Have our measures of poverty become poorer?

by Harold W. Watts

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The official measures of poverty in the United States are based on statistical conventions adopted in the mid-1960s and modified only slightly since then. By “official,” I mean only that the measures are used and regularly published by the Census Bureau and have received the blessing of the guardians of the statistical standards in the Office of Management and Budget. By “statistical conventions,” I mean to convey the notion that our measures are not grounded in some self-evident principle or expert consensus but are simply a collection of more or less arbitrary and eminently vulnerable rules. Their most remarkable feature is their widespread and persistent acceptance by the public and by those who make and criticize public policies.

The measures

The most widely reported poverty measure is the percentage of persons in poverty. This is obtained by counting persons in families and unrelated individuals with annual money income (as defined by the Census Bureau) below “poverty thresholds,” which vary by family size and composition. (Although this “poverty rate” is the most commonly cited measure, separate rates for family units and for unrelated individuals are also available and were more widely used in the past.) The poverty thresholds are held constant in “real” dollars by adjustments reflecting changes in the annual average Consumer Price Index. The data on income and family status for the annual tabulations come from the March Supplement to the Current Population Survey (CPS), which estimates annual income for the preceding calendar year for individuals in sample households at the time of the March survey.

The association of a binary poverty status (each person is either in or not in poverty) with the CPS sample permits a wide range of tables and subgroup poverty rates to be compiled. At least two reports are published each year in the P-60 (Consumer Income) series of Current Population Reports. In recent years a “near poverty” status has been recognized in these tables by counting those whose incomes are no more than 25 percent above the poverty threshold.

The poverty thresholds now in use, the so-called “Orshansky” lines,1 were the result of multiplying a set of prescriptive food budget totals developed in the Department of Agriculture by a factor of 3.0, which represented conventional wisdom (and some evidence) about the share of total expenditures used for food by those in the lower third of the income scale.

This rather inelegant but plausible structure of thresholds replaced an even cruder measure, which simply used $3000 (in 1964) for all family units and $1500 for individuals. The Orshansky thresholds yielded about the same overall poverty rates in 1964 as the $3000 measure, but made explicit allowance for the size of family units and their age and sex composition. For whatever reason, or lack of it, the Orshansky thresholds were adopted and have proved extremely durable in the face of a great deal of scholarly criticism. No serious rival has appeared with a combination of sound conceptual basis and a set of thresholds sufficiently different to make a change worthwhile. To the extent that alternative derivations of threshold levels arrive at more or less the same answers, we can simply add another plausible rationalization for sticking with the familiar Orshansky lines.

There have been many criticisms of the existing measures of poverty by those who have considered them carefully, though few users of the statistics have thought very much about how they are obtained. Sometimes the criticisms are focused on the thresholds and sometimes on the income data that are used with them. Strong arguments have been raised by Fuchs and others that the thresholds should be “relative” and move with median income instead of being fixed in real terms.2 The implicit equivalence scales embodied in the thresholds for differently composed families have also been challenged on the ground that the scale effects are not the same for food and nonfood consumption items. More fundamental reforms have urged separate standards of adequacy for each major consumption category, e.g., food, housing, clothing, transportation, medical care; with a rule for declaring poor any unit below standard in one or more of the categories.3 Another line of argument seeks to elicit income or spending norms from the answers to survey questions about what it takes to “get along” in the current social and economic environment.4
On the income side, a good deal of current attention is being given to the issue of nonmonetary or in-kind transfers as well as to deferred benefits such as pensions, both of which are ignored by the Census money income concept. The pretax nature of the Census measure has also been criticized. A persuasive case can be made, most recently by Ruggles and Ruggles, for using a consumption measure instead of income for comparison with a poverty threshold that is usually rationalized in terms of the consumption that can be afforded at the threshold. The exclusion of assets or liabilities from consideration in the reckoning of disposable resources is another notable gap in the procedure, and one can further challenge the easy acceptance of annual income aggregates instead of flows measured over longer or shorter periods. The validity of the measures obtained from the Current Population Survey can also be questioned, particularly in view of the substantial imputations required by the shortfall in incomes reported, compared to plausible control totals. Even more damaging is the fact that the previous year's income total for a household may be poorly matched to the group of persons in the household in March. The comparison of a poverty threshold based on the March household composition with the previous year's income of those persons may yield a highly fictive picture of their individual or collective experience during that previous year.

Deterioration of the measures

These and many other basic criticisms of the poverty measures all have some merit, the amount in each case depending on how one conceives poverty as an abstract condition and on how far one wants to go in perfecting measures that can estimate a given concept. But another kind of question is being asked in this essay. Have our poverty measures become increasingly out of touch with the one or more concepts that they seemed reasonably suited for ten years or so ago?

