

Experimental Poverty Measures: 1999

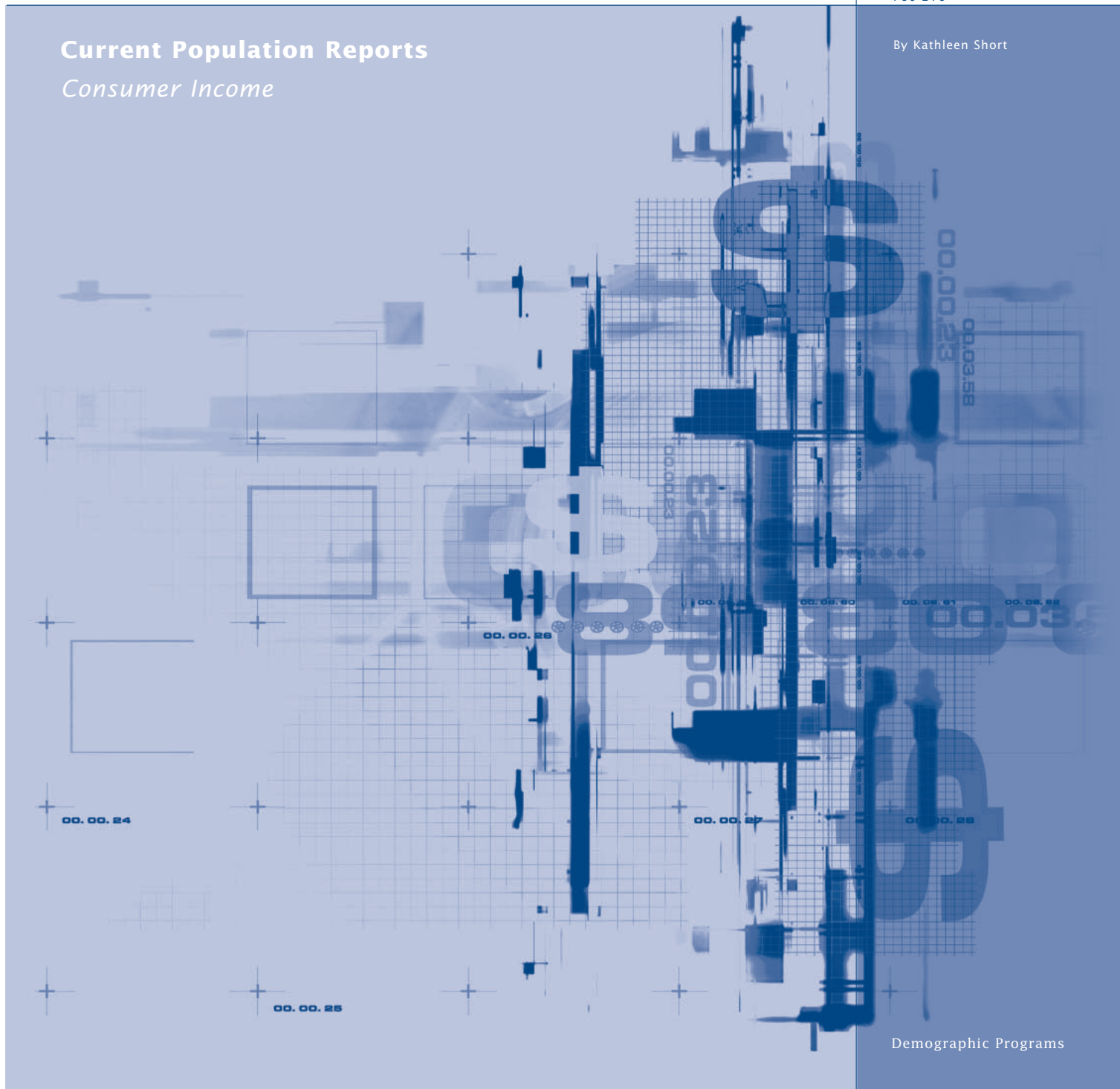
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Current Population Reports

Consumer Income

By Kathleen Short



Demographic Programs

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U.S. Department of Commerce

Donald L. Evans,
Secretary

Samuel W. Bodman,
Deputy Secretary

**Economics
and Statistics
Administration**
Kathleen B. Cooper,
Under Secretary for
Economic Affairs

U.S. CENSUS BUREAU
William G. Barron, Jr.,
Acting Director

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**Economics
and Statistics
Administration**

Kathleen B. Cooper,
Under Secretary
for Economic Affairs



U.S. CENSUS BUREAU

William G. Barron, Jr.,
Acting Director

William G. Barron, Jr.,
Deputy Director

John H. Thompson,
Principal Associate Director
for Programs

Nancy M. Gordon,
Associate Director
for Demographic Programs

Daniel H. Weinberg,
Chief, Housing and Household
Economic Statistics Division

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Experimental Poverty Measures: 1999

EXECUTIVE SUMMARY

This report presents experimental measures of poverty in the United States. These measures are illustrative variations of the recommendations of the *Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods* of the National Research Council of the National Academy of Sciences.¹ This report extends work previously published by the Census Bureau in *Experimental Poverty Measures: 1990 to 1997*.² The experimental measures presented here:

- Incorporate, in a way that the official measure does not, the effects of key government policies aimed at the most needy families in the U.S.
- Use an after-tax income measure
- Add the value of in-kind benefits, such as food stamps, to income
- Take account of expenses that are necessary to hold a job and to obtain medical care.

Key findings from experimental poverty measures presented here and in our last report include the following:

- Due to the Earned Income Tax Credit, deducting taxes from income on balance reduces the percent of people who are viewed as being poor.
- Adding in-kind benefits to income reduces poverty rates, but the reductions from any single program are generally quite small.
- The resulting increase in poverty rates when one accounts for necessary expenses can be substantial but depends on the method used to value those expenses.
- The experimental measures show a poverty population that is more like the total population in terms of socio-economic characteristics than results from using the current official measure.

This report addresses measurement issues and presents alternative ways of accounting for the calculation of work-related expenses including child care, the value of housing

subsidies that is added to income as a noncash transfer, the valuation of medical out-of-pocket spending, and adjustments for geographic cost-of-living differences in the threshold.

Key findings from the measures shown in this report are:

- Experimental poverty rates are more comparable in magnitude to official rates than those reported in earlier studies.
- Updated estimates of work-related expenses, including child care, are lower than those used in previous experimental measures, resulting in lower experimental poverty rates overall.
- Improved methods for including the value of housing subsidies result in increased imputed income for those families who benefit from these programs.
- Estimates of medical-out-of-pocket spending that are based on more recent data and alternative techniques have a considerably smaller effect on experimental poverty measures than those previously reported.
- Alternative geographic adjustments yield slightly higher experimental poverty rates but may provide better estimates of state-level poverty than those presented in the NAS and earlier Census reports.

This report represents continuing work toward improving the official measure of poverty. We invite comments from readers on any of the issues presented in this report.

INTRODUCTION

In the spring of 1995 the National Academy of Sciences (NAS) Panel on Poverty and Family Assistance released a report (Citro and Michael, 1995) that evaluated the current method of poverty measurement in the United States and recommended change. Based on practices from the 1960s, the current official poverty statistics compare before-tax cash income of families to poverty thresholds intended to approximate the cost of basic necessities at that time, updated for inflation since then. Poverty rates published each year by the Census Bureau (Dalaker and Proctor, 2000) represent the proportion of individuals whose family incomes are below the poverty thresholds.

The NAS panel recommended changing the definition of both the poverty thresholds and the family resources that are compared with those thresholds to determine poverty

¹Citro, Constance F. and Robert T. Michael (eds.), *Measuring Poverty: A New Approach*, Washington, DC: National Academy Press, 1995.

²Short, Kathleen, Thesia Garner, David Johnson, and Patricia Doyle. *Experimental Poverty Measures: 1990 to 1997*, U.S. Census Bureau, Current Population Reports, Consumer Income, P60-205, U.S. Government Printing Office, Washington, DC, 1999.

status. The NAS panel further suggested several improvements to the current official poverty measures, aimed at producing a measure of economic well-being that was more accurate in portraying the kinds of families and individuals facing serious income hardship in the U.S. The panel recommended a revised measure of poverty, hereinafter referred to as the NAS measure, based on two sets of considerations:

Poverty threshold recommendations. The NAS panel recommended that the poverty thresholds should represent a dollar amount for a basic set of goods that includes food, clothing, shelter (including utilities), and a small additional amount to allow for other needs (e.g., household supplies, personal care, nonwork-related transportation). This threshold should be developed first for a reference family of two adults and two children using Consumer Expenditure Survey data, and it should be adjusted (using a specified equivalence scale) to reflect the needs of different family types and geographic differences in housing costs. Adjustments to thresholds should be made over time to reflect real growth in expenditures on this basic bundle of goods.

Family resource recommendations. The NAS panel recommended that family resources should be defined as the value of money income from all sources, plus the value of near-money benefits that are available to buy the basic bundle of goods, minus necessary expenses for critical goods and services not included in the thresholds. Near-money benefits include food stamps, subsidized housing, school lunches, and home energy assistance. Necessary expenses that must be subtracted include income taxes, Social Security payroll taxes, child care and other work-related expenses, child support payments to another household, and household contributions toward the costs of medical care and health insurance premiums, or medical out-of-pocket costs (MOOP).

One of the goals of the NAS panel was to produce a measure of poverty that explicitly accounted for government spending aimed at alleviating the hardship of low-income families. Thus, taking account of tax and transfer policies, such as the food stamp program and the earned income (tax) credit (EIC), in the measure can show the effects of these policies on various targeted subgroups, for example, families with children. The current official measure, which does not explicitly take account of these benefits, yields poverty statistics that are unchanged regardless of changes in those policies.

In the summer of 1999, the Census Bureau released a report on experimental poverty measures covering the 1990-97 period (Short et al., 1999). That report presented a set of experimental poverty measures based on recommendations of the 1995 NAS panel report. Some additional variations on that measure were included in order to shed light and generate discussion on the various dimensions included in the proposed revision. The report also

examined the effects of each part of the recommendations, plus reasonable alternatives. Estimates of poverty rates using these experimental measures were calculated from 1990 through 1997 to examine the different trends that would have been observed. Comparisons were also made across various demographic subgroups in order to illustrate how their poverty rates were affected by the different measures.

That work suggested that with these new measures a somewhat different population would be identified as poor. This new group of poor would consist of a larger proportion of elderly people, working families, and married-couple families than are identified by the official poverty measure. Trends in poverty rates, however, were similar to those found using the official measure, except for a somewhat steeper decline in poverty rates during the recent economic expansion and following expansion of the EIC program.

The official poverty report, released in fall of 2000 by the Census Bureau, updated estimates through 1999 for a subset of these experimental measures. Table A shows poverty rates based on these measures with each column representing a different way of calculating the experimental thresholds:

- Column one shows *standardized* poverty rates for 1999. The experimental thresholds used in those calculations were computed for 1997 using the Consumer Expenditure Survey (CE) in the manner recommended by the NAS panel and updated from 1997 with the Consumer Price Index (CPI-U). Also, these estimates were *standardized*, or set equal to, the official poverty rate for all people in 1997. Any differences in these rates across measures represent different trends in the measures since 1997. Note that poverty rates based on the experimental measures are not very different from the official poverty rate.³
- Column two shows the *unstandardized* rates. (More detailed estimates for these CPI-based measures are available in detailed Tables 1-1 to 1-3 and 2-1 to 2-3.)
- Columns three and four in Table A are based on experimental thresholds calculated with more recent CE data for 1999. For each of the years following 1997, these thresholds have been calculated using expenditure data referring to each of these time periods. Thresholds based on CE data have increased more than the CPI since 1997, and thus poverty rates based on CE thresholds are slightly higher than those updated for price changes only (see Technical Appendix and detailed Tables 3-1 to 3-3 and 4-1 to 4-3 for details).

The official poverty rates are compared with the following experimental poverty measures in Table A:

³These estimates differ slightly from those published in *Poverty in the United States: 1999* because of a correction to the experimental thresholds. See the Technical Appendix for details.

- The NAS measure that most closely implements the NAS panel's recommendations.
- The DCM (Different Child Care Method) uses a different method of calculating the cost of child care while parents work. This difference from the NAS measure results in higher poverty rates because this method assumes that all working parents with children must find suitable arrangements for their care while working.
- The NGA (No Geographic Adjustment) experimental measure does not adjust thresholds for geographic differences in costs of living. Poverty rates adjusting for differences in housing costs by place, as the NAS measure does, are slightly lower than the NGA measure that does not. This suggests that there are more families living in lower-cost areas who move from poor to nonpoor than there are families in high-cost areas who are classified as poor when housing costs are considered.
- The DES measure, uses a Different Equivalence Scale from the NAS measure to adjust for changes in expenses as family size increases or the number of children and adults in the family differs. Generally, an equivalence scale accounts for the fact that economies of scale result from the sharing of resources among more people. As shown in the table, the DES measure employs an equivalence scale that results in a somewhat higher threshold, and thus higher poverty rates, than the NAS measure. Details on these methods are available in the Technical Appendix and in Short et al., 1999. Time-series estimates of poverty rates using these measures from 1990 are presented in detailed Tables 5-1 to 5-25.

three-parameter equivalence scale used in the DES measure, rather than the two-parameter scale recommended by the NAS panel. An equivalence scale is used in a poverty measure to take account of differences in costs due to differences in family size and composition. The cost of food and clothing, for example, would be higher for a family of four than a two-person family, but not twice as high. The equivalence scale makes this adjustment.

The NAS panel originally employed a two-parameter scale in its illustrative calculations. The three-parameter scale, used in the DES measure, has been shown to more adequately represent the relative needs of families with and without children, and it is generally agreed that this scale should be used (Betson, 1996, Short et al., 1999, and Open Letter, 2000). For this reason, the next section of this report uses the DES measure as the main comparison measure. This report continues to use the March 2000 Annual Demographic Supplement to the Current Population Survey (CPS) to compute poverty rates for 1999.

NEW MEASURES

The measures presented in this report draw upon the considerable research and discussion that followed publication of the first report. A series of papers (available on the Census Bureau Web site) have presented improved methods for computing the various dimensions of the poverty measure, including

- The calculation of work-related expenses including child care
- The value of housing subsidies that is added to income as a noncash transfer
- The valuation of medical out-of-pocket spending
- Adjustments for geographic cost-of-living differences in the threshold. These elements are addressed individually in this section.

Beginning with the DES measure, then, this section of the report will discuss each new item in turn, incorporate each item in the DES measure separately, and compare the newer version with the DES measure before the change. This shows the differences that are observed in poverty rates after each change. For each item there is a brief discussion of the concept and the changes being incorporated. (For further details, see the Technical Appendix and the relevant papers cited.)

Work-Related Expenses Including Child Care

The NAS panel recommended that expenses necessary to work should be subtracted from family income before determining poverty status. The panel suggested one that subtracted a flat weekly amount for these expenses for each week worked. These expenses were restricted to not exceed the lowest-paid person's earnings (where all adults worked). The NAS panel used data from the 1987 Survey

Table A. **Poverty Rates Calculated Using Various Measures: 1999**

Characteristic	Consumer price index-based thresholds		Consumer expenditure-based thresholds	
	Standardized ⁵	Unstandardized	Standardized ⁵	Unstandardized
Official	11.8	11.8	11.8	11.8
NAS ¹	11.7	13.7	12.2	14.4
DCM ²	11.9	14.3	12.4	15.0
NGA ³	11.6	14.0	12.2	14.6
DES ⁴	11.7	14.2	12.2	15.0

¹NAS: National Academy of Science proposed measure

²NAS measure with child care method based on SIPP medians

³NAS measure with no geographic adjustment

⁴NAS measure with different equivalence scale (three-parameter equivalence scale).

⁵Experimental measures adjusted to equal official poverty rates for all people in 1997

Source: U.S. Census Bureau, March 2000 Current Population Survey.

Since the release of the Census Bureau report on experimental measures in 1999, there has been increasing consensus among poverty researchers concerning the use of a

of Income and Program Participation (SIPP), the most recent data then available, to obtain an estimate of the median value of work expenses of \$17.12 (in 1999 dollars) for each week reported working by each person in the family.

Responding to the fact that these data were relatively out of date, the Census Bureau introduced a new set of questions on work-related expenses in the 1996 SIPP. These data were used to compute a new estimate of weekly median expenses. The amount estimated from these newer data is very similar to the previously estimated dollar amount; in fact, at \$16.83 per week in 1999, it is a bit lower than the previously employed figure.

Child care expenses while parents work are more difficult to determine. The NAS panel modeled child care expenses in their measure using information from the 1990 SIPP. They used a two-step procedure for each of two separate groups — two-parent families where both parents worked, and single parents who worked. The first step of the calculation established the probability that a family had incurred child care expenses. If the family was determined to have incurred expenses, then the second step subtracted an estimated dollar amount from the income of the family before determining poverty status.

Responding to the lack of information on child care expenses, the Census Bureau added to the CPS in 1999 to elicit information from the household about whether they had paid for child care while they worked. While these data can now be used to determine whether a CPS family incurred child care expenses, it is still necessary to model amounts spent. This measure uses an improved model similar to the NAS model (see Technical Appendix and Iceland and Ribar, 2001, for details).

When work-related expenses are based on these newer data, the poverty rate falls from 15.0 percent to 14.8 percent. This decline reflects the fact that fewer families are assigned child care expenses with the new CPS question and other work-related expenditures are calculated using an amount that is slightly lower per week. (See Figure 1 and detailed Tables 6-1 to 6-3).

Housing Subsidies

The Census Bureau values housing subsidies and releases estimates of these values every year with the March CPS Supplement. While the CPS collects information on whether a household is in a public or subsidized housing unit it does not collect information on the value of the subsidy received. Currently, the Census Bureau data from the 1985 American Housing Survey (AHS) to calculate subsidy amounts and then assigns values in the CPS based on region, family income, and family size. Each year these amounts are adjusted according to a price index for rents.

There is some general agreement that these valuations underestimate the actual value of subsidies received and

that more recent data should be used to update these values.⁴ Furthermore, there is agreement that, while the value of a housing subsidy can free up a family's income to purchase food and other basic items, it will only do so to the extent that it meets the need for shelter. Thus, while the new approaches presented here revise the values for housing subsidies upward with more recent data, the values are limited to the proportion of the threshold that is allocated to shelter costs. From estimates based on threshold calculations from the CE, this limit is set at 44 percent of the calculated experimental threshold for each family.

Two new housing subsidy valuation methods are presented here. The first application uses Fair Market Rents (FMRs) to value housing subsidies.⁵ In this method, the FMR represents the market rent for a metropolitan or non-metropolitan territory in a given state. Given the average FMR for each state by metropolitan status, subsidy amounts are calculated by subtracting 30 percent of household income from market rent, based on program rules. Poverty rates fall when these subsidies are added to family income. The resulting subsidy estimates are considerably higher than subsidy amounts estimated under the old method, and, even when limited to not exceed 44 percent of the poverty threshold, bring the overall poverty rate down from 15.0 percent to 14.4 percent (see Figure 1 and detailed Tables 6-1 to 6-3.)

A second method of valuing housing subsidies has been calculated using 1999 AHS data. The calculation method differs considerably from the previous method, including a statistical matching procedure that imputes market rent for individual housing units. Because this method results in subsidy values that are lower than those resulting from the FMR calculations, the poverty rate does not decline as much as it does using FMRs. The overall poverty rate is 14.6 percent using this 1999 AHS-based valuation method, 15.0 percent using the current (1985 AHS-based) valuation method, and 14.4 percent with the FMR method. (See Figure 1 and detailed Tables 6-1 to 6-3.)

Medical Out-of-Pocket Expenses (MOOP)

The NAS panel was aware that expenditures for health care are a significant portion of a family budget and have become an increasingly larger budget item since the 1960s. The panel considered including health care in the thresholds with food, clothing, and shelter needs, but decided against it. They argued that medical care needs differ from the need for food or housing in that not every family requires medical care in a given year, but when they do, the associated costs may be extraordinarily large. They concluded that it would be impossible to capture the

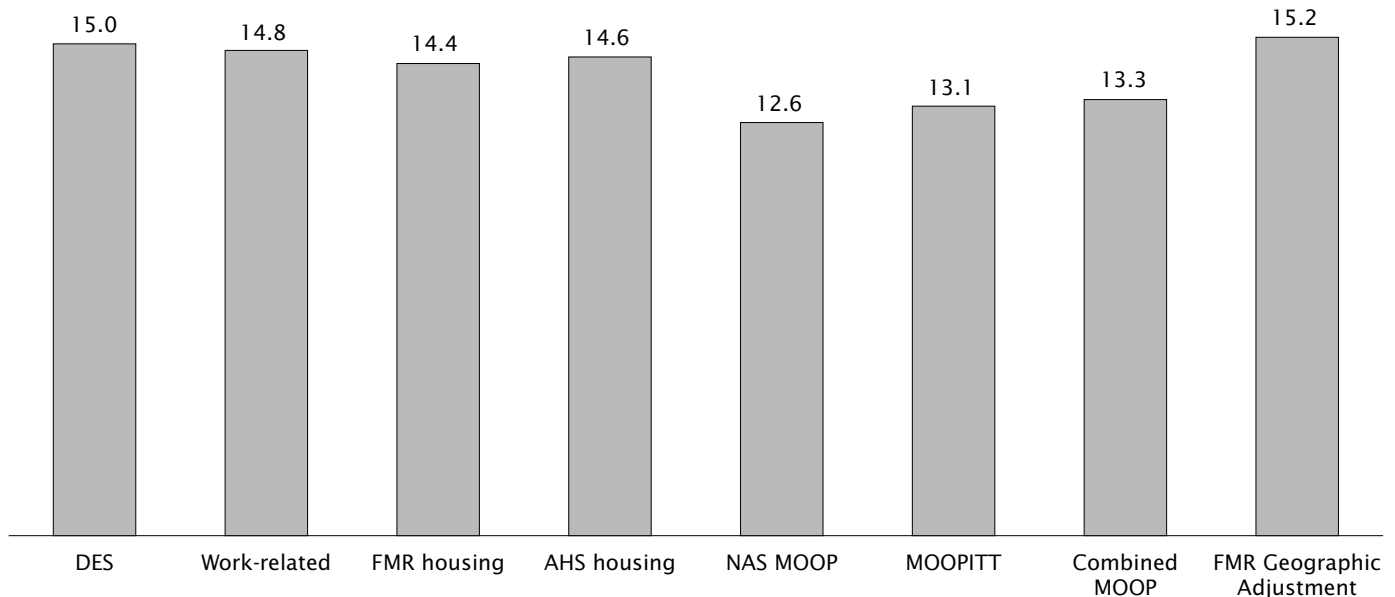
⁴Steffick, 1993.

⁵Fair Market Rents are used to set reimbursement levels for Section 8 housing vouchers given to low-income families trying to find adequate affordable housing in the private rental market.

Figure 1.

DES Experimental Poverty Measure With Variations: 1999

(Percent poor)



Notes: NAS = National Academy of Sciences, DES = NAS measure with different equivalence scale, FMR = Fair market rents, AHS = American Housing Survey, NAS MOOP = Medical out of pocket expenses subtracted from income, MOOPITT = MOOP in the threshold

Source: U.S. Census Bureau, March 2000 Current Population Survey.

actual variation of medical needs by variations in the thresholds and that this could lead to what the panel termed “erroneous poverty classification.” Instead, they developed a method that was intended to represent “actual” MOOP spending. These expenses include the payment of health insurance premiums plus other medically necessary items such as prescription drugs and doctor copayments that are not paid for by insurance. Subtracting these “actual” amounts from income, like taxes and work expenses, leaves the amount of income that the family had available in 1999 to purchase the basic bundle of goods (food, clothing, shelter, and utilities (FCSU) and a “little bit more”).

That method used data from the 1987 National Medical Expenditure Survey (NMES) to model expenses that were then subtracted from family income. One criticism of the method was the outdated nature of the data, particularly in the area of health care spending, which has seen considerable changes in recent years. For this reason, David Betson (University of Notre Dame) has reestimated the valuation procedure using more recent data from the 1996 and 1997 CE.⁶ He also incorporated considerable improvements to the calculation including respecification of the model used to calculate MOOP amounts (see Betson,

⁶More recent data on medical spending including health insurance premiums are not yet available from the Medical Expenditure Panel Survey.

2001). Betson also recommends no adjustment to a national benchmark total, such as was done in the earlier version of the MOOP model. When this newer NAS valuation method is employed, the poverty rate falls to 12.6 percent from 15.0 using the older MOOP estimate included in the DES measure. (See Figure 1 and detailed Tables 6-1 to 6-3.)

Thus far, the Census Bureau has only employed the NAS method of valuing MOOP in our examination of experimental poverty measures. However, the NAS recommendations have raised issues of implementation (see Bavier, 1999 and Bavier, 2000). Their treatment of medical needs would require surveys and administrative data sets either to ask families directly and extensively about out-of-pocket medical expenditures or, as was done for the earlier report, to use statistical methods to assign amounts to each family. In light of both the conceptual and practical issues raised by the panel’s proposal for handling medical needs, this report includes an alternative treatment. This treatment parallels the panel’s recommendations for poverty thresholds based on expenditures for food, clothing, shelter, and a little more, but adds “expected” out-of-pocket medical spending to those thresholds (see Banthin et al., 2001).

This second method of accounting for medical needs produces a set of “expected” amounts of medical spending for a broad set of families. Using quarterly data from

the CE and from the 1996 Medical Expenditure Panel Survey (MEPS), a threshold for food, clothing, shelter, and out-of-pocket medical expenses (FCSUM) is calculated for different family types based on differences in health insurance coverage, self-reported health status, presence of elderly family members, and family size. In addition, since these figures represent “expected” spending, they include an adjustment for the uninsured, whose need for health care may exceed their “actual” spending. Adding these expenses to thresholds rather than subtracting them from income changes poverty rates considerably. Overall, the poverty rate falls from 15.0 percent to 13.1 percent when we change the method of valuing MOOP to this “MOOP in the threshold” (MOOPITT) measure. This estimate lies between the estimate using the old and that using the revised NAS MOOP method. (See Figure 1 and detailed Tables 6-1 to 6-3.)

A final approach to valuing medical expenses is to combine the two approaches above into a single measure. This combined approach includes the addition of an “expected” MOOP value in the thresholds in a way similar to the measures described above. The next step is to calculate the difference between an estimate of MOOP that preserves the inherent variation, such as the method used by the NAS panel, and the “expected” MOOP value that has been added into the thresholds. This *net* MOOP amount is then subtracted from family income.

This method has the advantage of including medical needs in the poverty threshold (thus allowing the threshold to represent a broader range of needs), while, at the same time, replicating the actual MOOP distribution by accounting for the substantial variation that typifies the observed distribution of MOOP in the population. While MOOP is included in the poverty thresholds in this measure, families with unexpectedly large MOOP expenses are more appropriately classified as poor, while families with unexpected good health are characterized as being better off than they otherwise would be if an expected value approach is used alone. Doing this reduces the poverty rate overall from 15.0 percent to 13.3 percent, suggesting that, according to these calculations, individuals experienced slightly higher than expected health care costs on average in 1999. (See Figure 1 and detailed Tables 6-1 to 6-3.)

Geographic Indexes for Thresholds

The NAS panel calculated a set of indexes used in their report as well as in Short et al., 1999, to take account of geographic differences in cost of living. The panel stated that their indexes, while an improvement over the current official thresholds that take no account of these differences, could be improved upon with better data and valuation methods. This report includes a different valuation procedure that employs Fair Market Rents (FMRs) prepared

by the Department of Housing and Urban Development for 1999. While problems still remain, using FMRs does improve upon the panel’s procedure (see the Technical Appendix and Short, 2001).

The primary difference between the indexes used by the NAS report and those used here comes from the panel putting counties into 41 groups by census division and population size of metropolitan area, versus the FMR method putting counties into 100 groups, two numbers for each state and the District of Columbia. These numbers correspond to metropolitan and nonmetropolitan status within each state. This method allows for more heterogeneity of prices and leads to a slightly higher poverty rate (15.2 percent in 1999) than the panel’s index (15.0 percent in 1999, see Figure 1 and detailed Tables 6-1 to 6-3).⁷

NEW MEASURES—PUTTING THE PIECES TOGETHER

Description of Measures and Poverty Rates

This section combines several of the newer estimation methods together in a new set of six experimental poverty measures. All of these new measures, like those in the previous section, begin with the DES measure and then change the combination of elements as listed below.

Therefore, in this section, as in the previous one, *the DES measure serves as the point of comparison*. These measures combine new work-related expenses including the new method of valuing child care with geographic cost-of-living adjustments to the thresholds. They then use the various methods of valuing housing subsidies and out-of-pocket medical expenses. The new measures are:

MSI = new work-related expenses, housing subsidies using FMRs, new NAS MOOP, and new geographic adjustments.

MSI-AHS = new work-related expenses, housing subsidies using AHS, new NAS MOOP, and new geographic adjustments.

MSI-NGA = new work-related expenses, housing subsidies using FMRs, new NAS MOOP, and no geographic adjustments.

MIT = new work-related expenses, housing subsidies using FMRs, MOOP in thresholds, and new geographic adjustments.

CMB = new work-related expenses, housing subsidies using FMRs, combined MOOP method, and new geographic adjustments.

MSI-CPI = new work-related expenses, housing subsidies using FMRs, new NAS MOOP, and new geographic adjustments, but uses CPI-based threshold updating method from 1997 to 1999.

⁷These figures use CE-based thresholds to update from 1997 to 1999. Comparable CPI-based measures are found in detailed Table G.

