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REDUCTIONS IN POVERTY SIGNIFICANTLY GREATER IN THE 1990s THAN OFFICIAL ESTIMATES SUGGEST

Introduction

Since it was first developed in the early 1960s, the official poverty measure has been used by policymakers to assess the impact of anti-poverty programs, by program administrators to allocate resources, and by researchers to analyze trends. Over its near 40-year history, the measure has been revised only slightly, raising concerns about its ability to reflect important economic, policy, and societal changes that have affected the material well-being of low-income families.

In 1995, in response to such concerns, the National Academy of Sciences issued recommendations to improve the official poverty measure. The methodology used in this analysis incorporates as many of these recommendations as possible to examine the change in poverty from 1979 to 2000. Compared to this methodology, the official poverty measure understates the reduction in poverty over time. While the official measure suggests a modest reduction in the overall poverty rate of 0.4 percentage points, the estimates presented here suggest that poverty actually fell by 4.4 percentage points. Over 90 percent of the poverty reduction occurred during the decade of the 1990s. This paper examines why the official poverty measure understates poverty and argues for a closer examination by the U.S. Census Bureau of the change in poverty over time.

Future papers will examine the effectiveness of anti-poverty programs over time and their ability to counteract the impact of recessions on economic well-being.

Background

Each year, the U.S. Census Bureau issues the official poverty rate. Defined as the percent of individuals whose family resources fall below a given threshold for that family size and type, the poverty rate is an important gauge of the material well-being of low-income Americans. However, using a deficient poverty measure that fails to accurately reflect the impact of important economic, policy, and societal changes may create misperceptions about the effectiveness of public policy and ultimately lead to misguided policymaking.

Since the 1960s, major policy changes have altered the social safety net, increasing the resources available to low-income individuals. In particular, the value of non-cash government benefits and tax-based cash transfers have increased substantially, both in absolute terms and as a percentage of total income, while the relative value of cash benefits has decreased. Similarly, significant changes in family formation patterns—rising levels of non-marital childbearing and increases in cohabitation—have changed how resources are shared among household members. As employment among women and mothers in particular has increased, so, too, has the cost of earning income. And the prices of food, shelter, and other necessities have not always tracked with the overall index of inflation, by which the poverty thresholds are adjusted each year. The official poverty measure does not reflect these and other important changes that affect the material well-being of low-income Americans.

In 1992, in response to increasing concerns about deficiencies in the official poverty measure, Congress requested the National Academy of Sciences (NAS) to develop recommendations for its improvement. In its final report, issued in 1995, the NAS Panel on Poverty and Family Assistance identified various flaws in the current poverty measure and recommended a new measure that would more accurately reflect material well-being in today's society. While the U.S. Census Bureau has not incorporated any of the panel's recommendations into the official poverty rate measures, researchers both within and outside of Census have explored alternative methods for measuring poverty based on the panel's recommendations.

Much of the research on experimental poverty measures has focused on the decade of the 1990s. This analysis builds on that research, with a particular focus on how the poverty rate has changed over the past two decades. Specifically, it examines the poverty rate in three years: 1979, 1989, and 2000. Each of

these years represents the peak of the economic cycle.

JEC Democratic Staff Measure

The measure used in this analysis incorporates as many of the recommendations of the NAS panel as possible given data limitations. However, while the panel recommended introducing a relative measure of poverty, which adjusts poverty thresholds to reflect changes in household expenditures over time, this analysis instead uses an absolute measure of poverty, which, like the official measure, simply updates thresholds by an inflation index—that is, by the change in the price of a fixed household budget.

The JEC measure differs from the official Census measure in five key areas: how income is defined, whose income is counted, the poverty thresholds, the equivalence scale used to adjust the thresholds for household size, and the inflation index. In key respects, it is similar to the methodology used by the Congressional Budget Office in its analysis of income

Table 1

Brief Description of Major Differences in Measuring Poverty Between Census and JEC

Feature	Official Census	JEC
Definition of Income	Pre-tax money income.	Money income PLUS food stamps, school meal benefits, housing subsidies, home energy assistance, and the EITC, MINUS payroll and federal income taxes and work-related expenses.
Whose Income is Counted	Related family members.	Related and unrelated household members. Same unit of analysis used by CBO.
Poverty Thresholds	Original thresholds were derived for each family size and type.	Based on official threshold for reference household of two adults and two children, scaled to yield same overall poverty rate as official rate in 2000, and adjusted for size by a uniform equivalence scale.
Equivalence Scale	Implicit scale is not uniform and assumes that elderly adults require fewer resources than non-elderly adults.	Uniformly adjusts for household size and assumes all individuals have equal resource needs. Same scale used by CBO.
Inflation Index	Consumer Price Index (CPI).	Research series of the CPI for urban consumers (CPI-U). Same index used by CBO.

