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MEASURING POVERTY IN THE UNITED STATES: HISTORY AND CURRENT ISSUES

by

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Abstract

Formal measurement of poverty in the United States is now about 40 years old. This paper first briefly describes the origins and basis of the official poverty thresholds adopted by the federal government in the late 1960s. Then, it discusses in some detail some of the more current issues that observers suggest must be addressed if changes are to be made. The final sections discuss recent efforts to propose alternates to the current official approach.

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I. HISTORY

The official poverty thresholds used today by the U.S. Census Bureau to measure poverty have their basis in work by Orshansky (1963, 1965), a Social Security Administration researcher. Until that time, the major attempt to quantify the number and distribution of those with inadequate economic resources had been tabulations published from the 1960 Census, as well as several reports in the 1960s from the Current Population Survey (CPS) that indicated the number of families with incomes below $3,000 and unrelated individuals with incomes below $1,500 (see U.S. Census Bureau 1965, 1969).[1]

The key problem with the concept used in the decennial census and CPS tabulations was that both small and large families with, for example, $2,900 in income were assumed to be "low income". Further, there was no explicit relationship to any measure of need. In contrast, Orshansky's method had thresholds that increased with family size so that larger families needed more income than smaller ones to be out of poverty.

Orshansky started with a set of minimally adequate food budgets calculated for families of various sizes and composition by the U.S. Department of Agriculture for 1961.[2] Based

1. Herman Miller, Chief of the Income Branch at the U.S. Census Bureau at the time, in a personal communication to the author, does not recall why these income levels were chosen, except to note they were already tabulated standard income categories.

2. She used the "Economy Food Plan," designed for "temporary or emergency use when funds are low."

on evidence from the 1955 Household Food Consumption Survey, she determined that food represented about one-third of after-tax income for the typical family. This relationship yielded a "multiplier" of three, that is, the minimally adequate food budgets were multiplied by a factor of three to obtain 124 poverty thresholds that differed by family size, number of children, age and sex of head, and farm or nonfarm residence (adjustments were made for families of size one and two). One reason these proposed thresholds were viewed as reasonable was because the threshold that resulted for a family of four (close to the median family size at the time) was $3,130, close to the $3,000 figure used in the 1960 Census tabulations and the 1965 CPS publication.

As President Lyndon Johnson's “War on Poverty” was just beginning and there was a great interest in measuring its progress, Orshansky's measure of poverty was widely used by policy makers at the U.S. Council of Economic Advisers, and by other researchers. Attempts to update the poverty scale to account for inflation in the 1960s used increases in the price of food to inflate the minimal food budget, maintaining the multiplier of three. In 1969, the U.S. Bureau of the Budget (now the Office of Management and Budget [OMB]) adopted the Orshansky measure as a standard government poverty measure. OMB issued Statistical Policy Directive 14 defining a statistical measure of poverty in May 1978, including a mandate that inflation be measured using the Consumer Price Index (CPI), published by the U.S. Bureau of Labor Statistics (BLS); see the Appendix for the text of the directive. With only minor

modifications since then (mostly reducing the number of categories, now 48), the Orshansky thresholds still form the basis for the official poverty statistics.[3]

The Census Bureau publishes statistics annually using the CPS, a household survey conducted monthly mainly to determine the nation's unemployment rate. The Annual Social and Economic Supplement (ASEC) provides the income data necessary from 78,000 households to determine income distribution and poverty statistics. Official poverty rates show a steady decline from 1959 to 1973, decreasing from 22.4 percent to 11.1 percent.[4] The poverty rate remained at roughly that level until 1978. From 1978 to 1983, the poverty rate increased by roughly one-third, rising from 11.4 percent to 15.2 percent. From 1983 to 1989, the poverty rate declined, reaching 12.8 percent in 1989. The peak since then was 15.1 percent in 1993, declining to 11.3 percent in 2000, statistically equal to the 1973 level. It has since risen to 12.7 percent in 2004. (See DeNavas-Walt et al. 2005.)

II. CURRENT ISSUES

Serious examinations of the poverty thresholds were undertaken in 1969, 1976, 1980, 1990, 1995, and 2004-2005 (see Table 1). One of the most thorough was the work of the 1976 government task force. Their findings (and 17 background working papers)

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3. See Fisher (1992) for more historical detail on the development of the poverty thresholds. In practice, the CPI-U (the CPI for urban consumers) has been used for inflation indexing.

4. Ross et al. (1987), using 1950 Census data, have estimated the poverty rate for 1949 to be 40.5 percent.

were published in a series of volumes called *The Measure of Poverty* (U.S. Department of Health, Education, and Welfare 1976). Some minor changes in measurement methodology resulted, but there was no wholesale redefinition. The 1990 interagency task force had a mandate much less broad than the 1976 group, and developed a draft research agenda and recommendations that would review current and alternative measures of income and poverty.[5] The 1995 examination of the poverty concept by the Committee on National Statistics of the National Academy of Sciences, at Congressional request and funded by the U.S. Census Bureau, the BLS, and the Administration for Children and Families in the U.S. Department of Health and Human Services (DHHS) will be discussed in detail in Section III.[6] The 2004-2005 investigation, a seminar series organized by the University of Maryland and held at the American Enterprise Institute, was also funded by the Census Bureau and DHHS, with participation by BLS, OMB, and a number of other federal agencies. Some of the findings from that seminar series are presented in Section IV.

