below.

Research on Updating

Census, BLS, and OMB staff have carried out extensive work to evaluate different methods for updating the reference family threshold, given a starting value. The panel recommended a quasi-relative updating procedure, by adjusting the initial threshold by the percentage change in median expenditures on FCSU (alternatively, as the experimental thresholds do, by taking 0.96725 of median FCSU), as measured from the most recent 3 years' of CE data. The panel expected that the recommended method would increase the reference family threshold by less than the increase in total personal consumption expenditures, which include luxuries as well as basic needs, but by more than a price adjustment with the CPI-U. From 1990 to 2000, Short and Garner (2002:Table 5) found that median FCSU expenditures increased by 33.5 percent over that period, compared with an increase of 31.8 percent in the CPI. By comparison, median before-tax income for four-person families rose 50 percent over the period.

Examining year-to-year increases reveals a pattern in which thresholds developed as 0.96725 of median FCSU from the latest 3 years' of CE data increased at a slower rate than the official thresholds for the years 1991 to 1997—that is, the value of the FCSU thresholds declined

in real terms. For the years 1998 to 2000, the FCSU thresholds increased at a faster rate than the official thresholds—that is, the value of the FCSU thresholds rose in real terms. Allowing for the lag from using 3-year-average CE data, these patterns fit the economic conditions of the decade, which saw a recession in 1991-1992 followed by recovery and then by even stronger economic growth in the late 1990s.

A concern with using the percentage of median FCSU for the reference family threshold is that the standard errors of the estimates would be considerably larger than those from CPI-adjusted thresholds (see Johnson, Shipp, and Garner, 1997). While the standard errors for the FCSU-based thresholds are, indeed, larger than those for CPI-based thresholds, they are not particularly large (see Short and Garner, 2002:Table 6) and have gotten smaller since 1995. Thus, a 90 percent confidence interval for the 2000 FCSU-based reference family threshold is plus or minus 1.024 percent of the estimated value.

ISSUES IN SETTING A REVISED THRESHOLD

For setting a revised reference family poverty threshold, given that an official threshold exists, there seem to me to be two main issues. First, in the case of a monetarized threshold concept such as in the U.S. income-based poverty measure, the nub of the matter is selecting a specific dollar value for the reference family threshold. Such specification inevitably involves judgment. With regard to the concept recommended by the panel, required decisions include the selection of the reference family, the measurement of the budget items (food, clothing, shelter, utilities) from expenditure data, and the selection of the percentage of median expenditures on

these items and the multiplier for other commonly needed spending. A related decision is whether and how much to increase the value of the reference family threshold relative to the official threshold to reflect real growth in expenditures over the past four decades.

Second, because an official poverty measure already exists, there is an issue of if and how to maintain an element of continuity in the estimates from a revised poverty measure with the lengthy time series of estimates from the current official measure. Such continuity might, for example, be maintained by choosing a reference family threshold for a starting year to generate the same poverty rate under a revised measure as under the current measure, although such a threshold would have no substantive meaning. Alternatively, the same nominal dollar value might be selected for a revised reference family threshold as the current threshold. Because the concepts are different (food times three for all other spending, compared with food, clothing, shelter, utilities, and a small additional amount for other common needs, excluding nondiscretionary expenses), the same nominal value would represent some amount of real updating of the official thresholds. Such a real updating might or might not result in an increase in measured poverty, depending on the effects of other changes in a revised measure (e.g., taking account of net taxes).

Yet another approach would be to explicitly make a real upward adjustment in the reference family threshold, as recommended by the panel, and give the resulting poverty measure a new name, such as “low-income measure.” This approach could minimize the political fallout that might arise if an upwardly revised threshold were to result in a significantly higher poverty rate than the rate under the official poverty measure.

