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EVALUATION OF POVERTY INDICATORS

Statement of  
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Before the  
Subcommittee on Census and Population  
Committee on Post Office and Civil Service  
House of Representatives



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Mr. Chairman and Members of the Subcommittee:

It is a pleasure to be here today to report to you on our study of the Census Bureau's experimental methods for valuing noncash benefits as part of measuring poverty in the United States. My remarks come from our report entitled NONCASH BENEFITS: Methodological Review of Experimental Valuation Methods Indicates Many Problems Remain (GAO/PEMD-87-23). Today, I would like to highlight our central findings and discuss their implications.

In particular, I want to make three points. The first is that many of the concerns raised about the Census Bureau's experimental valuation methods can be systematically assessed and their influence--the magnitude and direction--can be empirically determined. My second point is that when we examined these concerns, we found that the experimental valuation methods can reclassify or misclassify who is considered in or out of poverty. Finally, my third point is that the Census Bureau's publications do not give adequate warning of the magnitude of differences in poverty estimates resulting from conceptual, operational and computational concerns with the valuation of noncash benefits.

A great deal of work remains to be done in improving how we measure poverty in the United States, and our empirical work has just scratched the surface. However, until the work is done, the poverty estimates should be viewed with extreme caution.

To place our work in context, let me first provide a brief summary of the origins of the problems of ascribing cash values to noncash benefits. As you know, increasingly the poor have been receiving federal assistance through goods and services rather than cash. (In 1960, three-quarters of all low-income assistance came in the form of cash; by 1985 only 24 percent did.) These goods and services, however, have not been counted in the cash-only method the Census Bureau uses for measuring income and poverty.

In response to Congressional interest, the Census Bureau developed three experimental methods for placing cash values on noncash benefits. The methods differ primarily in whether the cash value assigned to a benefit is based on what it would cost to buy the benefits (market value method), what it is worth to the recipient (recipient value method), or what percentage of a poor family's budget is spent on the benefit (poverty budget share method). The Census Bureau publishes annually the national poverty rates that result from applying these three methods. Depending on the income definition and valuation method used, adding "cashed out" benefits to the official cash-only data reduces the poverty rate and can change the reported income distribution among the poor.

The Census Bureau's methods have generated many concerns. We previously abstracted 23 central issues, based on 66 specific concerns, including those identified by the Census Bureau and

experts at its December 1985 conference on the measurement of noncash benefits. Many of the concerns have possible effects, and few had been examined empirically for the actual magnitude of the problems identified. Of the 23 issues, 21 could be subjected to such tests. Appendix I displays the 23 issues organized by the five general questions discussed in the next section. The 10 issues denoted with an asterisk are the issues we examined (an eleventh issue--use of an incomplete income stratification--was discovered during the course of our analyses and does not appear in the appendix). Appendix I also includes the 66 conceptual, operational, and computational concerns previously identified.

MANY OF THE CONCERNS RAISED ABOUT THE CENSUS BUREAU'S METHODS CAN BE SYSTEMATICALLY ASSESSED AND THEIR INFLUENCE DETERMINED

In our study of the Census Bureau's experimental valuation methods, we found that although there were many criticisms and concerns raised about the methods for valuing noncash benefits, no general systematic approach to assessing the methods was available. Therefore, we developed an assessment approach that can be applied to methods using income-based definitions of poverty.

Our three-part evaluation approach calls first for the identification of specific concerns with a given method in terms of five questions: (1) What is the basis for defining income? (2) Are the methods valid? (3) Do the values that are assigned accurately

represent the benefit levels received? (4) What is the quality of the data and data analytic procedures used to derive benefit values? (5) Are definitions used consistently across key steps of poverty measurement? Second, we conducted an empirical examination of these concerns, using as indicators changes in poverty rates, the identification of subgroups differentially affected, an index of dispersion of changes in poverty-gap distributions, and the average benefit assigned. The third part of our approach brings together the conceptual and empirical results in an overall judgment about the method being evaluated.