When considering the adequacy of the official poverty thresholds, it is critical to realize that one cannot separate the issue of income measurement from poverty definition. When one defines the level of resources needed to be out of poverty, one must also

5. The author participated in the deliberations of that task force, led by Rebecca Blank, Staff Economist for the Council of Economic Advisers. This paper does not necessarily represent the views of the other task force members.

6. Patricia Ruggles, author of *Drawing the Line* (1990), was instrumental in obtaining partial Congressional funding for the NAS study.

determine which resources are to be counted. Therefore, the discussion below covers both income measurement and poverty definition issues.

The first decision involves whether to use an absolute or relative measure of poverty. A relative measure sets the poverty standard at a fixed fraction, say 50 percent, of some measure of the population's well-being such as median family income. Thus, under a relative poverty measure, only if the incomes for the families at the bottom of the income distribution improve *relative* to the rest of the distribution would poverty decline. In 1965 in the U.S., the poverty threshold for a family of four was 46 percent of median family income (for families of all sizes); by 1989 this percentage had fallen to 37 percent (and was 29 percent for a family of three).[7] After rising slightly until the mid-1990s, the percentages then resumed falling, and returned roughly to their previous lows – 36 percent for a family of four (and 28 percent for a family of three) in 2004.

The European Community has used relative thresholds to facilitate cross-national comparisons since absolute income levels differ markedly among member countries (see, e.g., O'Higgins and Jenkins 1990). In good economic times income rises, raising relative thresholds, and making a specific level of poverty reduction harder to achieve. In addition, economic slowdowns may produce what the public perceives as perverse

7. The average family size was 3.70 in 1965 but only 3.16 in 1989.

results – poverty declining during a period of recession (as median income falls, usually faster than incomes of those at the bottom end who are typically protected by a government “safety net”).

The alternate method of measuring poverty and the one currently in use in the United States is more or less an absolute measure. When constructing an absolute measure, one attempts to measure the minimal “necessary” consumption levels of as many goods as possible. The cost of that consumption bundle is then increased to account for necessary goods not included by use of a "multiplier." Orshansky measured only the cost of a minimally adequate diet. Other proposals have suggested adding shelter, clothing, and medical care to the list. The remaining discussion in this paper is about absolute poverty measures; most observers expect the U.S. poverty concept to retain this feature.

In reality, the poverty thresholds chosen are ultimately arbitrary – reasonable social scientists and politicians will always disagree about their appropriate levels. Whatever level is chosen should be the result of a carefully specified process that cannot be changed arbitrarily from year-to-year, and should be capable of being updated at reasonable intervals as the economic circumstances of the society and the behavior of its demographic and economic components change.

A. INCOME MEASUREMENT

The key income measurement issues for the U.S. are three: (1) valuing noncash income, (2) measuring disposable income (the role of taxes and work expenses), and (3) reducing survey underreporting and nonsampling errors. Two other income issues also addressed below are the choice of an appropriate measure of resources (the role of wealth and consumption-based measures) and the measurement of nonmarket income (see also Section IV). Also of interest is whether to continue publishing official estimates based on the CPS or switch to a newer survey designed to collect better income information, the Survey of Income and Program Participation, or to an even newer American Community Survey.

A.1. Noncash income

The issue of valuing noncash income spans the income distribution. A more comprehensive income measure would place a value not only on noncash government transfers, such as food stamps (coupons used as cash for qualified food purchases), which typically go to low-income families, but also on elements of nonwage compensation (from employer-provided health insurance to company cars) that typically go to earners at all income levels.

Noncash income to U.S. families has grown substantially in the past 35 years. In the 1980s, over half of government transfer spending for low-income households was in the form of noncash benefits (U.S. Census Bureau 1995). This growth of transfer benefits has been paralleled by a growth of nonwage compensation to wage earners,

begun as a reaction of businesses to wage controls in World War II as a way to compete for skilled workers, but also induced in part by tax laws exempting such compensation from income and payroll taxes. By 1991, employer costs for nonwage compensation had grown to 28.3 percent of total compensation costs, up from 19.4 percent in 1966.[8] The comparable figure for September 2005 is 29.8 percent for nonwage compensation. Further, in the third quarter of 2005, 68.8 percent of householders owned their homes, which provide them with additional noncash income in the form of housing services.

The Census Bureau began publishing estimates of the value of many of these noncash benefits in 1982 (the latest is Cleveland 2005). This experimental series values food, housing, and medical government transfer benefits, and also employer-provided health insurance. Some of these areas needs further developmental work to improve measurement methods.