The first three measures, MSI (MOOP Subtracted from Income) and the variations MSI-AHS and MSI-NGA, represent measures for which MOOP is subtracted from income. All of the measures use FMRs to value housing subsidies except MSI-AHS, which uses the alternative estimates from the AHS. All of the new measures adjust thresholds using geographic indexes, except MSI-NGA, which has no geographic adjustment. The MIT measure accounts for MOOP in the Thresholds only and the CMB measures both subtracts MOOP from income and includes MOOP in the threshold.

The last measure, MSI-CPI, is the same as the first, MSI, but uses the 1997 FCSU (food, clothing, shelter, and utilities) threshold that has been updated to 1999 with the Consumer Price Index (CPI-U). A CPI-based measure is shown here only for the MSI measure to illustrate the effect of updating thresholds with the CPI-U, as is done with the official measure of poverty, rather than reestimating the thresholds annually with CE data. (There are no experimental MOOPITT thresholds available for 1997.)

Table B and Figure 2 show poverty rates based on these new experimental measures. Overall poverty rates are considerably lower than with the DES measure because of

the smaller work-related expenses, the lower estimates of MOOP, and the higher valued housing subsidies using the newer methods. The first of these experimental measures, MSI, starts with the DES measure but includes the newly measured work-related expenses, updated housing subsidies valued using FMRs, geographic adjustments based on FMRs, and MOOP values using the updated NAS model. The experimental poverty rate for all people using CE-based thresholds and this combination of methods is 12.0 percent, quite a bit lower than the DES measure of 15.0 percent and nearly equal to the official rate of 11.8 percent for all people. (The comparable measure using CPI-based thresholds, MSI-CPI, is lower than the official measure, 11.3 percent poor in 1999.)

Poverty rates calculated using these experimental measures differ as expected given the previous discussions. All are below the DES measure, with the four measures using the updated NAS MOOP method being the lowest, from 11.3 percent to 12.3 percent. The measure with MOOP in the threshold, MIT, yields a slightly higher poverty rate, 12.6 percent; and the measure combining these two, CMB, is numerically the highest, at 12.7 percent poor.

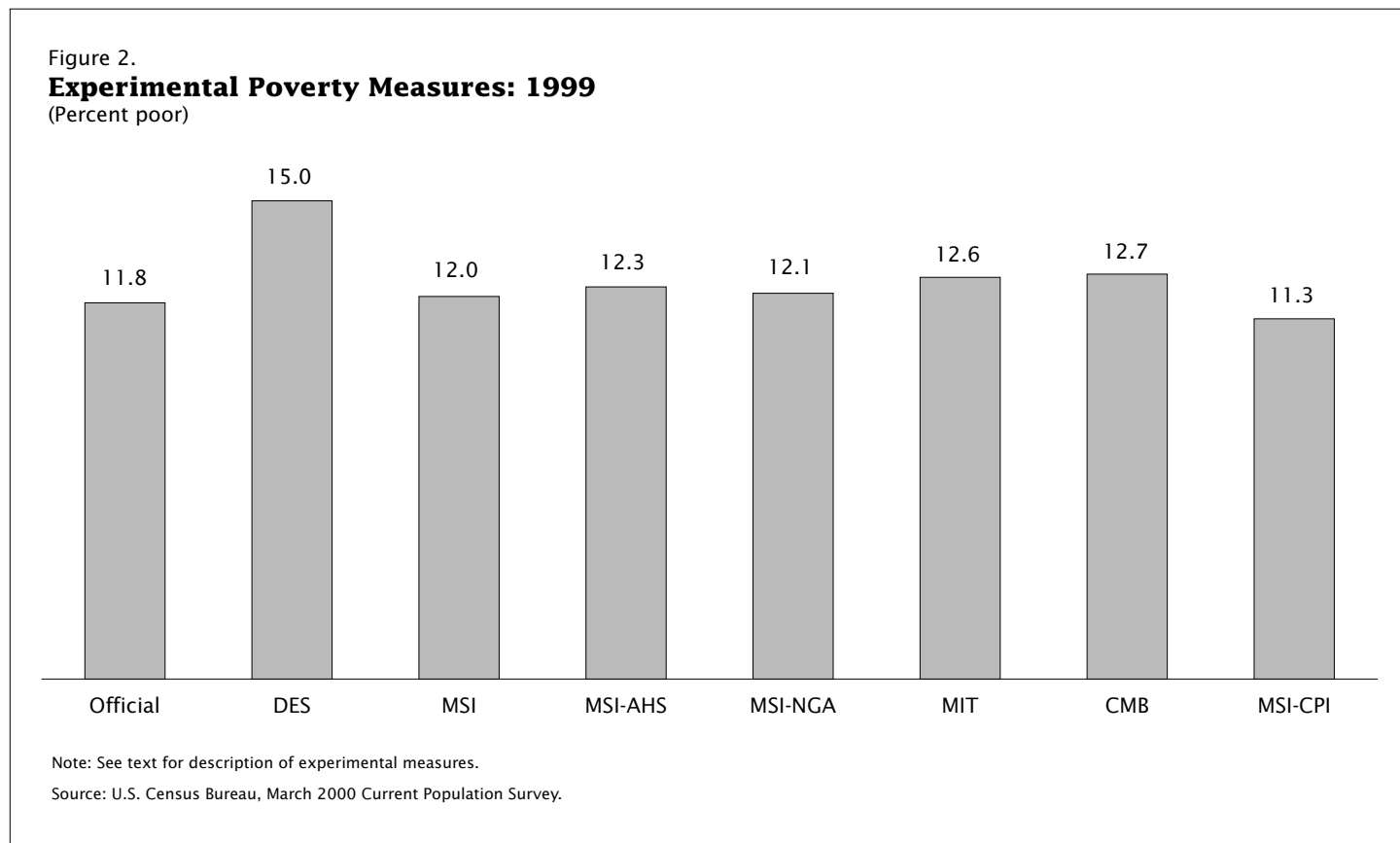


Table B. Poverty Rates Under Official and Experimental Poverty Measures: 1999

Characteristic	Number poor	Percent poor
Official	32,258	11.8
DES	40,895	15.0
MSI	32,825	12.0
MSI-AHS	33,552	12.3
MSI-NGA	33,082	12.1
MIT	34,434	12.6
CMB	34,830	12.7
MSI-CPI	31,005	11.3

Note: See text for description of experimental measures.
 Source: U.S. Census Bureau, March 2000 Current Population Survey.

Distribution of the Poverty Population

While the level of poverty overall differs among the various measures, differences in the makeup of the poverty population by various demographic and socioeconomic characteristics may be more important. As the panel showed in their report, the experimental measures tend to present a poverty population that looks more like the total population in terms of the type of individuals who are indicated as poor. This section examines the makeup of the poverty population by demographic subgroups. By comparing the official measure with the experimental measures, or comparing the experimental measures against each other, it is possible to show how methods for measuring poverty affect the perception of who is poor.

Figure 3 shows the proportion of the population under 18 years old using the different measures. The first column shows that children constitute 26.2 percent of the total population and a much larger percentage of the poverty population, particularly using the official measure. Under that measure, 37.5 percent of the poor are children below the age of 18. However, under the experimental measures, that percentage falls to about 31 to 32 percent of the poor because transfer programs aimed at alleviating poverty in families with children are taken account of explicitly in all of the experimental measures.

Figure 4 shows the percentage of the population that is elderly and reveals a more dramatic change in the opposite direction. While the elderly were underrepresented in the poverty population using the official measure, they make up a larger percentage of the poor under most of the experimental measures. Overall, about 11.9 percent of the total population is 65 years old and over, with only 9.8 percent of the official poor in that age group. However, based on the experimental measures that account for relatively large medical out-of-pocket expenses, the elderly constitute 14 to 15 percent of the poverty population, except using MIT, which measures poverty by including MOOP in the threshold. In that case, the elderly are 12.1 percent of the poor.

African Americans are another group for whom representation in the poverty population changes with the experimental measures. Figure 5 shows the distribution of

this group as a percent of the total, and illustrates that for each of the poverty measures, Blacks typically make up a larger percentage of the poverty population than the total population. However, they constitute a lower percentage—around 22 percent—under the experimental measures than under the official measure, 25.9 percent. In comparison, White-not-Hispanic individuals are a slightly larger part of the poor using the experimental measures, about 50 percent as compared with 46.1 percent using the official measure (see Table 8-2).

Hispanics made up 11.9 percent of the total population in 1999 and 23.1 percent of the official poor (Figure 6). Their representation in the poverty population increases somewhat under the experimental measures, particularly under the MIT measure, which shows that Hispanics are 25.3 percent of the poor. Under the other experimental measures with a geographic adjustment the proportion is somewhat lower, about 24 percent. This result reflects the fact that when we include MOOP in the threshold we are also making an adjustment for a lack of health insurance. Since Hispanics are more likely to lack health insurance than other groups (see Mills, 2000), this adjustment shows up here as a slightly greater probability of being poor. Most notable, however, is the MSI-NGA measure, which is the only measure presented here that does not adjust for geographic differences in housing costs. This result suggests that Hispanics tend to live where housing costs are higher.

CONCLUDING REMARKS, FUTURE RESEARCH, AND DATA NEEDS

This report extends previous experimental poverty measures by taking advantage of more recent information from the 1999 American Housing Survey, the 1996 panel of the Survey of Income and Program Participation, the March 2000 Current Population Survey, the 1996 Medical Expenditure Panel Survey, the 1996 to 2000 Consumer Expenditure Surveys, and 1999 Fair Market Rents from the Department of Housing and Urban Development.

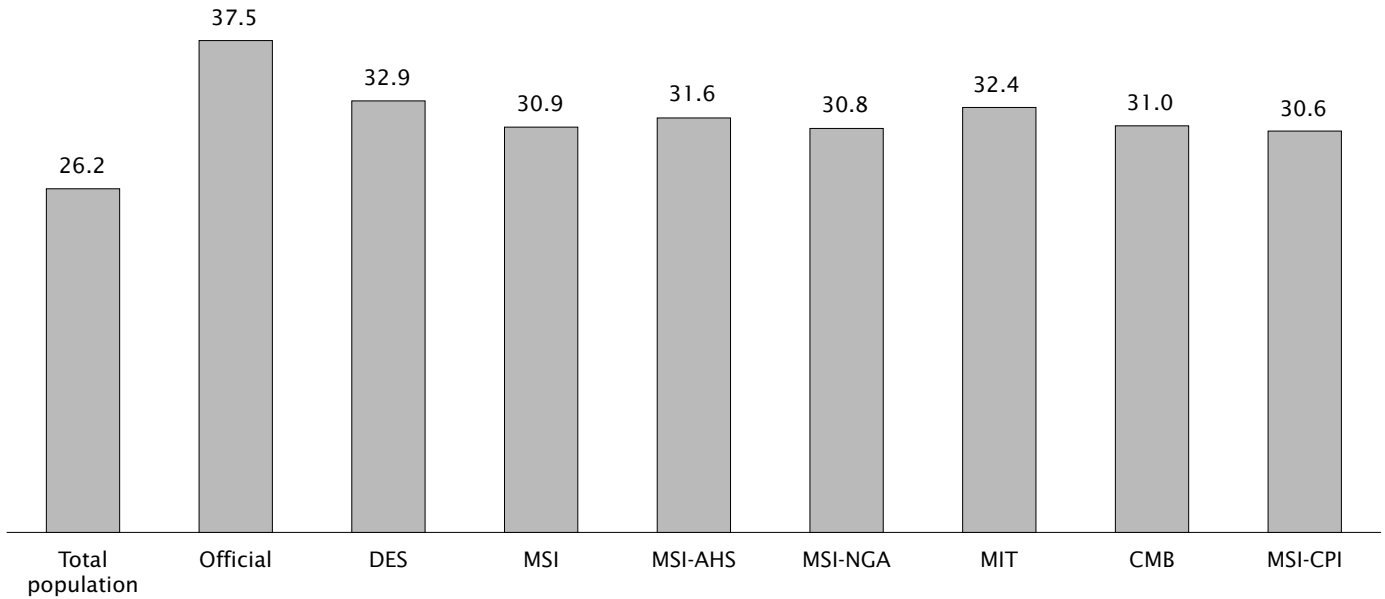
While the methods discussed here are considered to be improvements over the previously published experimental poverty measures, most of the changes represent only small measurement variations on the originally designed measure as prescribed by the National Academy of Sciences panel. Variations from the NAS proposals all retain the basic structure but explore alternatives that reflect remaining measurement or conceptual issues.

Overall, we believe the measures presented in this report represent an advance in consideration of the NAS recommendations for experimental poverty measures. However, improved implementation does not affect most of the previous conclusions about the relative incidence of poverty for various subgroups. These measures, like the measures in the NAS report and the previous Census Bureau report on experimental poverty measures, show

Figure 3.

Children as a Percent of the Total and Poverty Population Using Experimental Poverty Measures: 1999

(Percent of population)

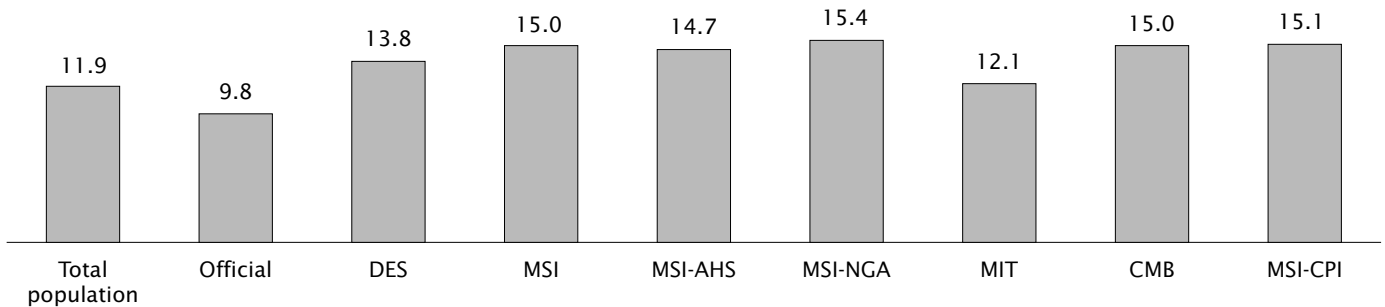


Source: U.S. Census Bureau, March 2000 Current Population Survey.

Figure 4.

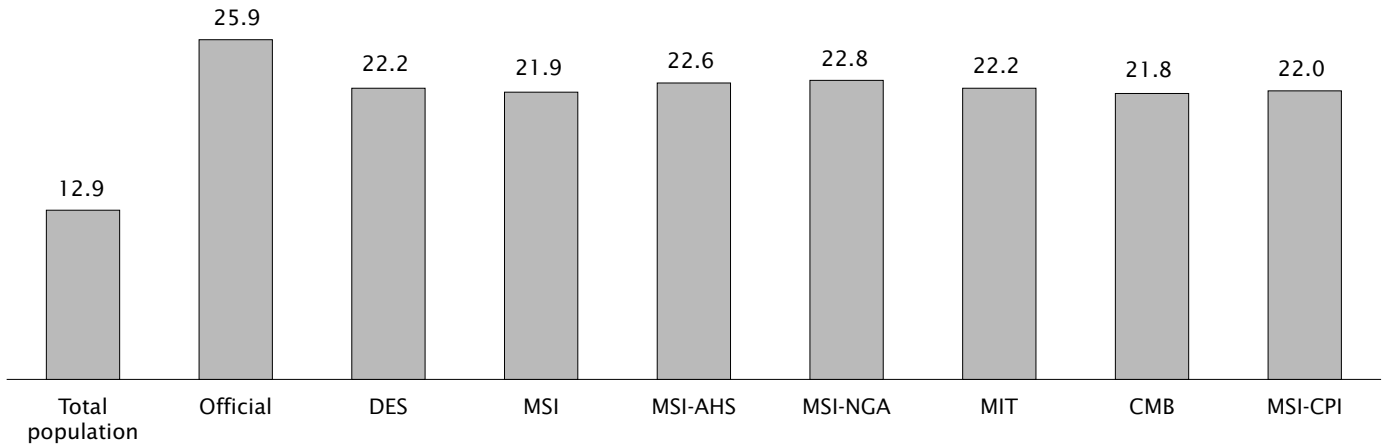
Elderly as a Percent of the Total and Poverty Population Using Experimental Poverty Measures: 1999

(Percent of population)



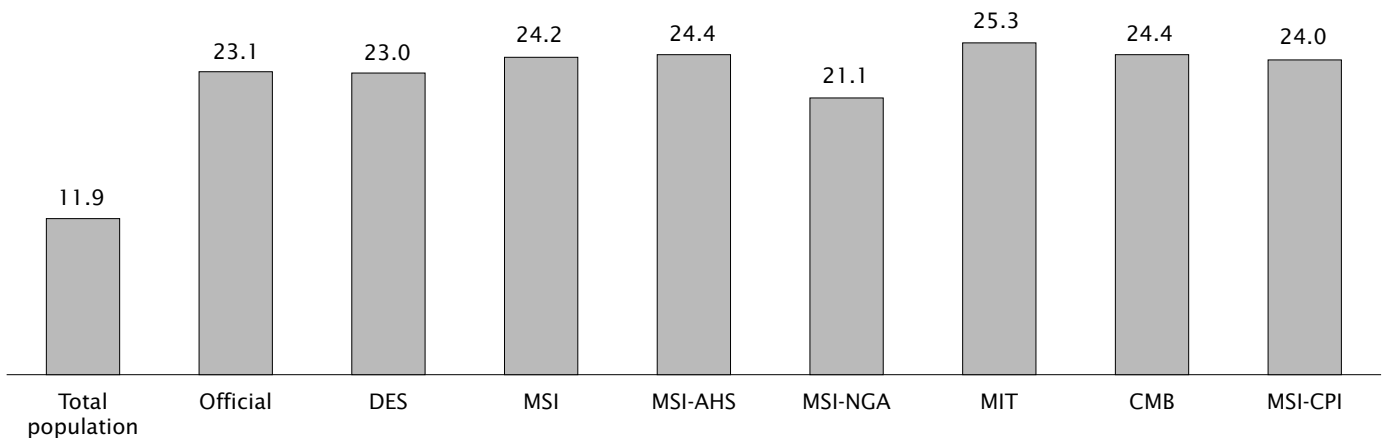
Source: U.S. Census Bureau, March 2000 Current Population Survey.

Figure 5.
Blacks as a Percent of the Total and Poverty Population Using Experimental Poverty Measures: 1999
 (Percent of population)



Source: U.S. Census Bureau, March 2000 Current Population Survey.

Figure 6.
Hispanics as a Percent of the Total and Poverty Population Using Experimental Poverty Measures: 1999
 (Percent of population)



Source: U.S. Census Bureau, March 2000 Current Population Survey.

that there are more elderly, more married-couple families, more families in the West and Northeast, and in suburban areas, classified as poor than are currently identified with the official poverty measure.

Further Research Areas

Two more general issues for further research are the treatment of cohabitants in the unit of analysis and the treatment of the flow of services from owner-occupied housing. These areas were discussed in our last report, and remain on our research agenda for further improvements to a poverty measure.

The unit of analysis. The NAS panel recommended that the definition of family should be broadened for the purposes of poverty measurement to include cohabiting couples and their children, and that research should be conducted on the extent of resource sharing among roommates and other household and family members to determine if the unit of analysis should be modified further. This research, as recommended by the panel, should include an assessment of the effects on poverty rates of changing the unit of analysis by treating cohabiting couples as “families.”

The panel noted that while cohabiting couples, roommates, and other household members benefit from economies of scale, the current measure overstates the poverty rate for such people. The panel also noted that cohabiting couples typically pool resources, and many exhibit considerable stability in their living arrangements, so that it makes sense to treat them like married-couple families for purposes of poverty measurement.

Our previous report pursued the panel’s recommendations regarding the family definition used to measure poverty by implementing four new units of analysis (see Short et al. 1999). Further work in this area (see Iceland, 2000) extends the measures presented in that report. Additional research is planned to evaluate questions added to the 2001 SIPP that concern the sharing of expenses among members of a household. These questions are similar to those already used in the CE to determine a consumer unit.

Owner-occupied housing. Accounting for the flow of services from owner-occupied housing would affect both thresholds and resources. As noted by the panel, economists have long argued that the economic resources for owners and renters should be treated comparably because the resources available are related to a household’s expenses. For example, if the household owns its home without a mortgage, then more money is available to purchase other needed goods and services. This study defines thresholds using the out-of-pocket shelter expenses reported (not including the reduction in mortgage principal) by the reference units for both renters and owners.

For homeowners with high or no mortgage payments or other expenses, out-of-pocket shelter expenditures can differ substantially from those paid by renters. The NAS panel noted that this difference could be taken into account if a measure were developed indicating the amount that homeowners would pay if they were renting their homes.⁸ This could be used as a proxy for the flow of services from housing. This measure, the estimated shelter costs for owner occupants, could replace the owner’s out-of-pocket expenditures on the threshold side. To balance this, a measure of the implicit income of homeownership should be included in the incomes of homeowners to adjust for their advantaged situation regarding housing costs. The NAS panel used an out-of-pocket measure for “processing convenience,” but their preferred approach would account for the cost of the flow of services for homeowners.⁹

The Census Bureau publishes annually a poverty measure that includes a measure of net return to home equity for homeowners. This value represents the hypothetical income that a household would receive if it chose to shift the amount held as home equity into an interest-bearing account. Although this measure provides a basis for illustrating the potential importance of developing and implementing a well-founded measure of imputed rent, it is not complete. It is not consistent with a threshold measure that only counts out-of-pocket expenses as reported in the CE.

The previous report included a measure that substituted out-of-pocket shelter expenditures with estimated rental shelter costs for homeowners in the calculation of thresholds and that added net return to home equity to resources (Short et al., 1999). That calculation made the poverty measure consistent, because both the resource and threshold sides accounted for the implicit costs and the implicit income of homeownership. However, further refinement of these measures is an item for continued research (see Garner and Rozaklis, 2001, for some additional insights).

In addition to accounting for imputed shelter costs for homeowners, this method would also allow us to value the total cost of subsidized housing in our thresholds, rather than the out-of-pocket costs that would be counted without this imputation. This method of constructing the thresholds would also be consistent with the addition of housing subsidies received as income on the resource side, as shown earlier, because it would then reflect the total cost of housing that subsidized renters face. Without this imputation on the threshold side, it is inconsistent to add the value of housing subsidies to income.

⁸The panel referred to this value as “imputed rent.” This value would include expenditures for maintenance as well as rent.

⁹Citro and Michael, p.148.

Data Improvements

Consumer Expenditure Survey. The NAS panel recommended that the CE be used for deriving and updating the poverty thresholds, as was done in this report. These calculations used 3-year averages to estimate median expenditures for a reference family of two adults and two children on the basic bundle of commodities. Three years of data were used to compensate for the relatively small sample sizes of the survey (approximately 5,000 households, increasing to 7,800 households in 1999) and to smooth any fluctuations from year to year.

The panel recommended improvements to the CE. Among these were to increase the sample size to improve the quality of the data for updating poverty thresholds; an increase of 76 percent has already been made.¹⁰ They also suggested development of methods to reduce reporting errors and to improve response rates. In addition, the panel recommended an evaluation of the CE in terms of overall design, which might include following family members over time to collect expenditures on an annual basis, the reference period used here to assess poverty status.

Particularly in the area of health care coverage there are important contributions that could be made to the calculation of poverty thresholds. While expenditures on food, clothing, and shelter are very likely to be similarly measured across four quarters in a given year, expenses on health care are not. Since health care expenditures for a family are likely to occur on an irregular basis, quarterly estimates of MOOP expenses are often nonpositive due to health insurance reimbursements. An annual measure of expenditure is a better representation of the expenses incurred by a family. An appropriately calculated sample weight that allows longitudinal estimates of these expenditures to be computed would improve the accuracy of poverty thresholds that include MOOP.

Medical Expenditure Panel Survey. The 1996 MEPS experienced substantial nonresponse to the household question on health insurance premiums, and the analysis in this report instead makes use of imputed premiums for families. These imputations rely on a combination of hot-deck and regression-based imputations. However, for the purposes of this report, a provisional imputation method was used. Average premium contributions were imputed to privately insured families with employer-provided coverage, based on data from the 1996 MEPS - Insurance Component for the list sample of employers.¹¹ These data provide nationally representative estimates of average premium contributions for employer-sponsored private health insurance plans by single and family policies, industry, state, and other variables.

¹⁰This increase only affected the urban portion of the sample because the Consumer Price Index market basket is calculated from the CE only for urban consumers.

¹¹These data are publicly available in tabular form at www.meeps.ahrq.gov.

While the MEPS was designed to collect highly detailed and accurate estimates of medical expenses, the lack of adequate information on household insurance premiums is a severe problem. In our application, we have used imputed data to calculate total MOOP for families with different characteristics. These estimates were then used to calculate “medical equivalence scales” for the thresholds that include MOOP. Obviously, spending on insurance premiums is an important element in the health care spending for families. An improved method of collecting these data would greatly benefit our calculations of poverty thresholds that include MOOP.

Interarea price indexes. This report followed the recommendations of the panel and adjusted the poverty thresholds for geographic differences in cost of living. We have done this only for housing costs using Fair Market Rents as prepared by HUD. While this represents a marked improvement in measuring geographic variation in the cost of housing, an improved poverty measure would benefit from considering how prices of other goods and services vary geographically.

Interarea indexes for *all* areas based on preliminary research at BLS by Kokoski, Cardiff, and Moulton (KCM),¹² for example, would be very beneficial to this application. These researchers used an hedonic methodology and monthly CPI-U price data for July 1988 through June 1989 to produce experimental price indexes for the 44 CPI publication geographic areas.¹³ These experimental interarea price indexes were created at the lowest level of CPI price data available and were aggregated to form index factors for 11 major expenditure categories. This was accomplished by weighting lower level indexes using expenditure shares from CE Survey data. The resulting 11 expenditure categories constitute about 85 percent of total consumer spending. Further work in this area should be encouraged.

Survey of Income and Program Participation. One important recommendation of the NAS panel was to make the SIPP rather than the CPS the official source for measuring income or resources in our poverty statistics. The panel made this recommendation because SIPP collects more information that is relevant to the measurement of poverty. Because the SIPP is an income survey rather than a supplement to a labor force survey, as is the CPS, the SIPP is designed to satisfy the increased data requirements for an improved measure of poverty.

Started in 1983 by the Census Bureau, the SIPP is a continuing panel survey in which all respondent household members are followed even if they move. Until 1993, the design introduced a new sample panel each February.

¹²Kokoski, Cardiff, and Moulton, 1994.

¹³The KCM research is still in progress and the current indexes are of experimental status. They do not reflect official BLS published data.

Beginning in 1996, an enlarged 4-year panel was introduced, with no further panels planned until 2000. The sample covers the U.S. civilian noninstitutionalized population and members of the Armed Forces living off post or with their families on post. Sample size historically has varied from 12,500 to 23,500 households per panel; the 1996 panel is composed of 36,700 households. The reporting unit is the household, with unrelated individuals and families also identified.

Methodological investigation by the Census Bureau has concluded that a time series of official statistics, such as poverty, must be based on surveys with consistent design characteristics. For a longitudinal survey like the SIPP, this means that the characteristics of the sample (consisting of households that stay in sample for several years) must not change from year to year. But we know from past research that families in poverty leave the sample at higher rates than nonpoverty families. As a consequence, direct survey estimates cannot be used without accounting for and correcting the bias introduced by this differential attrition.

To address this problem, an alternative survey redesign has been proposed for SIPP with constant attrition bias (similar to the design of the CPS) that allows measuring year-to-year changes accurately (if both years' estimates are biased in the same way, their difference is not biased). Constant attrition bias for an annual statistic like poverty can be obtained by starting a new SIPP panel each year, just as the CPS adds a new sample each month to permit accurate measurement of month-to-month changes in unemployment. Specifically, the proposal is to field a new SIPP panel each year, with each panel collecting data for 3 years.¹⁴ As part of this design the sample size must be sufficient to produce a time series of poverty statistics with the same variance as the March CPS estimates (or less). Each panel would provide a complete measure of calendar-year income. The current proposal is to supplement the existing longitudinal panel with two additional smaller panels. These additional panels would yield stable cross-section estimates and allow valid time-series comparisons.

Alternative Criteria for Poverty Measures

This report has presented several alternative measures of poverty which demonstrate various measurement methods. While the choice of measurement method should be driven by accuracy, an official measure that is too burdensome to produce will delay release of these important statistics and preclude researchers from replicating related statistics.

One theme likely to drive the adoption of a particular method is the overriding need to produce official poverty statistics from the March CPS Supplement or the SIPP for timely publication and release. An important consideration

in examining each of these alternative methods is the amount of time that the estimates would require and the possibility of creating these estimates in a production environment. Other considerations are the ease with which researchers outside the Census Bureau can replicate such statistics, and further, if these experimental measures can even be calculated using other survey data that do not collect the wide variety of information required.

The calculation of MOOP is a good example. Concern has been expressed about the difficulty in using a complex statistical model to calculate a complete experimental measure. The alternative of having a threshold that includes MOOP and a set of medical equivalence scales allows relatively easy adaptation of these measures to other federal surveys. While the second method does not capture the actual distribution of MOOP in the population, ease of implementation can be an important consideration.

Another example would be the valuation of housing subsidies. We present two approaches in this report. One uses a data-intensive hedonic regression method coupled with a statistical match to the AHS. The other method simply applies average FMRs to adjust poverty thresholds. The second method is much simpler to implement than the first, lends itself to a production mode of data estimation, and is accessible to researchers working in other data environments. However, it also produces values of housing subsidies that may be considered, on average, to be overestimates of these amounts.