EMPIRICAL ASSESSMENTS SHOW THAT IDENTIFIED CONCERNS MAKE A DIFFERENCE IN WHO IS CONSIDERED POOR

Execution of the three-part approach for evaluating alternative poverty measures revealed the importance of doing this kind of empirical assessment. We found that 10 of the 11 issues examined empirically had sizable effects and 8 of these were in the direction of either reclassifying persons as nonpoor or misclassifying persons out of poverty when in fact they were not. The analyses also show that blacks, persons in families headed by women, and the elderly are particularly likely to be affected by these problems.

Both the market value method and the recipient value method reveal substantial conceptual and methodological problems. The

problems are particularly acute for valuing medical care using the market value method. To illustrate these issues, we applied our assessment approach to a single method (market value method) across several benefit areas (food, housing and medical care) and a single benefit area (medical care) across two methods (market value and recipient value) and answered the five questions for each application. The final report addresses each question in detail. Here, we summarize the findings and organize them by the source of the problem.

### Market Value Method

The Census Bureau's experimental market value method is open to potential weaknesses, and as a result, the estimates it produces are questionable, especially when medical benefits are included. Under each of our evaluative questions, we found at least one issue suggesting that the method is flawed. The effect these issues have on the poverty rate and the distribution of the income of the poor and "near poor" varies--many are large enough to change individual poverty status dramatically. Others are small and have little effect on individual poverty status.

### Sources of Problems

Our analyses revealed that these problems could be traced to three types of practices associated with choices about what to

measure and how calculations were performed. First, conceptual choices about which benefits to include in the definition of income can affect the poverty rate by as much as 4.7 percentage points, reclassifying up to 11 million persons as no longer in poverty. Because the Census Bureau offers no theoretical rationale for these choices, it is not possible to say which definition of income is most appropriate for measuring poverty. However, our statistical evidence strongly suggests that some choices do not reflect improvements in the measurement of economic well-being of the poor. For example, when medical care is included in the income definition using the market value method, many poor persons can be reclassified as no longer poor.

In particular, when we compared the change in the distribution of poverty gaps--that is, the amount of money it would take to bring an individual below the poverty line up to it--before and after the inclusion of medical benefits, we found, as figure 1 shows, that many persons well below the poverty line before medical benefits were assigned were well above the poverty line after medical benefits were assigned. If we use the fifth row from the bottom on figure 1 as an example (see the arrow), we find that while 52 percent of the 1,442,000 persons (see the first circle from the left) with incomes \$6,000 - \$7,000 below the poverty line before the inclusion of medical benefits had the same incomes after the inclusion of medical benefits (that is, no change). Continuing across this same row to the column to the far right, we find that

**Figure 1: Poverty Gaps With and Without Medical Benefits in the Market Value Method<sup>a</sup>**

Poverty Gaps Without Medical																Number of Persons <sup>b</sup>					
0 to -\$1,000												45	15	21	10	4	2	4	6,211,000		
												42	16	22	12	4	1	1	2	5,443,000	
												47	14	22	10	3	2	1	1	2	4,416,000
												45	13	19	15	4	1	1		1	3,499,000
-\$4,000 to -\$5,000																					2,945,000
																					2,546,000
→					52	9	19	10	8	1	1	1							1	1,442,000	
				49	6	18	10	8	2	1	2						1		2	1,096,000	
				58	3	16	9	6	6	3											837,000
				65	3	10	9	3	3	6											390,000
-\$10,000 or more	86	3	4	2	5		1													1,284,000	
	-\$10,000 or more					-\$4,000 to -\$5,000					0					+\$5,000 or more					
Poverty Gaps With Medical																					

<sup>a</sup> A poverty gap is the amount of income necessary to raise a person's income to the poverty threshold. These data are for the nation in 1984. Percentages in cells may not add to 100 because of rounding.