In a number of important respects they have become worse as indicators of the material conditions under which our least fortunate families and individuals try to work out satisfactory lives. As we have seen, the measures themselves have been based on an array of poverty thresholds that are "fixed in real terms." We must therefore consider how the world may have changed to make this fixed strategy less appropriate. I suggest there are four ways in which the existing measures have deteriorated. First, the thresholds themselves have become more remote from the "mainstream" of living levels generally obtained around the median income. Second, during the past two decades important noncash benefits have been instituted that are not counted in Census money income. Third, taxes of various kinds, partly under the impact of nonindexed inflation, have begun to take an appreciable share of poverty-level incomes, and this is also ignored by Census money income. Fourth, the increasing amount of divorce and the generally changed constellation of household types suggest that annual income within a single household may be, for many persons, the wrong time unit or income unit from which to assess current poverty status.

Distance from median income

When the poverty thresholds were first set out, they were, for the four-person prototype, nearly half of median income of a family that size. By now they are more like a third. They have declined substantially relative to the money income levels commanded by the mainstream. If it is granted that poverty is properly related to some sort of "distance" from the prevailing consumption norms—that relative deprivation is the cause of the many social ills we associate with poverty in a modern society—then it is probably time for a realignment or even adoption of a more explicitly relative set of thresholds. (See Kahn's article in this issue.) I sincerely doubt that the alternative of maintaining a fixed-in-real-terms or so-called "absolute" threshold is a viable alternative for a long period—i.e., a half century or more (unless median income itself stagnates). Assuming some real growth in living standards, a fixed poverty line will sooner or later be ignored as silly or irrelevant, and higher standards will be adopted under some guise. The only choice is between gradual and spasmodic adjustment. However one comes out on that issue, it is about time to make an adjustment that gets us closer to the relative standards adopted in the 1960s.

In-kind income

Noncash benefits have become a more important resource for low-income consumption. During the last twenty years, food stamps, Medicare, and Medicaid have become the most important, but housing subsidies and employment-related benefits (largely employer-provided health insurance and pension contributions) have also grown in coverage and importance. A substantial literature has been produced recently dealing with the issue of how these benefits should be valued. This is an easy question for food stamps but is much more difficult for the medical reimbursement programs and retirement entitlements. There is also no agreement as to how far one should go in including such services as public education, libraries, and other amenities among the measures available to meet "private" needs. For the most part no one has yet faced the issue of how the poverty threshold concept, which was "designed" for comparison with Census money income, should be adjusted for use with a more comprehensive measure of resources. Some statistical opportunists appear content to add new resource components without considering any change in the norm of adequacy. Carried to absurdity, this procedure could completely eliminate poverty on paper by, e.g., attributing the cost of prison maintenance to the families of convicts or imputing some reasonable value for keeping the ambient atmosphere in a breathable condition. In fairness, I would note that the recent literature has stayed well short of such extremes. Assuming that some reasonable ground rules can be established, it seems clear that inclusion of some kinds of noncash benefits is overdue. The neglect of much if not most of the fruit of public policy of the last two decades by our
poverty measures simply cannot be defended. Neither the
gains from expanding such benefits nor the losses from their
recent retrenchment have been reflected. This should be
corrected even if all of the puzzles about valuation and true
incidence cannot be resolved.

Taxes
Another problem with the use of Census money income is
that it is a pretax measure. Whatever the reasons why the
Census Bureau has opted against estimating posttax or dis-
posible income, it didn't seem to make much difference so
long as there was no income tax levied below the poverty
lines. In recent years, however, the zero-tax point has fallen
below poverty for many families, particularly when state
taxes are considered. This clearly causes an overestimate of
the resources available for regular consumption and should
be corrected (or else the thresholds should be raised to allow
for tax liabilities).

It seems to me that disposable income would be a better
concept for many distributional issues, including poverty.
Relative norms that might be specified as a percentage of the
median income would make more intuitive sense if stated in
terms of the after-tax income that most people are familiar
with.

Demographic change
Much has been made recently of the apparent “feminiza-
tion” of poverty. A very large proportion of the total poverty
population is in households headed by women, and the share
has grown rapidly in the last decade. But there has also been
an increase in divorce rates and an increase in the number of
“small” households and a concomitant decrease in subfam-
ily units, “undoubling,” suggesting a change in dwelling
patterns. The poverty measures implicitly assume that living
separately means living independently. But with the CPS,
we do not measure interhousehold transfers very well. If
these are important, then another source of consumption
power that is becoming more prevalent than it used to be is
being largely overlooked when measuring poverty. Regular
money transfers such as alimony or child support are sup-
posed to be measured in Census money income but are
probably not very reliably estimated. Irregular and/or in-
kind sources are deliberately excluded. This then is another
example of how a change in demographic patterns may make
a minor flaw in the income measurement conventions into a
more important gap that can bias both measures of level and
change in poverty status.