Further work in this area will continue to take account of these important issues: replicability of measures, timeliness of data needed for measures, and concerns about confidentiality that could preclude public use of data. Balancing these concerns with precise and accurate measures continues to be a goal of this research.

Notes and Users' Comments

The information in this report was collected in the 50 states and the District of Columbia and does not include residents of Puerto Rico. The CPS, from which these data were taken, samples approximately 50,000 households nationwide. The estimates in this report are controlled to national population estimates by age, race, sex, and Hispanic origin. The population controls used in the preparation of the estimates are based on results of the 1990 census carried forward to 1999.

We are interested in your reaction to the usefulness of the information provided in this report, and we welcome your recommendations for improving our products. Many of the papers cited in this report are accessible through the Census Bureau home page. www.census.gov, by clicking on "Poverty" and then on "Recent Poverty Measurement Research." If you have suggestions or comments, please write to: Kathleen Short, Housing and Household Economic Statistics Division U.S. Census Bureau Washington, DC 20233-8500; or kshort@census.gov.

¹⁴Weinberg, Short, and Hernandez, 1998.

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Table 1-1. Standardized Poverty Rates: 1999

Characteristic	Official measure	CPI-based experimental measures (standardized to match the 1997 official rate)					
		NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All persons	11.8	11.7	11.6	11.9	11.7	11.8	11.7
Children	16.9	14.7	14.5	15.5	14.8	14.4	14.3
Nonelderly adults	10.0	10.1	10.0	10.2	10.1	10.3	10.3
Elderly	9.7	13.3	13.6	13.0	13.2	13.6	13.7
White	9.8	10.2	10.2	10.4	10.3	10.3	10.2
Black	23.6	19.8	20.1	20.9	19.9	20.3	20.3
Other	14.4	14.2	13.2	14.4	14.6	14.3	13.9
Hispanic origin	22.8	22.6	20.6	23.3	22.7	22.4	22.3
No workers	32.7	31.1	31.5	30.6	31.0	31.3	31.5
One or more workers	8.6	8.8	8.6	9.1	8.8	8.8	8.7
Persons in family of type:							
Married couple	5.8	6.7	6.6	6.7	6.7	6.3	6.3
Male householder	14.9	14.8	14.7	14.9	14.8	15.7	15.7
Female householder	27.5	24.5	24.3	25.4	24.6	25.5	25.5
Geographic regions:							
Northeast	10.9	12.6	10.4	12.9	12.5	12.6	12.6
Midwest	9.8	9.2	10.0	9.3	9.3	9.3	9.2
South	13.1	11.5	13.0	11.8	11.6	11.6	11.6
West	12.6	13.7	12.2	13.9	13.8	13.8	13.8
Metropolitan area:							
Central city	16.4	16.1	14.9	16.7	16.2	16.4	16.3
Not central city	8.3	9.3	8.8	9.4	9.3	9.3	9.3
Nonmetropolitan area	14.3	11.4	14.4	11.6	11.5	11.3	11.3

Table 1-2. Distribution of the Population: 1999

Characteristic	Total population	Poverty population						
		Official measure	CPI-based standardized experimental measures					
			NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	37.5	33.0	32.8	34.1	33.2	32.2	31.9
Nonelderly adults	61.8	52.6	53.5	53.2	52.9	53.4	54.1	54.2
Elderly	11.9	9.8	13.6	14.0	13.0	13.5	13.8	13.9
White	82.0	68.0	71.9	71.9	71.3	71.8	71.6	71.7
Black	12.9	25.9	22.0	22.4	22.6	21.9	22.3	22.4
Other	5.0	6.1	6.1	5.7	6.1	6.2	6.1	6.0
Hispanic origin	11.9	23.1	23.1	21.2	23.4	23.2	22.8	22.7
No workers	13.1	36.3	34.8	35.4	33.6	34.5	34.8	35.2
One or more workers	86.9	63.7	65.2	64.6	66.4	65.5	65.2	64.8
Persons in family of type:								
Married couple	65.5	32.3	37.5	37.5	37.0	37.5	35.1	35.0
Male householder	11.8	14.8	14.9	14.9	14.7	14.9	15.7	15.7
Female householder	22.7	52.8	47.5	47.6	48.3	47.6	49.2	49.3
Geographic regions:								
Northeast	19.0	17.6	20.4	16.9	20.6	20.3	20.3	20.5
Midwest	23.2	19.2	18.2	20.0	18.2	18.3	18.4	18.2
South	35.0	38.9	34.6	39.2	34.5	34.5	34.5	34.6
West	22.8	24.3	26.8	23.9	26.7	26.9	26.7	26.7
Metropolitan area:								
Central city	29.3	40.7	40.3	37.5	40.9	40.5	40.8	40.6
Not central city	51.7	36.2	41.1	38.9	40.6	40.9	40.9	41.0
Nonmetropolitan area	19.1	23.1	18.6	23.6	18.5	18.7	18.3	18.4

Table 1-3. Standardized Poverty Rates by Selected Characteristics: 1999

Characteristic	Number (1,000)	Official measure	CPI-based experimental measures (standardized to match the 1997 official rate)					
			NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All persons	273,493	11.8	11.7	11.6	11.9	11.7	11.8	11.7
Age groups:								
Less than 3 years	11,593	18.9	16.9	17.4	18.1	17.4	17.2	16.8
3 to 5 years	11,762	17.9	17.1	16.5	17.7	17.1	16.8	16.6
6 to 11 years	24,536	17.4	14.9	14.7	15.8	15.2	14.6	14.3
12 to 17 years	23,839	14.9	12.1	12.0	12.8	12.1	11.8	11.8
18 to 21 years	15,777	17.8	18.0	17.9	18.1	18.1	18.7	18.7
22 to 44 years	93,346	10.2	10.2	10.1	10.5	10.3	10.4	10.4
45 to 54 years	36,631	6.7	6.9	6.7	6.8	6.9	7.0	7.0
55 to 59 years	12,868	9.2	9.2	9.3	9.0	9.1	9.0	9.0
60 to 64 years	10,519	9.8	9.4	9.7	9.2	9.4	9.6	9.7
65 to 74 years	17,796	8.9	11.8	12.0	11.6	11.7	11.8	11.8
75 years and over	14,825	10.7	15.1	15.5	14.8	15.1	15.7	15.9
Race/origin:								
White, not Hispanic	193,334	7.7	8.2	8.5	8.3	8.2	8.3	8.3
White, Hispanic	31,039	22.7	22.7	20.8	23.4	22.9	22.5	22.4
Black, not Hispanic	34,306	23.6	19.8	20.2	20.8	19.8	20.2	20.2
Black, Hispanic	1,066	25.2	22.1	18.4	24.0	22.1	23.0	22.5
Other, not Hispanic	13,184	14.1	14.0	13.0	14.2	14.4	14.1	13.7
Other, Hispanic	564	21.7	18.9	17.6	18.9	17.7	18.6	18.6
Number of persons in family:								
1 person	43,432	19.1	17.4	17.6	17.1	17.4	18.9	19.0
2 persons	64,290	7.8	9.9	10.1	10.2	9.9	9.7	9.7
3 persons	50,002	9.9	10.5	10.3	10.9	10.5	11.1	11.1
4 persons	59,169	8.8	8.6	8.8	8.8	8.6	8.4	8.4
5 persons	33,158	12.4	11.4	11.1	11.6	11.7	11.0	10.9
6 persons	13,581	16.9	15.0	13.5	15.3	14.9	13.3	13.3
7 or more persons	9,861	23.9	18.5	17.9	20.3	19.4	17.7	16.9
Marital status:								
Married, spouse present	113,002	4.9	6.4	6.4	6.4	6.4	6.0	6.0
Married, spouse absent	2,730	18.5	19.4	18.4	19.0	19.3	19.6	19.8
Widowed	13,665	16.1	16.6	16.9	16.3	16.5	17.9	18.1
Divorced	24,360	16.9	15.0	15.0	15.2	15.1	16.1	16.0
Never married	119,737	16.6	15.2	15.1	15.8	15.3	15.5	15.3
Gender:								
Male	133,647	10.3	10.6	10.5	10.7	10.6	10.5	10.5
Female	139,846	13.2	12.7	12.7	13.0	12.8	13.0	12.9
Education (25 years of age and over):								
No high school diploma	27,853	22.4	22.6	22.5	22.5	22.6	22.9	23.0
High school diploma	58,086	9.2	10.1	10.2	10.1	10.1	10.2	10.2
Some college	44,445	6.1	6.6	6.6	6.7	6.6	6.7	6.7
College degree	44,846	2.8	3.5	3.4	3.6	3.5	3.6	3.6
Citizenship status:								
Native	245,146	11.2	10.8	11.0	11.0	10.8	10.9	10.9
Naturalized citizen	10,620	9.1	11.1	10.0	11.4	11.1	11.2	11.3
Not a citizen	17,728	21.3	24.4	21.1	24.6	24.5	24.2	24.0
Disability status:								
Not disabled	157,725	8.7	9.3	9.1	9.4	9.3	9.4	9.4
Disabled	19,498	23.3	18.1	18.5	17.9	18.1	18.5	18.6
Severe disability	13,341	26.0	19.4	19.9	19.0	19.3	19.8	19.9
Self-reported health status:								
Excellent	96,951	8.9	8.9	8.9	9.3	8.9	8.9	8.9
Very good	83,332	9.9	10.2	10.1	10.5	10.3	10.4	10.3
Good	62,658	14.2	13.9	13.8	14.1	13.9	14.0	13.9
Fair	21,249	19.3	18.5	18.5	18.4	18.5	18.6	18.6
Poor	9,305	25.5	23.1	23.9	22.8	23.0	23.7	23.7

Table 2-1. Poverty Rates: 1999

Characteristic	Official measure	CPI-based experimental measures					
		NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All persons	11.8	13.7	14.0	14.3	13.8	14.3	14.2
Children	16.9	17.5	17.9	18.7	17.7	18.0	17.8
Nonelderly adults	10.0	11.8	11.8	12.2	11.8	12.4	12.3
Elderly	9.7	15.7	16.2	15.7	15.7	16.5	16.5
White	9.8	12.0	12.3	12.5	12.1	12.5	12.4
Black	23.6	23.3	23.7	24.8	23.4	24.8	24.7
Other	14.4	17.0	16.0	16.8	16.9	17.3	17.3
Hispanic origin	22.8	26.7	24.9	28.2	26.9	27.6	27.3
No workers	32.7	34.8	35.2	34.8	34.8	36.0	36.0
One or more workers	8.6	10.6	10.8	11.2	10.7	11.1	11.0
Persons in family of type:							
Married couple	5.8	8.3	8.6	8.6	8.3	8.1	8.1
Male householder	14.9	16.7	16.5	16.9	16.7	18.2	18.1
Female householder	27.5	27.9	28.1	29.4	28.1	30.2	30.1
Geographic regions:							
Northeast	10.9	14.7	12.5	15.4	14.8	15.5	15.4
Midwest	9.8	10.8	12.1	11.2	10.8	11.3	11.3
South	13.1	13.6	15.6	14.3	13.8	14.2	14.1
West	12.6	16.1	14.7	16.6	16.2	16.7	16.6
Metropolitan area:							
Central city	16.4	18.8	17.9	19.5	19.0	19.9	19.7
Not central city	8.3	11.0	10.4	11.4	11.0	11.4	11.3
Nonmetropolitan area	14.3	13.5	17.4	14.0	13.5	14.0	13.8

Table 2-2. Distribution of the Population: 1999

Characteristic	Total population	Poverty population						
		Official measure	CPI-based experimental measures					
			NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	37.5	33.4	33.7	34.3	33.5	32.9	32.8
Nonelderly adults	61.8	52.6	53.0	52.5	52.6	52.9	53.4	53.4
Elderly	11.9	9.8	13.7	13.8	13.1	13.6	13.7	13.8
White	82.0	68.0	71.9	72.2	71.7	72.0	71.6	71.5
Black	12.9	25.9	21.9	22.0	22.4	21.9	22.4	22.4
Other	5.0	6.1	6.2	5.8	5.9	6.2	6.1	6.1
Hispanic origin	11.9	23.1	23.2	21.3	23.6	23.3	23.0	22.9
No workers	13.1	36.3	33.1	33.0	31.8	32.9	32.8	33.0
One or more workers	86.9	63.7	66.9	67.0	68.2	67.1	67.2	67.0
Persons in family of type:								
Married couple	65.5	32.3	39.6	40.3	39.4	39.6	37.2	37.2
Male householder	11.8	14.8	14.3	14.0	13.9	14.2	14.9	15.0
Female householder	22.7	52.8	46.1	45.7	46.7	46.2	47.8	47.9
Geographic regions:								
Northeast	19.0	17.6	20.4	17.0	20.5	20.4	20.5	20.5
Midwest	23.2	19.2	18.2	20.1	18.1	18.1	18.4	18.4
South	35.0	38.9	34.7	39.0	35.0	34.9	34.6	34.5
West	22.8	24.3	26.7	23.9	26.4	26.7	26.5	26.6
Metropolitan area:								
Central city	29.3	40.7	39.9	37.6	40.0	40.2	40.5	40.5
Not central city	51.7	36.2	41.3	38.6	41.4	41.2	40.9	41.0
Nonmetropolitan area	19.1	23.1	18.8	23.8	18.6	18.7	18.6	18.5

Table 2-3. Poverty Rates by Selected Characteristics: 1999

Characteristic	Official measure	CPI-based experimental measures					
		NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All persons	11.8	13.7	14.0	14.3	13.8	14.3	14.2
Age groups:							
Less than 3 years	18.9	20.0	21.0	21.9	20.3	21.2	20.8
3 to 5 years	17.9	20.0	20.3	20.9	19.9	20.3	20.3
6 to 11 years	17.4	17.9	18.5	19.2	18.2	18.4	18.1
12 to 17 years	14.9	14.6	14.7	15.5	14.7	14.9	14.8
18 to 21 years	17.8	20.2	20.4	20.8	20.3	21.6	21.6
22 to 44 years	10.2	12.0	12.1	12.6	12.1	12.6	12.5
45 to 54 years	6.7	8.0	8.0	8.1	8.1	8.4	8.4
55 to 59 years	9.2	10.8	10.8	10.8	10.8	11.2	11.2
60 to 64 years	9.8	11.1	11.2	11.2	11.1	11.4	11.4
65 to 74 years	8.9	13.8	14.3	13.8	13.8	14.4	14.4
75 years and over	10.7	18.1	18.4	18.1	18.1	19.1	19.1
Race/origin:							
White, not Hispanic	7.7	9.7	10.2	10.0	9.7	10.1	10.0
White, Hispanic	22.7	26.8	25.1	28.3	27.0	27.6	27.4
Black, not Hispanic	23.6	23.2	23.8	24.7	23.3	24.7	24.6
Black, Hispanic	25.2	26.3	22.0	28.2	26.3	28.9	28.3
Other, not Hispanic	14.1	16.8	15.9	16.5	16.7	17.0	17.1
Other, Hispanic	21.7	21.4	19.3	24.5	22.2	24.3	23.5
Number of persons in family:							
1 person	19.1	19.6	19.8	19.6	19.6	21.9	21.9
2 persons	7.8	11.5	11.8	11.9	11.6	11.6	11.5
3 persons	9.9	12.2	12.4	12.8	12.2	13.2	13.2
4 persons	8.9	10.4	10.6	11.1	10.5	10.8	10.7
5 persons	12.4	14.1	14.3	14.8	14.2	13.8	13.7
6 persons	16.9	18.4	17.9	19.2	18.3	17.6	17.6
7 or more persons	23.9	23.3	23.8	24.4	23.9	22.4	21.5
Marital status:							
Married, spouse present	4.9	7.8	8.1	8.0	7.9	7.6	7.6
Married, spouse absent	18.5	21.8	20.1	21.9	21.8	23.3	23.2
Widowed	16.1	19.4	19.9	19.5	19.4	21.7	21.7
Divorced	16.9	17.3	17.7	17.8	17.4	19.1	19.0
Never married	16.6	17.8	17.9	18.7	17.9	18.7	18.5
Gender:							
Male	10.3	12.5	12.7	12.9	12.5	12.9	12.8
Female	13.2	15.0	15.2	15.6	15.1	15.7	15.6
Education (25 years of age and over):							
No high school diploma	22.4	26.8	26.8	27.2	26.9	28.1	28.0
High school diploma	9.2	11.8	12.4	12.2	11.9	12.4	12.3
Some college	6.1	7.9	7.9	8.2	7.9	8.2	8.2
College degree	2.8	4.2	4.0	4.2	4.2	4.4	4.3
Citizenship status:							
Native	11.2	12.7	13.2	13.2	12.8	13.3	13.2
Naturalized citizen	9.1	13.8	12.0	14.0	13.8	14.3	14.3
Not a citizen	21.3	28.3	25.2	29.1	28.3	29.3	29.1
Disability status:							
Not disabled	8.7	10.8	10.8	11.2	10.9	11.3	11.3
Disabled	23.3	21.3	21.9	21.4	21.3	22.4	22.4
Severe disability	26.0	22.8	23.5	22.9	22.8	23.9	23.9
Self-reported health status:							
Excellent	8.9	10.5	10.7	11.1	10.5	10.9	10.8
Very good	9.9	12.0	12.1	12.7	12.1	12.5	12.4
Good	14.2	16.4	16.5	16.9	16.5	17.2	17.0
Fair	19.3	21.7	22.2	22.1	21.7	22.9	22.7
Poor	25.5	26.8	28.2	26.9	26.8	28.1	28.0

Table 3-1. Standardized Poverty Rates: 1999

Characteristic	Official measure	CE-based experimental measures (standardized to match the 1997 official rate)					
		NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All persons	11.8	12.2	12.2	12.4	12.3	12.3	12.2
Children	16.9	15.3	15.4	16.1	15.6	15.1	15.0
Nonelderly adults	10.0	10.5	10.5	10.6	10.6	10.7	10.7
Elderly	9.7	14.0	14.2	13.5	13.9	14.1	14.1
White	9.8	10.7	10.7	10.8	10.8	10.7	10.7
Black	23.6	20.5	20.9	21.5	20.7	21.1	21.1
Other	14.4	14.9	13.9	14.9	15.3	15.0	14.6
Hispanic origin	22.8	23.7	21.6	24.3	23.8	23.5	23.4
No workers	32.7	32.0	32.5	31.4	31.9	32.3	32.4
One or more workers	8.6	9.2	9.1	9.5	9.3	9.3	9.2
Persons in family of type:							
Married couple	5.8	7.1	7.1	7.1	7.1	6.6	6.6
Male householder	14.9	15.3	15.1	15.2	15.3	16.2	16.2
Female householder	27.5	25.4	25.3	26.2	25.5	26.5	26.4
Geographic regions:							
Northeast	10.9	13.1	11.0	13.3	13.1	13.1	13.1
Midwest	9.8	9.5	10.5	9.6	9.6	9.7	9.7
South	13.1	12.1	13.6	12.3	12.2	12.1	12.1
West	12.6	14.3	12.7	14.6	14.4	14.4	14.3
Metropolitan area:							
Central city	16.4	16.8	15.7	17.1	16.9	17.1	17.0
Not central city	8.3	9.7	9.2	9.8	9.8	9.7	9.7
Nonmetropolitan area	14.3	11.9	15.0	12.0	12.0	11.8	11.8

Table 3-2. Distribution of the Population: 1999

Characteristic	Total population	Poverty population						
		Official measure	CE-based experimental measures					
			NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	37.5	33.0	33.0	34.1	33.3	32.4	32.2
Nonelderly adults	61.8	52.6	53.4	53.1	52.9	53.2	53.9	54.0
Elderly	11.9	9.8	13.7	13.9	13.0	13.5	13.7	13.8
White	82.0	68.0	72.1	72.1	71.5	71.9	71.6	71.7
Black	12.9	25.9	21.8	22.2	22.4	21.8	22.2	22.3
Other	5.0	6.1	6.1	5.7	6.1	6.3	6.1	6.0
Hispanic origin	11.9	23.1	23.2	21.1	23.5	23.2	22.9	22.9
No workers	13.1	36.3	34.3	34.9	33.1	34.0	34.4	34.6
One or more workers	86.9	63.7	65.7	65.1	66.9	66.0	65.6	65.4
Persons in family of type:								
Married couple	65.5	32.3	38.0	38.3	37.5	38.1	35.4	35.4
Male householder	11.8	14.8	14.7	14.6	14.5	14.7	15.5	15.6
Female householder	22.7	52.8	47.3	47.1	48.0	47.2	49.1	49.0
Geographic regions:								
Northeast	19.0	17.6	20.5	17.1	20.5	20.3	20.3	20.3
Midwest	23.2	19.2	18.0	20.0	18.0	18.1	18.4	18.4
South	35.0	38.9	34.8	39.1	34.7	34.8	34.6	34.7
West	22.8	24.3	26.7	23.8	26.8	26.8	26.8	26.6
Metropolitan area:								
Central city	29.3	40.7	40.2	37.6	40.6	40.4	40.7	40.7
Not central city	51.7	36.2	41.2	38.9	41.0	41.0	40.9	41.0
Nonmetropolitan area	19.1	23.1	18.6	23.5	18.4	18.6	18.3	18.3

Table 3-3. Standardized Poverty Rates by Selected Characteristics: 1999

Characteristic	Number (1,000)	Official measure	CE-based experimental measures (standardized to match the 1997 official measure)					
			NAS	NGA	DCM1	DCM2	DES-DCM2	DES
All persons	273,493	11.8	12.2	12.2	12.4	12.3	12.3	12.2
Age groups:								
Less than 3 years	11,593	18.9	17.5	18.4	19.0	18.0	17.8	17.6
3 to 5 years	11,762	17.9	17.7	17.4	18.5	17.9	17.3	17.2
6 to 11 years	24,536	17.4	15.6	15.6	16.5	16.0	15.5	15.2
12 to 17 years	23,839	14.9	12.8	12.6	13.1	12.8	12.5	12.5
18 to 21 years	15,777	17.8	18.6	18.5	18.7	18.6	19.1	19.2
22 to 44 years	93,346	10.2	10.7	10.6	10.9	10.7	10.9	10.8
45 to 54 years	36,631	6.7	7.2	7.0	7.0	7.2	7.3	7.3
55 to 59 years	12,868	9.2	9.6	9.8	9.3	9.5	9.3	9.4
60 to 64 years	10,519	9.8	10.0	10.1	9.7	10.0	9.9	10.0
65 to 74 years	17,796	8.9	12.3	12.6	12.0	12.4	12.2	12.2
75 years and over	14,825	10.7	15.9	16.1	15.3	15.8	16.3	16.4
Race/origin:								
White, not Hispanic	193,334	7.7	8.6	8.9	8.6	8.6	8.6	8.6
White, Hispanic	31,039	22.7	23.8	21.7	24.4	23.9	23.5	23.5
Black, not Hispanic	34,306	23.6	20.5	21.0	21.4	20.7	21.0	21.0
Black, Hispanic	1,066	25.2	22.9	19.9	24.2	22.5	24.8	24.4
Other, not Hispanic	13,184	14.1	14.7	13.7	14.6	15.1	14.8	14.5
Other, Hispanic	564	21.7	20.5	17.6	20.8	20.4	18.9	18.9
Number of persons in family:								
1 person	43,432	19.1	17.9	18.1	17.5	17.9	19.5	19.6
2 persons	64,290	7.8	10.4	10.5	10.6	10.4	10.0	10.0
3 persons	50,002	9.9	11.0	11.0	11.3	10.9	11.6	11.7
4 persons	59,169	8.8	8.9	9.2	9.2	9.1	8.9	8.9
5 persons	33,158	12.4	12.0	11.7	12.2	12.2	11.6	11.5
6 persons	13,581	16.9	16.6	14.6	16.7	16.7	14.1	14.1
7 or more persons	9,861	23.9	19.1	19.5	20.4	20.3	18.2	17.5
Marital status:								
Married, spouse present	113,002	4.9	6.8	6.9	6.7	6.8	6.3	6.3
Married, spouse absent	2,730	18.5	20.0	19.1	19.6	19.8	20.7	20.6
Widowed	13,665	16.1	17.5	17.5	16.9	17.3	18.6	18.7
Divorced	24,360	16.9	15.5	15.7	15.7	15.6	16.5	16.5
Never married	119,737	16.6	15.9	15.8	16.4	16.0	16.1	16.0
Gender:								
Male	133,647	10.3	11.0	11.0	11.2	11.1	11.0	11.0
Female	139,846	13.2	13.3	13.3	13.5	13.4	13.5	13.4
Education (25 years of age and over):								
No high school diploma	27,853	22.4	23.8	23.5	23.4	23.8	23.8	24.0
High school diploma	58,086	9.2	10.5	10.8	10.6	10.6	10.7	10.7
Some college	44,445	6.1	6.9	6.9	6.9	6.9	7.0	7.0
College degree	44,846	2.8	3.7	3.6	3.7	3.8	3.7	3.7
Citizenship status:								
Native	245,146	11.2	11.2	11.5	11.4	11.3	11.3	11.3
Naturalized citizen	10,620	9.1	12.0	10.6	11.9	12.0	12.0	12.0
Not a citizen	17,728	21.3	25.5	22.1	25.6	25.7	25.1	25.1
Disability status:								
Not disabled	157,725	8.7	9.7	9.5	9.8	9.7	9.8	9.8
Disabled	19,498	23.3	18.9	19.4	18.5	18.9	19.2	19.3
Severe disability	13,341	26.0	20.3	20.8	19.7	20.3	20.5	20.6
Self-reported health status:								
Excellent	96,951	8.9	9.3	9.3	9.6	9.3	9.3	9.3
Very good	83,332	9.9	10.7	10.6	10.9	10.8	10.8	10.7
Good	62,658	14.2	14.5	14.4	14.6	14.7	14.6	14.5
Fair	21,249	19.3	19.4	19.4	19.0	19.4	19.5	19.6
Poor	9,305	25.5	24.1	25.1	23.5	24.0	24.3	24.3

Table 4-1. Poverty Rates: 1999

Characteristic	Official measure	CE-based experimental measures					
		NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All persons	11.8	14.4	14.6	15.0	14.4	15.0	15.0
Children	16.9	18.3	18.8	19.7	18.5	18.9	18.8
Nonelderly adults	10.0	12.3	12.4	12.7	12.3	13.0	12.9
Elderly	9.7	16.6	17.0	16.6	16.6	17.3	17.3
White	9.8	12.6	12.9	13.1	12.6	13.2	13.1
Black	23.6	24.6	24.7	26.0	24.7	25.8	25.6
Other	14.4	17.5	17.1	18.1	17.5	17.8	17.7
Hispanic origin	22.8	28.0	26.2	29.5	28.3	29.0	28.8
No workers	32.7	35.8	36.2	35.8	35.8	37.1	37.1
One or more workers	8.6	11.1	11.4	11.9	11.2	11.7	11.6
Persons in family of type:							
Married couple	5.8	8.8	9.1	9.2	8.9	8.7	8.7
Male householder	14.9	17.2	17.2	17.5	17.3	18.8	18.8
Female householder	27.5	28.9	29.2	30.4	29.0	31.3	31.1
Geographic regions:							
Northeast	10.9	15.4	13.1	16.2	15.5	16.2	16.2
Midwest	9.8	11.4	12.6	11.8	11.4	11.9	11.8
South	13.1	14.2	16.3	14.9	14.3	14.9	14.8
West	12.6	16.8	15.4	17.4	16.9	17.4	17.4
Metropolitan area:							
Central city	16.4	19.7	18.8	20.5	19.8	20.7	20.6
Not central city	8.3	11.5	10.9	12.1	11.5	12.0	11.9
Nonmetropolitan area	14.3	14.0	18.3	14.6	14.0	14.6	14.5

Table 4-2. Distribution of the Population: 1999

Characteristic	Total population	Poverty population						
		Official measure	CE-based experimental measures					
			NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	37.5	33.5	33.7	34.4	33.6	33.0	32.9
Nonelderly adults	61.8	52.6	52.8	52.5	52.4	52.7	53.3	53.3
Elderly	11.9	9.8	13.8	13.9	13.2	13.7	13.7	13.8
White	82.0	68.0	71.7	72.3	71.5	71.8	71.9	71.9
Black	12.9	25.9	22.1	21.8	22.4	22.1	22.2	22.2
Other	5.0	6.1	6.1	5.9	6.1	6.1	5.9	5.9
Hispanic origin	11.9	23.1	23.3	21.4	23.5	23.4	23.1	23.0
No workers	13.1	36.3	32.6	32.4	31.1	32.4	32.2	32.4
One or more workers	86.9	63.7	67.4	67.6	68.9	67.6	67.8	67.6
Persons in family of type:								
Married couple	65.5	32.3	40.3	40.9	40.3	40.2	38.0	38.0
Male householder	11.8	14.8	14.1	13.8	13.7	14.1	14.7	14.8
Female householder	22.7	52.8	45.6	45.3	46.0	45.6	47.3	47.3
Geographic regions:								
Northeast	19.0	17.6	20.3	17.0	20.5	20.4	20.5	20.5
Midwest	23.2	19.2	18.4	20.0	18.3	18.3	18.3	18.4
South	35.0	38.9	34.5	39.1	34.8	34.6	34.7	34.6
West	22.8	24.3	26.7	24.0	26.5	26.7	26.4	26.5
Metropolitan area:								
Central city	29.3	40.7	40.1	37.6	39.9	40.2	40.3	40.2
Not central city	51.7	36.2	41.3	38.5	41.6	41.3	41.2	41.2
Nonmetropolitan area	19.1	23.1	18.6	23.8	18.5	18.5	18.6	18.5