<sup>b</sup> Total number of persons equals 30,103,000.

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1 percent of the 1,442,000 persons (or approximately 14,420) with incomes \$6,000 - \$7,000 below the poverty line before the inclusion of medical benefits had incomes of \$5,000 or more above the poverty line after the inclusion of medical benefits. Additionally, many of those who were not moved over the poverty threshold were placed substantially closer to it and, thus, made notably less eligible for the means-tested benefits that use the poverty indicator.

Second, our analyses show that the validity of the method and accuracy of the benefit values that are assigned are influenced by methodological choices made in carrying out the poverty calculations. The Census Bureau's choices influence the poverty rate by 0.9 to 1.2 percentage points, thus reclassifying an estimated 1.7 to 2.5 million more individuals as no longer poor relative to other legitimate methods based on different decision rules.

For example, the Census Bureau's market value method for calculating and assigning medical benefits is based on a concept that prevails for private insurance values, so that the average medical benefit is assigned to all who are covered by Medicare or Medicaid or both, even though the actual distribution of medical benefits is very skewed. That is, while a few eligible people have extremely high charges, many eligible people have no, or very low, charges.

When alternative procedures for calculating and assigning a value for Medicare under the market value method are used (using data from the four states where data were available), the result is a higher poverty rate. It ranges from from 0.5 to 0.9 percentage points which translates to a projection of between nearly 1 and 1.8 million additional poor persons nationally in 1982.

The elderly, unrelated individuals and single women are more likely to be reclassified "in poverty" as a result of using the Census Bureau's market value method than legitimate alternative procedures for calculating Medicare benefit values. Further, our alternative procedures yield lower average benefit values for the noninstitutionalized by \$35 to \$1,400.

Third, methodological flaws resulting from problems of data quality--such as the misreporting of participation in the food stamp program--overestimate the poverty rate by as much as 0.6 percentage points (translating to about 1.4 million persons nationally misclassified as poor). Also, errors stemming from inaccuracies in the way benefits are derived and assigned underestimate the poverty rate by as much as 2.1 percentage points (translating to about 4.1 million persons nationally misclassified as nonpoor). Further, adjustments to account for invalidity in the methods used to establish the poverty thresholds range from decreasing the poverty rate by 3.2 percentage points (classifying 7.5 million poor persons nationally as no longer poor) to

increasing it by as much as 6.6 percentage points (classifying about 15.4 million more persons into poverty).

The analyses also revealed differential subgroup effects, disruption of persons' relative position within the poverty gap distribution, and generally higher benefit levels under the Census Bureau's method. For example, for each 0.5 change in the threshold multiplier, the poverty threshold for a family of four changes by approximately \$1,800. Put another way, as the threshold multiplier increases above the official threshold multiplier of 3.0 by 0.5 increments, the poverty rate increases at the rate of about 3.3 percentage points (translating to nearly 7.7 million additional persons classified as poor).

#### Medical Benefits

In the valuation of noncash benefits, there is great controversy about whether or not to include in the definition of income the value of medical benefits, the largest noncash form of public assistance. Of all the noncash benefits examined by the Census Bureau, medical benefits have the greatest effect on the poverty rate, regardless of the valuation technique. Beyond deciding whether to include medical benefits lie issues of just how medical benefits should be valued and assigned to individuals.

As indicated earlier, in general, the market value method is weak on a number of issues related to defining and measuring medical benefits. Specifically, the method calculates and assigns Medicaid benefit values by using noncomparable groups. It assigns medical benefit values to all members of a family, regardless of whether they actually benefit from them. It assigns to all persons in specific risk categories a benefit value by using a questionable statistic. Finally, it does not cap extraordinary medical benefit values.