Role of Judgment

Judgment is an inherent element of specifying an initial reference family poverty threshold. Thus, judgment was used by USDA nutritionists to specify the minimum diet for which the cost formed the basis of the original poverty thresholds; other assumptions and selections could have resulted in a different “minimum diet” at a higher or lower cost than that of the Economy Food Plan. Judgment also entered into Mollie Orshansky’s selection of a multiplier of three from the spending patterns of the average family rather than a family at another income level. It entered as well into the Office of Economic Opportunity’s selection of the lower of Orshansky’s two sets of poverty thresholds, even though the Low-Cost Food Plan, which formed the basis of the higher set, had been used for many years as the standard by which to judge welfare program food allowances (Fisher, 1992, revised 1997:4-5).

Orshansky’s concept rapidly gained wide acceptance in the second half of the 1960s. One factor in that acceptance seems to have been that Orshansky’s reference family threshold was remarkably congruent with thresholds for families developed by others (e.g., the Council of Economic Advisers, AFL-CIO—see Fisher, 1992, revised 1997:10-11, 18) and with other indicators of relative well-being, such as relative and subjective measures of poverty (see Vaughan, 1993). What Orshansky added to those measures was an easy-to-understand, budget-based threshold concept (food times three), together with realistic adjustments to the thresholds for families of different sizes and composition. Such “equivalence scale” adjustments were lacking from other existing measures, except for a simplistic distinction between families and single individuals in the CEA measure. Thus, Orshansky’s reference family threshold had face validity.

The 1995 panel recognized the role of judgment by not recommending a specific dollar value for a reference family budget for food, clothing, shelter, utilities, and a small additional amount, but it did suggest a range for such a threshold. It justified that range by explicitly using a triangulation method. The suggested range was congruent with, and, indeed, its midpoint was somewhat lower than, a dozen or more contemporary poverty thresholds derived from expert budget, relative, and subjective concepts (see National Research Council, 1995:Table 1-4). The component values for food, clothing, and shelter were also congruent with amounts in major federal income support programs as of the early 1990s (e.g., food stamps and housing subsidies—see National Research Council, 1995:149).

Underlying both the original 1963 poverty thresholds and the panel’s revised concept and range for a reference family threshold is an assumption that poverty is inherently relative to time and place. If this assumption is accepted, and the evidence for it is strong (see, e.g., Fisher, 1993, revised 1997; 1995), then the triangulation method used by the panel to justify its suggested threshold range is, in my view, a reasonable exercise of judgment. The selection of food, clothing, shelter, and utilities as the major basic needs also appears to be a reasonable exercise of judgment, although views may differ on whether to account for such expenditures as MOOP and work-related day care expenses by varying the thresholds for different types of families or by subtracting expenditures from income, as recommended by the panel.

Although the panel’s conclusions can be and have been questioned, they were not arbitrary in the sense of capricious or random, just as Orshansky’s work was not capricious or random. To permit progress in poverty measurement, I believe it is important to dispute the connotation that “judgment” must necessarily be “arbitrary.” Such a connotation is one of the factors that I believe has paralyzed decision making about a revised poverty measure. Other

factors are the “official” nature of the measure, its link to some, although not all, income support programs, and the fact that no single government agency has both the technical wherewithal and the authority to revise the statistical measure.

Strategies for Choosing an Initial Threshold

Equal Rate

The panel implemented two reference family thresholds to show the effects of its revised poverty measure on poverty rates for population groups. The value of the first threshold was set at the midpoint of the panel’s recommended range--\$14,800 compared with \$14,228 for the official threshold in 1992 dollars. This value, together with all of the other changes proposed by the panel (e.g., revised equivalence scale, definition of resources as after-tax disposable income for basic needs), increased the estimated poverty rate for 1992 by about 4 percentage points compared with the official measure (National Research Council, 1995:Table 5-8). The second threshold resulted from determining the value for the reference family threshold that, together with all of the other recommended changes, would produce the same total population poverty rate for 1992 as the official rate. The resulting threshold, \$13,175, is simply an artifact of the calculation.