Table 4-3. Poverty Rates by Selected Characteristics: 1999

Characteristic	Official measure	CE-based experimental measures					
		NAS/U	NGA/U	DCM1/U	DCM2/U	DES-DCM2/U	DES/U
All persons	11.8	14.4	14.6	15.0	14.4	15.0	15.0
Age groups:							
Less than 3 years	18.9	20.9	21.8	23.2	21.2	22.0	21.8
3 to 5 years	17.9	20.7	21.1	22.0	20.7	21.3	21.3
6 to 11 years	17.4	18.9	19.5	20.3	19.1	19.4	19.1
12 to 17 years	14.9	15.3	15.5	16.2	15.4	15.7	15.7
18 to 21 years	17.8	21.0	21.2	21.6	21.1	22.5	22.3
22 to 44 years	10.2	12.5	12.7	13.2	12.6	13.2	13.2
45 to 54 years	6.7	8.4	8.4	8.4	8.4	8.9	8.8
55 to 59 years	9.2	11.2	11.4	11.3	11.2	11.7	11.7
60 to 64 years	9.8	11.6	11.8	11.6	11.6	11.9	11.8
65 to 74 years	8.9	14.6	15.0	14.6	14.6	15.0	15.0
75 years and over	10.7	19.0	19.4	18.9	18.9	20.0	20.0
Race/origin:							
White, not Hispanic	7.7	10.1	10.7	10.4	10.1	10.6	10.6
White, Hispanic	22.7	28.1	26.4	29.6	28.3	29.1	28.8
Black, not Hispanic	23.6	24.5	24.7	25.9	24.5	25.6	25.5
Black, Hispanic	25.2	28.9	23.2	29.7	29.4	30.1	30.1
Other, not Hispanic	14.1	17.3	16.9	17.8	17.2	17.5	17.4
Other, Hispanic	21.7	22.1	21.3	25.2	22.9	24.3	23.5
Number of persons in family:							
1 person	19.1	20.3	20.5	20.3	20.3	22.7	22.7
2 persons	7.8	12.0	12.4	12.6	12.1	12.1	12.0
3 persons	9.9	12.5	12.9	13.3	12.6	13.9	13.8
4 persons	8.8	11.0	11.1	11.8	11.1	11.4	11.4
5 persons	12.4	14.8	15.2	15.7	14.9	14.8	14.6
6 persons	16.9	19.4	18.9	20.5	19.2	18.6	18.4
7 or more persons	23.9	24.7	25.4	25.6	25.2	23.6	23.5
Marital status:							
Married, spouse present	4.9	8.3	8.6	8.6	8.3	8.1	8.1
Married, spouse absent	18.5	22.5	21.1	22.7	22.5	24.0	23.9
Widowed	16.1	20.2	21.0	20.3	20.2	22.8	22.8
Divorced	16.9	18.1	18.5	18.6	18.1	19.8	19.8
Never married	16.6	18.5	18.7	19.5	18.6	19.5	19.4
Gender:							
Male	10.3	13.0	13.3	13.6	13.1	13.5	13.5
Female	13.2	15.6	15.9	16.4	15.7	16.5	16.4
Education (25 years of age and over):							
No high school diploma	22.4	28.0	28.1	28.6	28.1	29.4	29.3
High school diploma	9.2	12.4	13.1	12.8	12.5	13.1	13.0
Some college	6.1	8.3	8.3	8.6	8.3	8.6	8.6
College degree	2.8	4.3	4.2	4.4	4.3	4.6	4.6
Citizenship status:							
Native	11.2	13.3	13.9	13.9	13.3	13.9	13.8
Naturalized citizen	9.1	14.5	13.0	14.7	14.4	14.9	14.9
Not a citizen	21.3	29.5	26.3	30.6	29.7	30.4	30.4
Disability status:							
Not disabled	8.7	11.2	11.3	11.8	11.3	11.9	11.8
Disabled	23.3	22.1	23.0	22.3	22.2	23.4	23.4
Severe disability	26.0	23.7	24.8	23.9	23.7	25.2	25.1
Self-reported health status:							
Excellent	8.9	11.0	11.2	11.5	11.0	11.4	11.3
Very good	9.9	12.5	12.8	13.3	12.6	13.2	13.1
Good	14.2	17.3	17.2	17.9	17.3	18.0	17.9
Fair	19.3	22.6	23.5	23.2	22.7	23.8	23.8
Poor	25.5	27.9	29.6	28.0	27.9	29.4	29.3

Table 5-1. Official Poverty Measure

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.5	14.2	14.8	15.1	14.6	13.8	13.7	13.3	12.7	11.8
Children	20.7	21.8	22.4	22.7	21.8	20.8	20.5	19.9	18.9	16.9
Nonelderly adults	10.8	11.4	11.9	12.4	11.9	11.4	11.4	10.9	10.5	10.0
Elderly	12.2	12.4	12.9	12.2	11.7	10.5	10.8	10.5	10.5	9.7
White	10.7	11.3	11.9	12.2	11.7	11.2	11.2	11.0	10.5	9.8
Black	31.9	32.7	33.4	33.1	30.6	29.3	28.4	26.5	26.1	23.6
Other	15.4	17.6	17.4	18.9	21.1	17.8	17.6	16.1	14.5	14.4
Hispanic origin	28.1	28.7	29.6	30.6	30.7	30.3	29.4	27.1	25.6	22.8
No workers	40.2	40.5	42.0	42.4	40.7	38.2	38.1	36.3	35.3	32.7
One or more workers	8.9	9.5	10.0	10.2	9.9	9.6	9.6	9.5	9.1	8.6
Persons in family of type:										
Married couple	6.9	7.2	7.7	8.0	7.4	6.8	6.9	6.4	6.2	5.8
Male householder	15.5	16.3	17.9	18.0	18.3	16.9	16.2	16.1	15.8	14.9
Female householder	33.1	34.8	34.9	34.8	34.2	32.4	32.0	31.5	29.7	27.5
Geographic regions:										
Northeast	11.4	12.2	12.6	13.3	12.9	12.5	12.7	12.6	12.3	10.9
Midwest	12.5	13.2	13.3	13.4	13.0	11.0	10.7	10.4	10.3	9.8
South	15.8	16.1	17.1	17.2	16.1	15.7	15.1	14.6	13.7	13.1
West	13.0	14.3	14.9	15.6	15.3	14.9	15.4	14.6	14.0	12.6
Metropolitan area:										
Central city	19.0	20.2	20.9	21.5	20.9	20.6	19.6	18.8	18.5	16.4
Not central city	8.7	9.6	9.9	10.3	10.3	9.1	9.4	9.0	8.7	8.3
Nonmetropolitan area	16.3	16.1	16.9	17.2	16.0	15.6	15.9	15.9	14.4	14.3

Table 5-2. NAS Measure

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.3	15.1	15.6	16.6	15.3	14.3	13.7	13.3	12.8	12.2
Children	20.0	21.2	21.6	22.6	20.7	19.0	18.0	17.6	17.0	15.3
Nonelderly adults	11.8	12.3	12.7	13.7	12.7	12.0	11.4	11.1	10.8	10.5
Elderly	15.4	15.9	17.0	17.6	16.8	15.5	15.7	15.0	13.9	14.0
White	12.2	12.8	13.1	14.0	13.2	12.3	11.8	11.5	11.1	10.7
Black	28.1	29.3	31.1	31.4	27.1	25.9	24.4	23.3	23.0	20.5
Other	16.3	18.8	18.3	21.5	22.0	18.4	16.8	17.0	15.7	14.9
Hispanic origin	32.1	33.6	33.1	34.3	33.0	30.8	29.5	27.0	26.6	23.7
No workers	36.4	37.1	39.7	40.3	39.0	36.5	35.9	34.4	33.6	32.0
One or more workers	10.5	11.2	11.3	12.2	11.2	10.5	10.0	9.8	9.5	9.2
Persons in family of type:										
Married couple	8.9	9.4	9.8	10.5	9.3	8.6	8.2	7.8	7.4	7.1
Male householder	16.3	17.1	18.1	19.5	18.4	17.6	16.0	15.6	15.1	15.3
Female householder	30.5	31.8	32.1	33.1	31.9	29.0	28.3	27.8	27.1	25.4
Geographic regions:										
Northeast	13.3	14.3	15.1	16.1	15.0	14.8	14.3	14.1	13.4	13.1
Midwest	12.8	12.8	13.2	14.1	12.9	11.1	10.0	10.0	9.9	9.5
South	15.1	15.8	16.6	17.1	15.3	14.6	13.9	13.1	12.7	12.1
West	16.0	17.4	17.1	18.8	18.4	16.8	16.6	16.1	15.6	14.3
Metropolitan area:										
Central city	19.8	21.1	21.8	23.2	21.0	20.7	19.0	18.5	18.3	16.8
Not central city	10.7	11.5	11.7	12.6	12.3	10.8	10.7	10.2	9.9	9.7
Nonmetropolitan area	14.8	14.7	15.3	16.2	14.7	13.5	13.2	13.1	12.1	11.9

Table 5-3. **DCM1 Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.3	14.9	15.6	16.4	15.2	14.3	13.8	13.3	12.9	12.4
Children	20.1	21.1	21.8	22.6	20.7	19.3	18.6	17.9	17.4	16.1
Nonelderly adults	11.6	12.2	12.7	13.6	12.5	11.9	11.5	11.0	10.8	10.6
Elderly	15.0	15.5	16.5	17.2	16.3	15.0	15.3	14.5	13.5	13.5
White	12.1	12.6	13.1	13.8	13.0	12.2	11.9	11.5	11.1	10.8
Black	28.1	29.4	31.2	31.6	27.1	26.2	25.3	23.5	23.5	21.5
Other	16.5	18.3	18.5	22.0	22.0	18.6	16.7	16.7	15.1	14.9
Hispanic origin	32.0	33.1	33.2	34.0	32.6	30.7	29.6	27.1	26.3	24.3
No workers	35.6	36.3	38.8	39.4	38.1	35.6	35.1	33.8	33.1	31.4
One or more workers	10.6	11.1	11.4	12.2	11.1	10.6	10.2	9.9	9.6	9.5
Persons in family of type:										
Married couple	8.8	9.2	9.7	10.3	9.2	8.5	8.2	7.7	7.3	7.1
Male householder	16.2	16.7	18.0	19.4	18.2	17.5	16.2	15.6	15.1	15.2
Female householder	30.4	31.7	32.1	33.1	31.7	29.2	28.7	28.1	27.5	26.2
Geographic regions:										
Northeast	13.2	14.0	15.0	16.0	14.9	14.6	14.2	14.1	13.7	13.3
Midwest	12.7	12.6	13.3	13.9	13.0	11.1	10.4	10.0	9.9	9.6
South	15.2	15.7	16.7	17.0	15.0	14.6	14.3	13.3	12.7	12.3
West	15.7	17.2	16.9	18.7	18.0	16.7	16.3	15.9	15.4	14.6
Metropolitan area:										
Central city	19.6	20.8	21.8	22.9	21.0	20.7	19.3	18.5	18.4	17.1
Not central city	10.5	11.3	11.7	12.6	12.0	10.8	10.8	10.2	9.9	9.8
Nonmetropolitan area	15.0	14.6	15.4	16.0	14.5	13.3	13.3	13.2	12.3	12.0

Table 5-4. **DCM2 Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.3	15.0	15.6	16.5	15.3	14.3	13.7	13.3	12.8	12.3
Children	20.0	21.2	21.7	22.6	20.7	19.1	18.2	17.6	17.0	15.6
Nonelderly adults	11.7	12.3	12.7	13.7	12.7	12.0	11.4	11.0	10.8	10.6
Elderly	15.3	15.8	17.0	17.6	16.7	15.5	15.6	14.9	13.8	13.9
White	12.2	12.8	13.1	14.0	13.1	12.3	11.9	11.5	11.0	10.8
Black	28.1	29.0	31.0	31.4	27.1	25.9	24.5	23.2	23.0	20.7
Other	16.2	18.5	18.5	21.6	22.0	18.7	16.8	16.9	15.5	15.3
Hispanic origin	32.0	33.4	33.0	34.2	32.7	30.9	29.5	26.9	26.6	23.8
No workers	36.3	36.9	39.5	40.1	38.8	36.3	35.7	34.3	33.5	31.9
One or more workers	10.5	11.1	11.3	12.2	11.1	10.5	10.1	9.8	9.5	9.3
Persons in family of type:										
Married couple	8.9	9.3	9.8	10.5	9.3	8.6	8.2	7.8	7.3	7.1
Male householder	16.2	17.0	18.1	19.4	18.3	17.6	16.0	15.6	15.1	15.3
Female householder	30.4	31.6	32.0	32.9	31.8	29.1	28.4	27.8	27.2	25.5
Geographic regions:										
Northeast	13.2	14.3	15.1	16.1	15.0	14.7	14.3	14.0	13.4	13.1
Midwest	12.8	12.7	13.2	14.1	12.9	11.1	10.2	9.9	9.8	9.6
South	15.1	15.7	16.6	17.0	15.2	14.7	14.0	13.3	12.6	12.2
West	15.8	17.3	17.0	18.8	18.3	16.8	16.5	16.0	15.5	14.4
Metropolitan area:										
Central city	19.8	21.0	21.7	23.0	20.9	20.7	19.2	18.4	18.3	16.9
Not central city	10.6	11.4	11.7	12.6	12.2	10.8	10.7	10.2	9.9	9.8
Nonmetropolitan area	14.8	14.7	15.4	16.1	14.8	13.6	13.3	13.2	12.1	12.0

Table 5-5. **DES-DCM2 Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.3	15.0	15.7	16.5	15.3	14.4	13.8	13.3	12.8	12.3
Children	19.5	20.7	21.4	22.1	20.3	18.6	17.8	17.3	16.7	15.1
Nonelderly adults	11.8	12.4	12.9	13.8	12.8	12.2	11.6	11.2	10.8	10.7
Elderly	15.5	15.9	17.1	17.6	16.5	15.9	15.8	14.9	14.1	14.1
White	12.1	12.7	13.2	13.9	13.0	12.3	11.9	11.5	11.0	10.7
Black	28.0	29.0	31.1	31.5	27.3	26.4	24.9	23.4	23.0	21.1
Other	16.5	18.4	18.6	21.8	21.9	18.3	16.6	16.9	15.7	15.0
Hispanic origin	31.8	32.8	32.8	33.8	32.1	30.7	28.9	26.5	25.9	23.5
No workers	36.7	37.2	39.6	40.5	38.8	37.0	36.3	34.4	33.9	32.3
One or more workers	10.4	11.0	11.4	12.1	11.1	10.4	10.0	9.8	9.4	9.3
Persons in family of type:										
Married couple	8.4	8.7	9.4	10.0	8.8	8.1	7.7	7.3	6.9	6.6
Male householder	17.2	18.1	19.4	20.5	19.3	18.6	16.9	16.6	15.9	16.2
Female householder	31.3	32.6	33.2	33.8	32.5	30.3	29.5	28.7	27.9	26.5
Geographic regions:										
Northeast	13.2	14.2	15.1	16.0	15.0	14.9	14.3	14.2	13.3	13.1
Midwest	12.7	12.8	13.3	14.0	13.0	11.1	10.1	10.0	9.8	9.7
South	15.0	15.7	16.7	17.1	15.1	14.6	14.0	13.2	12.6	12.1
West	15.9	17.0	17.1	18.7	18.1	16.9	16.6	16.0	15.5	14.4
Metropolitan area:										
Central city	19.9	21.1	21.9	23.0	21.1	21.1	19.3	18.4	18.2	17.1
Not central city	10.6	11.3	11.8	12.6	12.1	10.7	10.6	10.3	9.8	9.7
Nonmetropolitan area	14.6	14.6	15.5	16.1	14.7	13.4	13.4	13.0	12.2	11.8

Table 5-6. **NGA Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.6	15.2	15.8	16.5	15.4	14.4	13.6	13.3	12.7	12.2
Children	20.2	21.1	21.7	22.5	20.8	19.2	17.9	17.4	16.7	15.4
Nonelderly adults	12.0	12.4	12.9	13.7	12.7	12.1	11.4	11.1	10.7	10.5
Elderly	15.7	16.4	17.5	17.8	16.9	15.8	15.6	15.3	14.1	14.2
White	12.4	13.0	13.4	14.0	13.2	12.5	11.9	11.5	11.0	10.7
Black	28.8	29.2	31.2	31.4	27.4	25.8	24.5	23.2	22.6	20.9
Other	14.6	18.1	17.6	20.5	20.4	17.6	15.2	16.3	14.7	13.9
Hispanic origin	28.4	29.6	29.7	30.7	29.9	29.6	26.3	24.9	23.8	21.6
No workers	36.2	36.9	39.4	40.3	38.6	36.2	35.7	34.9	33.5	32.5
One or more workers	10.8	11.3	11.6	12.2	11.3	10.7	9.9	9.7	9.3	9.1
Persons in family of type:										
Married couple	9.2	9.6	10.1	10.5	9.5	8.8	8.1	7.8	7.4	7.1
Male householder	16.3	17.2	17.9	18.9	18.1	17.6	15.9	15.3	15.1	15.1
Female householder	30.3	31.4	32.0	33.0	31.4	29.0	28.2	28.0	26.5	25.3
Geographic regions:										
Northeast	11.0	11.8	12.6	13.4	12.6	12.6	12.1	12.0	11.3	11.0
Midwest	14.0	13.9	14.6	15.1	13.9	12.2	11.2	10.8	10.4	10.5
South	17.4	18.0	18.8	19.2	17.3	16.4	15.6	14.8	14.2	13.6
West	14.0	15.4	15.2	16.6	16.3	15.3	14.4	14.4	13.8	12.7
Metropolitan area:										
Central city	18.5	19.7	20.5	21.6	19.9	19.5	17.7	17.2	16.8	15.7
Not central city	9.9	10.8	11.1	11.8	11.5	10.2	9.9	9.7	9.3	9.2
Nonmetropolitan area	19.1	18.7	19.3	19.9	18.5	17.6	17.1	16.5	15.3	15.0

Table 5-7. **DES**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	14.3	15.1	15.7	16.5	15.3	14.3	13.7	13.3	12.8	12.2
Children	19.6	20.8	21.3	22.1	20.3	18.5	17.7	17.2	16.6	15.0
Nonelderly adults	11.9	12.5	12.9	13.9	12.8	12.2	11.6	11.2	10.9	10.7
Elderly	15.6	16.0	17.2	17.6	16.6	15.9	15.9	14.9	14.2	14.1
White	12.2	12.8	13.2	13.9	13.1	12.3	11.8	11.4	11.0	10.7
Black	28.2	29.3	31.1	31.6	27.4	26.3	25.1	23.5	22.8	21.1
Other	16.6	18.7	18.6	21.7	21.9	18.2	16.5	16.9	15.7	14.6
Hispanic origin	31.9	33.1	33.1	34.1	32.5	30.6	28.8	26.4	25.9	23.4
No workers	36.9	37.4	39.8	40.6	39.0	37.1	36.4	34.6	34.0	32.4
One or more workers	10.4	11.1	11.4	12.1	11.1	10.4	9.9	9.7	9.3	9.2
Persons in family of type:										
Married couple	8.4	8.8	9.4	9.9	8.8	8.1	7.6	7.3	6.9	6.6
Male householder	17.3	18.3	19.4	20.6	19.5	18.6	17.0	16.5	15.9	16.2
Female householder	31.6	32.8	33.1	34.0	32.6	30.2	29.5	28.7	27.8	26.4
Geographic regions:										
Northeast	13.3	14.2	15.2	16.1	15.0	15.0	14.3	14.2	13.4	13.1
Midwest	12.8	12.9	13.2	14.1	12.9	11.1	10.1	10.0	9.8	9.7
South	15.0	15.8	16.7	17.0	15.1	14.5	14.1	13.1	12.5	12.1
West	16.1	17.2	17.2	18.7	18.3	16.9	16.5	16.0	15.5	14.3
Metropolitan area:										
Central city	20.0	21.3	22.0	23.1	21.1	21.1	19.3	18.6	18.3	17.0
Not central city	10.7	11.4	11.8	12.5	12.1	10.7	10.6	10.2	9.8	9.7
Nonmetropolitan area	14.6	14.7	15.4	16.1	14.6	13.4	13.4	13.1	12.0	11.8

Table 5-8. **NAS/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.9	17.7	18.2	19.1	17.8	16.9	16.1	15.3	14.8	14.4
Children	23.6	24.8	25.0	25.9	23.8	22.5	21.3	20.3	19.6	18.3
Nonelderly adults	13.8	14.5	14.9	15.8	14.8	14.1	13.5	12.8	12.4	12.3
Elderly	18.0	18.8	20.3	20.7	19.5	18.2	18.4	17.3	16.4	16.6
White	14.3	15.0	15.5	16.2	15.3	14.5	14.0	13.4	12.8	12.6
Black	33.4	34.5	35.0	35.8	31.3	30.3	28.7	26.7	26.5	24.6
Other	19.6	21.8	22.4	25.0	25.2	21.4	19.4	18.7	17.5	17.5
Hispanic origin	37.2	38.6	38.3	39.6	37.3	36.8	34.6	31.5	30.5	28.0
No workers	41.1	41.8	44.1	44.8	43.1	40.8	40.3	38.3	36.9	35.8
One or more workers	12.7	13.4	13.6	14.4	13.3	12.7	12.1	11.5	11.2	11.1
Persons in family of type:										
Married couple	10.8	11.3	12.0	12.5	11.3	10.6	10.0	9.4	8.9	8.8
Male householder	18.6	19.6	20.7	21.7	20.9	19.7	18.4	17.5	16.9	17.2
Female householder	35.0	36.4	35.9	37.4	35.5	33.4	32.5	31.3	30.3	28.9
Geographic regions:										
Northeast	15.7	16.6	17.6	18.6	17.5	17.6	17.0	16.2	15.6	15.4
Midwest	14.8	15.1	15.6	16.1	14.8	12.9	12.3	11.6	11.3	11.4
South	17.9	18.7	19.3	19.7	17.9	17.2	16.2	15.3	14.6	14.2
West	18.8	20.1	19.9	21.8	21.0	19.9	19.2	18.6	17.8	16.8
Metropolitan area:										
Central city	23.1	24.3	25.3	26.2	24.3	24.1	22.4	21.2	20.7	19.7
Not central city	12.5	13.5	13.8	14.7	14.2	12.8	12.6	11.9	11.6	11.5
Nonmetropolitan area	17.9	17.7	18.1	18.8	17.2	16.2	15.5	15.4	14.1	14.0

Table 5-9. **DCM1/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	17.2	18.1	18.7	19.5	18.3	17.4	16.7	15.9	15.4	15.0
Children	24.4	25.6	25.9	26.8	24.8	23.5	22.6	21.4	20.9	19.7
Nonelderly adults	14.1	14.7	15.2	16.1	15.2	14.5	13.9	13.2	12.8	12.7
Elderly	18.0	18.8	20.3	20.7	19.5	18.2	18.4	17.3	16.5	16.6
White	14.7	15.3	15.8	16.5	15.7	15.0	14.4	13.8	13.3	13.1
Black	34.0	35.2	35.8	37.0	32.2	31.1	30.4	27.9	28.1	26.0
Other	19.7	22.4	22.8	25.3	25.8	22.2	20.5	19.1	17.8	18.1
Hispanic origin	37.9	39.4	39.3	40.2	38.2	38.0	35.9	33.0	31.9	29.5
No workers	41.1	41.8	44.1	44.8	43.1	40.8	40.3	38.3	36.9	35.8
One or more workers	13.1	13.8	14.1	14.9	13.9	13.3	12.8	12.2	11.9	11.9
Persons in family of type:										
Married couple	11.1	11.6	12.2	12.7	11.7	10.9	10.4	9.7	9.3	9.2
Male householder	18.8	19.5	20.9	22.0	21.2	20.1	18.9	18.0	17.3	17.5
Female householder	35.8	37.2	37.0	38.3	36.5	34.5	33.8	32.5	31.8	30.4
Geographic regions:										
Northeast	16.0	16.8	18.0	18.9	18.0	18.1	17.5	16.6	16.4	16.2
Midwest	15.1	15.5	16.1	16.5	15.4	13.3	12.6	12.0	11.9	11.8
South	18.5	19.1	19.7	20.3	18.4	17.7	17.1	16.0	15.3	14.9
West	18.9	20.3	20.3	22.0	21.3	20.6	19.7	19.2	18.4	17.4
Metropolitan area:										
Central city	23.6	24.7	25.7	26.7	24.8	24.6	23.4	22.0	21.5	20.5
Not central city	12.8	13.9	14.1	15.0	14.6	13.3	13.0	12.3	12.1	12.1
Nonmetropolitan area	18.2	18.1	18.6	19.3	17.8	16.7	16.1	15.6	14.7	14.6

Table 5-10. **DCM2/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.9	17.8	18.3	19.2	17.9	17.0	16.2	15.4	14.9	14.4
Children	23.6	25.0	25.2	26.1	24.0	22.8	21.5	20.5	19.9	18.5
Nonelderly adults	13.8	14.5	14.9	15.9	14.9	14.2	13.5	12.9	12.5	12.3
Elderly	18.0	18.8	20.3	20.6	19.5	18.2	18.4	17.3	16.4	16.6
White	14.3	15.1	15.5	16.3	15.4	14.7	14.1	13.5	12.9	12.6
Black	33.4	34.5	35.2	35.9	31.4	30.5	28.8	26.8	26.9	24.7
Other	19.5	21.9	22.5	25.1	25.4	21.7	19.4	18.7	17.5	17.5
Hispanic origin	37.3	38.6	38.4	39.5	37.5	37.0	34.8	31.6	31.1	28.3
No workers	41.1	41.8	44.1	44.8	43.1	40.8	40.3	38.3	36.9	35.8
One or more workers	12.7	13.5	13.7	14.5	13.4	12.9	12.2	11.6	11.4	11.2
Persons in family of type:										
Married couple	10.8	11.4	12.0	12.6	11.4	10.7	10.1	9.4	9.1	8.9
Male householder	18.6	19.5	20.9	21.8	20.8	19.9	18.4	17.6	17.1	17.3
Female householder	35.0	36.5	36.1	37.4	35.7	33.6	32.7	31.5	30.5	29.0
Geographic regions:										
Northeast	15.6	16.6	17.7	18.7	17.7	17.7	17.0	16.3	15.7	15.5
Midwest	14.8	15.3	15.7	16.2	15.0	13.0	12.5	11.6	11.4	11.4
South	17.9	18.8	19.4	19.7	17.9	17.4	16.3	15.4	14.8	14.3
West	18.7	20.1	20.1	21.9	21.1	20.0	19.3	18.6	18.1	16.9
Metropolitan area:										
Central city	23.1	24.3	25.3	26.3	24.4	24.1	22.6	21.2	20.9	19.8
Not central city	12.5	13.6	13.9	14.8	14.3	13.0	12.7	12.0	11.7	11.5
Nonmetropolitan area	17.8	17.8	18.3	19.0	17.3	16.5	15.6	15.4	14.2	14.0

Table 5-11. **DES-DCM2/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	17.6	18.4	19.1	20.0	18.5	17.6	17.0	16.1	15.6	15.0
Children	24.0	25.3	25.7	26.6	24.4	23.1	22.1	20.8	20.3	18.9
Nonelderly adults	14.5	15.2	15.8	16.7	15.5	14.9	14.3	13.6	13.2	13.0
Elderly	19.0	20.0	21.1	21.6	20.2	19.3	19.2	18.4	17.4	17.3
White	15.0	15.7	16.1	17.0	15.9	15.2	14.7	14.0	13.5	13.2
Black	34.4	35.5	36.9	37.5	32.5	31.6	30.3	28.1	27.8	25.8
Other	20.5	22.1	23.3	25.5	25.9	22.0	20.4	19.0	18.4	17.8
Hispanic origin	38.1	39.5	39.4	40.7	38.7	37.8	35.6	32.6	32.0	29.0
No workers	42.8	43.3	45.6	46.2	44.4	42.5	41.9	39.9	38.6	37.1
One or more workers	13.2	14.0	14.3	15.2	13.9	13.3	12.8	12.2	11.9	11.7
Persons in family of type:										
Married couple	10.8	11.2	12.0	12.6	11.2	10.6	10.0	9.3	9.0	8.7
Male householder	20.3	21.7	22.8	23.9	23.0	21.7	20.5	19.6	18.8	18.8
Female householder	37.5	38.8	38.8	39.9	38.0	35.9	35.2	33.7	32.8	31.3
Geographic regions:										
Northeast	16.4	17.4	18.4	19.5	18.3	18.3	17.9	17.1	16.6	16.2
Midwest	15.4	15.9	16.4	16.9	15.5	13.5	12.9	12.2	12.0	11.9
South	18.7	19.3	20.2	20.7	18.4	18.1	17.1	16.1	15.4	14.9
West	19.4	20.7	20.7	22.4	21.8	20.7	20.1	19.2	18.7	17.4
Metropolitan area:										
Central city	24.2	25.2	26.3	27.4	25.3	25.0	23.7	22.2	21.8	20.7
Not central city	12.9	14.2	14.5	15.4	14.7	13.4	13.2	12.5	12.2	12.0
Nonmetropolitan area	18.5	18.1	18.9	19.7	17.8	17.1	16.3	16.0	14.7	14.6