When the empirical effects of selected conceptual and technical issues associated with the market value method were aggregated, about 3 million persons were found to be reclassified as poor. That is, the Census Bureau's market value method underestimates the extent of poverty and differentially affects the poverty rates of subgroups, disrupts the poverty gap distribution and assigns higher benefit levels as compared to our composite analysis. For example, the average medical benefit imputed to individuals using the Census Bureau's market value method and data from the four states in 1982 was \$2,454, while our composite figure was \$957.

We found that the recipient value method also has flaws that can distort the classification of persons in or out of poverty. First, the conceptual choice to include medical benefits in the income definition for the recipient value method can affect the

poverty rate by as much as 1.0 percentage point (translating to approximately 2 million fewer persons in poverty) when all medical benefits are included in the definition of income. Blacks, the elderly, persons in families headed by women, unrelated individuals, and single women are particularly likely to be reclassified as nonpoor as a result of including all medical benefits in the income definition under the recipient value method. Although the Census Bureau has not provided a conceptual basis for including medical benefits in the income definition, it is still useful to examine the consequences of the Census Bureau's choices.

Second, our analyses of the validity of the method and accuracy of the benefit values that are assigned are influenced by methodological choices made in carrying out the poverty calculations using the recipient value method. Specifically, the household income definition the Census Bureau uses to classify individuals into income strata for benefit assignment influences the poverty rate by 0.2 percentage points, reclassifying an estimated 500,000 more persons as no longer poor relative to another legitimate definition. The recipient value method is particularly likely to reclassify blacks, the elderly, persons in families headed by women and unrelated individuals as nonpoor when they are poor. Further, the average medical benefit assigned under the alternative income definition is only \$78 lower than the recipient value benefit and does not affect the distribution of poverty gaps.

Third, we found that methodological flaws resulting from problems associated with the quality of the analytic procedures-- such as the use of an incomplete income stratification in the assignment of medical benefit values to individuals--can underestimate the poverty rate by as much as 0.4 percentage points (translating to about 800,000 persons nationally misclassified as nonpoor). As a result of this error, the Census Bureau's recipient value method is particularly likely to misclassify blacks, the elderly, persons in families headed by women, unrelated individuals, and single women as poor when they are nonpoor. Further, the recipient value method's average medical benefit is \$446 lower than the medical benefit assigned when a complete income stratification is used.

Additionally, in the recipient value method, error associated with using information from one group to develop estimates for another group--known as selectivity bias--could range from underestimating the poverty rate by 0.3 percentage points (translating to approximately 660,000 additional poor persons) to overestimating the poverty rate by 0.3 percentage points (translating to 660,000 fewer poor persons). Our analyses show that the Census Bureau's recipient value method is particularly likely to misclassify blacks, Hispanics, the elderly, persons in families headed by women, unrelated individuals, and single women as poor when the medical benefit is decreased beyond 10 percent and

misclassify individuals in these groups as nonpoor when the medical benefit is increased by 10 percent and 25 percent.

Alternative solutions to the concerns associated with the recipient value method examined have, however, only a small composite effect on the poverty rate. The aggregate empirical effect of these flaws was the misclassification of about 260,000 persons nationally as nonpoor, with no notable disruption to the poverty gap distribution. Differential subgroup effects and generally higher benefit values with the Census Bureau's recipient value method were, however, noted.

MORE WORK NEEDS TO BE DONE TO IMPROVE HOW WE MEASURE POVERTY  
IN THE UNITED STATES

Conceptual and methodological choices and technical errors associated with the Census Bureau's experimental valuation methods affect the estimates of income and poverty status of many people. Some of the problems, such as a failure to use the full income stratification for medical benefit assignment in the recipient value method, could be corrected immediately. Others, such as the calculation and assignment of medical benefits under the market value method, require better data or alternative calculation methods. Still others, such as the definition of income, cannot be resolved immediately and require a clear conceptual framework.