The “equal rate” threshold was used by the panel to show more clearly the effects of its other recommended changes, not combined with the effects of a threshold that reflected the increase in real expenditures that occurred from 1963 to 1992. The panel did not intend for an

“equal rate” threshold to be a genuine candidate for a starting threshold, given that such a threshold has no substantive meaning and that its value is affected by the regime in effect in the chosen year. For example, if the Earned Income Tax Credit had been at 1996 levels in 1992, then the “equal rate” threshold would have been higher than that calculated by the panel. If, on the other hand, a program such as food stamps had been drastically cut in 1992, then the “equal rate” threshold would have been lower than that calculated by the panel.

Equal Threshold

Selecting an initial reference family threshold that is about the same value as the official threshold could be helpful heuristically in making the transition to a revised poverty measure. Thus, the experimental FCSU-based reference family threshold for 1998 is \$16,517, which is virtually the same as the official reference family threshold for 1998 of \$16,530. Indeed, FCSU-based thresholds differ from the official thresholds by no more than \$300 for every year from 1990 to 1999 (Short and Garner, 2002:Table 6).³

However, the similarity in dollar values does not translate into similar levels of need given the difference in budget concepts; rather, the FCSU-based threshold would represent an updating in real terms of the official threshold. How much of an updating is not clear, given the uncertainty about the level of expenditures for medical care, work-related day care, other work expenses, and child support that were included in the original multiplier of three but are not included in the panel’s multiplier. Assuming that such expenditures were a similar percentage of

³From 2000 to 20002, the FCSU-based thresholds exceeded the official thresholds by an increasing amount—by almost \$1,100 in 2002 (from material supplied by K. Short, U.S. Census Bureau; see note 6).

total expenditures in 1963 as today (more likely, the percentage was lower in the earlier period), then it is possible that the real updating achieved by using a similar value for an FCSU-based threshold as the official threshold could be as much as 19 percent. (This result was obtained from National Research Council, 1995:Table 1-4, assuming that the official threshold converted to the panel's concept is 84 percent as large as the original value.)

Bavier (1999) has argued that the original thresholds have already been updated by as much as 14 percent in real terms because of flaws in the CPI-U. He faults Figure 1-1 in the 1995 report, which compares the official thresholds with subjective and relative thresholds, for showing the official thresholds as a flat line. However, for determining whether it is reasonable to further update the original thresholds in real terms, Figure 1-1 remains valid for comparison purposes. Because the subjective and relative thresholds are also shown in 1992 dollars using the flawed CPI-U, one can view Figure 1-1 as setting the official threshold equal to 1 (or 100) and expressing the subjective and relative thresholds as ratios (or percentages) of the official threshold. In this way, one sees that, beginning around 1969, the subjective and relative thresholds are considerably higher in real terms than the official threshold, averaging about 21 percentage points higher over this period (see National Research Council, 1995:Tables 2-3 and 2-4, for relative and subjective thresholds as percentages of the official threshold).

Bavier (1997) also faults the panel's argument for updating the thresholds in real terms on the grounds that, while real median FCSU expenditures increased by about 16-17 percent over the period from 1972 to 1994 using a revised measure of inflation, the official thresholds themselves increased in real terms by about 13 percent over the same period (due to overestimation of inflation by the CPI-U compared with the revised index). The difference suggests that, at most, an additional 4 percent real increase in the thresholds could be justified.

By comparison, the panel's suggested range for a revised reference family threshold as of 1992 is 14 to 33 percent higher than the official threshold for 1992.

A similar analysis by the panel, which spanned a longer time period (from 1961 to 1991), produced a very rough estimate of 14 percent real growth in median FCSU expenditures. Because this estimate used the flawed CPI-U to factor out price increases, then it is not invalid to compare it to the official threshold for 1992, which was developed using the same (flawed) CPI-U index. That comparison suggests that a real increase in the current threshold of as much as 14 percent could be justified on the basis of real growth in median FCSU expenditures since the official thresholds were first adopted.