Table 5-12. **NGA/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	17.5	18.0	18.8	19.5	18.1	17.2	16.4	15.7	15.1	14.6
Children	24.4	25.1	25.7	26.4	24.4	22.9	21.4	20.9	19.9	18.8
Nonelderly adults	14.3	14.7	15.3	16.1	15.0	14.3	13.7	13.1	12.7	12.4
Elderly	19.0	19.3	21.1	21.3	20.0	19.3	18.9	17.9	17.1	17.0
White	15.0	15.5	16.0	16.8	15.8	15.0	14.3	13.8	13.2	12.9
Black	34.0	34.1	36.1	35.7	31.4	30.3	29.1	27.1	26.9	24.7
Other	18.6	20.5	21.8	23.2	24.1	20.7	18.2	18.5	17.0	17.1
Hispanic origin	34.6	35.2	35.1	36.2	35.1	34.7	32.0	30.1	29.1	26.2
No workers	41.6	41.7	44.6	45.1	43.1	41.6	40.6	39.1	37.9	36.2
One or more workers	13.3	13.7	14.2	14.8	13.7	13.0	12.3	11.9	11.5	11.4
Persons in family of type:										
Married couple	11.6	11.8	12.5	13.0	11.9	11.1	10.3	9.7	9.3	9.1
Male householder	18.7	19.3	21.0	21.5	20.8	20.1	18.4	17.4	17.2	17.2
Female householder	35.5	36.2	36.6	37.5	35.5	33.5	32.6	32.0	30.7	29.2
Geographic regions:										
Northeast	13.4	14.0	15.1	15.8	15.0	14.9	14.1	14.0	13.4	13.1
Midwest	16.7	16.7	17.4	17.9	16.6	14.4	13.6	12.9	12.5	12.6
South	20.9	21.2	22.2	22.6	20.3	19.8	18.7	17.6	16.9	16.3
West	17.1	18.1	18.2	19.5	19.1	18.1	17.5	17.2	16.5	15.4
Metropolitan area:										
Central city	22.1	23.1	24.1	25.1	23.2	23.0	21.2	20.5	20.1	18.8
Not central city	12.1	12.8	13.3	13.8	13.5	12.2	11.8	11.4	11.0	10.9
Nonmetropolitan area	22.9	22.2	23.2	24.1	22.3	21.4	20.6	19.8	18.2	18.3

Table 5-13. **DES/U Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	17.5	18.3	19.0	19.9	18.4	17.5	16.8	16.0	15.4	15.0
Children	23.9	25.1	25.6	26.5	24.1	22.8	21.8	20.6	20.0	18.8
Nonelderly adults	14.5	15.1	15.7	16.7	15.5	14.8	14.2	13.6	13.1	12.9
Elderly	19.0	20.0	21.1	21.6	20.2	19.3	19.2	18.4	17.4	17.3
White	14.9	15.6	16.1	16.9	15.8	15.1	14.6	14.0	13.4	13.1
Black	34.4	35.4	36.6	37.3	32.3	31.4	30.0	28.1	27.4	25.6
Other	20.4	22.0	23.2	25.4	25.8	21.8	20.3	19.0	18.2	17.7
Hispanic origin	38.0	39.5	39.4	40.7	38.6	37.5	35.4	32.4	31.4	28.8
No workers	42.8	43.3	45.6	46.2	44.4	42.5	41.9	39.9	38.6	37.1
One or more workers	13.1	13.8	14.2	15.1	13.8	13.2	12.6	12.1	11.7	11.6
Persons in family of type:										
Married couple	10.7	11.1	12.0	12.5	11.1	10.5	9.9	9.3	8.8	8.7
Male householder	20.3	21.7	22.7	23.8	23.0	21.4	20.4	19.6	18.6	18.8
Female householder	37.4	38.7	38.6	39.9	37.8	35.7	34.9	33.5	32.6	31.1
Geographic regions:										
Northeast	16.3	17.4	18.4	19.4	18.1	18.3	17.9	17.0	16.5	16.2
Midwest	15.3	15.7	16.3	16.9	15.4	13.4	12.7	12.1	11.9	11.8
South	18.6	19.2	20.2	20.6	18.4	17.9	17.0	16.0	15.3	14.8
West	19.4	20.6	20.7	22.3	21.7	20.5	20.0	19.2	18.4	17.4
Metropolitan area:										
Central city	24.2	25.1	26.4	27.3	25.1	25.0	23.5	22.1	21.6	20.6
Not central city	12.9	14.1	14.4	15.3	14.6	13.3	13.1	12.4	12.1	11.9
Nonmetropolitan area	18.4	18.0	18.8	19.6	17.8	16.8	16.2	16.0	14.7	14.5

Table 5-14. **NAS-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.7	14.5	15.1	15.8	14.6	13.8	13.6	13.3	12.5	11.7
Children	19.0	20.3	21.0	21.7	19.7	18.4	17.8	17.6	16.5	14.7
Nonelderly adults	11.2	11.8	12.3	13.1	12.1	11.6	11.3	11.1	10.5	10.1
Elderly	14.8	15.2	16.4	16.8	16.1	14.9	15.6	15.0	13.5	13.3
White	11.6	12.3	12.7	13.4	12.5	11.8	11.7	11.5	10.7	10.2
Black	26.7	28.1	30.3	30.1	25.9	25.1	24.2	23.3	22.4	19.8
Other	15.6	17.7	17.9	21.0	21.1	17.8	16.7	17.0	15.1	14.2
Hispanic origin	30.9	32.2	32.1	32.9	31.4	29.5	29.2	27.0	25.7	22.6
No workers	35.1	35.9	38.5	38.8	37.8	35.4	35.5	34.4	33.1	31.1
One or more workers	9.9	10.6	10.9	11.6	10.5	10.1	9.9	9.8	9.2	8.8
Persons in family of type:										
Married couple	8.4	8.9	9.4	9.9	8.8	8.2	8.1	7.8	7.1	6.7
Male householder	15.8	16.4	17.7	18.8	17.8	17.0	15.9	15.6	14.8	14.8
Female householder	29.0	30.6	31.1	31.8	30.6	28.3	28.0	27.8	26.4	24.5
Geographic regions:										
Northeast	12.6	13.5	14.6	15.3	14.2	14.2	14.1	14.1	13.1	12.6
Midwest	12.2	12.3	12.8	13.4	12.3	10.8	10.0	10.0	9.6	9.2
South	14.3	15.2	16.1	16.3	14.6	14.1	13.8	13.1	12.2	11.5
West	15.2	16.6	16.6	18.2	17.5	16.2	16.4	16.1	15.2	13.7
Metropolitan area:										
Central city	18.8	20.3	21.2	22.2	20.1	20.1	18.8	18.5	17.9	16.1
Not central city	10.2	11.0	11.4	12.1	11.6	10.4	10.6	10.2	9.6	9.3
Nonmetropolitan area	14.1	14.0	14.9	15.4	14.1	13.0	13.1	13.1	11.8	11.4

Table 5-15. **DCM1-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.6	14.3	15.0	15.7	14.5	13.8	13.7	13.3	12.5	11.9
Children	19.2	20.2	21.0	21.6	19.7	18.6	18.4	17.9	17.0	15.5
Nonelderly adults	11.1	11.7	12.2	13.0	12.0	11.5	11.4	11.0	10.5	10.2
Elderly	14.4	14.7	16.0	16.3	15.6	14.5	15.2	14.5	13.2	13.0
White	11.5	12.1	12.6	13.1	12.4	11.8	11.8	11.5	10.8	10.4
Black	26.9	27.9	29.8	30.5	25.6	25.2	25.1	23.5	23.0	20.9
Other	16.0	17.6	17.9	21.4	21.0	17.9	16.6	16.7	14.7	14.4
Hispanic origin	30.6	31.8	32.2	32.3	31.4	29.5	29.3	27.1	25.7	23.3
No workers	34.5	35.0	37.7	38.0	36.8	34.6	34.9	33.8	32.5	30.6
One or more workers	10.0	10.6	11.0	11.6	10.5	10.2	10.2	9.9	9.3	9.1
Persons in family of type:										
Married couple	8.4	8.7	9.4	9.7	8.7	8.1	8.1	7.7	7.1	6.7
Male householder	15.6	16.2	17.6	18.8	17.4	17.0	16.1	15.6	14.8	14.9
Female householder	29.1	30.6	30.9	31.9	30.2	28.3	28.5	28.1	26.9	25.4
Geographic regions:										
Northeast	12.5	13.3	14.3	15.2	14.1	14.1	14.1	14.1	13.4	12.9
Midwest	12.0	12.1	12.7	13.3	12.3	10.8	10.3	10.0	9.6	9.3
South	14.5	14.9	16.1	16.2	14.4	14.2	14.2	13.3	12.3	11.8
West	15.0	16.6	16.5	17.9	17.2	16.1	16.1	15.9	15.1	13.9
Metropolitan area:										
Central city	18.8	20.0	20.9	22.0	20.0	20.1	19.2	18.5	17.9	16.7
Not central city	10.1	10.8	11.4	12.0	11.4	10.4	10.7	10.2	9.6	9.4
Nonmetropolitan area	14.2	13.9	14.8	15.1	14.1	12.8	13.2	13.2	11.8	11.6

Table 5-16. **DCM2-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.6	14.4	15.1	15.8	14.6	13.8	13.6	13.3	12.4	11.7
Children	19.0	20.2	21.0	21.6	19.7	18.4	18.0	17.6	16.6	14.8
Nonelderly adults	11.1	11.7	12.3	13.0	12.1	11.5	11.3	11.0	10.5	10.1
Elderly	14.7	15.1	16.3	16.7	16.0	14.8	15.5	14.9	13.4	13.2
White	11.6	12.2	12.6	13.3	12.5	11.8	11.7	11.5	10.7	10.3
Black	26.6	27.7	30.2	30.0	25.8	25.1	24.4	23.2	22.4	19.9
Other	15.6	17.8	18.1	21.1	20.9	17.8	16.7	16.9	15.0	14.6
Hispanic origin	30.8	32.0	31.9	32.8	31.2	29.5	29.1	26.9	25.7	22.7
No workers	35.0	35.7	38.3	38.6	37.5	35.1	35.3	34.3	32.9	31.0
One or more workers	9.9	10.6	10.9	11.6	10.5	10.1	9.9	9.8	9.2	8.8
Persons in family of type:										
Married couple	8.4	8.8	9.4	9.9	8.8	8.2	8.1	7.8	7.1	6.7
Male householder	15.6	16.3	17.6	18.7	17.6	17.0	15.9	15.6	14.8	14.8
Female householder	29.0	30.4	31.0	31.6	30.3	28.2	28.1	27.8	26.5	24.6
Geographic regions:										
Northeast	12.5	13.5	14.4	15.3	14.2	14.1	14.1	14.0	13.1	12.5
Midwest	12.2	12.2	12.8	13.3	12.3	10.7	10.1	9.9	9.5	9.3
South	14.4	15.1	16.1	16.2	14.5	14.1	13.9	13.3	12.3	11.6
West	15.2	16.5	16.5	18.2	17.3	16.2	16.3	16.0	15.1	13.8
Metropolitan area:										
Central city	18.8	20.3	21.0	22.0	20.0	20.1	19.0	18.4	17.8	16.2
Not central city	10.1	10.9	11.4	12.1	11.6	10.3	10.5	10.2	9.5	9.3
Nonmetropolitan area	14.1	13.9	14.9	15.3	14.1	12.9	13.2	13.2	11.9	11.5

Table 5-17. **DES-DCM2-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.5	14.3	15.1	15.7	14.5	13.8	13.6	13.3	12.4	11.8
Children	18.4	19.7	20.6	21.1	19.2	18.0	17.5	17.3	16.2	14.4
Nonelderly adults	11.2	11.9	12.4	13.2	12.2	11.7	11.5	11.2	10.6	10.3
Elderly	14.8	15.3	16.6	16.6	15.7	15.2	15.6	14.9	13.5	13.6
White	11.5	12.2	12.7	13.3	12.4	11.9	11.7	11.5	10.7	10.3
Black	26.3	27.8	30.2	30.0	25.9	25.2	24.7	23.4	22.4	20.3
Other	15.6	17.9	18.1	21.1	20.7	18.1	16.5	16.9	15.1	14.3
Hispanic origin	30.5	31.2	31.3	32.5	30.9	29.5	28.6	26.5	25.2	22.4
No workers	35.3	36.0	38.6	39.0	37.1	35.8	36.0	34.4	33.1	31.3
One or more workers	9.7	10.5	10.9	11.5	10.5	10.1	9.8	9.8	9.1	8.8
Persons in family of type:										
Married couple	7.9	8.2	8.9	9.4	8.3	7.7	7.6	7.3	6.6	6.3
Male householder	16.4	17.5	18.7	19.9	18.5	18.1	16.8	16.6	15.6	15.7
Female householder	29.8	31.5	32.2	32.5	31.1	29.3	29.2	28.7	27.2	25.5
Geographic regions:										
Northeast	12.5	13.6	14.5	15.1	14.2	14.6	14.1	14.2	13.1	12.6
Midwest	12.0	12.3	12.7	13.4	12.3	10.7	10.1	10.0	9.4	9.3
South	14.2	15.0	16.2	16.2	14.5	14.0	13.8	13.2	12.3	11.6
West	15.2	16.2	16.5	18.0	17.2	16.3	16.4	16.0	15.1	13.8
Metropolitan area:										
Central city	18.8	20.3	21.0	22.1	20.0	20.3	19.0	18.4	17.8	16.4
Not central city	10.0	10.8	11.4	11.9	11.5	10.4	10.5	10.3	9.6	9.3
Nonmetropolitan area	13.8	13.8	14.9	15.3	14.0	12.9	13.2	13.0	11.7	11.3

Table 5-18. **NGA-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.8	14.6	15.2	15.8	14.6	13.9	13.5	13.3	12.3	11.6
Children	19.1	20.3	21.0	21.5	19.7	18.4	17.7	17.4	16.3	14.5
Nonelderly adults	11.3	11.9	12.4	13.0	12.1	11.6	11.3	11.1	10.3	10.0
Elderly	14.9	15.6	16.9	17.0	16.2	15.1	15.4	15.3	13.5	13.6
White	11.8	12.4	12.9	13.3	12.6	12.0	11.7	11.5	10.7	10.2
Black	27.3	28.0	30.3	30.3	26.3	25.0	24.3	23.2	21.8	20.1
Other	13.9	17.3	16.9	19.6	19.5	17.0	15.1	16.3	14.3	13.2
Hispanic origin	26.8	28.5	28.7	29.2	28.3	28.6	26.0	24.9	23.1	20.6
No workers	34.7	35.7	38.4	38.9	37.5	35.2	35.4	34.9	32.6	31.5
One or more workers	10.1	10.8	11.1	11.5	10.6	10.2	9.8	9.7	9.0	8.6
Persons in family of type:										
Married couple	8.6	9.1	9.7	9.9	8.9	8.4	8.0	7.8	7.1	6.6
Male householder	15.7	16.6	17.4	18.3	17.3	17.0	15.7	15.3	14.8	14.7
Female householder	29.0	30.3	31.1	31.8	30.3	28.1	28.0	28.0	25.8	24.3
Geographic regions:										
Northeast	10.4	11.3	12.1	12.9	12.0	12.0	12.0	12.0	10.8	10.4
Midwest	13.3	13.3	14.0	14.4	13.2	11.6	11.1	10.8	10.1	10.0
South	16.4	17.3	18.2	18.2	16.5	15.8	15.4	14.8	13.8	13.0
West	13.3	14.8	14.7	15.9	15.5	14.8	14.2	14.4	13.4	12.2
Metropolitan area:										
Central city	17.5	18.9	19.8	20.6	18.9	18.9	17.5	17.2	16.3	14.9
Not central city	9.4	10.3	10.8	11.3	10.9	9.8	9.8	9.7	9.0	8.8
Nonmetropolitan area	18.0	18.0	18.6	19.0	17.5	16.8	16.8	16.5	14.8	14.4

Table 5-19. **DES-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	13.6	14.4	15.1	15.8	14.6	13.8	13.6	13.3	12.4	11.7
Children	18.6	19.8	20.6	21.1	19.3	17.9	17.5	17.2	16.2	14.3
Nonelderly adults	11.3	11.9	12.5	13.2	12.3	11.8	11.5	11.2	10.6	10.3
Elderly	14.9	15.4	16.6	16.7	15.9	15.4	15.7	14.9	13.7	13.7
White	11.6	12.3	12.7	13.3	12.5	11.9	11.7	11.4	10.7	10.2
Black	26.7	27.8	30.3	30.1	26.0	25.1	24.7	23.5	22.4	20.3
Other	15.6	17.8	17.9	21.0	20.7	18.1	16.3	16.9	15.4	13.9
Hispanic origin	30.6	31.6	31.6	32.5	31.1	29.6	28.5	26.4	25.2	22.3
No workers	35.4	36.1	38.8	39.2	37.4	36.0	36.1	34.6	33.3	31.5
One or more workers	9.9	10.5	10.9	11.5	10.5	10.0	9.8	9.7	9.1	8.7
Persons in family of type:										
Married couple	7.9	8.3	9.0	9.4	8.3	7.8	7.5	7.3	6.7	6.3
Male householder	16.6	17.6	18.9	20.1	18.6	18.2	16.9	16.5	15.6	15.7
Female householder	30.1	31.6	32.1	32.6	31.3	29.2	29.2	28.7	27.2	25.5
Geographic regions:										
Northeast	12.7	13.6	14.6	15.3	14.3	14.5	14.2	14.2	13.1	12.6
Midwest	12.1	12.4	12.7	13.4	12.3	10.7	10.0	10.0	9.5	9.2
South	14.3	15.1	16.2	16.2	14.5	14.0	13.9	13.1	12.2	11.6
West	15.3	16.3	16.6	18.0	17.3	16.2	16.4	16.0	15.2	13.8
Metropolitan area:										
Central city	18.9	20.4	21.1	22.2	20.1	20.3	19.0	18.6	17.9	16.3
Not central city	10.1	10.9	11.4	12.0	11.6	10.3	10.5	10.2	9.6	9.3
Nonmetropolitan area	13.9	13.9	14.8	15.3	14.0	13.0	13.1	13.1	11.5	11.3

Table 5-20. **NAS/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.0	16.9	17.6	18.3	17.0	16.3	16.0	15.3	14.4	13.7
Children	22.4	23.8	24.2	24.8	22.8	21.7	21.1	20.3	19.0	17.5
Nonelderly adults	13.1	13.8	14.4	15.2	14.1	13.6	13.3	12.8	12.1	11.8
Elderly	17.1	17.9	19.4	19.7	18.5	17.6	18.3	17.3	16.0	15.7
White	13.6	14.4	14.9	15.5	14.6	14.0	13.9	13.4	12.4	12.0
Black	31.4	33.1	34.0	34.5	30.0	29.4	28.4	26.7	25.7	23.3
Other	18.7	20.1	21.5	24.0	23.9	20.8	19.2	18.7	17.0	17.0
Hispanic origin	35.7	37.2	37.1	37.9	36.0	35.3	34.2	31.5	29.8	26.7
No workers	39.7	40.3	42.9	43.4	41.8	39.9	40.0	38.3	36.4	34.8
One or more workers	11.9	12.7	13.1	13.7	12.6	12.2	12.0	11.5	10.8	10.6
Persons in family of type:										
Married couple	10.2	10.6	11.5	11.8	10.6	10.1	9.9	9.4	8.6	8.3
Male householder	17.7	18.8	20.0	21.1	20.1	19.2	18.3	17.5	16.5	16.7
Female householder	33.6	35.2	34.9	36.0	34.4	32.5	32.2	31.3	29.6	27.9
Geographic regions:										
Northeast	14.8	15.9	17.0	17.8	16.6	16.9	16.8	16.2	15.1	14.7
Midwest	14.1	14.4	14.9	15.5	14.2	12.5	12.1	11.6	11.0	10.8
South	17.0	17.8	18.6	18.9	17.0	16.6	16.1	15.3	14.2	13.6
West	17.9	19.2	19.3	20.8	20.2	19.1	19.0	18.6	17.3	16.1
Metropolitan area:										
Central city	22.1	23.4	24.4	25.3	23.3	23.3	22.2	21.2	20.2	18.8
Not central city	11.9	12.9	13.3	14.0	13.6	12.3	12.5	11.9	11.2	11.0
Nonmetropolitan area	16.7	16.8	17.4	18.0	16.2	15.6	15.3	15.4	13.6	13.5

Table 5-21. **DCM1/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.4	17.3	18.0	18.7	17.5	16.8	16.6	15.9	15.0	14.3
Children	23.2	24.5	25.0	25.8	23.9	22.7	22.4	21.4	20.3	18.7
Nonelderly adults	13.4	14.1	14.7	15.5	14.5	14.0	13.7	13.2	12.5	12.2
Elderly	17.1	17.9	19.4	19.7	18.5	17.6	18.3	17.3	16.0	15.7
White	13.9	14.6	15.2	15.8	15.0	14.4	14.3	13.8	12.9	12.5
Black	32.3	34.0	34.8	35.9	30.9	30.2	30.1	27.9	27.3	24.8
Other	18.9	20.6	21.6	24.7	24.6	21.7	20.1	19.1	17.2	16.8
Hispanic origin	36.4	37.8	38.1	38.7	37.0	36.4	35.4	33.0	31.1	28.2
No workers	39.7	40.3	42.9	43.4	41.8	39.9	40.0	38.3	36.4	34.8
One or more workers	12.4	13.1	13.5	14.2	13.2	12.8	12.7	12.2	11.5	11.2
Persons in family of type:										
Married couple	10.4	10.9	11.7	12.1	11.0	10.4	10.3	9.7	8.9	8.6
Male householder	17.9	18.9	20.2	21.5	20.4	19.5	18.7	18.0	17.0	16.9
Female householder	34.5	35.9	36.0	37.1	35.4	33.5	33.6	32.5	31.1	29.4
Geographic regions:										
Northeast	15.2	16.0	17.4	18.2	17.2	17.4	17.3	16.6	15.8	15.4
Midwest	14.3	14.9	15.4	15.9	14.8	12.8	12.5	12.0	11.5	11.2
South	17.6	18.3	19.0	19.5	17.5	17.1	17.0	16.0	14.9	14.3
West	18.1	19.5	19.6	21.2	20.5	19.8	19.5	19.2	17.9	16.6
Metropolitan area:										
Central city	22.5	23.7	24.9	25.9	23.9	23.9	23.2	22.0	21.0	19.5
Not central city	12.2	13.2	13.6	14.4	14.0	12.8	13.0	12.3	11.7	11.4
Nonmetropolitan area	17.1	17.1	17.8	18.4	16.8	16.0	15.8	15.6	14.3	14.0

Table 5-22. **DCM2/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.1	17.0	17.6	18.3	17.1	16.4	16.1	15.4	14.5	13.8
Children	22.6	23.9	24.4	25.0	23.0	22.0	21.3	20.5	19.3	17.7
Nonelderly adults	13.2	13.8	14.4	15.2	14.2	13.7	13.4	12.9	12.1	11.8
Elderly	17.1	17.9	19.3	19.7	18.5	17.6	18.3	17.3	16.0	15.7
White	13.7	14.4	14.9	15.6	14.6	14.1	14.0	13.5	12.5	12.1
Black	31.7	33.1	34.0	34.6	30.2	29.6	28.6	26.8	26.0	23.4
Other	18.6	20.1	21.7	24.1	24.2	21.1	19.2	18.7	17.1	16.9
Hispanic origin	35.9	37.1	37.1	37.9	36.0	35.5	34.3	31.6	30.2	26.9
No workers	39.7	40.3	42.9	43.4	41.8	39.9	40.0	38.3	36.4	34.8
One or more workers	12.0	12.8	13.1	13.8	12.7	12.3	12.1	11.6	11.0	10.7
Persons in family of type:										
Married couple	10.2	10.7	11.5	11.9	10.7	10.2	10.0	9.4	8.7	8.3
Male householder	17.6	18.7	20.1	21.1	19.9	19.4	18.3	17.6	16.6	16.7
Female householder	33.7	35.2	35.1	36.0	34.6	32.7	32.5	31.5	29.9	28.1
Geographic regions:										
Northeast	14.9	15.9	17.1	17.8	16.8	17.0	16.8	16.3	15.2	14.8
Midwest	14.2	14.5	14.9	15.6	14.4	12.6	12.4	11.6	11.1	10.8
South	17.1	17.9	18.7	18.9	17.0	16.8	16.2	15.4	14.3	13.8
West	17.9	19.3	19.4	20.9	20.2	19.2	19.1	18.6	17.6	16.2
Metropolitan area:										
Central city	22.2	23.4	24.3	25.3	23.4	23.4	22.4	21.2	20.4	19.0
Not central city	11.9	12.9	13.4	14.1	13.6	12.5	12.6	12.0	11.3	11.0
Nonmetropolitan area	16.8	16.9	17.5	18.1	16.3	15.8	15.4	15.4	13.7	13.5

Table 5-23. **DES-DCM2/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.8	17.6	18.4	19.1	17.6	17.0	16.8	16.1	15.1	14.3
Children	22.9	24.3	24.8	25.6	23.3	22.3	21.8	20.8	19.8	18.0
Nonelderly adults	13.9	14.5	15.2	16.0	14.8	14.3	14.1	13.6	12.8	12.4
Elderly	18.1	18.9	20.3	20.6	19.3	18.5	19.0	18.4	16.9	16.5
White	14.3	15.0	15.5	16.3	15.1	14.6	14.5	14.0	13.1	12.5
Black	32.7	34.1	35.5	35.8	31.0	30.8	29.8	28.1	27.0	24.8
Other	19.4	21.7	22.4	24.2	25.1	21.5	20.3	19.0	17.9	17.3
Hispanic origin	36.4	37.8	38.2	39.2	36.9	36.3	35.0	32.6	31.2	27.6
No workers	41.2	42.0	44.5	44.9	43.2	41.4	41.5	39.9	37.9	36.0
One or more workers	12.5	13.3	13.7	14.4	13.1	12.7	12.6	12.2	11.5	11.1
Persons in family of type:										
Married couple	10.2	10.7	11.4	11.9	10.5	10.0	9.8	9.3	8.6	8.1
Male householder	19.5	21.0	22.1	22.9	22.2	20.8	20.2	19.6	18.3	18.2
Female householder	36.0	37.3	37.6	38.6	36.6	34.9	34.8	33.7	32.1	30.2
Geographic regions:										
Northeast	15.6	16.7	17.7	18.5	17.4	17.6	17.8	17.1	16.1	15.5
Midwest	14.8	15.1	15.8	16.2	14.8	13.1	12.7	12.2	11.6	11.3
South	17.7	18.5	19.5	19.8	17.6	17.4	16.9	16.1	14.9	14.2
West	18.6	20.0	20.0	21.7	20.9	19.9	19.8	19.2	18.2	16.7
Metropolitan area:										
Central city	23.1	24.3	25.4	26.3	24.0	24.3	23.4	22.2	21.3	19.9
Not central city	12.4	13.6	13.9	14.7	14.1	12.8	13.0	12.5	11.8	11.4
Nonmetropolitan area	17.4	17.3	18.3	18.8	17.0	16.3	16.2	16.0	14.4	14.0

Table 5-24. **NGA/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.5	17.3	18.1	18.6	17.3	16.6	16.2	15.7	14.6	14.0
Children	23.0	24.2	24.9	25.2	23.3	22.1	21.2	20.9	19.2	17.9
Nonelderly adults	13.5	14.1	14.8	15.4	14.3	13.8	13.5	13.1	12.3	11.8
Elderly	17.9	18.6	20.3	20.1	19.1	18.5	18.7	17.9	16.7	16.2
White	14.2	14.8	15.4	15.9	15.0	14.4	14.1	13.8	12.7	12.3
Black	32.4	33.0	34.9	34.4	30.3	29.1	28.9	27.1	26.0	23.7
Other	17.6	19.9	20.8	22.6	23.1	19.9	18.1	18.5	16.5	16.0
Hispanic origin	32.7	33.8	34.0	34.5	33.6	33.5	31.6	30.1	27.8	24.9
No workers	40.0	40.5	43.5	43.7	41.9	40.4	40.4	39.1	37.0	35.2
One or more workers	12.5	13.1	13.6	14.0	13.0	12.5	12.1	11.9	11.0	10.8
Persons in family of type:										
Married couple	10.8	11.2	12.0	12.2	11.2	10.5	10.2	9.7	8.9	8.6
Male householder	17.9	18.8	20.2	20.8	19.9	19.5	18.3	17.4	16.8	16.5
Female householder	33.9	35.0	35.7	36.2	34.3	32.5	32.4	32.0	29.8	28.1
Geographic regions:										
Northeast	12.5	13.4	14.5	15.0	14.4	14.4	14.0	14.0	13.0	12.5
Midwest	15.7	16.1	16.9	17.0	15.8	13.9	13.4	12.9	12.2	12.1
South	19.7	20.3	21.4	21.6	19.4	19.0	18.6	17.6	16.3	15.6
West	16.2	17.3	17.5	18.7	18.2	17.5	17.3	17.2	15.9	14.7
Metropolitan area:										
Central city	21.0	22.3	23.4	24.1	22.2	22.1	21.0	20.5	19.4	17.9
Not central city	11.3	12.3	12.8	13.2	12.9	11.7	11.7	11.4	10.6	10.4
Nonmetropolitan area	21.8	21.3	22.3	22.7	21.1	20.5	20.4	19.8	17.7	17.4