We believe we have presented the kind of work that the Census Bureau could have usefully conducted prior to publishing its experimental estimates of poverty. The Census Bureau identified more than 30 concerns associated with its experimental valuation techniques in its first publication of the alternative estimates of poverty. It was careful to point out what it thought were the likely effects of the concerns. However, this did not constitute enough information to determine the importance of the concerns. Empirical evidence, in addition to "likely effects," constitutes useful information for the evaluation of poverty measurement procedures. The magnitude of the effects is such, for some cases (for example, 7.7 million persons misclassified as poor), as to have warranted a great deal more analytic care in the development of the experimental valuation techniques.

The Census Bureau's publications of the alternative estimates of poverty are useful to readers who want to know the procedures the Census Bureau followed in arriving at its estimates of poverty. However, the publications offer only limited assistance to those who want to replicate the procedures and resulting estimates. Most seriously, the publications do not give adequate warning of the magnitude of differences in estimates resulting from conceptual and technical concerns with the estimation of noncash benefits.

The Census Bureau's estimates are widely cited in discussions of trends in poverty and of the effects of various policies. They



have been used in this way, for example, by the current administration. We did not assess every concern that has been raised about the Census Bureau's experimental methods, but we found that 10 of the 11 issues we did examine had sizable effects, 8 of these issues associated with the methods defined persons "out of poverty" by either reclassifying them as nonpoor or misclassifying them as poor when they were not. We also found that blacks, persons in families headed by women, and the elderly were particularly likely to be defined "out of poverty" by the Census Bureau's methods.

The Census Bureau does not publish information about the size and direction of such problems in its estimates, although it notes that problems may exist. Further empirical analysis and more information are needed to confirm the extent of these problems and to identify problems that have not been critiqued in detail.

In light of our analysis, we have recommended that the Secretary of the Department of Commerce direct the director of the Census Bureau to conduct a more comprehensive examination of the problems with the Census Bureau's valuation methods, especially those involving medical benefits, giving full consideration to the assessment approach we have developed. We also recommended that the Census Bureau fully disclose in its publications the magnitude of the effects of these problems. Since the Census Bureau is not scheduled to publish its experimental estimates for 1987 until

later this year, insufficient time has elapsed to judge how responsive they have been to our recommendations.

This concludes my prepared statement, Mr. Chairman. I would be happy to respond to questions.

ISSUES RELATED TO MEASURING POVERTY  
AND THE VALUE OF NONCASH BENEFITS

In prior reports, we have identified over 60 concerns raised by poverty experts about measuring poverty and valuing noncash benefits. These issues have been abstracted into 23 general poverty measurement issues. This appendix discusses these issues in relation to the five evaluation questions described on pages 3 and 4 of the foregoing testimony. The individual concerns are listed at the end of this appendix. How they correspond to each issue is designated by an abbreviation and their number, in parentheses, following each issue. The Census Bureau's method to which the issue applies is indicated by an abbreviation following the parentheses. The abbreviations that appear in parentheses are as follows: CM = computational concern; CN = conceptual concern; OP = operational concern. The abbreviations for the methods that follow the parentheses are as follows: all = all methods; MV = market value; PBS = poverty budget share; RV = recipient value. The 10 issues that we examined empirically are indicated by an asterisk.

QUESTION 1

What is the basis for defining income?

Issue 1

The official definition of cash income is incomplete. For example, assets, adjustments for work expenses, capital income savings and debt interest, and underground income are not included. (CN16, CN17, CN31, OP26), all

Issue 2\*

The inclusion of noncash benefits alters the definition of income. The poverty indicator should include noncash benefits in the income definition on a rational and consistent basis (for example, whether the benefit frees up resources or provides for immediate material consumption). (CN07, CN08, CN29), all

QUESTION 2

Are the methods valid?