Whether and how the panel's and Bavier's results could be reconciled is not clear. Indeed, as the panel acknowledged, it is difficult to evaluate the real growth in median FCSU expenditures from historical data. The reason is the significant design differences between the 1960-1961 and 1972-1973 CE surveys and between them and the continuing CE that began in 1980.

Equal Threshold Measure with a New Name

Let us assume that the panel's arguments for a significant increase in the reference family threshold are persuasive (from looking at the data in Figure 1-1 and Table 1-4 from the 1995 report). Let us further assume that a revised FCSU-based threshold is set as of 1990 (the starting year for the revised series), when it was similar to the level of the official food-times-three threshold—\$13,398 and \$13,254, respectively (Short and Garner, 2002:Table 6.) This revision,

as noted above, might represent as much as a 19 percent real increase in the value of the reference family threshold, given the difference in the two budget concepts.

Other things equal, such a revision will result in a higher estimated poverty rate, as, indeed occurred for 1990.⁴ It may also result in higher numbers of people who are eligible for such assistance programs as Medicaid and school lunch that tie eligibility to the poverty thresholds.⁵ This could occur if the programs adopted the panel's definition of family resources as after-tax disposable cash and noncash income for basic needs. If the programs were to retain a gross money income definition of family resources (which would be inconsistent with the threshold concept), then there would be no effect of the revised threshold. The Food Stamp Program already uses a net income concept for eligibility that resembles the panel's income definition, so it is not clear whether a revised threshold set at the level of the current threshold would have much effect on that program (see National Research Council, 1995:326-333). Finally, there would be no effects for such assistance programs as housing subsidies, Temporary Assistance for Needy Families, and others that do not tie eligibility to the poverty thresholds (see National Research Council, 1995:Table D-1).

Whether poverty (or program eligibility) rates are higher (or lower) under a revised measure than under the current measure depends not only on the levels of the thresholds, but also on the components of the resource definition. Thus, although for 1990 the estimated poverty rate was higher under the revised measure than the official measure, by 1999, despite the real updating of the FCSU-based thresholds, the rates for the two measures were virtually the same—

⁴The total estimated poverty rate for the revised "NAS measure" was 14.3 percent in 1990, compared with the estimated official rate of 13.5 percent (Short, 2001:Tables 5-1, 5-2). However, with an improved version of the NAS measure, "MSI-GA-CE," which was developed for 1999 and later years, the 1990 estimated rate for the revised measure may have been one or two tenths of a percentage point below 14.3 percent (from material provided by K. Short, U.S. Census Bureau; see note 6).

12.1 percent for the revised measure and 11.9 percent for the official measure. One reason was likely the expansion of the Earned Income Tax Credit after 1995, which is not counted by the official measure. By 2002, however, the revised rate of 13.4 percent was significantly higher than the official rate of 12.1.⁶ One reason was that the FCSU-based thresholds increased by a faster rate than inflation in the period between 1999 and 2002 (13 percent compared with 8 percent, from material supplied by K. Short, U.S. Census Bureau).

To enable an improved poverty measure to go forward and, at the same time, minimize the concerns that could result from possibly large increases in measured poverty and eligibility for some government programs, an option is to give a revised poverty measure a new name. For example, a revised measure could be termed a “low-income measure” or a “basic needs” measure instead of a “poverty measure.” (See Fisher, 1992, revised 1997:31-33, for an earlier proposal to rename poverty statistics as low-income statistics.)

Assuming that other aspects of a revised measure were deemed to be satisfactory for implementation, then a single low-income (or basic needs) measure with an updated reference family threshold could be featured in official publications for policy use along with the official poverty measure. This would be advantageous compared with the large number of alternative experimental poverty measures that are now published.

ISSUES IN UPDATING A REVISED THRESHOLD

⁵More precisely, the programs tie eligibility to the poverty guidelines, which are a smoothed version of the poverty thresholds, varying only by the number of family members and not also by family composition in terms of adults and children.