Table 5-25. **DES/U-CPI Measure**

Characteristic	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All persons	16.7	17.6	18.3	19.0	17.5	16.8	16.6	16.0	15.0	14.2
Children	22.7	24.2	24.7	25.4	23.0	22.0	21.5	20.6	19.5	17.8
Nonelderly adults	13.8	14.5	15.2	15.9	14.7	14.3	14.1	13.6	12.8	12.3
Elderly	18.1	18.9	20.2	20.6	19.3	18.5	19.0	18.4	16.9	16.5
White	14.2	14.9	15.5	16.2	15.1	14.5	14.4	14.0	13.0	12.4
Black	32.4	34.1	35.4	35.7	30.7	30.5	29.6	28.1	26.8	24.7
Other	19.5	21.6	22.1	24.1	25.0	21.2	20.2	19.0	17.7	17.3
Hispanic origin	36.3	37.8	38.1	39.1	36.9	36.1	34.9	32.4	30.8	27.3
No workers	41.2	42.0	44.5	44.9	43.2	41.4	41.5	39.9	37.9	36.0
One or more workers	12.4	13.2	13.6	14.3	13.0	12.6	12.5	12.1	11.4	11.0
Persons in family of type:										
Married couple	10.1	10.6	11.4	11.8	10.4	10.0	9.8	9.3	8.6	8.1
Male householder	19.6	20.9	21.9	22.8	22.2	20.7	20.2	19.6	18.3	18.1
Female householder	35.8	37.3	37.5	38.5	36.4	34.7	34.5	33.5	31.9	30.1
Geographic regions:										
Northeast	15.5	16.7	17.7	18.4	17.2	17.6	17.7	17.0	16.0	15.4
Midwest	14.6	15.0	15.7	16.2	14.6	12.9	12.5	12.1	11.6	11.3
South	17.6	18.4	19.4	19.7	17.5	17.2	16.8	16.0	14.8	14.1
West	18.6	19.9	19.9	21.5	20.9	19.8	19.7	19.2	18.0	16.6
Metropolitan area:										
Central city	23.1	24.2	25.4	26.3	23.9	24.2	23.2	22.1	21.1	19.7
Not central city	12.3	13.5	13.8	14.7	14.0	12.7	13.0	12.4	11.8	11.3
Nonmetropolitan area	17.3	17.3	18.2	18.7	16.9	16.1	16.1	16.0	14.3	13.8

Table 6-1. Experimental Poverty Rates: 1999

Characteristic	DES measure	CE-based experimental measures (selected new methods)						
		Work-related	FMR housing	AHS housing	NAS MOOP	MOOPITT	Combined MOOP	FMR geographic adjustments
All persons	15.0	14.8	14.4	14.6	12.6	13.1	13.3	15.2
Children	18.8	18.5	17.6	18.1	15.6	16.8	16.4	19.1
Nonelderly adults	12.9	12.8	12.6	12.7	10.9	11.6	11.4	13.0
Elderly	17.3	17.2	16.9	17.0	15.3	13.1	16.1	17.5
Some private health insurance	8.3	8.2	8.2	8.2	6.0	6.5	6.4	8.4
Only public health insurance	41.4	40.9	38.1	39.4	39.3	38.2	41.1	41.9
No health insurance	36.4	35.9	36.0	36.2	33.5	36.6	34.8	36.9
White	13.1	13.0	12.8	12.9	10.8	11.1	11.4	13.3
Black	25.6	25.6	23.7	24.5	22.9	24.4	24.3	25.5
Other	17.7	17.2	16.7	17.0	16.0	16.7	16.6	18.7
Hispanic origin	28.8	28.8	27.5	28.2	25.0	26.9	26.6	30.0
No workers	37.1	37.1	35.6	36.1	35.1	33.6	36.1	37.1
One or more workers	11.6	11.5	11.2	11.4	9.3	10.1	9.9	11.9
Persons in family of type:								
Married couple	8.7	8.5	8.5	8.5	6.7	7.1	7.1	9.0
Male householder	18.8	18.7	18.7	18.7	16.6	17.4	17.5	18.7
Female householder	31.1	31.0	29.3	30.1	27.9	28.4	29.1	31.3
Geographic regions:								
Northeast	16.2	16.2	15.1	15.6	14.1	14.7	15.0	16.6
Midwest	11.8	11.4	11.3	11.4	9.6	9.8	10.0	11.6
South	14.8	14.7	14.4	14.5	12.4	12.7	12.9	14.8
West	17.4	17.2	16.9	17.2	15.0	15.9	15.9	18.2
Metropolitan area:								
Central city	20.6	20.4	19.3	19.8	17.9	19.1	18.9	21.1
Not central city	11.9	11.8	11.6	11.8	10.0	10.2	10.6	12.2
Nonmetropolitan area	14.5	14.3	14.4	14.4	11.8	11.9	12.2	13.9

Table 6-2. Distribution of the Population: 1999

Characteristic	Total population	Poverty population							
		DES measure	CE-based selected new methods						
			Work-related	FMR Housing	AHS Housing	NAS MOOP	MOOPITT	Combined MOOP	FMR geographic adjustments
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	32.9	32.7	32.0	32.5	32.3	33.5	32.4	33.1
Nonelderly adults	61.8	53.3	53.4	54.0	53.7	53.2	54.6	53.2	53.1
Elderly	11.9	13.8	13.9	14.0	13.8	14.4	11.9	14.4	13.8
Some private health insurance	78.5	43.5	43.7	44.5	44.0	37.2	38.6	37.8	43.5
Only public health insurance	12.9	35.8	35.7	34.3	34.9	40.2	37.7	40.0	35.8
No health insurance	8.5	20.7	20.6	21.3	21.1	22.5	23.7	22.3	20.7
White	82.0	71.9	71.8	72.9	72.5	70.2	69.5	70.1	72.0
Black	12.9	22.2	22.4	21.3	21.6	23.5	24.1	23.6	21.8
Other	5.0	5.9	5.8	5.8	5.9	6.3	6.4	6.3	6.2
Hispanic origin	11.9	23.0	23.2	22.8	23.0	23.7	24.5	23.9	23.6
No workers	13.1	32.4	32.7	32.4	32.3	36.3	33.4	35.5	32.0
One or more workers	86.9	67.6	67.3	67.6	67.7	63.7	66.6	64.5	68.0
Persons in family of type:									
Married couple	65.5	38.0	37.6	38.6	38.3	34.5	35.3	34.9	38.7
Male householder	11.8	14.8	14.9	15.3	15.1	15.5	15.6	15.5	14.5
Female householder	22.7	47.3	47.5	46.2	46.7	50.0	49.1	49.6	46.8
Geographic regions:									
Northeast	19.0	20.5	20.8	19.9	20.3	21.1	21.2	21.4	20.8
Midwest	23.2	18.4	17.9	18.2	18.1	17.6	17.3	17.4	17.8
South	35.0	34.6	34.9	35.0	34.8	34.3	33.9	34.1	34.1
West	22.8	26.5	26.4	26.8	26.9	27.0	27.6	27.2	27.3
Metropolitan area:									
Central city	29.3	40.2	40.3	39.2	39.7	41.5	42.4	41.5	40.8
Not central city	51.7	41.2	41.2	41.7	41.6	40.8	40.3	41.1	41.7
Nonmetropolitan area	19.1	18.5	18.5	19.0	18.7	17.8	17.3	17.4	17.5

Table 6-3. Experimental Measures Poverty Rates by Selected Characteristics: 1999

Characteristic	Total	DES measure	CE-based experimental measures (selected new methods)						FMR geographic adjustments
			Work-related	FMR housing	AHS housing	NAS MOOP	MOOPITT	Combined MOOP	
All persons	273,493	15.0	14.8	14.4	14.6	12.6	13.1	13.3	15.2
Age groups:									
Less than 3 years	11,593	21.8	21.5	20.5	21.1	18.7	20.4	19.6	22.2
3 to 5 years	11,762	21.3	20.9	20.1	20.8	17.9	19.1	18.9	22.0
6 to 11 years	24,536	19.1	18.8	17.7	18.4	15.6	16.8	16.5	19.4
12 to 17 years	23,839	15.7	15.6	14.7	15.0	12.9	13.8	13.6	15.9
18 to 21 years	15,777	22.3	22.1	21.8	21.9	19.5	20.5	20.3	22.5
22 to 44 years	93,346	13.2	13.1	12.8	13.0	10.9	11.8	11.6	13.4
45 to 54 years	36,631	8.8	8.7	8.6	8.7	7.5	7.9	7.8	8.9
55 to 59 years	12,868	11.7	11.7	11.5	11.5	10.2	10.7	10.6	11.6
60 to 64 years	10,519	11.8	11.8	11.6	11.6	10.2	10.8	10.7	11.8
65 to 74 years	17,796	15.0	14.9	14.7	14.7	13.1	12.0	13.7	15.2
75 years and over	14,825	20.0	20.0	19.6	19.6	17.9	14.4	18.9	20.2
Race/origin:									
White, not Hispanic	193,334	10.6	10.4	10.4	10.4	8.5	8.6	8.9	10.6
White, Hispanic	31,039	28.8	28.7	27.7	28.3	25.1	26.9	26.6	29.9
Black, not Hispanic	34,306	25.5	25.5	23.7	24.4	22.9	24.3	24.1	25.3
Black, Hispanic	1,066	30.1	30.9	24.8	26.5	25.8	30.2	30.4	31.1
Other, not Hispanic	13,184	17.4	16.8	16.5	16.8	15.7	16.4	16.3	18.3
Other, Hispanic	564	23.5	27.5	23.2	23.2	21.7	24.3	23.0	28.8
Number of persons in family:									
1 person	43,432	22.7	22.7	22.5	22.5	20.6	20.4	21.4	22.9
2 persons	64,290	12.0	12.1	11.6	11.7	9.9	10.0	10.4	12.0
3 persons	50,002	13.8	13.8	13.3	13.5	12.2	12.7	12.9	14.0
4 persons	59,169	11.4	11.2	10.9	11.2	8.8	9.8	9.4	11.6
5 persons	33,158	14.6	14.2	13.6	14.1	11.3	12.2	11.9	14.8
6 persons	13,581	18.4	17.8	17.1	17.7	16.1	17.3	17.1	19.3
7 or more persons	9,861	23.5	22.7	22.3	22.8	20.4	21.8	21.4	24.1
Marital status:									
Married, spouse present	113,002	8.1	8.0	7.9	7.9	6.3	6.5	6.7	8.3
Married, spouse absent	2,730	23.9	23.9	23.2	23.7	21.1	21.8	22.4	24.4
Widowed	13,665	22.8	22.8	22.3	22.3	20.7	18.3	21.7	22.9
Divorced	24,360	19.8	19.6	19.2	19.3	17.5	17.8	18.2	19.9
Never married	119,737	19.4	19.2	18.4	18.9	16.6	17.6	17.4	19.6
Gender:									
Male	133,647	13.5	13.3	13.0	13.2	11.3	11.9	11.9	13.7
Female	139,846	16.4	16.2	15.7	16.0	14.0	14.4	14.7	16.6
Education (25 years of age and over):									
No high school diploma	27,853	29.3	29.1	28.3	28.7	26.0	25.7	27.2	29.7
High school diploma	58,086	13.0	12.9	12.8	12.8	10.8	10.9	11.3	13.2
Some college	44,445	8.6	8.5	8.4	8.5	7.0	7.3	7.5	8.7
College degree	44,846	4.6	4.5	4.5	4.5	3.7	3.8	4.0	4.5
Citizenship status:									
Native	245,146	13.8	13.7	13.3	13.5	11.6	12.0	12.2	14.0
Naturalized citizen	10,620	14.9	14.7	14.5	14.6	13.4	14.0	14.4	15.3
Not a citizen	17,728	30.4	30.2	29.2	29.8	26.8	28.4	28.4	31.0
Disability status:									
Not disabled	157,725	11.8	11.7	11.5	11.6	9.8	10.5	10.3	11.9
Disabled	19,498	23.4	23.3	22.8	23.0	21.1	22.0	22.2	23.6
Severe disability	13,341	25.1	25.0	24.4	24.6	22.9	23.5	24.0	25.3
Self-reported health status:									
Excellent	96,951	11.3	11.2	10.9	11.1	9.3	10.1	9.8	11.4
Very good	83,332	13.1	13.0	12.6	12.8	10.7	11.3	11.2	13.3
Good	62,658	17.9	17.6	17.1	17.5	15.3	15.7	16.2	18.3
Fair	21,249	23.8	23.8	22.9	23.2	20.9	21.3	22.0	24.0
Poor	9,305	29.3	29.3	28.4	28.6	27.8	26.5	28.7	29.3

Table 7-1. Experimental Poverty Rates: 1999

Characteristics	DES measure	CPI-based experimental measures (selected new methods)						FMR geographic adjustments
		Work-related	FMR housing	AHS housing	NAS MOOP	MOOPITT	Combined MOOP	
All persons	14.2	14.1	13.7	13.9	11.9	(NA)	(NA)	14.4
Children	17.8	17.4	16.5	17.1	14.5	(NA)	(NA)	17.9
Nonelderly adults	12.3	12.2	12.0	12.1	10.3	(NA)	(NA)	12.4
Elderly	16.5	16.5	16.2	16.2	14.6	(NA)	(NA)	16.6
Health insurance:								
Some private	7.8	7.8	7.7	7.7	5.6	(NA)	(NA)	7.9
Only public health insurance	39.3	38.7	36.1	37.4	37.1	(NA)	(NA)	39.7
No health insurance	35.3	34.6	34.8	35.0	31.8	(NA)	(NA)	35.6
Race:								
White	12.4	12.3	12.1	12.2	10.2	(NA)	(NA)	12.6
Black	24.7	24.6	22.7	23.5	21.8	(NA)	(NA)	24.0
Other	17.3	16.9	16.3	16.5	14.9	(NA)	(NA)	17.8
Hispanic origin	27.3	27.3	26.1	26.8	23.3	(NA)	(NA)	28.1
Family workers:								
No workers	36.0	36.0	34.5	35.0	34.1	(NA)	(NA)	35.8
One or more workers	11.0	10.8	10.5	10.7	8.6	(NA)	(NA)	11.1
Persons in family of type:								
Married couple	8.1	8.0	7.9	8.0	6.1	(NA)	(NA)	8.3
Male householder	18.1	17.9	18.0	18.1	15.8	(NA)	(NA)	18.1
Female householder	30.1	29.8	28.1	28.9	26.7	(NA)	(NA)	29.9
Geographic regions:								
Northeast	15.4	15.4	14.4	14.8	13.4	(NA)	(NA)	15.8
Midwest	11.3	10.9	10.8	10.9	9.2	(NA)	(NA)	11.0
South	14.1	14.0	13.7	13.8	11.6	(NA)	(NA)	14.0
West	16.6	16.4	16.1	16.3	13.9	(NA)	(NA)	17.2
Metropolitan area:								
Central city	19.7	19.5	18.5	18.9	17.0	(NA)	(NA)	20.1
Not central city	11.3	11.2	11.0	11.1	9.3	(NA)	(NA)	11.5
Nonmetropolitan area	13.8	13.7	13.6	13.7	11.1	(NA)	(NA)	13.2

NA Not available.

Table 7-2. **Distribution of the Population: 1999**

Characteristic	Total population	Poverty population							
		DES measure	CPI-based selected new methods						FMR geographic adjustments
			Work-related	FMR Housing	AHS Housing	NAS MOOP	MOOPITT	Combined MOOP	
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	32.8	32.5	31.7	32.2	32.1	(NA)	(NA)	32.7
Nonelderly adults	61.8	53.4	53.6	54.2	53.9	53.3	(NA)	(NA)	53.5
Elderly	11.9	13.8	13.9	14.1	13.9	14.6	(NA)	(NA)	13.8
Health insurance:									
Some private	78.5	43.2	43.5	44.2	43.8	36.8	(NA)	(NA)	43.1
Only public health insurance	12.9	35.7	35.6	34.1	34.8	40.4	(NA)	(NA)	35.8
No health insurance	8.5	21.0	20.9	21.6	21.4	22.7	(NA)	(NA)	21.1
Race:									
White	82.0	71.5	71.4	72.5	72.2	70.0	(NA)	(NA)	72.2
Black	12.9	22.4	22.6	21.5	21.8	23.7	(NA)	(NA)	21.6
Other	5.0	6.1	6.0	6.0	6.0	6.3	(NA)	(NA)	6.2
Hispanic origin	11.9	22.9	23.2	22.8	23.0	23.4	(NA)	(NA)	23.4
Family workers:									
No workers	13.1	33.0	33.4	33.0	33.0	37.5	(NA)	(NA)	32.6
One or more workers	86.9	67.0	66.6	67.0	67.0	62.5	(NA)	(NA)	67.4
Persons in family of type:									
Married couple	65.5	37.2	37.0	37.9	37.5	33.5	(NA)	(NA)	38.0
Male householder	11.8	15.0	14.9	15.5	15.3	15.6	(NA)	(NA)	14.8
Female householder	22.7	47.9	48.0	46.7	47.2	50.9	(NA)	(NA)	47.2
Geographic regions:									
Northeast	19.0	20.5	20.7	20.0	20.3	21.4	(NA)	(NA)	20.9
Midwest	23.2	18.4	17.9	18.2	18.2	17.9	(NA)	(NA)	17.7
South	35.0	34.5	34.8	35.0	34.8	34.2	(NA)	(NA)	34.1
West	22.8	26.6	26.5	26.8	26.8	26.6	(NA)	(NA)	27.2
Metropolitan area:									
Central city	29.3	40.5	40.6	39.5	39.8	41.7	(NA)	(NA)	40.9
Not central city	51.7	41.0	40.9	41.5	41.4	40.6	(NA)	(NA)	41.6
Nonmetropolitan area	19.1	18.5	18.5	19.0	18.8	17.7	(NA)	(NA)	17.5

NA Not available.

Table 7-3. Experimental Measures Poverty Rates by Selected Characteristics: 1999

Characteristic	Total	DES measure	CPI-based experimental measures (selected new methods)						
			Work-related	FMR housing	AHS housing	NAS MOOP	MOOP-ITT	Combined MOOP	FMR geographic adjustments
All persons	273,493	14.2	14.1	13.7	13.9	11.9	(NA)	(NA)	14.4
Age groups:									
Less than 3 years	11,593	20.8	20.3	19.4	19.9	17.4	(NA)	(NA)	20.7
3 to 5 years	11,762	20.3	19.9	19.1	19.8	16.8	(NA)	(NA)	20.8
6 to 11 years	24,536	18.1	17.6	16.7	17.2	14.5	(NA)	(NA)	18.3
12 to 17 years	23,839	14.8	14.7	13.8	14.2	12.0	(NA)	(NA)	14.8
18 to 21 years	15,777	21.6	21.4	21.0	21.2	18.7	(NA)	(NA)	21.5
22 to 44 years	93,346	12.5	12.4	12.2	12.3	10.3	(NA)	(NA)	12.7
45 to 54 years	36,631	8.4	8.3	8.2	8.3	7.0	(NA)	(NA)	8.4
55 to 59 years	12,868	11.2	11.2	10.9	10.9	9.4	(NA)	(NA)	11.2
60 to 64 years	10,519	11.4	11.4	11.2	11.2	9.5	(NA)	(NA)	11.4
65 to 74 years	17,796	14.4	14.3	14.1	14.1	12.6	(NA)	(NA)	14.6
75 years and over	14,825	19.1	19.1	18.6	18.7	17.0	(NA)	(NA)	19.1
Race/origin:									
White, not Hispanic	193,334	10.0	9.9	9.8	9.9	8.0	(NA)	(NA)	10.1
White, Hispanic	31,039	27.4	27.3	26.2	26.9	23.4	(NA)	(NA)	28.1
Black, not Hispanic	34,306	24.6	24.4	22.7	23.4	21.7	(NA)	(NA)	23.8
Black, Hispanic	1,066	28.3	29.5	23.2	25.2	24.9	(NA)	(NA)	28.5
Other, not Hispanic	13,184	17.1	16.5	16.0	16.2	14.7	(NA)	(NA)	17.4
Other, Hispanic	564	23.5	25.3	23.2	23.2	18.4	(NA)	(NA)	26.4
Number of persons in family:									
1 person	43,432	21.9	21.9	21.8	21.8	19.9	(NA)	(NA)	22.0
2 persons	64,290	11.5	11.6	11.1	11.2	9.6	(NA)	(NA)	11.5
3 persons	50,002	13.2	13.1	12.6	12.7	11.3	(NA)	(NA)	13.4
4 persons	59,169	10.7	10.7	10.2	10.5	8.1	(NA)	(NA)	10.7
5 persons	33,158	13.7	13.3	12.6	13.2	10.8	(NA)	(NA)	13.9
6 persons	13,581	17.6	16.6	16.3	16.9	15.0	(NA)	(NA)	18.9
7 or persons	9,861	21.5	21.3	20.2	20.8	17.8	(NA)	(NA)	21.3
Marital status:									
Married, spouse present	113,002	7.6	7.5	7.4	7.5	5.8	(NA)	(NA)	7.8
Married, spouse absent	2,730	23.2	23.2	22.6	22.9	20.6	(NA)	(NA)	23.9
Widowed	13,665	21.7	21.6	21.2	21.2	19.5	(NA)	(NA)	21.8
Divorced	24,360	19.0	18.8	18.4	18.5	16.5	(NA)	(NA)	19.0
Never married	119,737	18.5	18.3	17.6	18.0	15.7	(NA)	(NA)	18.6
Gender:									
Male	133,647	12.8	12.7	12.4	12.6	10.6	(NA)	(NA)	13.0
Female	139,846	15.6	15.5	14.9	15.2	13.2	(NA)	(NA)	15.7
Education (25 years of age and over):									
No high school diploma	27,853	28.0	27.8	27.0	27.3	24.7	(NA)	(NA)	28.1
High school diploma	58,086	12.3	12.2	12.1	12.1	10.1	(NA)	(NA)	12.5
Some college	44,445	8.2	8.1	8.0	8.1	6.6	(NA)	(NA)	8.4
College degree	44,846	4.3	4.3	4.3	4.3	3.5	(NA)	(NA)	4.3
Citizenship status:									
Native	245,146	13.2	13.0	12.6	12.8	10.9	(NA)	(NA)	13.3
Naturalized citizen	10,620	14.3	14.1	14.0	14.1	12.7	(NA)	(NA)	14.5
Not a citizen	17,728	29.1	29.0	28.0	28.4	24.8	(NA)	(NA)	29.4
Disability status:									
Not disabled	157,725	11.3	11.2	11.0	11.1	9.2	(NA)	(NA)	11.3
Disabled	19,498	22.4	22.2	21.8	22.0	20.0	(NA)	(NA)	22.5
Severe disability	13,341	23.9	23.7	23.2	23.4	21.7	(NA)	(NA)	24.0
Self(NA)reported health status:									
Excellent	96,951	10.8	10.7	10.3	10.5	8.7	(NA)	(NA)	10.8
Very good	83,332	12.4	12.3	12.0	12.2	10.1	(NA)	(NA)	12.6
Good	62,658	17.0	16.7	16.3	16.7	14.3	(NA)	(NA)	17.4
Fair	21,249	22.7	22.8	22.0	22.2	19.9	(NA)	(NA)	22.5
Poor	9,305	28.0	27.9	27.0	27.3	26.4	(NA)	(NA)	27.8

NA Not available.

Table 8-1. Experimental Poverty Rates: 1999

Characteristic	Official measure	CE-based experimental measures (combined new methods)						
		DES	MSI	MSI-AHS	MSI-NGA	MIT	CMB	MSI-CPI
All persons	11.8	15.0	12.0	12.3	12.1	12.6	12.7	11.3
Children	16.9	18.8	14.1	14.8	14.2	15.5	15.0	13.2
Nonelderly adults	10.0	12.9	10.5	10.7	10.5	11.3	11.1	10.0
Elderly	9.7	17.3	15.1	15.1	15.6	12.8	16.1	14.4
Health insurance:								
Some private	4.9	8.3	5.8	5.9	5.8	6.4	6.3	5.4
Only public health insurance	41.2	41.4	35.9	37.0	36.7	34.9	37.8	33.9
No health insurance	31.0	36.4	32.7	33.0	32.5	36.2	34.2	31.3
Race								
White	9.8	13.1	10.5	10.6	10.5	11.0	11.2	9.9
White, not Hispanic	7.7	10.6	8.3	8.3	8.8	8.5	8.8	7.8
Black	23.6	25.6	20.3	21.5	21.3	21.7	21.5	19.3
Other	14.4	17.7	15.0	15.3	14.3	15.6	15.9	14.2
Hispanic origin	22.8	28.8	24.3	25.0	21.4	26.7	26.1	22.7
Family workers								
No workers	32.7	37.1	33.8	34.2	34.2	32.2	35.2	32.4
One or more workers	8.6	11.6	8.7	9.0	8.8	9.6	9.4	8.2
Persons in family of type:								
Married couple	5.8	8.7	6.4	6.5	6.4	6.9	6.9	5.9
Male householder	14.9	18.8	16.3	16.4	16.5	17.1	17.2	15.6
Female householder	27.5	31.1	26.0	26.8	26.2	26.6	27.2	24.8
Geographic regions:								
Northeast	10.9	16.2	13.4	13.9	10.5	13.9	14.2	12.7
Midwest	9.8	11.8	8.5	8.7	9.9	8.9	8.9	8.0
South	13.1	14.8	12.0	12.1	14.1	12.3	12.6	11.3
West	12.6	17.4	14.4	14.8	12.6	15.7	15.6	13.7
Metropolitan area:								
Central city	16.4	20.6	16.7	17.4	15.6	17.9	17.9	15.8
Not central city	8.3	11.9	9.7	9.9	9.0	10.1	10.3	9.1
Nonmetropolitan area	14.3	14.5	11.0	11.0	15.3	11.1	11.4	10.5

Table 8-2. **Distribution of the Population: 1999**

Characteristic	Total population	Poverty population							
		Official measure	Combined new methods						
			DES	MSI	MSI-AHS	MSI-NGA	MIT	CMB	MSI-CPI
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children	26.2	37.5	32.9	30.9	31.6	30.8	32.4	31.0	30.6
Nonelderly adults	61.8	52.6	53.3	54.1	53.7	53.9	55.5	54.0	54.3
Elderly	11.9	9.8	13.8	15.0	14.7	15.4	12.1	15.0	15.1
Health insurance:									
Some private	78.5	32.4	43.5	38.1	38.1	37.9	39.7	38.7	37.7
Only public health insurance	12.9	45.3	35.8	38.7	39.1	39.3	35.8	38.5	38.8
No health insurance	8.5	22.3	20.7	23.2	22.9	22.9	24.4	22.9	23.5
Race:									
White	82.0	68.0	71.9	71.9	71.1	71.3	71.5	71.9	71.7
White, not Hispanic	70.7	46.1	50.0	48.9	48.0	51.2	47.5	48.7	49.0
Black	12.9	25.9	22.2	21.9	22.6	22.8	22.2	21.8	22.0
Other	5.0	6.1	5.9	6.3	6.3	5.9	6.2	6.3	6.3
Hispanic origin	11.9	23.1	23.0	24.2	24.4	21.1	25.3	24.4	24.0
Family workers:									
No workers	13.1	36.3	32.4	36.8	36.4	36.9	33.5	36.1	37.4
One or more workers	86.9	63.7	67.6	63.2	63.6	63.1	66.5	63.9	62.6
Persons in family of type:									
Married couple	65.5	32.3	38.0	34.9	34.7	34.8	36.1	35.7	34.2
Male householder	11.8	14.8	14.8	15.9	15.7	16.0	16.0	15.9	16.2
Female householder	22.7	52.8	47.3	49.2	49.6	49.2	47.9	48.4	49.6
Geographic regions:									
Northeast	19.0	17.6	20.5	21.2	21.6	16.5	20.9	21.2	21.2
Midwest	23.2	19.2	18.4	16.5	16.5	18.9	16.4	16.3	16.4
South	35.0	38.9	34.6	34.9	34.5	40.7	34.2	34.6	34.8
West	22.8	24.3	26.5	27.4	27.5	23.8	28.5	28.0	27.5
Metropolitan area:									
Central city	29.3	40.7	40.2	40.8	41.4	37.6	41.6	41.1	40.7
Not central city	51.7	36.2	41.2	41.7	41.5	38.3	41.6	41.8	41.7
Nonmetropolitan area	19.1	23.1	18.5	17.5	17.0	24.1	16.8	17.1	17.6

Table 8-3. Combined Measures Poverty Rates by Selected Characteristics: 1999

Characteristic	Total	Official measure	CE-based experimental measures (combined new methods)						
			DES	MSI	MSI-AHS	MSI-NGA	MIT	CMB	MSI-CPI
All persons	273,493	11.8	15.0	12.0	12.3	12.1	12.6	12.7	11.3
Age groups:									
Less than 3 years	11,593	18.9	21.8	17.3	18.1	18.1	19.3	18.5	16.3
3 to 5 years	11,762	17.9	21.3	16.6	17.1	16.3	17.7	17.4	15.5
6 to 11 years	24,536	17.4	19.1	13.9	14.6	13.6	15.3	14.8	13.0
12 to 17 years	23,839	14.9	15.7	11.6	12.1	11.8	12.9	12.4	10.8
18 to 21 years	15,777	17.8	22.3	19.0	19.3	19.1	20.2	19.8	18.2
22 to 44 years	93,346	10.2	13.2	10.5	10.7	10.5	11.4	11.1	10.0
45 to 54 years	36,631	6.7	8.8	7.3	7.3	7.3	7.7	7.7	6.8
55 to 59 years	12,868	9.2	11.7	9.9	9.8	10.1	10.4	10.5	9.3
60 to 64 years	10,519	9.8	11.8	9.8	9.8	10.2	10.4	10.6	9.2
65 to 74 years	17,796	8.9	15.0	13.2	13.2	13.3	11.7	13.9	12.6
75 years and over	14,825	10.7	20.0	17.5	17.5	18.3	14.1	18.6	16.5
Race/origin:									
White, not Hispanic	193,334	7.7	10.6	8.3	8.3	8.8	8.5	8.8	7.8
White, Hispanic	31,039	22.7	28.8	24.3	25.0	21.4	26.7	26.0	22.7
Black, not Hispanic	34,306	23.6	25.5	20.2	21.3	21.3	21.5	21.3	19.2
Black, Hispanic	1,066	25.2	30.1	23.8	26.3	19.5	26.0	26.8	23.2
Other, not Hispanic	13,184	14.1	17.4	14.5	14.9	13.9	15.1	15.5	13.7
Other, Hispanic	564	21.7	23.5	24.7	25.0	22.7	27.5	27.3	24.3
Number of persons in family:									
1 person	43,432	19.1	22.7	20.6	20.6	20.9	20.4	21.4	19.8
2 persons	64,290	7.8	12.0	9.7	9.7	10.0	9.6	10.4	9.2
3 persons	50,002	9.9	13.8	11.9	12.0	11.8	12.2	12.5	11.1
4 persons	59,169	8.8	11.4	8.0	8.3	7.9	9.2	8.6	7.6
5 persons	33,158	12.4	14.6	9.9	10.5	9.8	11.1	10.7	9.4
6 persons	13,581	16.9	18.4	14.2	15.2	14.5	16.3	15.0	13.3
7 or more persons	9,861	23.9	23.5	18.1	19.1	17.8	20.4	19.8	15.5
Marital status:									
Married, spouse present	113,002	4.9	8.1	6.1	6.2	6.2	6.4	6.6	5.7
Married, spouse absent	2,730	18.5	23.9	20.6	20.9	20.0	21.1	21.6	19.5
Widowed	13,665	16.1	22.8	19.9	20.0	20.6	17.9	21.3	19.0
Divorced	24,360	16.9	19.8	16.8	16.9	17.3	17.0	17.6	16.0
Never married	119,737	16.6	19.4	15.5	16.0	15.5	16.7	16.3	14.6
Gender:									
Male	133,647	10.3	13.5	10.8	11.1	10.8	11.4	11.5	10.2
Female	139,846	13.2	16.4	13.2	13.4	13.3	13.7	13.9	12.4
Education (25 years of age and over):									
No high school diploma	27,853	22.4	29.3	24.9	25.2	25.1	24.7	26.4	23.4
High school diploma	58,086	9.2	13.0	10.5	10.6	10.8	10.6	11.1	9.9
Some college	44,445	6.1	8.6	6.9	6.9	6.8	7.2	7.3	6.5
College degree	44,846	2.8	4.6	3.6	3.6	3.5	3.7	3.9	3.5
Citizenship status:									
Native	245,146	11.2	13.8	11.0	11.2	11.4	11.5	11.6	10.4
Naturalized citizen	10,620	9.1	14.9	12.9	13.0	11.7	13.1	14.0	12.3
Not a citizen	17,728	21.3	30.4	25.4	26.0	22.3	27.7	27.0	24.2
Disability status:									
Not disabled	157,725	8.7	11.8	9.4	9.6	9.4	10.2	10.0	9.0
Disabled	19,498	23.3	23.4	20.4	20.7	21.2	21.3	21.6	19.1
Severe disability	13,341	26.0	25.1	22.2	22.4	23.2	22.8	23.4	20.7
Self-reported health status:									
Excellent	96,951	8.9	11.3	8.7	8.9	8.9	9.6	9.2	8.2
Very good	83,332	9.9	13.1	10.2	10.4	10.1	10.9	10.9	9.7
Good	62,658	14.2	17.9	14.5	14.9	14.2	15.0	15.4	13.7
Fair	21,249	19.3	23.8	20.4	20.6	20.9	20.3	21.5	19.2
Poor	9,305	25.5	29.3	26.5	26.6	28.2	25.1	27.6	25.0

Appendix A.