Currently, food stamps are valued at their coupon value, that is, their full dollar value. This appears widely acceptable as research shows recipients are unconstrained in their food choices by the requirement to use coupons. The value of public and subsidized housing is assigned through a crude imputation methodology involving a statistical

8. Data are from the Compensation and Working Conditions Branch, Bureau of Labor Statistics. The 1966 percentage is not strictly comparable to the 1991 figure. Recent data are from the National Compensation Survey.

match between the CPS and the American Housing Survey (AHS). Alternative methods have been tested (see Stern 2000), but not yet adopted.[9]

Of key concern to understanding well-being is the valuation of medical benefits, both the government health programs – Medicare (medical aid to the elderly) and Medicaid (medical aid to low-income individuals and the disabled) – and how to handle employer-provided health insurance. The valuation of medical benefits is particularly difficult since coverage of high medical expenses for someone who is sick does nothing to improve his or her poverty status (although the benefits clearly make him or her better off). Even if one imputes the value of an equivalent insurance policy to program participants, these benefits (high in market value due to large medical costs for the fraction who do get sick) cannot be used by the recipients to meet other needs of daily living. Accordingly, the Census Bureau developed a not-altogether-satisfactory method, termed fungible value, to avoid giving too high a value of these benefits to those at the low end of the income scale.[10]

Because these medical programs are so large, coming up with a better measure of the value of medical benefits or a better way of accounting for the presence of adequate

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9. One troublesome issue is that current methods assign a "locational premium" for subsidized units in high-cost areas.

10. Medicare and Medicaid benefits are counted as income only to the extent that they free up resources that could have been spent on medical care. Neither has any income value if the family is unable to meet basic food and housing requirements.

health insurance should be a high priority. Ellwood and Summers (in U.S. Census Bureau 1986) argued that there is little theoretical foundation for including medical benefits as income but then not adjusting income for other medical expenditures such as insurance premium costs for those that must buy their own insurance and out-of-pocket expenditures for medical care. To treat all medical costs consistently, they concluded that it is preferable to exclude all medical care costs from income because: (a) there are large variations in medical need and more medical needs do not leave the individual better off; (b) medical benefits are not fungible, especially for those in poverty; (c) and there are many difficult measurement problems in trying to value medical benefits. The poverty thresholds would also presumably be adjusted to exclude medical costs. This suggestion was adopted by the NAS panel in their 1995 report (Citro and Michael 1995); see Section III.

Aaron (in U.S. Census Bureau 1986), attributing the suggestion to Gary Burtless, suggested considering someone out of poverty only if he has adequate medical coverage. He argues that medical care is not fungible so medical benefits should not be added to income. However, if a person was out of poverty on the basis of income, he could still be classified as in poverty if he did not have health insurance coverage. The NAS panel adopted the suggestion of a separate medical risk index.

Work should also be carried out on valuing employer-provided benefits other than health insurance. Should employer contributions to retirement pensions be included in

the non-wage compensation of current earners or as paid out to pension recipients (as is now done)? What about other benefits (life insurance, subsidized meals, company cars, etc.)? Much could be learned about the distribution of non-wage compensation from a study matching household data with data from their employers on non-wage compensation.

The ownership of assets clearly promotes well-being. Homeownership provides the largest uncounted noncash flow of services not counted in family income. The Census Bureau estimated the imputed median income from homeownership at 3.5 percent of median household cash income in 2004. Beyond measuring the flows from assets, though, is the issue of whether someone with even modest assets should even be considered in poverty. Indeed, many government transfer programs exclude those with low income from participation if their asset holdings are high enough.[11]

A.2. Disposable income

Even though Orshansky's original calculations were based on post-tax income, poverty has always been calculated for the official statistics using pre-tax income because of the limited information collected on the CPS. Census Bureau estimates of after-tax income are based on a model of the likely taxes a family of given circumstances would pay. A new model has been implemented starting with 2003 alternative income estimates.

11. See Fitzgerald and David (1987) for further discussion of this issue.

There is also discussion about the advisability of deducting work expenses for wage earners, such as child care, uniform, and transportation (commuting) costs in calculating disposable income.

A.3. Underreporting and nonsampling errors

Research matching household survey responses to federal income tax returns and comparison with national income accounts has revealed substantial areas where the level and receipt of certain income sources are underreported (see U.S. Census Bureau 1991, Appendix C; Roemer 2000). Ruser et al. (2004) compared U.S. Bureau of Economic Analysis (BEA) State Personal Income (SPI) with CPS ASEC money income for 2001. Once adjustments to BEA SPI are made to derive a concept consistent with CPS ASEC, the gap is $806 billion, about half of which is due to adjustments BEA makes in its SPI estimates for unreported earnings (wages, salaries, and self-employment income). The key areas of CPS response error are four:

- *Wages and Salaries*: 3 percent underreporting accounts for $158 billion of the gap;
- *Self-Employment income*: 48 percent underreporting accounts for $302 billion of the gap;
- *Interest and Dividends*: 32 percent underreporting accounts for $132 billion of the gap; and
- *Transfer Programs*: 23 percent underreporting accounts for $199 billion of the gap.