Assuming agreement on a revised reference family threshold for a new poverty (or low-income or basic needs) measure, such as the 1990 value of the panel's proposed FCSU-based thresholds, a key issue is how to update the thresholds over time. There are three primary options: (1) update the revised thresholds annually for price change for the foreseeable future (absolute updating); (2) update the revised thresholds annually for real growth in median total or FCSU expenditures (relative or quasi-relative updating); or (3) update the revised thresholds in real terms periodically (say, at 10- or 20-year intervals) and use a price adjustment in the intervening years (periodic real updating).

Absolute Updating

Mollie Orshansky and others at the Social Security Administration argued for a real updating of the 1963 poverty thresholds as early as 1969 and again in 1979 (see Fisher, 1992, revised 1997:38-49, 64-68). However, the Bureau of the Budget mandated in 1969 that the thresholds be updated for price changes only and that mandate has been followed ever since. Although overestimation of inflation by the CPI-U resulted in a real updating of the official thresholds (see previous discussion), that was not the intent of the updating procedure.

The benefit of an absolute poverty measure is that progress in alleviating poverty can be measured unambiguously against a fixed standard. The problem with maintaining an absolute poverty measure over long periods of time is that it eventually becomes disassociated with socioeconomic conditions on the ground. As Figure 1-1 from the 1995 report makes clear,

⁶Source: Table 6 supplied by K. Short, U.S. Census Bureau, available at <[http://www.census.gov/...](http://www.census.gov/)> dated 25 September 2002. The revised rates cited in the text are those labeled "MSI-GA-CE."

subjective and relative poverty thresholds considerably exceeded the official thresholds as early as 1969. From around 1969 to 1992, their relationship to the official thresholds remained relatively steady. From 1990 to 2000, based on changes in four-person before-tax median family income (Short and Garner, 2002:Table 5), subjective and relative thresholds may be increasing yet further above the official thresholds.

Relative or Quasi-Relative Updating

A second option for an updating method is to adjust the poverty thresholds in real terms year by year. A completely relative updating procedure would be to adjust the initial reference family threshold by the increase in median after-tax income or expenditures for the reference family type. Such a procedure is commonly used in other developed countries for updating poverty or low-income thresholds. It is easy to use, simple to understand, and has the advantage that the updating is automatic and not subject to contentious and extended debate.

The panel, however, rejected such a relative updating procedure on the grounds that it would not be well accepted. For one reason, the thresholds could vary considerably from year-to-year and they could decrease, as well as increase, in real terms and even in nominal terms. Relatedly, a relative updating procedure could be viewed as presenting too much of a moving target against which to evaluate the effectiveness of anti-poverty programs. Further, the updating would be based on median income or expenditures, including spending on luxury items as well as basic necessities.

The panel proposed a quasi-relative updating procedure, which would tie the poverty thresholds to the increase in median expenditures on the basic commodities of food, clothing, shelter, and utilities for the reference family. The updating would also be lagged to some extent and smoothed by using the most recent 3 years' of CE data. The smoothing would reduce year-to-year variability, while the lagged procedure would presumably keep the thresholds from declining in real terms at the very onset of a recession or increasing in real terms at the very onset of economic recovery. Instead, the thresholds would change more slowly, as one would assume to be true as well of public opinion about poverty standards.

The panel supported the idea of a regular, automatic updating, so that the real level of the thresholds would not become so out of date with regard to social standards of living for basic necessities. A problem with the procedure is the lack of an extensive time series by which to evaluate it. As discussed above, the behavior of the panel's recommended updating procedure is hard to assess going back in time, and a consistent time series of FCSU-based thresholds currently exists only for the period 1990 to 2002. This time series suggests that the updating procedure does respond, with lags, to changes in the business cycle. From 1991 through 1997, the FCSU-based thresholds increased at a lower rate than the official thresholds; since then, the FCSU-based thresholds have increased at a higher rate than the official thresholds (see Table 1, attached).