Technical Appendix

POVERTY THRESHOLDS: CONSUMER EXPENDITURE SURVEY 1997-99

The thresholds presented in this report differ slightly from previously published estimates because of changes in the computation method and corrections to the data files. Previously published thresholds, calculated to correspond to the Census Bureau definition of family, did not include spouses under the age of 18 in the family composition. For this very small number of families, a slightly lower poverty threshold was assigned. Insofar as the application to poverty estimates was based on the reference family of two adults and two children, this limited further the effect on estimates of experimental poverty measures. Recalculated poverty thresholds are shown in Table A-1.

In this study, as in the panel's study and in previous work (Short et al., 1999), the thresholds are obtained by following six steps.

1. Median expenditures (adjusted to current dollars) for reference units are obtained using their food, clothing, shelter, and utilities (FCSU) expenditures.

A-1. Poverty Thresholds for Reference Family of Two Adults and Two Children: 1989-99

Year	Official	FCSU CE-based	FCSU CPI-based ¹	FCSUM CE-based
1989	\$12,575	\$12,734	\$12,350	(NA)
1990	13,254	13,398	13,017	(NA)
1991	13,812	13,917	13,565	(NA)
1992	14,228	14,284	13,973	(NA)
1993	14,654	14,806	14,391	(NA)
1994	15,029	15,169	14,760	(NA)
1995	15,455	15,514	15,178	(NA)
1996	15,911	15,710	15,626	(NA)
1997	16,276	15,985	15,985	(NA)
1998	16,530	16,517	16,234	(NA)
1999	16,895	17,036	16,592	18,671
Percent change:				
1989-99	34.4	33.8	34.4	(NA)
1989-97	29.4	25.5	29.4	(NA)
1997-99	3.8	6.6	3.8	(NA)

NA Not available.

¹The CPI-based thresholds use the CE-based threshold in 1997 only. Thresholds for other years are obtained by applying changes in the CPI-U to the 1997 CE-based threshold.

Notes: *FCSU* Food, clothing, shelter, and utilities.
FCSUM Food, clothing, shelter, utilities, and medical.
CE Consumer Expenditure Survey.
CPI Consumer Price Index.

Source: Author's tabulations of Consumer Expenditure Survey data.

2. Percentages of median expenditures are selected that reflect the 30th and 35th percentiles of the distribution of FCSU expenditures. These percentiles translate to approximately 78 and 83 percent of the median. The panel concluded in their study that these percentiles seem to represent a "reasonable range" for the FCSU component of the reference family's threshold.¹
3. Expenses for their other needs (e.g., household supplies, personal care, and nonwork related expenses) are accounted for through the use of a small multiplier. The panel recommended a lower and upper value for the multiplier of 1.15 and 1.25, respectively. In this study, as in the panel's work, the base-year threshold is computed by taking the midpoint or average of these upper and lower values for both the percentages and multipliers (i.e., Threshold = $0.5 \times (1.15 \times .78 + 1.25 \times .83) \times$ median FCSU), with the result being that the threshold equals $0.96725 \times$ median FCSU expenditures for the basic bundle. Hence, the resulting threshold is almost equal to median expenditures on FCSU.
4. Adjustments are made to reflect geographic differences in costs. The panel used interarea housing cost indexes calculated from the 1990 census data on gross rent (including utilities) for apartments with specified characteristics, adjusted for the share of housing in the proposed poverty budget.^{2 3}
5. An equivalence scale adjusts the reference units' threshold to produce thresholds for household units with different characteristics from those of the reference unit. The panel used a two-parameter equivalence scale that accounts for the differing needs of adults and children and the economies of scale of living in a larger household. This scale is $(A+PC)^F$, where *A* and *C* represent the number of adults and children, *P* represents the adult-equivalent of one child, and *F* represents the scale economy factor. In the earlier report, we used $P=0.7$ and $F=0.65$ since these scales minimized the effect on overall poverty and were

¹Betson, 1995b. David Betson was a member of the NAS Panel.

²The Panel set this share at 44 percent.

³Johnson et al., 1997 found that these indexes produced similar results to those using interarea price indexes that account for more expenditure categories than housing.

most similar to the current scales (see Citro and Michael, 1995 and Johnson et al., 1997). For this report, we used a three-parameter scale described below.

- The base-year thresholds are updated using a price adjustment factor. While the panel recommended updating by the change in median expenditures each year, they also recommended that an alternative set of thresholds be produced during the first several years after the new poverty measure is implemented which are updated for price change only.⁴ Therefore, this report shows the alternative threshold computed for 1997 and updated to 1999 with the CPI-U (see Table A).

The thresholds presented here are based on data from the 1987 through 2000 quarterly CE data on expenditures. Median estimates for a reference family of expenditures on a basic bundle of goods were used. A simple 3-year average across the data collection quarters forms the basis for these estimates.

EQUIVALENCE SCALES

In their report, the NAS panel recommended using a two-parameter equivalence scale over a range of values. The two-parameter scales are given by the following parameter values: P=0.7 and F=0.65 (the panel's lower bound), P=0.7 and F=0.75 (the panel's upper bound), P=0.85 and F=0.65 (a modified NAS scale suggested in Betson, 1996). The one-parameter scale, also called constant-elasticity scales, is basically a two-parameter scale that treats adults and children similarly (i.e., P=1.0). This scale is calculated as the square root of family size (A+C)^{0.5}.

⁴Citro and Michael, 1995, p. 7.

The NAS panel's choice of a two-parameter scale was an attempt to be consistent with the cost-of-children literature and to smooth out the increases in the scale for larger family sizes. However, this scale may not be appropriate for childless families. The three-parameter scale proposed by Betson attempts to reconcile the differences between singles and childless couples, single-parent and two-parent families, and the cost-of-children literature. Compared with the panel's recommendation, the three-parameter scale provides more economies of scale between singles and childless couples and more similarity between the scales for families with one parent and two children and two-parent families with one child. Use of this three-parameter scale represents the main difference between the NAS measure and the measure referred to as the DES measure.

All of the new experimental measures in this report use this three-parameter scale. Specifically, this scale fixes the ratio of the scale for two adults and one adult to a constant value, 1.41. For single parents the scale adds the number of adults to 0.8 for the first child plus 0.5 times all other children raised to a power of 0.7, that is (A + 0.8 + 0.5 * C)^{0.7}. All other families use the formula (A + 0.5 * C)^{0.7}. The calculated values for different families using this scale and others described above are shown in Table A-2.

The other main difference between all these scales and the official scales is the treatment of the elderly. None of the experimental scales distinguish between elderly and nonelderly families, while the official scales assign a single elderly person a scale of 0.473 and an elderly couple a scale of 0.597 (versus 0.513 and 0.660, the values for nonelderly which are shown in the table).

GEOGRAPHIC ADJUSTMENTS

As noted by the NAS panel, "There is wide agreement that it is desirable to adjust poverty thresholds for differences in prices...[however]...There are no geographic area

Table A-2. **Alternative Equivalence Scales**

Family type	Official	Two-parameter scales				Three-parameter scale
		F=0.65; P=0.7	F=0.75; P=0.7	F=0.65; P=0.85	F=0.5 P=1.0	
Single adult	*0.513	0.451	0.399	0.427	0.500	0.463
Two adults	*0.660	0.708	0.672	0.700	0.707	0.653
Three adults	0.771	0.922	0.910	0.873	0.866	1.000
Two adults, one child	0.794	0.861	0.841	0.844	0.866	0.880
Two adults, two children	1.000	1.000	1.000	1.000	1.000	1.000
Two adults, three children	1.177	1.129	1.151	1.144	1.118	1.114
One adult, one child	0.680	0.637	0.595	0.637	0.707	0.699
One adult, two children	0.794	0.797	0.770	0.815	0.866	0.830
<i>Ratios of scale for:</i>						
Single adult to two adults	0.777	0.637	0.595	0.637	0.707	0.714
Single parent with two children to two adults with one child	1.000	0.926	0.915	0.965	1.000	1.000

Two-parameter scale = (adults + p * children)^f
 Three-parameter scale = ratio of the scale for 2 adults and one adults is 1.41
 For single parents (adults + .8 + .5 * (children-1))^{.7}
 All other families (adults + .5 * children)^{.7}

* Nonelderly adults

Source: Johnson et al, 1997.

Table A-3.

Adjustments for Housing Costs for NAS Poverty Thresholds¹

Area and population size	Index value	Area and population size	Index value
NORTHEAST		SOUTH	
New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)		South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia)	
Nonmetropolitan areas and Metropolitan areas under 250,000	1.128	Nonmetropolitan areas and Metropolitan areas under 250,000	0.899
Metropolitan areas 250,000-500,000	1.128	Metropolitan areas 250,000-500,000	0.961
Metropolitan areas 500,000-1,000,000	1.148	Metropolitan areas 500,000-1,000,000	1.007
Metropolitan areas 1,000,000-2,500,000	1.141	Metropolitan areas 1,000,000-2,500,000	1.043
Metropolitan areas 2,500,000 or more	1.209	Metropolitan areas 2,500,000 or more	1.119
Middle Atlantic (New Jersey, New York, Pennsylvania)		East South Central (Alabama, Kentucky, Mississippi, Tennessee)	
Nonmetropolitan areas and Metropolitan areas under 250,000	0.908	Nonmetropolitan areas and Metropolitan areas under 250,000	0.827
Metropolitan areas 250,000-500,000	0.997	Metropolitan areas 250,000-500,000	0.935
Metropolitan areas 500,000-1,000,000	1.020	Metropolitan areas 500,000-1,000,000	0.947
Metropolitan areas 1,000,000-2,500,000	0.975	Metropolitan areas 1,000,000-2,500,000	(NA)
Metropolitan areas 2,500,000 or more	1.187	Metropolitan areas 2,500,000 or more	(NA)
MIDWEST		West South Central (Arkansas, Louisiana, Oklahoma, Texas)	
East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin)		Nonmetropolitan areas and Metropolitan areas under 250,000	
Nonmetropolitan areas and Metropolitan areas under 250,000	0.896	under 250,000	0.858
Metropolitan areas 250,000-500,000	0.959	Metropolitan Areas 250,000-500,000	0.911
Metropolitan areas 500,000-1,000,000	0.987	Metropolitan areas 500,000-1,000,000	0.942
Metropolitan areas 1,000,000-2,500,000	0.995	Metropolitan areas 1,000,000-2,500,000	0.962
Metropolitan areas 2,500,000 or more	1.059	Metropolitan areas 2,500,000 or more	1.005
West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota)		WEST	
Nonmetropolitan areas and Metropolitan areas under 250,000		Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming)	
under 250,000	0.861	Nonmetropolitan areas and Metropolitan areas under 250,000	
Metropolitan areas 250,000-500,000	0.962	under 250,000	
Metropolitan areas 500,000-1,000,000	0.981	Metropolitan areas 250,000-500,000	
Metropolitan areas 1,000,000-2,500,000	1.028	Metropolitan areas 500,000-1,000,000	
Metropolitan areas 2,500,000 or more (use areas 1-2.5 million)	(NA)	Metropolitan areas 1,000,000-2,500,000	
		Metropolitan areas 2,500,000 or more	
		Pacific (Alaska, California, Hawaii, Oregon, Washington)	
		Nonmetropolitan areas and Metropolitan areas under 250,000	
		under 250,000	
		Metropolitan areas 250,000-500,000	
		Metropolitan areas 500,000-1,000,000	
		Metropolitan areas 1,000,000-2,500,000	
		Metropolitan areas 2,500,000 or more	

NA Not applicable.

¹Table copied from Table 1-1, page 41: Constance F. Citro and Robert T. Michael (eds.) *Measuring Poverty: A New Approach*, Washington, DC: National Academy Press, 1995.

cost-of-living indexes that correspond to the Consumer Price Index for Urban Consumers (CPI-U).⁵ Yet, various approaches have been proposed to estimate interarea price differences. In this section, the panel's method for

accounting for differences in prices by geographic area is explained first and is followed by the method presented in this report using FMRs.

⁵Citro and Michael, 1995, pages 182-183.

NAS Panel's Method

The panel developed an interarea price index for shelter, which includes housing plus utilities.⁶ They focused on shelter because housing expenditures are the largest component of the poverty budget and because variations in housing costs are significant by region and population size. They used a modified version of a method developed by the Department of Housing and Urban Development (HUD) for the administration of Section 8 rental housing subsidies. HUD uses a combination of data from the most recent American Housing Survey, the most recent decennial census, and a random-digit dialing (RDD) survey to develop a set of Fair Market Rents each year that vary by geographic location. The panel used census data only and computed index values for each of 341 metropolitan areas (setting the U.S. average equal to 1.0). The index values were based on the cost of housing at the 45th percentile of the value of the distribution for each area. The data were then grouped into six population size categories within each of the nine census divisions. The nonmetropolitan territory was considered by region, and new index values recomputed, which produced a final set of 41 index values.

The index values were further adjusted for the estimated fraction of the poverty budget of the reference family accounted for by housing (including utilities)—44 percent. This effectively created a fixed-weight-interarea price index with two components: housing, and all other goods and services, where the price of other goods and services was assumed not to vary. This narrowed the range of index values. As the panel pointed out, the proposed procedure should not be viewed as the last word on the issue of adjusting poverty thresholds for the area differences in prices. Their procedure accounts only for housing differences and does not account for differences within an area, differences in quality of a unit, or significantly higher housing costs in Alaska or Hawaii. Their indexes are shown in Table A-3. In this report and in the earlier report, the indexes were adjusted for each year of the CPS sample so that the average of the indexes across all people was 1.00. For example, for 1999 the indexes were divided by a factor of 1.025 to yield an average of 1.00 using the March 2000 CPS.

New Method

A problem with the NAS indexes was the implicit assumption that housing costs were homogeneous within the census divisions for which summary indexes were calculated. For some states, especially in New England, this assumption resulted in experimental poverty rates that differed radically from the official rates.

To improve state-level poverty rates, a new method that regroups housing costs at smaller levels of geography was tried. This was done while keeping in mind disclosure

problems with the release of microdata files. While other groupings were considered, mean indexes by state and metropolitan status were computed, resulting in 100 indexes, two per state (except for only metropolitan indexes in New Jersey and the District of Columbia) by which thresholds are adjusted for the cost of housing differences (see Short, 2001, for more details and variations, and Malpezzi et al., 1998).

These new indexes were calculated using Fair Market Rents for 1999. HUD Fair Market Rents are estimated annually for 2,416 counties that are outside metropolitan areas and for all 341 metropolitan areas. FMRs are defined to be gross rent (with utilities) at the 40th percentile for the rent distribution of a standard quality of rental housing. One problem with FMRs is that they do not fully control for housing quality since the definition of “standard” is not a strict one. Only recent movers are included in the calculations, and because long-term renters may pay lower rents on average, this measure of the cost of housing is biased upward. Finally, there are also some legislative adjustments that present some inconsistencies across areas.

Analysts at HUD have described why FMRS should *not* be used to adjust a poverty threshold.⁷ The 12 reasons are reproduced here:

1. FMRs were developed to run HUD's Section 8 certificates and vouchers program, and for no other purpose. We are satisfied that they work satisfactorily for this purpose.
2. FMRs are not intended to reflect levels or changes in owner-occupied housing costs. They measure market rents, not total housing costs.
3. FMRs measure gross rents (rents plus tenant-paid utilities) of recent movers, not of the entire rental housing stock. “Recent movers” are those who had moved into the unit within the past 15 months, not the past 5 years as stated in the [NAS] report (page 195). These represent well under one-half of all rental units.
4. All areas are calibrated to the census once a decade (the last was in 1994), and most major metropolitan areas are checked once or twice a decade using Random Digit Dialing (RDDs), but this leaves unevenness in other areas.
5. Rental markets can be quite volatile, and many of these are caught by areas RDDs, of which HUD conducts about 50 to 60 a year. For example, a 1997 RDD of Los Angeles resulted in an FMR reduction of almost \$140. While adjustments of the magnitude of Los Angeles' are very rare, changes can be unpredictable and sudden.

⁶Citro and Michael, 1995, pages 194-197.

⁷Personal communication from staff at HUD.

6. For 99 large FMR areas, rents are adjusted using CPI rent and utility factors. However, the CPI data are available only for 32 consolidated MSAs, and they are applied to all primary MSAs⁸ within CMSAs.
7. We update FMRs for smaller areas using the results of longitudinal Random Digit Dialing (RDD) surveys of the metropolitan⁹ and nonmetropolitan portions of the ten HUD regions. This is a substantial improvement over the previous system of using CPI rent changes for the four Census regions, but it still results in generalizations of rent changes that might not be applicable to individual areas.
8. The percentile standard has changed. FMRs were based on the 50th percentile from 1975 to 1983, the 45th percentile from 1985¹⁰ to 1994, and the 40th percentile starting in 1995. It is possible to splice the series from 1985 onward, using the difference between the 45th and the 40th percentile in 1995, but this is a rough approximation.
9. The percentile measure is administratively determined; it is doubtful that statisticians, policymakers, and above all, the general public, would call the 45th percentile a good measure of central tendency, much less the 40th percentile.
10. The treatment of nonmetropolitan counties has changed over time. Between 1975 and 1983, FMRs were based on county groups of 250,000 or more. From 1984 to 1993 they were based on county groups of 100,000 or more. Only starting in 1994 have FMRs been based on data for individual counties, but with an important adjustment - the state minimum.
11. In 1996 we instituted a state minimum FMR. ¹¹This had the effect of raising FMRs substantially in many nonmetropolitan counties.
12. For all of these reasons, FMRs are published with a 60-day comment period, giving housing authorities and other interested parties a chance to try to alter their FMRs.

⁸FMR areas do not always coincide with OMB-defined MSAs. At present, selected outlying counties are treated as different FMR areas in six MSAs: Chicago, Cincinnati, Dallas, Flagstaff, New Orleans, and Washington, DC.

⁹For the metropolitan surveys, metropolitan areas that are covered by the CPI are excluded; these are therefore the smaller MSAs and PMSAs.

¹⁰No FMR was published in 1984.

¹¹In nonmetropolitan counties the FMR is the higher of the local FMR or the statewide average of nonmetropolitan counties, subject to a ceiling rent cap. The state minimum also affects a small number of metropolitan areas whose rents could otherwise fall below the state minimum. This state minimum replaces one that was in effect for the 1994 FMRs: for counties with fewer than 100 recent-mover 2-bedroom cases, the rent was based on the lowest-rent county in the state with 100 cases or more.

In spite of these problems, we argue that the FMR methodology is straightforward and applicable to all areas of the United States. The data are also updated on a regular basis from the base year of 1990. The information is very detailed and provides a good indication of the variability of housing costs in different areas of the country.

Table A-4 shows mean state indexes as calculated in the March 2000 CPS. The first column shows NAS indexes and the last two columns show the FMR indexes, when used directly for individual MSAs and counties, and when state and metropolitan-nonmetropolitan means are applied as in this report. We do not argue for the use of separate FMRs for all areas because confidentiality concerns preclude identifying many such areas on the public use microdata files from the CPS and the SIPP.

WORK-RELATED EXPENSES

Under the experimental measure of poverty, two types of work-related expenses are subtracted from a family's resources: 1) child care expenditures, and 2) "other" work-related expenses. These expenses are described separately below.

Child Care Expenditures

The method of valuing child care expenditures used in the NAS and the first Census Bureau reports involved using data from the 1992 SIPP to estimate child care expenses for CPS families (the March CPS contained no questions on child care expenses). In the SIPP, parents or guardians of children under 15 years of age who were in the labor force or attended school during the reference period were asked about their child care arrangements and costs during the last month. Expenses were limited to the earnings of the parent with the lower earnings, or to the dollar amount of the dependent care tax credit—which is \$2,400 for one child or \$4,800 for two or more children—whichever was lower.

A two-step procedure was used to estimate the expenses for each of two separate groups of families: two-parent families where both parents worked and families with a single working parent. First, one estimates the probability of incurring child care expenses based on the race/ethnicity of the head, the number of children of various ages, region, and family income. Second, one estimates the weekly expenses of working parents who paid for child care using the same set of explanatory variables. Both steps used the 1992 SIPP panel (see Tables A-5 and A-6).

Another method for valuing child care expenses was included in the Census Bureau report as the DCM measure. That method involves simply subtracting a fixed amount from the earnings of families with no nonworking parents and with children under the age of 12, and to limit this deduction to the earnings of the lower earner. For the DCM measure, we subtracted fixed amounts equal to 85 percent of median annual expenses as reported in SIPP

Table A-4. Mean Normalized Indexes, Poverty Rates, and Mean FMRs by State: 1999

Region	Indexes			Poverty rates 1999			Mean FMRs	
	NAS	FMR	FMR state/MSA	Official	DES	FMR state/MSA	Metro-politan	Nonmetro-politan
United States	1.00	1.00	1.00	11.80	15.00	15.20		
Alabama	0.86	0.84	0.84	15.10	13.70	13.20	468.84	348.75
Alaska	0.95	1.14	1.13	7.60	8.20	10.90	773.00	777.01
Arizona	0.96	0.99	0.99	12.00	15.30	16.20	623.64	503.71
Arkansas	0.85	0.84	0.84	14.70	15.90	15.40	485.25	375.68
California	1.14	1.12	1.13	13.80	20.50	21.30	769.32	603.36
Colorado	0.95	1.02	1.02	8.30	10.20	12.10	654.64	589.74
Connecticut	1.15	1.14	1.13	7.10	11.50	11.70	772.79	750.28
Delaware	1.02	1.02	1.02	10.40	13.70	15.40	659.20	579.00
District of Columbia	1.09	1.17	1.17	14.90	20.30	22.70	820.00	(NA)
Florida	0.98	1.01	1.01	12.40	15.00	15.80	628.39	553.77
Georgia	1.00	0.96	0.95	12.90	15.90	15.60	635.62	415.84
Hawaii	0.99	1.23	1.23	10.90	13.30	22.60	863.00	957.98
Idaho	0.89	0.88	0.88	14.00	14.30	13.60	540.00	441.53
Illinois	1.00	1.04	1.03	9.90	11.90	12.60	685.24	409.28
Indiana	0.93	0.90	0.90	6.70	10.10	9.70	552.59	419.97
Iowa	0.87	0.87	0.87	7.50	9.30	9.70	521.57	419.87
Kansas	0.90	0.88	0.88	12.20	13.60	13.20	525.71	406.50
Kentucky	0.86	0.85	0.85	12.10	13.70	13.50	505.31	383.35
Louisiana	0.89	0.86	0.87	19.20	19.30	17.90	480.90	362.35
Maine	1.10	0.94	0.94	10.60	18.10	12.80	597.70	529.98
Maryland	1.07	1.05	1.05	7.30	10.80	10.60	696.93	526.46
Massachusetts	1.16	1.15	1.16	11.70	18.60	18.30	798.61	691.63
Michigan	0.99	0.98	0.97	9.70	12.00	11.50	600.37	425.16
Minnesota	0.92	0.97	0.97	7.20	8.80	9.60	638.83	447.51
Mississippi	0.84	0.83	0.83	16.10	13.40	12.60	495.98	378.57
Missouri	0.94	0.87	0.87	11.60	13.10	11.90	493.04	368.92
Montana	0.87	0.88	0.88	15.60	18.20	18.60	496.96	477.83
Nebraska	0.89	0.89	0.89	10.90	10.50	10.20	563.22	409.97
Nevada	0.98	1.06	1.06	11.30	14.90	16.70	695.97	614.11
New Hampshire	1.15	1.07	1.07	7.70	12.30	10.90	724.61	637.47
New Jersey	1.16	1.19	1.18	7.80	14.10	14.80	830.73	(NA)
New Mexico	0.92	0.91	0.92	20.70	19.70	20.00	577.25	439.54
New York	1.09	1.17	1.16	14.10	19.60	21.60	826.81	546.68
North Carolina	0.95	0.92	0.92	13.60	15.60	14.60	553.63	433.42
North Dakota	0.84	0.85	0.85	13.00	13.00	13.20	531.29	381.75
Ohio	0.98	0.93	0.92	12.00	14.20	13.10	538.65	437.20
Oklahoma	0.88	0.85	0.85	12.70	13.60	12.70	482.39	362.12
Oregon	1.02	0.98	0.98	12.60	18.60	17.20	624.20	518.96
Pennsylvania	1.02	0.98	0.97	9.40	12.50	12.10	594.63	471.13
Rhode Island	1.11	1.05	1.05	9.90	13.50	12.00	663.68	828.95
South Carolina	0.94	0.89	0.89	11.70	14.20	13.00	515.93	410.26
South Dakota	0.84	0.89	0.89	7.70	7.70	8.50	577.49	438.77
Tennessee	0.89	0.88	0.89	11.90	12.80	12.00	535.23	363.72
Texas	0.92	0.95	0.95	15.00	16.40	17.60	600.31	395.74
Utah	0.95	0.98	0.98	5.70	7.90	8.50	619.90	471.59
Vermont	1.10	0.99	0.99	9.70	15.90	12.80	692.00	573.56
Virginia	0.99	1.01	1.00	7.90	10.40	10.50	651.00	502.88
Washington	1.10	1.01	1.01	9.50	12.50	11.50	680.86	493.86
West Virginia	0.91	0.85	0.86	15.70	17.40	14.80	510.50	374.00
Wisconsin	0.92	0.92	0.92	8.60	11.10	11.20	569.45	423.25
Wyoming	0.87	0.88	0.88	11.60	10.30	11.20	539.84	435.79

NA Not applicable.