While current Census Bureau procedures reweight the data for full interview nonresponse and impute appropriate income responses for individual unanswered questions (item nonresponse), these are insufficient to fully correct the problem (see Weinberg forthcoming b for a complete discussion of CPS income data quality). Procedures to enhance the data through microsimulation or other means should be investigated, along with continued improvement in imputation for nonresponse.

A.4. Other issues

In most societies, "underground," "nonmarket," or "black market" income from legal or illegal activities is typically omitted from official income statistics. This income ranges from barter transactions to home production (e.g., home gardens) to illegal income. Researchers are a long way from measuring this activity, so including this income into official statistics would be quite difficult (see Smeeding and Weinberg 2001, and Expert [Canberra] Group 2001).

It has been suggested that consumption is a better measure of well-being than income (see Cutler and Katz 1991 and Slesnick 1993). If a family can maintain its consumption through judicious use of assets when income falls, is it truly in poverty? Unfortunately, it is difficult to collect accurate annual data on consumption or even expenditures. Further, consumption reflects choices on how to allocate resources, rather than need.

Nevertheless, fuller investigation of a consumption-based measure would be useful (see Short et al. 1999 and Johnson 2004).

The final issue of income measurement is the choice of surveys on which to base income measurement. The survey currently used for poverty measurement is a supplement to the CPS, the key U.S. labor force survey.[12] Alternatives for income measurement are:

- The Survey of Income and Program Participation (SIPP) – a longitudinal survey of households, following the same individuals for up to 4 years (at 4-month intervals), regardless of their residence;[13] and
- The American Community Survey (ACS) – a cross-section multipurpose survey with only nine questions about income, but very good geographic detail.[14]

Even though the SIPP questionnaire was designed to reduce income underreporting when compared to the CPS by collecting greater income detail more often, apparently

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12. The survey design is for a housing *unit* to be in-sample for 4 months, then out-of-sample for 8 months, and then back in for 4 months, after which it is (typically) retired. This design reduces the sampling error for month-to-month and year-to-year changes in the unemployment rate (and year-to-year changes in income, poverty, and health insurance coverage estimates). The income, poverty, and health insurance coverage estimates are based on an augmented sample, in which minority households and households with children are selected from the previous November's CPS sample and are re-interviewed in February, March, or April.

13. The Committee on National Statistics panel on the future of the SIPP recommended moving toward the use of the SIPP for official income and poverty measurement (Citro and Kalton 1993). The Census Bureau has recently recommended redesigning the SIPP.

14. The ACS is designed to replace the long form of the decennial census. It began nationwide implementation in January 2005.

successfully for almost all income sources, it nevertheless has several drawbacks when compared to the CPS.[15] SIPP has historically had a smaller sample size and slower data release (inconsistencies between successive interviews must be resolved). Another drawback for obtaining a consistent time series of annual national poverty estimates from the SIPP, though, will be sample attrition (as households are lost from the sample) as only one SIPP panel is in the field at one time, and time-in-sample bias (as households get conditioned by repeated interviewing).

Perhaps the best long-run solution would be to regard these three surveys as complementary and to use statistical modeling to combine the data from the CPS, the SIPP, and the ACS, along with administrative data such as tax records, and develop one consistent (more accurate) measure.[16] The CPS could be used for a quick snapshot, consistent with data collected since 1948; while the SIPP (which began in 1983) would be used for more detailed estimates, for subannual and multiyear estimates, and for understanding other dimensions of poverty (assets, disability, gross flows and other dynamic aspects, and so forth); and the ACS would be used to give geographic detail (down to neighborhoods, using aggregates of 5 years of data).

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15. Exceptions to more complete income reporting in SIPP are wages and salaries (due to a failure to always collect gross instead of net earnings) and workers' compensation (payments for injuries on the job). See Roemer 2000.

16. This is the principle behind the Census Bureau's Small Area Income and Poverty Estimates program; see <http://www.census.gov/hhes/www/saipe/saipe.html>.

B. POVERTY THRESHOLDS

With an absolute measure of poverty, there are key decisions to be made about determining the appropriate level. The key research issues addressed here are (1) determination of the relationship between minimal commodity consumption levels and minimal income, (2) how to correct for differences in family size and composition, and (3) how to correct for cost-of-living differences across time and between areas.