Source: Census Bureau, C.F. Citro and R.T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995), and Joint Economic Committee Democratic staff.

and tax trends. Table 1 summarizes the differences between the official Census measure and the JEC measure, which is described in more detail in the appendix.

Results

Distribution of Poverty is Changed

As discussed in more detail in the appendix, in order to compare the change in poverty over time, the JEC measure adjusts the poverty thresholds to yield the same overall poverty rate as the official rate for 2000, the most recent year of analysis. However, while the overall poverty rate for 2000 is the same under both

Table 2

Comparison of 2000 Poverty Rates by Age Under JEC and Official Census Measures

Age Group	Official Census	JEC
All	11.3%	11.3%
Children	16.2%	14.5%
Non-Elderly Adults	9.6%	9.3%
Elderly	9.9%	15.2%

Source: Census Bureau and tabulations of Census Bureau public use files by the Joint Economic Committee Democratic Staff.

measures, the poverty rates among subgroups are different. Table 2 compares the JEC poverty estimates to the official Census measure for different age groups.

As shown, the overall poverty rate in 2000 is 11.3 percent under both measures. However, the JEC estimate of child poverty in 2000 is 14.5 percent, 1.7 percentage points lower than the official child poverty rate of 16.2 percent. Conversely, the JEC estimate of poverty among the elderly is 5.3 percentage points higher than the official poverty rate for that group, 15.2 percent compared to 9.9 percent.

The differences in the poverty rates for different age groups demonstrate the impact of various adjustments to the official Census measure. In particular, as discussed further below, including the Earned Income Tax Credit (EITC), food stamps, and housing subsidies in the definition of household income has a significant effect on the poverty rate for households with children. The difference in poverty rates among the elderly is largely attributable to using higher poverty thresholds for elderly households, as discussed in more detail in the appendix.

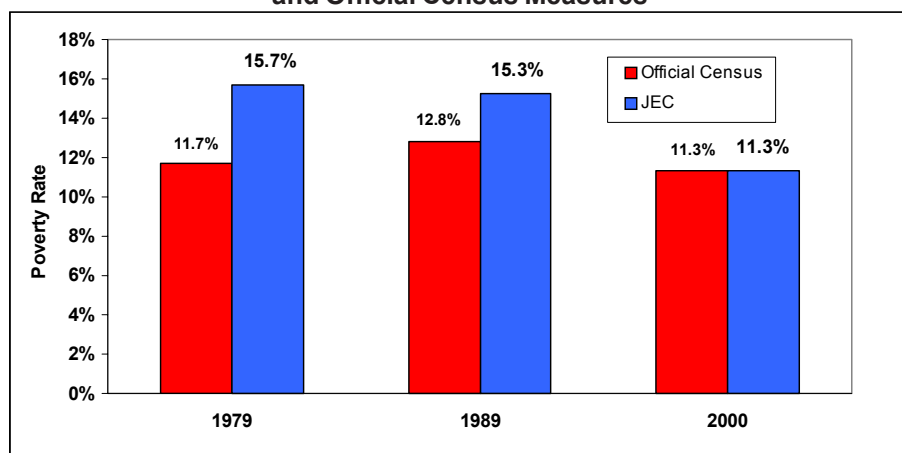
The Official Poverty Measure Understates Poverty Reduction

Chart 1 compares the official Census estimates to the JEC estimates for all three years of the analysis. According to the official measure, in 1979, 11.7 percent of all Americans were poor. Poverty increased during the 1980s, to 12.8 percent in 1989, and then fell during the 1990s, to 11.3 percent in 2000. Thus, between 1979 and 2000, the official poverty rate fell by a modest 0.4 percentage points.