The uses of poverty measures
It is relatively easy to make a case that the poverty measures
have deteriorated, but the more difficult problem is deciding
how they should be changed. One aim might be to restore to
poverty statistics something like their original meaning—
produce a 1985 model of the Orshansky thresholds for com-
parison with Census money income or some derivative mea-
sure that can be realized in the CPS data. Alternatively one
could recognize the inherent inadequacies of that approach
along with the opportunities afforded by newly available data
to engage in a more fundamental overhaul of our poverty
measures. While my own inclination goes toward major
overhauls, I do not want to scorn an Orshansky update. That
approach has maintained a high degree of acceptance, and
for a limited but important range of objectives could con-
tinue to be almost as good as more elaborate alternatives. It
may be useful here to consider alternative uses of poverty
measures and criteria, because for many purposes a rela-
tively crude measure is quite satisfactory.

In this discussion I am primarily concerned with measure-
ment of poverty as a social indicator. By this I mean a
quantitative scale that allows meaningful comparison over
time, among geographical areas, or across groups of indi-
viduals defined by economic, social, or demographic char-
acteristics. In such measures a bias that is fairly constant,
even though large, can be tolerated because it is the change
or contrast that is of interest. Some of the problems noted for
the current measures would have produced fairly constant or
minor bias in the absence of change in, e.g., demography or
policy.

Measures based on the nose counts are fine for considering
whether, or where, or for whom, poverty may be getting
better or worse, but as “test scores” for program effective-
ness they may have some disadvantages. The reason is that
programs may “play to the test” by selecting persons or
households close to the poverty threshold to receive their
treatment. Many such families will move out of poverty
without any treatment, but the program can claim a rescue
anyway. The same strategy would urge program evaluators
not to select those who are far below the threshold because
they are almost certain to be unable to escape poverty by
themselves and may be either very expensive or very diffi-
cult to rescue by a program. This is an inherent drawback of
a nose-count measure relative to, say, a “gap” measure,
which can record any improvement, even if it is insufficient
to raise income over the poverty threshold. Even gap mea-
sures can be faulted for giving a constant value to dollar
gains below the threshold and zero for any gains above it.
Again, alternatives can be devised that are more suitable as
explicit targets for antipoverty programs. Perhaps our social
indicators would also be more valuable if they measured
income gaps on some other scale that distinguishes degree of
severity for poverty. In many cases the indices will move
together, but they might distinguish those changes that
reflect improvements for the poorest of the poor.

Poverty measures can also be adopted as eligibility criteria
for public programs. This is one of the most demanding
purposes imaginable. It can almost be said that any criterion
that is capable of mass application to data that are routinely
collected (as in the CPS) is necessarily too crude and
approximate for fair application on a clinical basis. There
are many more considerations relevant both to the “true”
poverty status of a person and to that person’s suitability for a
particular program’s benefits or other ministrations than can be covered in a practical poverty statistic. An antipoverty program may seek to alleviate obstacles to employment by improving literacy, but it shouldn’t rely on the correlation between poverty and illiteracy to screen out clients. Illiteracy itself should be the criterion.

An even more doubtful purpose to which poverty measures may be put is to define benefit levels or maximum benefits on an across-the-board basis. Well-designed programs should be sensitive to local variations in prices or other factors and to differential incentive effects. Some situations should be treated more or less generously relative to the poverty threshold in order to achieve related but not identical objectives—e.g., discouraging migration to high-cost locations or encouraging greater work effort through fractional benefit-reduction rates. The statistical measures of poverty should be reserved for after-the-fact and universe-level assessments and—not for benefit designation.

A strategy for overhauling our poverty measures

In view of the different possible uses of the poverty indicator, it is probably bad strategy to aim at one all-purpose measure. It would be nice, or at least orderly, to have all measures related to one basic abstract notion of what poverty is, however. Alternative measures of the same notion may be in order simply because different amounts and kinds of information are available in different situations. For example it may be possible to secure much more information in a “clinical” or program situation than in preparing tabulations of social indicators from general survey data.