B.1. Minimal consumption standards

Minimal consumption standards for all necessary commodities could in theory be established, perhaps by an expert panel, but doing so would raise difficult ethical issues about which commodities to include (e.g., is a telephone a necessity?). One alternative is to define minimal consumption standards for a limited number of necessities and obtain a poverty threshold by using a multiplier to account for necessities not measured. One example is from Renwick and Bergmann (1993), who developed a full "Basic Needs Budget" requiring no multiplier for single-parent families.[17]

B.2. Equivalence scales

The relationships embodied in the current U.S. poverty thresholds among families of different sizes (termed the equivalence scale) is supposed to represent the different relative costs of supporting those families at a minimally adequate levels. In fact, the

17. A full review of budget-based approaches is in Watts (1993).

relationship in the official thresholds is based solely on the relative food costs as they existed in 1961 and include some unfortunate anomalies (see Ruggles 1990, pp. 64-68). While it is possible to develop minimal budgets for every type and size of family separately and thus eliminate the need for equivalence scales entirely, in practice it is difficult to do so. No one scale now exists that is universally accepted. Issues in developing equivalence scales include which distinctions in family circumstances (e.g., owner vs. renter) should lead to different thresholds, how resources are shared within the family, and whether a more useful basis for determining poverty is the household (those living in one housing unit) rather than the family (those in one household related by blood, marriage, or adoption), or some other, such as cohabitors, or cohabitors with children in common.

B.3. Cost-of-living differences

In as large and diverse a country as the U.S., there are significant differences in the cost-of-living among localities. Unfortunately, there are no currently available data upon which to estimate interarea price differences for all commodities reliably. Further, it is difficult to collect such data. In addition, were such data to be incorporated into poverty thresholds, it would lead to questions about whether government transfer program benefits (or even tax exemptions) should differ by area as well. In my opinion, only if some practical alternative cost-of-living index could be developed, such as rental housing prices for relatively large areas (suggested in Citro and Michael 1995), would

geographic variation be possible in the thresholds. Substantial research before adoption is indicated (see Kokoski et al. 1992 and Moulton 1992 for some work in this area).

A related price issue is how to adjust for inflation. The U.S. poverty thresholds are required by OMB Statistical Policy Directive 14 to use the CPI to adjust thresholds over time. If the measurement of minimal consumption is used as the basis for new thresholds, presumably that could be the basis every year, with components, prices, and multipliers reestimated as often. A possible compromise might be to respecify and reestimate the minimal consumption bundle at prespecified intervals as market baskets become outdated, say every ten years, and use the CPI for interim adjustments. The market basket used for the CPI itself is typically reviewed and respecified at least once every ten years.[18]

III. THE 1995 COMMITTEE ON NATIONAL STATISTICS REPORT

The National Academy of Sciences (NAS) Committee on National Statistics released a report in May 1995 entitled *Measuring Poverty: A New Approach.* In that report, the panel of experts recommended that the federal government redefine the way it measures poverty. The key changes they recommended are threefold: change the income measure, change the poverty thresholds, and change the survey used. To

18. There is also an issue about whether to use the official CPI-U (urban consumers), an experimental CPI created to correct for errors in the official CPI in its measurement of housing costs prior to 1983 (CPI-U-X1), or a yet newer CPI-U-RS (research series) designed to incorporate all CPI methodological improvements made since 1978. The official CPI has been used historically to update the thresholds, one year at a time.

change the income measure from the current money income definition, they proposed to add noncash benefits, subtract taxes, subtract work expenses including child care expenses, subtract child support paid, and subtract medical out-of-pocket expenses (MOOP). The poverty thresholds were to be based on food, clothing, shelter, utilities, and "a little bit more" (78-83 percent of median expenditures on these items multiplied by 1.15-1.25); a new equivalence scale (a two-parameter equivalence scale of the form $[\#Adults + a*\#Children]^b$); an allowance for geographic variation; and are to be updated annually based on growth in median expenditures. The poverty measure is to be supplemented with a companion measure indicating whether the individual has adequate health insurance coverage. Finally, the panel recommended that the government use the SIPP instead of the CPS to collect the basic income and poverty-related data.

In the late 1990s, under the guidance of a technical working group on poverty measurement convened by OMB, experts from the Census Bureau and other agencies examined technical methods for revising the way the U.S. measures poverty, using the NAS report as a starting point. The Census Bureau issued two reports based on the CPS (Short et al. 1999, Short 2001), and they and others have produced numerous technical papers.[19] The key findings from the two reports show that:

19. See their poverty measurement site: <http://www.census.gov/hhes/www/povmeas/povmeas.html>.

- Due to the Earned Income Tax Credit (EITC), deducting taxes from income on balance reduces the percentage of people who are viewed as in poverty.
- Adding in-kind benefits to income reduces poverty rates, but the reduction from any single program is generally quite small.
- The experimental measures show a poverty population that is more like the total population in terms of socioeconomic characteristics than results from using the current official measure.
- Alternative geographic adjustments yield slightly higher experimental poverty rates but may provide better estimates of state-level poverty than those presented in the NAS report.

The most recent research results show comparable (though slightly higher) poverty rates to the official rates. The patterns over time are very similar, with explainable differences (e.g., EITC growth).