Source: U.S. Census Bureau tabulations of March 2000 Current Population Survey.

Table A-5. Logit Coefficients Predicting Whether a Family Incurred Child Care Expenses: 1992

Characteristic	Single-parent family 1992	Married-couple family 1992
Intercept	2.523	8.672
African American family head	0.137	0.289
Hispanic family head	0.207	0.170
Number of kids 0-5 years old	-1.074	-1.127
Number of kids 6-11 years old	-0.116	0.107
Number of kids 12-15 years old	1.018	1.211
Number of kids 16-18 years old	0.128	0.259
Midwest	-0.040	-0.630
South	-0.078	-0.853
West	-0.648	-0.693
Log of family income	-0.150	-0.640
Percent of family's income earned by the mother	(NA)	-1.167
Number of observations	902	2,533

NA Not applicable.

Source: U.S. Census Bureau tabulations of Survey of Income and Program Participation.

Table A-6. Ordinary Least Squares Coefficients for Imputed Child Care Expenses: 1992

Characteristic	Single parent 1992	Married couple 1992
Intercept	-105.406	-332.173
African American family head	7.96	-4.25
Hispanic family head	-3.343	-9.975
Number of children 0-5 years old	40.59	59.364
Number of children 6-11 years old	18.602	23.809
Number of children 12-15 years old	19.539	-9.965
Number of children 16-18 years old	-16.055	18.428
Midwest	-16.501	-7.558
South	1.526	3.14
West	1.707	3.537
Log of family income	12.432	29.584
Percent of family's income earned by the mother	(NA)	54.66
Number of observations	306	826
Root Mean Square Error from unweighted regressions	68.033	93.247

NA Not applicable.

Source: U.S. Census Bureau tabulations of Survey of Income and Program Participation.

from these families. We used estimates from the 1993 SIPP panel updated to 1997 using the CPI for child care and nursery school and calculated six separate medians depending on the number and age of children (see Table A-7). This method has the advantage of imputing child care costs for all families with working parents and children and takes into account the opportunity costs involved in arranging for child care. For example, a family that cannot afford child care might opt to leave a child unsupervised during working hours. This family might not be poor, even though subtracting an adequate amount to pay for child care would render this family poor. Likewise,

Table A-7. Median Child Care Costs by Number and Age of Children: 1991-93

Characteristic	1991	1992	1993
1 child under 12 years old			
none under 5 years old	1,820	1,560	1,820
1 under 5 years old	2,600	3,120	3,120
2 or more children under 12 years old			
none under 5 years old	1,560	2,080	2,548
1 under 5 years old	3,380	3,640	3,380
2 under 5 years old	4,160	4,680	4,836
3 under 5 years old	4,940	7,150	5,200

Source: U.S. Census Bureau tabulations of Survey of Income and Program Participation.

some families with high child care costs might be counted as poor, even though their overall level of well-being might be higher than that of some nonpoor families with lower or no child care costs. Subtracting fixed amounts from a family's resources overcomes this problem.

New CPS Questions on Paid Child Care

The newer method of estimating child care presented in this report replaces the first step of this procedure with responses to questions introduced in the CPS about spending on child care. These questions ask if anyone in the household paid for the care of their children while they worked in 1999. If the response is "yes," then the children who needed care are listed. The probability model based on SIPP data estimates that 12.9 percent of people are in families with child care expenses, but the direct question in the CPS shows only 10.5 percent. If the family has children for whom care is paid, then the amount paid is modeled using a somewhat different specification than the one described above.

One problem with the expenditure imputations in the NAS method is that nothing constrains the expenditures to be positive. Iceland and Ribar (2001), using the 1993 panel of SIPP, found that the NAS procedure imputes negative amounts to roughly a quarter of the families who were predicted to pay something. While our calculations prevent negative amounts from being used, Iceland and Ribar further refined the specification.

The first modification in the imputation procedure was to remove outliers from the conditional expenditure regressions by dropping families who reported more than \$750 a week in child care costs (roughly 1 percent of the families with positive expenditures). Removing these observations led to large improvement in the fit statistics for the conditional linear regressions for unmarried families, the R^2 increased from 0.12 to 0.18, while for married families, the R^2 increased from 0.17 to 0.21. This simple step led to fewer initial out-of-range predictions, better average imputations, and more highly correlated imputations than the NAS procedure. Table A-8 shows the results of these procedures.

Table A-8. Estimated Coefficients of Various Models of Family Expenditures on Child Care

Characteristic	Single parent/other families			Married couple families		
	NAS	Trimmed	Log	NAS	Trimmed	Log
Intercept	***-451.1 -124.8	***-238.7 -67.2	-0.83 -1.16	***-436.4 -76.7	***-369.5 -56.6	-1.02 -0.90
Family head Black	21.9 -20.2	10.9 -10.7	**0.23 -0.12	1.4 -16.6	11.6 -12.1	0.06 -0.12
Family head Hispanic	11.5 -26.8	**31.3 -14.3	0.24 -0.16	13.8 -15.5	-1.0 -11.5	0.10 -0.12
Children 0-5	***73.9 -14.6	***51.7 -7.8	- -	***54.6 5.5	***45.6 -4.1	- -
Children 0-2	-	-	***0.82 -0.12	-	-	***0.69 -0.05
Children 3-5	-	-	***0.57 -0.10	-	-	***0.45 -0.05
Children 6-11	***46.4 -13.0	**14.5 -7.0	*0.13 -0.08	**11.5 -5.4	2.6 -4.0	-0.01 -0.04
Children 12-15	-26.1 -23.0	-6.8 -12.2	***-0.39 -0.14	-12.0 -8.1	-5.9 -6.0	-0.07 -0.06
Children 16-18	-18.1 -34.0	-4.4 -18.1	-0.12 -0.21	-24.1 -15.7	-18.3 -11.5	-0.18 -0.12
Midwest	-21.4 -25.2	**29.1 -13.4	***-0.45 -0.15	***-55.9 -10.7	***-41.0 -7.9	***-0.39 -0.08
South	-7.1 -22.9	-18.3 -12.2	***-0.35 -0.13	***-46.5 -10.8	***-35.8 -8.0	***-0.26 -0.08
West	38.2 -25.0	-10.7 -13.4	-0.03 -0.15	-17.7 -11.9	-13.2 -8.8	-0.06 -0.09
In family income	***44.0 -11.5	***26.9 -6.2	***0.37 -0.09	***44.5 -6.8	***38.1 -5.1	***0.26 -0.06
Proportion from mother's earnings	-	-	-	***64.0 -18.0	***64.8 -13.2	0.15 -0.16
Average hours	-	-	**0.03 -0.01	-	-	***0.03 -0.01
Average hours 2 (/100)	-	-	*-0.03 -0.02	-	-	- 0.01 -0.01
Number of adults in household	-	-	**0.15 -0.06	-	-	- 0.05 -0.08
Some High school	-	-	**0.97 -0.41	-	-	- 0.09 -0.26
High school	-	-	**0.81 -0.40	-	-	- 0.01 -0.23
Some college	-	-	**0.86 -0.40	-	-	0.09 -0.24
College	-	-	*0.74 -0.41	-	-	0.17 -0.24
Urban residence	-	-	0.08 -0.12	-	-	**0.13 -0.06
Age	-	-	0.07 -0.05	-	-	0.06 -0.04
Age 2 (/100)	-	-	- 0.10 -0.08	-	-	- 0.09 -0.06
Root MSE	153.2	81.5	0.88	115.9	84.8	0.84
R2	0.12	0.18	0.31	0.17	0.21	0.31
Observations	372	372	372	1029	1029	1029

* Significant at .10 level.
 ** Significant at .05 level.
 *** Significant at .01 level.

NAS NAS reestimated model.

Trimmed NAS reestimated excluding outliers.

Log Augmented model with natural logarithms specification of dependent variable.

Note: Estimates based on observations from the 9th wave of the 1993 panel of the SIPP (Fall 1995).

Because of differences in dependent variables and models, coefficients are not comparable across specifications. Standard errors shown below estimates.

Source: Iceland and Ribar, 2001.

Next, Iceland and Ribar augmented the regression equations to include controls for the mother's average weekly hours, the square of her hours, education (some high school, high school, some college, or college), age, age-squared, an indicator for metropolitan residence, finer controls for the age distribution of children, and the number of adults in the household. The added variables were jointly significant. The fit statistics for all of the models improved considerably and mean predictions were very close to the true mean expenditure levels. Correlation coefficients between the actual and imputed expenditures were higher than those for the other two approaches; however, the absolute values of the correlation coefficients remained low.

The first of the nonlinear specifications replaced the dependent variables with their natural logarithms. (Imputations are formed by taking the exponential of the predicted outcome.) Besides being constrained to predict positive expenditures, the log-linear approach has the advantage that it tends to reduce the effect of outliers. The means and standard deviations of the imputed values were both very close to the corresponding statistics for the actual values. The correlations with the actual values, however, were not quite as strong as from the augmented linear model.

Other Work-Related Expenses

The panel proposed subtracting a flat amount for "other" work-related expenses to be updated annually for inflation. Following the panel's recommendations, the flat amount represents 85 percent of the median amount spent on other work-related expenses, as reported by SIPP respondents (no questions on other work-related expenses are asked in the CPS). This amount is restricted to not exceed the person's earnings. The panel used data from the 1987 SIPP, the most recent data then available. More specifically, the 1987 SIPP collected information on work-related expenses from people who had at least one employer in the reference period. Three types of expenses were identified:

1. *Annual expenses*—annual work-related expenses, such as union dues, licenses, permit, special tools, or uniforms.
2. *Mileage expenses*—the number of miles usually driven to and from work in a typical week, for people who do some driving to work. An estimate of 22.5 cents per mile was used to convert mileage to expenses.
3. *Other expenses*—other expenses incurred in getting to and from work, such as bus fares or parking fees, in a typical week.

Using these data, the panel calculated 85 percent of median work expenses, which resulted in \$14.42 per week in 1992, or \$17.12 in 1999 dollars.

To have more recent information, very similar questions were added as a topical module to the 1996 panel of SIPP. These updated responses are included in the estimate of other work-related expenses presented in this report. Similar calculations as the above resulted in an estimated work-expense value of \$16.83 in 1999, a figure slightly below that of the original calculation updated for inflation.

HOUSING SUBSIDY VALUATION

Rent subsidies, one of the noncash benefits valued in the March supplement to the CPS, are estimated as part of Census Bureau processing of the CPS microdata file. These values are currently calculated using American Housing Survey data from 1985, updated to current dollars, using the CPI Residential Rent Index (details on this method can be found in Short et al., 1999).

Two new methods are used in this report to value housing subsidies. The first method uses FMRs. Mean 1999 FMRs by state and metropolitan status are used to estimate monthly market rent amounts of subsidized units. These estimates are also those used in the previously described geographic indexes based on FMRs. Table A-4 above shows the relative values of the amounts used by state.

In the calculations, we assign FMRs for 0 to 4 bedrooms, based on the number of individuals in the household following HUD program rules for section 8 housing. We then calculate subsidy amount by subtracting 30 percent of total household income. This calculated subsidy is then prorated among families in each household, based on the number of people in each family. If market rent is smaller than 30 percent of household income, the subsidy value is set to zero. If the value of the subsidy is greater than 44 percent of the family threshold, then it is capped at that amount. This is done to include as a noncash benefit only the amount deemed to be necessary to meet shelter needs. The mean subsidy amount from this procedure is \$274 per month.

The second method of valuing housing subsidies used in this report employs a statistical match, imputing values of market rent from the AHS to the CPS. Because subsidized renters in the AHS report what they pay rather than the market value of the housing unit, monthly rents for subsidized units in the AHS are estimated using a hedonic regression model for unsubsidized units.

To calculate market rents using standard methods, the housing price equation in semilog form is calculated with the characteristics of the housing unit as independent variables and the log of rent paid as the dependent variable. To determine which geographic areas were significant in explaining housing market variation, the equation was estimated repeatedly using a stepwise procedure. At the outset, all metropolitan statistical areas in the United States were possibilities for inclusion as an indicator of differences in the housing market. One geographic variable at a time was added until no additional improvements

to R-squared could be made. Further, the set of geographic indexes was tested with F-tests to assure that the set of geographic indexes was significant.

Although the above procedure yielded 139 significant metropolitan areas, the model was estimated with only 50 uniquely identified metropolitan areas in its final version. This group was chosen for its probable stability over time. The coefficients on the geographic dummy variables are the incremental difference in the rental price between a unit in a particular MSA and a unit that is either not in an MSA or is in an MSA whose rental price is not significantly different from non-MSA units. The estimated coefficients from this hedonic equation were applied to the subsidized renters to get an estimate of the market value of subsidized units. Details of these calculations are found in Stern, 2001.

The next step was to perform a statistical match between the subsidized units in the CPS and the AHS, based on characteristics found in both data sets. A predictive mean match method was used to obtain estimates for market rent on the CPS. This method uses two stages:

1. In the first stage, a regression model estimates coefficients in the relationship between the shared characteristics and the market rent on the AHS. Once market rents were modeled in the AHS, the model was used to predict market value of subsidized rental units in both the AHS and CPS.
2. In the second stage, the predicted values are statistically matched.

An important element in the model that predicts market rent on the AHS and the CPS is the involvement of geographic areas. All the geographic entities represented in the data sets were grouped according to the appropriate two-bedroom Fair Market Rent. The resulting clusters assure that areas with the same level of housing prices are treated as having a similar housing market. For example, Cluster 1 includes all the geographic areas with very low rents. At the other end of the scale, Cluster 14 includes all geographic areas with the very high rents, like New York City. The estimates from this model are shown in Table A-9. The parameters were used to find the predicted market rent on both the AHS and the CPS file, the basic matching key of the statistical match.

Once the market rents are attached to households in the CPS, the value of the housing subsidy is calculated by subtracting 30 percent of household income as in the above method using FMRs. The mean subsidy amount from this procedure is \$245 per month.

MEDICAL CARE

In this report we use three different approaches toward the treatment of medical care in the poverty measure. The first approach deducts family obligations for the cost of medical care out-of-pocket (MOOP) expenses from

Table A-9. **Estimated Coefficients on the Model of Market Rents in the American Housing Survey Dependent Variable: Market Rent**

Characteristic	Estimate	Standard error
Constant/intercept	424.43	18.65
Number of people in household	35.32	2.75
Percent of the household who are children.	-36.81	13.69
Householder 65 years old or over.	-43.20	7.29
Householder married	30.16	7.43
Householder male	2.31	6.02
Cluster 2 ¹	-21.69	25.79
Cluster 3.	1.52	20.02
Cluster 4.	17.22	20.83
Cluster 5.	16.17	19.90
Cluster 6.	31.50	19.49
Cluster 7.	53.74	19.86
Cluster 8.	79.91	20.11
Cluster 9.	144.44	19.69
Cluster 10	150.34	19.63
Cluster 11.	190.50	21.05
Cluster 12	224.90	23.64
Cluster 13	265.12	19.11
Cluster 14	493.59	21.11
R-square = 0.5	0.5	-

¹Cluster 1, the groups of areas with the lowest housing prices, is the omitted category.

Source: Stern, 2001.

resources as the NAS panel recommended. The second approach adds average obligations for the cost of medical care to the threshold. The third approach combines the above two approaches in a single measure.

Method 1: Medical out-of-pocket expenses deducted from resources-two versions.

A description of the imputation process initially used by the NAS panel is described in detail in the earlier report (see Short et al., 1999, also Betson, 2001). For that model, the expenditure data were obtained from the 1987 National Medical Expenditure Survey (NMES), aged to represent 1991. The imputation procedure assigned a predicted expenditure to each family, based on the characteristics of that family, and adjusted the imputed amount to ensure that aggregate total imputed out-of-pocket expenditures agreed with aggregate expenditures estimated from an independent source.¹²

The imputation model consisted of three components. The first component of the model determined whether a family incurred any MOOP in the course of the year. The second component of the model assigned actual values of MOOP to those who incur such expenses. The panel assumed that the cumulative distribution of medical expenses could be described by a log-logistic function and estimated parameters for this equation:

$$\ln(c/(1-c)) = a + bX(h) + g \ln(\text{moop}) + d X(h) * \ln(\text{moop}) + e$$

¹²Note that we do not adjust any other income source to meet a benchmark amount.

where $\ln(\text{moop})$ = natural log of MOOP spending and c is the percentile in the cumulative distribution of MOOP in the NMES data.

The final value of MOOP was computed as the sum of the Medicare part B premiums and the imputed value of MOOP, adjusted for cost of living, and calibrated to the independent control totals. The aggregate totals used were based on an aggregate total for 1992 used by the panel, adjusted to other years according to changes in the CPI for medical care.¹³

This earlier method estimated that 94 percent of all people in the CPS were in a family with at least some MOOP. The average assigned amount spent in 1999 was \$2,793. Since all amounts were calibrated to aggregate totals, the aggregate-spending total was calculated to be \$291 billion for 1999.

An updated version of this model is included in the estimates in this report. This updated model uses data from the 1996 and 1997 CE (see Betson, 2001). This version of the MOOP model differs in some important ways from the earlier model. These differences are summarized by Betson in a series of recommendations that are made to guide the estimation of this model. The first recommendation is that the MOOP amounts predicted by the model should **not** be calibrated to aggregate totals, as was done in the earlier version. A second recommendation is that the model should be periodically updated to capture any changes in utilization of health care and shifting of costs between employers and families. Betson uses a third order log-logistic approximation to the cumulative probability in this version and limits the imputation of MOOP values to the lower 99 percent of the estimated MOOP distribution. Elderly adults in families with income below 120 percent of their poverty threshold were not assigned Medicare part B premiums. (Medicaid pays the part B premium for low-income elderly.)

Implementing this model of MOOP yields considerably lower amounts of expenses that are to be deducted from income than using the original model. For all people, the mean amount is \$1,706 per year, compared with the \$2,793 noted above.

Method 2: Medical out-of-pocket expenses included in the thresholds. This measure departs from the approach taken by the panel to move the accounting for medical needs from the resource side of a poverty measure to the threshold side. The first step of this calculation includes medical out-of-pocket expenditures in our calculation of the basic bundle of the two-adult, two-child reference family, thus expanding the set of basic needs to include medical expenses that are generally paid by the individual or family. Additional variability in the thresholds was assigned to each family, based on characteristics

¹³Betson, 1995b. David Betson was a member of the NAS Panel.

associated with variations in medical care utilization and cost. In the case of the uninsured, an adjustment was made to reflect the underutilization of health care by the uninsured (see Banthin et al., 2001 for details).

The next step of the formulation of thresholds that include MOOP incorporates an expanded set of characteristics. To accomplish this, information from the 1996 MEPS is used to adjust the thresholds to vary by important determinants of expenditures that differ from those of the two-adult, two-child reference family. Table A-10 shows risk factors for MOOP expenditures by size of family, numbers of persons in various age groups in the family, and insurance coverage as calculated from median MOOP with an adjustment for the uninsured. The table also shows means for comparison.

To produce the MEPS-based table, total expenditures were calculated directly except for the uninsured, for whom a predicted expenditure based on total expenditures of the insured with similar characteristics was substituted. This procedure was done in response to concerns that medical expenditures of those without insurance are so constrained that they do not provide reasonable estimates of adequate medical care (see Wolfe, 2000).

In the final step, these factors are used to adjust the medical care portion of the basic threshold bundle. Using the estimate from the CE that medical care spending represents approximately 6 percent of spending on food, clothing, shelter, utilities and medical care (FCSUM) in 1999, the MOOP portion of the thresholds based on risk factors of families by the relevant characteristics was calculated. This MOOP portion of the threshold was added to the remaining portion of the threshold, representing the FCSU expenditures. The FCSU portion of the thresholds was adjusted for family size differences using the three-parameter equivalence scale, as discussed elsewhere. Table A-10 shows the amounts added to thresholds for the family types listed under this method. For comparison to the method used in the MSI measures, the table also shows computed mean amounts subtracted from income for these groups using the revised NAS method.

Method 3: Combining methods 1 and 2. The final method considered is computed by combining the two methods above. The purpose of constructing this measure is to include the need for medical care in the threshold, but to retain the variability of “actual” MOOP that the first method more precisely captures. This method is computed by using the thresholds constructed in method two, and then calculating *net* MOOP by subtracting the amount of “expected” MOOP spending used in the thresholds from “actual” MOOP described in the first method. This difference represents “unexpected” spending for medical care and is subtracted from income. The amounts used for “expected” MOOP in this calculation are the same as those used in the MIT MOOP measure. These amounts are shown in Table A-10 as the amounts added to thresholds.

Table A-10. **Mean and Median MOOP, MEPS 1996, (With Adjustment for Uninsured) 1999 Dollars**

Characteristics	MOOP estimated using MEPS		Risk factors	NAS model mean	MOOP in thresholds
	Mean	Median			
Reference family	\$2,352	\$1,800	1.00	\$1,781	\$1,181
Families With No Elderly Members					
Private, 1 person					
Good health	1,157	762	0.42	858	500
Fair/poor health	1,974	1,394	0.77	850	915
Private, 2 people					
Good health	2,131	1,596	0.89	1,908	1,047
Fair/poor health	2,979	2,029	1.13	1,950	1,331
Private, 3 more people					
Good health	2,409	1,804	1.00	1,862	1,184
Fair/poor health	2,660	2,263	1.26	1,802	1,485
Public, 1 person					
Good health	371	32	0.02	506	21
Fair/poor health	501	124	0.07	461	81
Public, 2 or more people					
Good health	300	60	0.03	295	39
Fair/poor health	574	165	0.09	355	108
Uninsured, 1 person					
Good health	1,127	866	0.48	229	568
Fair/poor health	2,023	1,625	0.90	196	1,066
Uninsured, 2 or more people					
Good health	2,301	1,829	1.02	594	1,200
Fair/poor health	2,766	1,952	1.08	535	1,281
Families With Elderly Members					
Private, 1 person					
Good health	2,534	2,144	1.19	2,080	1,407
Fair/poor health	3,163	2,356	1.31	1,986	1,546
Private, 2 or more people					
Good health	4,169	3,461	1.92	3,128	2,271
Fair/poor health	4,863	4,132	2.30	3,055	2,711
Public, 1 person					
Good health	1,123	880	0.49	1,896	577
Fair/poor health	1,199	808	0.45	1,848	530
Public, 2 or more people					
Good health	2,173	1,629	0.91	2,917	1,069
Fair/poor health	2,425	1,825	1.01	2,619	1,197

Source: March 2000 Current Population Survey, 1996 Medical Expenditure Panel Survey, and Banthin et al., 2001.

Use of Four Complete Quarters of CE Interview Data to Compute Poverty Thresholds With MOOP

The NAS panel used 3 months of annualized data to produce the FCSU thresholds, although they recommended using only those consumer units who reported a complete year of expenditures. The thresholds used in this report follow the independent quarter assumption with regard to the CE data. However, this appendix examines the possible impact on reference person thresholds of the independent quarters assumption.

A caution is warranted, however, with regard to these results: this analysis uses the cross-sectional weights available in the Bureau of Labor Statistics' internal CE data file. However, it would have been more appropriate to use longitudinal weights for this exercise; such weights are not available for the CE.

Of the 76,692 consumer units interviewed between quarter two of 1997 and quarter one of 2000, only 11.0 percent of the consumer units (8,447 consumer units) have the same number of adults and children and report

expenditures for all four of their interviews. Of these, only 9 percent (767 consumer units) represent the reference family of two adults and two children. This sample is similar to the sample derived by assuming quarterly data are independent. Two-adult, two-child families represent 9.0 percent (6,917 consumer units) of all interviews conducted (76,792) during this same time period. The number of reference person consumer units is adequate statistically to produce thresholds based on the full four quarters of data. However, cells sizes are quite small when the data are disaggregated for the production of the medical risk index adjustment using the CE means or medians.¹⁴

For comparison purposes only, median expenditures, thresholds, and MOOP shares are presented in Table A-11 for thresholds based on data for which there is no adjustment in the expenditures for the underutilization of medical care due the reference families' lack of health insurance. Results are for two sets of weighted samples. One

¹⁴Unpublished data from Thesia Garner (BLS).

for which the quarterly expenditure data are assumed to be independent, and another for which four complete quarters of data are used and are thus not assumed to be independent for the same reference family.

All the thresholds based on four complete quarters of data are higher than the thresholds produced when the assumption of independent quarterly data is made. For the FCSU based threshold, the four complete quarter based threshold is 3.7 percent higher than the threshold resulting when quarterly data are assumed to be independent. This percentage is slightly higher than that reported by Johnson, Shipp, and Garner (1997). For that study, consumer units rather than families were the focus of the analysis and an age-housing tenure adjustment was made to the cross-sectional weight. Also, the percentages of the median were not reestimated. The CE based FCSUM threshold is 4.6 percent higher when four complete quarters of data are used as opposed to when the quarterly data are assumed to be independent. (For more details see Banthin et al., 2001.)

These differences are particularly important to the MOOP estimates presented in this report, as the two MOOP methods use the CE data differently. The new NAS model presented here uses only three- and four-complete quarter data for 1996 and 1997. The MOOPITT estimates

use the assumption of independent quarters in the calculation of the FCSUM thresholds shown here for 1999. Further work on developing longitudinal weights for CE families is necessary for improved estimates on MOOP expenditures.

Table A-11. Reference Family Annual Thresholds and Medical Out of Pocket Shares: 1999

Characteristic	FCSU threshold	FCSUM thresholds
Median expenditure		
Independent	17,613	19,424
4 complete quarters	18,206	20,269
Thresholds		
Independent	17,036	18,671
4 complete quarters	17,610	19,527
MOOP share of median		
Independent	(NA)	0.08
4 complete quarters	(NA)	0.10
MOOP share of threshold		
Independent	(NA)	0.06
4 complete quarters	(NA)	0.08

NA Not available.

Source: Unpublished data available from T. Garner (BLS), and Banthin et al., 2001.

Appendix B.

Source and Accuracy of the Data

SOURCE OF THE DATA

This report includes data from the following sources:

Current Population Survey (CPS). The CPS collects primarily labor force data about the civilian noninstitutional population.

Survey of Income and Program Participation (SIPP). The SIPP is a continuing panel survey, sponsored and conducted by the U.S. Census Bureau, which collects information from households about sources of income.

Consumer Expenditure Survey (CE). There are two components to the CE survey—the Quarterly Interview Survey and the Diary Survey. The Quarterly Interview Survey collects data on large expenditures and those which occur on a fairly regular basis. The diary survey provides data on other items by asking respondents to keep diaries to record all purchases made during the two 1-week periods.

American Housing Survey (AHS). The AHS is conducted in odd numbered years for the Department of Housing and Urban Development. The population covered by the sample for the AHS includes all housing units in the United States.

Medical Expenditure Panel Survey (MEPS). The MEPS is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics to collect information on the health care use, expenditures, sources of payment, and insurance coverage for the civilian noninstitutional population in the United States.

Survey Estimates. The estimation procedures used for these surveys inflate weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, gender, race, and Hispanic/non-Hispanic categories. The independent estimates are based on statistics from decennial censuses; an adjustment for undercoverage in the census; statistics on births, deaths, immigration, and emigration; and statistics on the size of the Armed Forces. The independent population estimates used for 1994 and later are based on updates to controls established by the 1990 decennial census.

ACCURACY OF THE ESTIMATES

Since the estimates in this report come from a sample, they may differ from figures from a complete census using the same questionnaires, instructions, and enumerators. A

sample survey estimate has two possible types of error: sampling and nonsampling. The standard errors provided in most *Current Population Reports* primarily indicate the magnitude of sampling errors. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. Bias is the average over all possible samples of the differences between the sample estimates and the desired value. The accuracy of a survey result depends on the net effect of sampling and nonsampling errors. Particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

Sampling Variability. Standard errors are primarily measures of sampling variability, that is, of the variations that occur by chance because of selecting a sample rather than surveying the entire population. Standard errors are not provided for all estimates in this report because of the wide variety of data sources. Instructions for calculating standard errors for estimates in this report can be obtained via e-mail.

Survey estimates Contact

CPS or general questions	DSMDS&A@census.gov
SIPP	Mahdi.S.Sundukchi@census.gov
CE	Padriac.A.Murphy@census.gov
AHS	Alphonso.M.Mason@census.gov
MEPS	KCarper@AHRQ.gov

Nonsampling Variability. As in any survey work, the results are subject to errors of response and nonreporting in addition to sampling variability. We can attribute nonsampling errors to several sources; for example, inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, respondents' inability or unwillingness to provide correct information, respondents' inability to recall information, errors made in data collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all units with the sample (undercoverage).

Comparability of Data. Data obtained from sample surveys and other sources are not entirely comparable. This

results from differences in interviewer training and experience and in differing survey processes. This is an example of nonsampling variability not reflected in standard errors. Use caution when comparing results from different sources.

A number of changes were made to the CPS in data collection and estimation procedures beginning in January, 1994. The major change was the use of a new questionnaire. The Bureau of Labor statistics redesigned the questionnaire to measure the official labor force concepts more precisely, to expand the amount of data available, to implement several definitional changes, and to adapt to a

computer assisted interviewing environment. Because of these and other changes, one should use caution when comparing estimates from data collected in 1994 and earlier years with estimates from later years.

Data users should also use caution when comparing estimates in this report (which reflect 1990 census-based population controls) with estimates from 1993 and earlier years (which reflect 1980 census based controls). This change in population controls had relatively little impact on summary measures, such as means, medians, and percent distributions. It did have a significant impact on levels.

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U.S. Census Bureau
Permit No. G-58

OFFICIAL BUSINESS
Penalty for Private Use \$300