It must be recognized that no measure is going to be perfect or fair in all uses. At the same time any measurement convention must be regarded as subject to change or revision when there is a change in the data base on which a measure is based. Indeed, one of the strongest reasons for reconsidering the poverty measures at this time is the availability of new income, program, and expenditure data from the Survey of Income and Program Participation (SIPP)9 and the Consumer Expenditure Survey (CEX).10 The newly established continuous CEX promises to yield a data base that will allow research to be carried out on the possibility of using a consumption measure. Such a measure would avoid some of the problems inherent in the income measure, such as the adjustments for assets, liabilities, and changes in household size. Experience suggests, however that measurement of consumption is relatively expensive, and it does not seem likely that a shift to consumption standards is feasible in the near future.

It would be useful as well as standard statistical practice to maintain the earlier, CPS-based measures for a time to provide experience with their difference. But both could be regarded as measures in pursuit of the same abstract concept.

A proposed strategy is then to enunciate a basic concept that seems suitable as a description of the goal of existing measures (at least when they were established) besides being satisfactory as an abstract guide for establishing new and improved measures. Using that concept, more specific suggestions can be made for exploiting the new surveys and other opportunities for bringing poverty measures as social indicators into closer conformity with the abstraction of poverty.

Consider the following example of an abstract poverty concept on which alternate measures can be based:

Poverty is a shortage of disposable, fungible resources (measured as a money flow) that prevents regular and continuous access to the minimal necessities of everyday life for all members of an economic household (spending unit).

This concept implies that poverty is to be a matter of degree—the shortage can be larger or smaller. It supposes that “minimal necessities of everyday life” will depend on social norms which surely evolve with the living standards of the entire society. It places primary importance on consumption levels but recognizes diversities in taste and requirements that are accommodated in a mixed market economy by consumer choices constrained by disposable resource flows. It is not implied that current earnings or even money income are the only source of such resources, however. It seems to me that this basic concept is consistent both with the vernacular notion of poverty and with the poverty measures used for the past twenty years. It is also consistent with the idea that the existing measures have become less complete and defensible for reflecting such poverty, as the world has changed the environment in which they operate.

How can the measures of concept be renewed with the richer data now available and allowing for the economic, social, and demographic change of the past two decades? There are several steps in this process. The first is to reach a pragmatic consensus on how noncash items should be treated. Some of these, such as food stamps and modest-sized housing subsidies, are generally as nonconstraining as cash and can be so regarded at their face value. The medical reimbursement programs are more difficult, but my earnest suggestion is that they be ignored whether they are provided by public programs such as Medicare and Medicaid or by employers as a part of compensation. It is consistent both with the past practice and the abstract concept to regard most medical reimbursements as coverage for extra-ordinary needs. It places medical “security” in the same category as public education as having important external effects along with private benefits. We have managed to understand poverty fairly well without accounting for educational benefits; we can do the same with medical benefits. The alternative in both cases is to make some very dubious calculation of the “value” of these eminently nonfungible resources to add to the fungible ones. To be consistent the calculation should be made for all persons—not just the poor—and in the end one
has a measure that is very remote from anyone's direct experience. There may be a few other noncash programs that supply ordinary necessities that could be included, such as energy rebates, but I would urge restraint unless major distortions seem likely.

The problem of accounting for interhousehold private transfers of both cash and "daily needs" such as food and child care is another matter, and one on which very little progress has been made. The SIPP and CEX both provide some information and could provide more, but so far no research has been done toward including such resources in our poverty or disposable income estimates.

The adoption of an after-tax measure of resources would have its greatest effect on the higher-income categories, of course, but unless or until the tax thresholds are raised above the poverty thresholds, it will also affect the measure of poverty. The adoption of a disposable-income basis for all kinds of distributional analysis, including poverty, would be a major step forward. With the new income surveys it is possible to measure income on a monthly basis for persons and the households they occupy. These surveys would provide each month an estimate of disposable resources that would include the value of those in-kind benefits which meet basic everyday needs, transfers in money or in kind from other households, and a deduction of income taxes paid (or accrued). Ideally, the tax would include both federal and state income taxes and perhaps an imputation in states where sales taxes are used instead of income taxes.

I would also urge that attempts be made to estimate the consumption value of fully paid-for durable goods and owner equity in a primary residence. For the older cohorts particularly, a major part of their daily needs is met by a fully amortized dwelling and an inventory of durable goods. By contrast, age-mates lacking such assets but having the same money income are much worse off in their ability to afford food, fuel, and clothing purchases. A rule for imputing income to nonearning assets more generally might be proposed ("rainy day dissaving") in some cases, but this is a complex issue deserving more study.