There is at least a rough consensus of opinion that any new measure should

- Include noncash benefits like food stamps and housing assistance,
- Subtract payroll and income taxes and account for the Earned Income Tax Credit,
- Subtract child support payments made (if data are available), and
- Adjust the equivalence scale.

However, there are a number of technical and policy issues that must be debated and resolved before any new measure that reflects the NAS recommendations could be adopted. These issues include:

- *Medical costs and benefits.* The NAS panel recommended excluding MOOP, employer contributions to health insurance and medical transfer program benefits from resources. One alternative explored in the Census Bureau reports is whether to include MOOP in the thresholds (adjusted for health insurance coverage) along with food, clothing, and shelter, and exclude medical transfer program benefits entirely.
- *What work expenses should be subtracted from income?* While subtracting the cost of non-reimbursed required work expenses (such as uniforms) seems uncontroversial, some have objected to subtracting other work expenses from income, such as an average amount for commuting or child care costs, arguing that those are the result of family choice, not exogenous circumstances associated with a particular job.
- *Basing thresholds on a pre-specified fraction of median expenditures.* How might the public and Congress react to a new poverty threshold that showed millions more people in poverty than the current measure? Are we confident enough about the quality of the Consumer Expenditure Survey data that we are willing to use them for updating the thresholds?
- *Developing geographical cost-of-living variations.* It is clear that the cost-of-living differs substantially from place to place, and different choices of methodology

have different implications. If geographic variation is to be incorporated, some method for measuring all cost differentials (rather than just for housing) and periodically updating the thresholds for relative price changes among areas should be established. Moving poverty around geographically might also have political implications if federal funding of state and local programs changed as well.

- *Annual inflation updating.* The panel proposed using the rate of growth in median expenditures to index the thresholds. This is an attempt to introduce some deliberate "relativity" into the measure (if, as was true in the past, median expenditures grow faster than inflation). The alternative is to use the Consumer Price Index.
- *Choosing the equivalence scale.* The panel recommended a two-parameter equivalence scale; subsequently, others investigated a three-parameter scale (allowing the cost of the first child in a one-adult family to be higher than for other children) that seems better suited to poverty thresholds.[20] Choice of the scale will inevitably alter the distribution of those in poverty. Related to this decision is the choice of income-sharing unit (e.g. family, cohabitors plus their children, households, or something else).

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20. The three-parameter scale that seems a consensus pick was developed by David Johnson of the Bureau of Labor Statistics and others. The scale for a single adult is set at 1.00, the scale for two adults is set at 1.41, the scale for single parents is $[1.8+0.5*(\text{children}-1)]^{0.7}$, and the scale for other families is $[\text{adults}+0.5*\text{children}]^{0.7}$. See also Betson (2004).

- *Underreporting.* Should the income statistics from the survey be adjusted for underreporting based on administrative data and modeling?
- *Review and Revision.* Should any new definition include a regular cycle of review and revision based on pre-specified criteria (NAS recommended once a decade)?

The Committee on National Statistics held a follow-up workshop to assess developments to date in June 2004. The discussions at that workshop are summarized in Iceland (2005). Many participants thought that some changes were worthwhile and relatively uncontroversial – counting noncash income, subtracting taxes, and adopting a new equivalence scale for the poverty thresholds. Other proposals were not universally recommended – subtracting medical out-of-pocket costs from income, adjusting the thresholds for differing cost-of-living across geographic areas, and using the SIPP in place of the CPS as the data source.

IV. UNIVERSITY OF MARYLAND-AMERICAN ENTERPRISE INSTITUTE SEMINAR SERIES AND A NEW CENSUS BUREAU REPORT

Rather than narrowing the number of alternative poverty measures prepared by the Census Bureau, the NAS report increased the number, adding to the difficulty in preparing a readable annual report, and in getting the public's attention to the desirability of modernization. For example, the most recent report (Dalaker 2005)

focused on 22 alternative measures, while a large number yet just a subset of all those computed (and provided on the Internet).

One goal of the University of Maryland-American Enterprise Institute seminar series was to convene a group of high-level administration officials and senior poverty researchers to attempt to reach enough of a consensus that a significantly fewer number of measures could be produced and released by the Census Bureau. But it also cast its net much wider: "to explore the limitations of the current federal poverty measure and to identify alternative approaches for gauging the well-being of low-income Americans" (Besharov and Germanis 2004, p. 2).

It is beyond the scope of this paper to discuss the alternative approaches in much detail. The reader might like to consult the seminar papers (e.g., Jencks et al. 2004 and Johnson 2004), two recent Census Bureau reports (2003, 2005), and Ouellette et al. (2004) for additional information.[21] Rather, I will focus on their discussions on income-based poverty.