Issue 3

The current income-based definition of poverty ignores other conceptualizations of well-being (such as, consumption, subjective, and sociocultural). (CN11, CN19), all

Issue 4\*

The Census Bureau definition of recipient value is a weak approximation of utility and it misrepresents benefit worth. This misestimation stems, in part, from the calculation of the normal expenditures of recipients at a resource level equal to cash income plus the market value of all types of noncash benefits. (CN04, CN05, CN24, OP04, OP07, CM01, CM02), RV

Issue 5\*

The market value method as developed by the Bureau overvalues benefits. In the case of medical benefits, an unreasonably large benefit does not enhance the overall budget of the person by a corresponding amount, but when it is added to cash income, may inappropriately reclassify persons as nonpoor. (CN01, CN02, CN03, OP01, OP24, OP25, CM07), MV

Issue 6

The Census Bureau definition of poverty budget share value is incomplete. (CN06, CN25), PBS

Issue 7\*

Estimates of normal or average expenditures on goods and services by subsidized consumers for use in the valuation of noncash benefits are derived by assuming that the benefit value is equal to the normal expenditures on goods and services by unsubsidized consumers with similar characteristics. A selectivity bias results when the groups are not equivalent in every respect except the benefit receipt. (OP05, OP06), RV

Issue 8

The poverty threshold currently accounts for medical care as some proportion of the 2/3 nonfood expenditures of the poor. To the extent that the elderly must spend a greater portion of their income on medical care, the current threshold underestimates the number of poor persons, especially the elderly poor. Critics argue that if noncash benefits are added to cash income for purposes of measuring poverty, the poverty threshold should be adjusted. The Adjustments discussed center on the issue of adding the value of

the noncash benefits to both sides of the poverty measurement equation (that is, income and threshold). (CN13, CN21), all

Issue 9\*

The current poverty thresholds are based on data from a 1955 survey which found that on average, families of three or more spent one-third of their after-tax income on food. To the extent that the survey did not capture the expenditures of poor households and/or expenditure patterns have changed, the poverty thresholds and poverty budget share method are inaccurate. (CN22, CN23, OP17, OP19), all

Issue 10

The poverty threshold is currently adjusted annually by the consumer price index. The index is based on the consumption of goods and services of the average consumer, not the poor. This adjustment misestimates the real consumption of the low-income population and therefore results in a misestimate of the poor. (CN14), all

Issue 11

Depending upon where a person lives, since the poverty

thresholds for a family of a given size are the same throughout the country, without regard to differences in living costs, persons in similar situations living in different parts of the country may in fact be classified differently. (CN20), all

Issue 12

The current poverty statistics (the poverty rate) ignore income fluctuations around the poverty line and do not capture how poor the poverty population is. (CM04), all

QUESTION 3

Do the values that are assigned accurately represent the benefit levels received?

Issue 13\*

Many eligible people do not receive benefits. Obtaining imputed values by dividing total benefit outlays by the number of recipients overestimates the value of the benefit when applied to all people eligible and underestimates the value actually received by some. Crediting people who actually did not receive any benefits with an average value would overestimate the income of those people. A related issue involves poverty estimates that



include the imputed value of benefits for populations not included in the estimate (such as, institutionalized or deceased persons). This practice can result in estimates that do not accurately reflect the poverty population. (CN10, OP03, OP13, OP20, OP21), RV

Issue 14\*

Many poor households include elderly persons who receive noncash benefits such as Medicare. Benefits of this kind are not sharable with others in the household. Assigning values for these noncash benefits to all members of the household who cannot benefit directly from them underestimates the number of poor persons and poor families. (CN30, OP16), MV

Issue 15

The total value of noncash benefits is not an additive function but rather less than that; for each additional benefit, the value to the recipient may be less because there is less flexibility in the family budget. Furthermore, equivalence scales for family size and composition may not adequately reflect need differences. (CN26, CN32), RV

Issue 16\*

In the Census Bureau's estimates of the numbers of persons in poverty under alternative definitions of income, the calculations utilize the average value for medical benefits received by the recipient population. Given that this distribution includes many very high values and zero expenditures, the summary measure used does not accurately reflect the typical value and tends to overvalue the medical benefit. In calculating the value of housing subsidies for the poor, the Census Bureau using the market value method, derived negative values for 20 percent of the cases. These negative values were disregarded in the calculation of the average subsidy value. This truncation of the distribution of subsidy values inflates the average value. (CM05, CM06), MV

QUESTION 4

What is the quality of the data and data analytic procedures used to derive benefit values?