Another problem with the panel's proposed updating procedure is the higher sampling errors compared with the use of CPI-adjusted thresholds. Yet after considering these and other issues with the panel's proposed threshold concept, Short and Garner (2002:22) conclude: "Overall, it would appear that the thresholds behave with a reasonable amount of stability and offer a viable alternative to the current official thresholds."

Periodic Real Updating

A third updating option is to adjust the poverty (or low-income) thresholds in real terms at widely-space intervals, using the CPI to adjust them annually in between those intervals. A question is how often such a real updating should be done. The available data suggest that 40 years is too long, but 10 years may be too short from the perspective of public acceptance (even though the official thresholds were seriously out of date by the end of the 1960s because of the significant real growth in consumption in that period). Perhaps a target could be set by using increases in FCSU expenditures and other indicators of socioeconomic change for when it would be appropriate to update the thresholds in real terms.

A possible way to move toward an improved measure of poverty or low income is to combine the strategy of renaming the measure and making a one-time real adjustment of the reference family threshold. Thus, a low-income or basic needs measure could begin in 1990 by using an FCSU-based reference family threshold with an inflation adjustment thereafter. That measure could be featured in publications for policy use. A second low-income measure, labeled as experimental, could be developed by updating the 1990 FCSU-based reference family threshold by the panel's recommended FCSU-based updating procedure. Over time, the regular implementation of the experimental measure would provide a longer time series for evaluating the behavior of FCSU-based thresholds through the ups and downs of business cycles. After, say, 10 years, the FCSU-based updating procedure could be evaluated to determine, first, whether another one-time real updating of the thresholds is needed and, second, whether the low-

income measure that uses FCSU-based updating should be featured in publications in place of the measure that makes an inflation adjustment only.

CONCLUSION

This paper has reviewed alternative methods for setting an initial reference family threshold and for revising that threshold as part of an overall revision of the current poverty measure (or development of a new low-income measure). The 1995 panel report argued that a revised measure was needed to inform policy makers and the public about the effects of such important public policy initiatives as the Food Stamp Program and the Earned Income Tax Credit on the economic well-being of population groups.

The issue of setting and updating a revised reference family threshold cannot be separated from other aspects of a revised poverty measure that are being considered at this conference. One issue is the appropriate measurement of shelter costs in the threshold and their treatment in the definition of family resources; a second issue is whether to include expenditures on MOOP, day care for work, and nonwork-related transportation in the thresholds instead of subtracting them from income as the panel recommended.

For expository purposes, the discussion in this paper has worked with the panel's threshold concept of food, clothing, shelter, utilities, and a little more. The attached Table 1 provides dollar values from 1990 through 2002 for three series of thresholds for a two-adult/two-child reference family: (1) official thresholds, (2) thresholds developed by updating the FCSU-based threshold for 1990 by the CPI-U, and (3) FCSU-based thresholds. Series (1) would

continue to be used, unless the official poverty measure was replaced by (2) or (3). Series (2) could be used for a renamed low-income or basic needs measure to be featured in publications for policy use, while series (3) could be used for an experimental measure to further evaluate the behavior of FCSU-based thresholds.

TABLE 1 Alternative Poverty Thresholds for a Two-Adult/Two-Child (Current Dollars)

Year	(1) Official	(2) FCSU-Based for 1990 Updated by the CPI-U	(3) FCSU-Based
1990	13,254	13,398	13,398
1991	13,812	13,962	13,917
1992	14,228	14,383	14,284
1993	14,654	14,813	14,806
1994	15,029	15,192	15,169
1995	15,455	15,623	15,514
1996	15,911	16,084	15,710
1997	16,276	16,453	15,985
1998	16,530	16,710	16,517
1999	16,895	17,079	17,036
2000	17,463	17,653	17,884
2001	17,960	18,155	18,709
2002	18,244	18,442	19,329

SOURCE: Material provided by K Short, U.S. Census Bureau (see note 6).

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NOTE: Poverty Measurement Working Papers are available on the Internet at

<http://www.census.gov/hhes/poverty/povmeas/papers.html>.