The seminar participants could not come to a consensus about the best way to measure poverty. One key conclusion, though, was that poverty as measured for transfer program eligibility need not be the same as poverty measured for

21. All the seminar papers can be found at <http://www.welfareacademy.org/pubs/poverty/>. More detail on U.S. household surveys that provide measures of well-being can be found in Weinberg (forthcoming a).

understanding economic well-being (OMB's Office of Statistical Policy always intended the official poverty measure to be solely a statistical measure). In response to a request from the seminar organizers, the Census Bureau prepared a number of alternative income-based measures of poverty to illustrate the distributional impacts of those alternatives and suggest a method for gauging the impact of taxes and transfers on poverty (Weinberg 2005). The paper, presented at the last meeting of the seminar series in June 2005, examined five income variants for two different units of analysis (families and households) for two different assumptions about inflation (the historical Consumer Price Index and the "Research Series" alternative that uses current methods) for two different sets of thresholds (official and the formula-based alternative based on three parameters). It also examined one method of adjusting for unreported transfer program income. Poverty rate effects were analyzed for the total population, the distributional effects were analyzed using poverty shares, and the anti-poverty effects of taxes and transfers were analyzed using a percentage reduction in poverty rates.

When changing from families to households as the unit of analysis, from official thresholds to three-parameter thresholds, and from CPI-U to CPI-U-RS indexing, poverty rates are reduced by 3-3½ percentage points. Going from the pre-transfer income variant excluding any consideration of home equity to the post-transfer income variant that includes an imputed return to home equity and subtracts property taxes also reduces poverty by about 3-3½ percentage points. Together all these changes amount to nearly a 7 percentage point reduction in poverty rates. Imputed

underreported transfer income for three transfer programs (Temporary Assistance for Needy Families, Supplemental Security Income, and Food Stamps) reduces poverty rates by an additional 1 percentage point or so.

As a result of the seminar discussions, a new Census Bureau report (2006) was released that focused on examining the effect of government transfer programs on poverty, using three new alternative measures of income, and two definitions of thresholds. The three income definitions are:

- Pre-tax, pre-transfer income (*market income*): Includes cash income except government cash transfers (both means- and non-means-tested); includes imputed realized capital gains and losses and an imputed rate of return on home equity; excludes formula-based work expenses for commuting but not child care.
- Pre-tax, pre-means-tested transfer income (*post-social insurance income*): Includes cash income except government *means-tested* cash transfers; includes imputed realized capital gains and losses and an imputed rate of return on home equity; excludes formula-based work expenses for commuting but not child care.
- Post-tax, post-transfer income (*disposable income*): Includes all cash transfers; includes non-cash (non-medical) transfers that can be measured and valued; includes imputed realized capital gains and losses and imputed rate of return on home equity; excludes formula-based work expenses for commuting, federal

payroll taxes, federal and state income taxes, and property taxes on owner-occupied homes.[22]

The two threshold definitions used are (1) the official poverty thresholds adjusted using a three-parameter equivalence scale but tied to 2004 levels, and (2) the thresholds computed similarly but based instead on the 1978 official levels, updated using the CPI-U-RS (research series) instead of updating using the official CPI-U series (the latter thresholds are about 12 percent lower). The report does not use the official poverty thresholds.

Market income-based poverty rates are the highest. In 2004, market income-based poverty rates were 19.4 percent, compared to a comparable money income-based measure of 12.6 percent (the rates using the RS-adjusted thresholds were 17.6 percent and 10.6 percent, respectively, roughly two percentage points lower).[23] Social insurance reduced poverty rates by nearly 5 percentage points – to 12.9 percent – and means-tested transfers and taxes reduced poverty rates still further – to 10.4 percent in 2004 (the rates using the RS thresholds were reduced to 11.2 percent and 8.3 percent, respectively).

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22. Sales taxes are usually considered consumption and not subtractions from income. Future calculation of a disposable income measure may include state sales taxes in an attempt to treat residents of different states more equally, as some use income taxes as their major revenue source, and some use sales taxes.

23. Inclusion of an imputed return to home equity reduces the market income-based poverty measure by roughly 0.7 percentage points when compared to a measure without such income (see Dalaker, 2005).

TABLE 1: Post-Orshansky Milestones in US Poverty Measurement

1969	Statistical Policy Directive 14 issued (revised 1978); includes revision of poverty thresholds and specification of CPI updating
1971-1972	Technical Committee on Poverty Statistics
1973	Interagency Subcommittees on Cash Income, on Non-Cash Income, and on Updating the Poverty Threshold
1975-1976	Poverty Studies Task Force under Department of Health, Education, and Welfare (*The Measure of Poverty*)
1980	Content of Current Population Survey expanded to include in-kind (non-cash) benefits
1981	Revision of poverty thresholds (farm differential eliminated)
1982	Census Bureau published first experimental poverty measures (created by Timothy Smeeding)
1984	Census Bureau conference on noncash benefits
1990	Council of Economic Advisers chairman Boskin's task force considers proposing revisions
1990	Ruggles, *Drawing The Line*
1993-1995	National Academy of Sciences panel, *Measuring Poverty*
1999-2001	Census Bureau issues *Experimental Poverty Measures* reports
2004	National Academy of Sciences poverty workshop
2004-2005	University of Maryland-American Enterprise Institute research seminar series
2006	Census Bureau issues *The Effects of Government Taxes and Transfers on Income and Poverty*

APPENDIX

OFFICE OF MANAGEMENT AND BUDGET
STATISTICAL POLICY DIRECTIVE NO. 14

DEFINITION OF POVERTY FOR STATISTICAL PURPOSES

[revised May 1978]

For the years 1959-1968 the statistics on poverty contained in the Census Bureau's Current Population Reports, Series P-60, No. 68, shall be used by all executive departments and establishments for statistical purposes. For the years 1969 and thereafter, the statistics contained in subsequent applicable reports in this series shall be used.