Issue 17

There are groups of people who are not covered on the decennial census or the current population survey. One a group not

covered and important to the estimates of poverty is the homeless.  
(OP22), all

Issue 18

Income is misreported on surveys. For some groups, income misreporting is widespread. To the extent that income misreporting occurs for the poor population, poverty rates are inaccurate.  
(OP14), all

Issue 19

Many poor persons suffer from temporary periods of income deficiency. In order to mitigate the effects of temporary income deficiency, poor persons claim benefits for periods shorter than 1 year. Since income is measured on an annual basis, part- and full-year program participation are not distinguished in the current population survey for most programs. This practice leads to an overestimate of the part-year participant's income and an underestimate of the number of persons in poverty. (CN18, OP18, OP23, OP27), all

Issue 20

The accuracy of the poverty estimates depends on the data used

in producing those estimates. To the extent that the data are obsolete or of poor quality, the poverty estimates will be inaccurate; the results can be over- or underestimates. (CN27, OP08, OP09, OP10, OP11), all

Issue 21\*

Program participation is misreported on surveys. To the extent that income resulting from program participation is not counted in the calculation of income for poverty measurement purposes, the poverty estimates will be inaccurate. (OP15, CM03), all

Issue 22

Medical benefits (Medicare and Medicaid) are difficult to measure. (CN15, CN28, OP02, OP12), all

QUESTION 5

Are definitions used consistently across key steps of poverty measurement?

Issue 23\*

Comparing an income measurement based on pretax income to an income threshold (such as the poverty threshold) based on posttax income, as is currently done, is inconsistent and inappropriately classifies too few people as impoverished. (CN09, CN12), all

CONCEPTUAL CONCERNS

1. Market value method overvalues benefit worth, especially medical benefits for the elderly.
2. Medical market values for the elderly "eliminate" the elderly from counts of the poor in some states.
3. Market value method lacks "caps" (limits) for need/benefit categories (especially medical).
4. Recipient value method undervalues transfers relative to income.
5. Recipient value method overestimates benefit worth because normal expenditures calculated are at a resource level that equals money income plus the market value of all types of noncash transfers.
6. Poverty budget share captures the "substitution" effect, not the "income" effect, of in-kind benefits.
7. Public or government noncash benefits should or should not be included in official definition of income.
8. Private noncash benefits should or should not be included in the official definition of income.
9. Calculations of income should be on a pretax (or posttax) basis.
10. Medicaid expenditures for institutionalized populations should or should not be included in the income of the noninstitutionalized.
11. Absolute definition of poverty ignore the well-being of the poor relative to national norms.
12. Poverty thresholds should be consistent with income definitions.
13. Current food-to-income "multiplier" is not appropriate when noncash benefits are included in the income definition.
14. Consumer price index does not adequately reflect changes in cost of living for average low-income persons.