With a monthly measure of disposable resources in hand, the next need is for a poverty threshold that can serve as a standard. I would suggest a two-phase approach here. First, the Orshansky structure could be brought up to date by aligning it with half of the median monthly disposable resources for nonaged four-person households. The remaining categories represented in the current structure would be proportionally adjusted. Using this set of monthly thresholds, a "welfare ratio" could be calculated for each household by dividing its disposable resources by the threshold. This ratio could also be attributed to each member of the household as a measure of individual resource adequacy.

Second, using individual monthly indicators of the adequacy of resources, an analyst could construct a variety of measures of poverty. One could be based on 12-month averages, another on the number of months below standard. Periods shorter or longer than a year could be aggregated or summarized. Moreover each of these measures, being associated with an individual, could be tabulated by the individual's characteristics or by household or other environmental characteristics.

More elaborate indicators could also be developed from the basic monthly data. The household resource deficiency or "gap" could be shared out to individuals and then summarized as an indicator of the severity of a person's poverty. Functions of the welfare ratio which reflect a sharply increasing hazard as income is proportionally more deficient could also be devised and could provide a better criterion for evaluating antipoverty policies than the existing nose-count indicators.

For purposes of program eligibility or benefit determination, the specific measures proposed above would be almost as bad as the present ones. The abstract principle could be interpreted and applied in some cases using the more detailed and "intimate" evidence of resource deficiency that may be available in a more clinical or programmatic setting, but the earlier stipulation against routine adoption of the indicators still holds.

In the longer run the thresholds themselves may require further reconsideration. Research is being carried on to assess the merit of survey-based expressions of consumption and income norms. These techniques may eventually provide a sound and broadly acceptable basis for setting the level of norms as well as the structure of equivalences needed to cover the full range of household situations. But at the present time results are too preliminary and tentative for early adoption.

**Conclusion**

There are several ways in which the much criticized but quite durable poverty measures have deteriorated since 1965 as measures of general capacity to consume at the social minimum. Because there is also an opportunity to bring new kinds of data into the measure, now is an especially good time to consider how the measures might be changed. It appears that most of the weaknesses can be corrected and our poverty measures enriched without doing major violence to the intuitive and vernacular notion of what it means to be "poor."
In 1964 no official estimates of the nature or extent of poverty in the United States existed, nor was poverty a focus of government studies or programs. In the aftermath of the Great Depression of the 1930s, poverty commanded little academic attention and few legislative initiatives explicitly designed to aid the poor were proposed. The situation changed dramatically in the 1960s. John Kennedy, influenced by the poverty he observed while campaigning in West Virginia and by contemporary accounts of the plight of the poor, directed his Council of Economic Advisers to study the problem. After Kennedy's assassination, Lyndon Johnson accelerated the work of the Council and, in his first State of the Union speech in January 1964, declared war on poverty. Shortly thereafter he announced a set of companion programs designed to enhance the general welfare and create the Great Society.

In the next decade, as a result of these initiatives, new programs were introduced and old programs were expanded; the emphasis of the federal budget shifted from military spending toward social welfare spending. The prevailing view during that period was optimistic.

That optimism soured as the war in Vietnam replaced the War on Poverty in the headlines and helped destroy faith in the government's ability to solve any problem. Arguments that social problems could not be solved by "throwing money" at them and that the antipoverty attempts had failed were increasingly popular.

By the late 1970s two revisionist views were heard. One suggested that even though the earlier efforts had reduced measured poverty, they had not provided sufficient opportunities for the able-bodied poor to earn their way out of poverty. We had nevertheless learned enough from this experience to reorient antipoverty policy. A second view argued that social spending had grown too large and had become a drag on economic growth. Income poverty had been "virtually eliminated," but work incentives had been eroded for both the poor and the rich, and the incentive to save had been weakened. As a result, these programs should be scaled back or eliminated. By 1982 the latter view had become official policy: "With the coming of the Great Society, government began eating away at the underpinnings of the private enterprise system. The big taxers and big spenders in the Congress had started a binge that would slowly change the nature of our society and, even worse, it threatened the character of our people. . . . By the time the full weight of Great Society programs was felt, economic progress for America's poor had come to a tragic halt" (Reagan, 1982). Rather than ask what government could do for the poor, official policy now emphasized what it could not accomplish and how it could be counterproductive.

In 1984, twenty years after the declaration of War on Poverty, the facts were clear—social spending had increased rapidly in real terms and as a percentage of the Gross National Product (GNP), yet poverty as officially measured had declined little. But these facts do not speak for themselves. Simple comparisons of spending trends and poverty trends obscure the diversity of the poverty population and the complexity of evaluating government policies.

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