A number of Federal agencies have been using statistical series on the number of persons and families in poverty, and their characteristics, in analytical and program planning work. The basis for these series has been the classification of income data collected by the Bureau of the Census in accordance with a definition of poverty developed by the Social Security Administration and revised by a Federal Interagency Committee in 1969. This definition provides a range of income cutoffs adjusted by such factors as family size, sex of family head, number of children under 18 years of age, and farm-nonfarm residences.

The Bureau of the Census series continues the Social Security Administration definition for the base year, 1963, except that the differential between poverty levels for farm and nonfarm families is reduced from 30 percent to 15 percent. Annual adjustments in Census series are based on changes in the average annual total Consumer Price Index (CPI) instead of changes in the cost of the U.S. Department of Agriculture's Economy Food Plan.

The establishment of this standard data series does not preclude departments and agencies from more detailed analyses or from publication of tabulations for specialized needs although, where applicable, totals must agree with totals published by the Bureau of the Census. 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.

The poverty levels used by the Bureau of the Census were developed as rough statistical measures to record changes in the number of persons and families in poverty and their characteristics, over time. While they have relevance to a concept of poverty, these levels were not developed for administrative use in any specific program and

nothing in this Directive should be construed as requiring that they should be applied for such a purpose.

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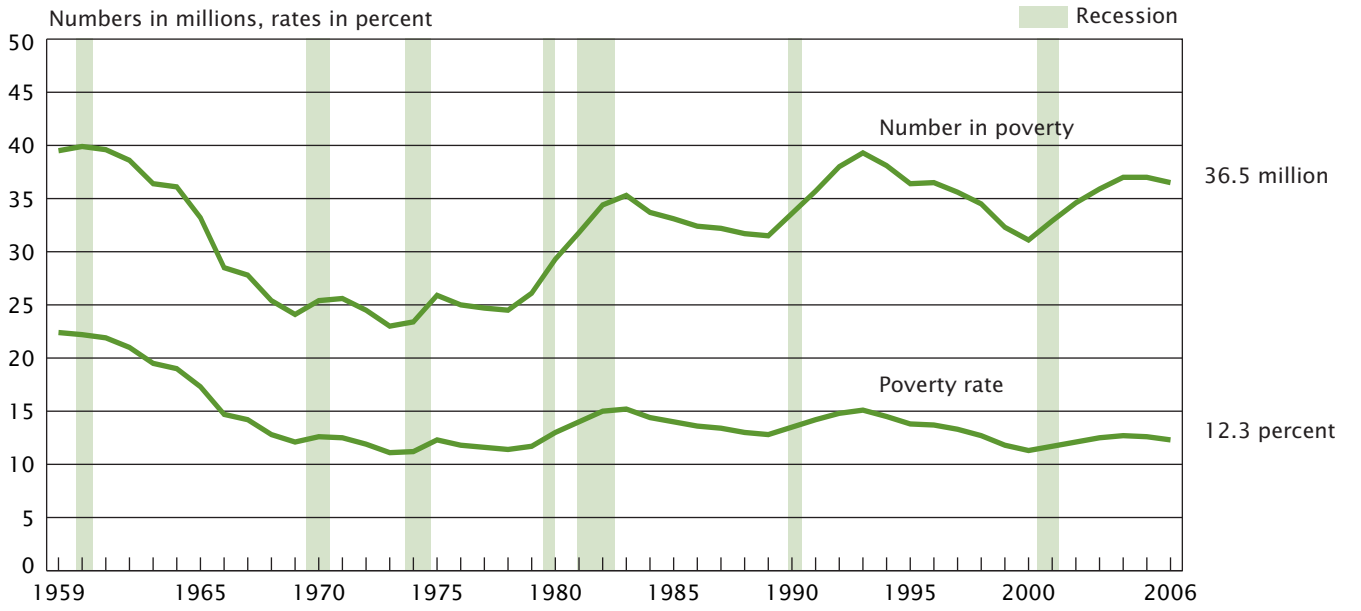
Figure 1.
Number in Poverty and Poverty Rate: 1959 to 2006



Note: The data points are placed at the midpoints of the respective years.
Source: U.S. Census Bureau, Current Population Survey, 1960 to 2007 Annual Social and Economic Supplements.