15. Changes in medical costs may be independent of changes in services.
16. Assets are not included in the official definition of income
17. Adjustments for work expenses, leisure, and so on are not included in official definitions of income.
18. Lifetime income should or should not be a basis for the official income definition.
19. Current definition of poverty ignore other conceptualizations (consumption, subjection, sociocultural).
20. A single national threshold may be less appropriate than a set of separate thresholds for geographic areas.
21. Medical needs of the elderly should be included in threshold for the elderly.
22. Same valuation methods should be used to (a) determine need and (b) value noncash income.
23. Official minimum-needs standards may be inaccurate and out of date.
24. The recipient value method (utility function) is not meaningful for medical benefits that maintain a subset alive but provide zero net benefit.
25. The appropriate poverty budget share values are undefined because many people (not all poor) receive uncompensated medical care.
26. Receipt of noncash benefits is not an additive function but rather less than that; for each additional benefit, the value to the recipient may be less because there is less flexibility in the family budget.
27. To the extent that federal noncash benefits substitute for previous state, local charitable programs, public hospitals, and so on, post-noncash benefit income is overestimated relative to pre-noncash benefit income.
28. Medicare includes an allowance to hospitals for capital equipment, new buildings, and the training of interns and residents, which is assigned to only the aged who qualify for Medicare.

29. Pension benefits should or should not be treated as income when they are received as opposed to when they are accrued.
30. Attributing benefits to households when the benefits really accrue to individuals can distort the income or poverty classification of individuals, pushing all members of the household over the poverty line instead of a subset of the household.
31. Capital income, savings and debt or interest are not adequately or consistently counted.
32. Equivalence scales for family size and composition may not adequately reflect need differences.



OPERATIONAL CONCERNS

1. Insurance value is used for medical benefits (versus services consumed).
2. Medical goods comparable to Medicare and Medicaid are difficult to identify in the private market.
3. Persons categorically eligible but not enrolled are not accounted for when the "population at risk" is estimated as persons ever enrolled or covered under Medicaid.
4. Normal expenditures are a weak approximation of a utility function.
5. Family cell matching procedure used to estimate normal expenditure risks selectivity bias.
6. Constructing an adequate counterfactual group is difficult.
7. Recipient value method assumes that benefits in excess of normal expenditures have a value of zero.
8. Consumer expenditures survey data used for recipient values are of poor quality.
9. The 1960-61 consumer expenditure survey data used to calculate poverty budget share values are out of date.
10. Quantity and quality of available benefit data are questionable.
11. Quality of HCFA Medicaid data is poor.
12. No adjustment is made for Medicaid benefit difference by race or residence.
13. Private as well as public school children were counted in current population survey as participants in the school lunch program.
14. Income is underreported in the current population survey.
15. Program participation is underreported in the current population survey.
16. Household versus family should or should not be used as income unit.

17. Multiplier used to calculate threshold may be inaccurate under current consumption patterns.
18. Time period for which income is measured (short-term versus long-term) may affect results.
19. "Market basket" has been restricted to private goods and services.
20. All persons receiving cash assistance have been counted as "recipients" of Medicaid, regardless of whether they have received benefits or say they are covered.
21. Medical benefits paid to deceased persons are included in the average benefit value assigned to recipients.
22. Current population survey population coverage may not be adequate
23. For most programs, the current population survey data make no distinction between part-year and full-year participation.
24. Medical market values determined by the Census Bureau's procedures underestimate the true market cost of private health insurance.
25. The insurance approach to valuation of noncash benefits treats Medicaid as if it were a gift of an all or nothing insurance policy. Enrollees are not afforded the option of selecting a less generous policy with the balance received in cash.
26. The underground economy and underground income are currently excluded from the official measures.
27. The CPS data establish household and family membership at the time of the survey interviews, whereas income data refer to the previous calendar year.

COMPUTATIONAL CONCERNS

1. Variance of normal expenditures is suppressed in cell-matching approach (limitation of number of cells).
2. Some regression  $R^2$  values are low (for example, medical values for persons under 65 years old;  $R^2 = 0.07$ ).
3. Imputation methods--for missing data and benefit value--may not be adequate for poverty population.
4. Current poverty rate ignores the extent of income fluctuations around the poverty line.
5. Average, mean medical benefit may be less appropriate than alternative measure of central tendency.
6. Negative values for housing subsidies were assigned a value of zero (truncation).
7. Current methods of valuing Medicaid as an insurance policy differ from private insurance practices--that is, family policies cost the same, regardless of the number of children.