By contrast, the JEC measure suggests that poverty actually fell by 4.4 percentage points over that time period, from 15.7 percent in 1979 to 15.3 percent in 1989 to 11.3 percent in 2000. Compared to these estimates, the official Census measure significantly understates the level of poverty reduction over the last

Chart 1

Comparison of Poverty Rates for Selected Years Under JEC and Official Census Measures



Source: Census Bureau and tabulations of Census Bureau public use files by the Joint Economic Committee Democratic staff.

two decades. The difference is especially pronounced over the 1990s. While the official rate fell by 1.5 percentage points from 1989 to 2000, the JEC measure suggests that poverty actually declined by 4 percentage points, over two and a half times the level of poverty reduction indicated by the official measure.

for each year of analysis, as well as for the change in poverty over time.

Dramatic Reductions in Poverty over the 1990s

The JEC measure estimates a reduction in the overall poverty rate of 4.4 percentage points from 1979 to 2000. About 90 percent of the decline occurred during the 1990s, over which the poverty rate fell by 4 percentage points. By contrast, the poverty rate declined by only 0.4 percentage points over the 1980s. During that decade, the elderly were the only group that experienced significant poverty reduction.

In contrast to the 1980s, nearly every demographic group experienced significant reductions in poverty over the 1990s. Chart 3 highlights the most significant reductions for various demographic groups. Compared to other age groups, children experienced the greatest decline in

poverty. As shown, child poverty fell by 6.9 percentage points under the JEC measure.

Poverty among elderly households declined by 4.3 percentage points. Compared to other racial groups, blacks experienced the most dramatic decline (11.8 percentage points), followed by Hispanics (9 percentage points). The pattern was similar for child poverty. Black child poverty dropped by 16 percentage points over the 1990s, compared to a decline of 13.8 percentage points for Hispanic children. See Appendix Table 2 for the poverty rates for various demographic groups under both the JEC and the official Census measures.

What Explains the Differences?

Differences between the Official Census Estimates and the JEC Estimates. Due to the

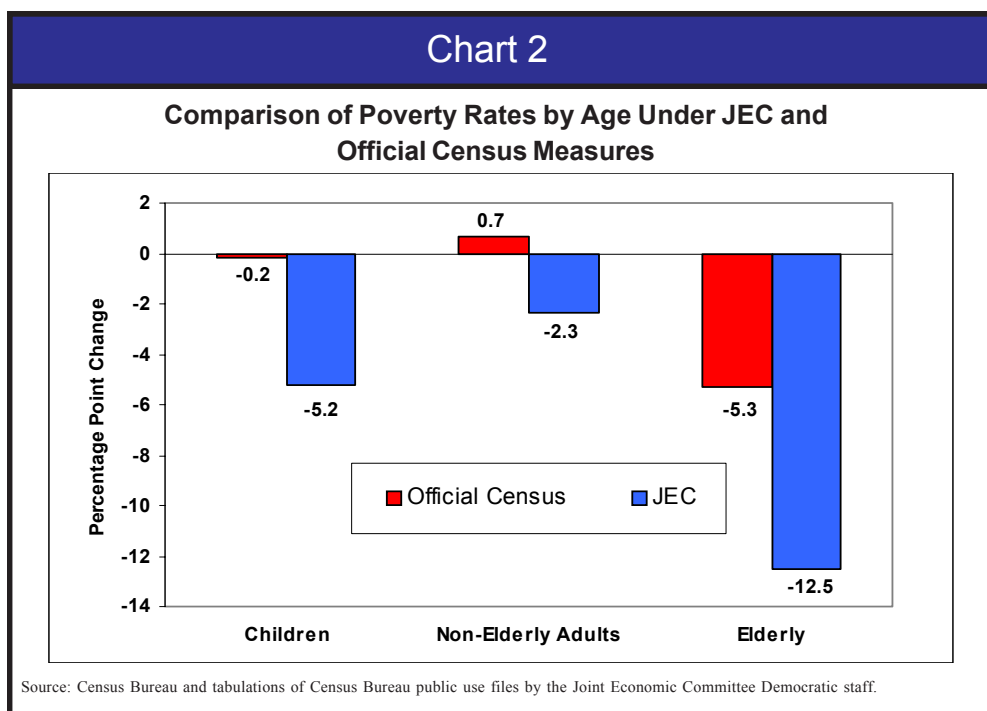
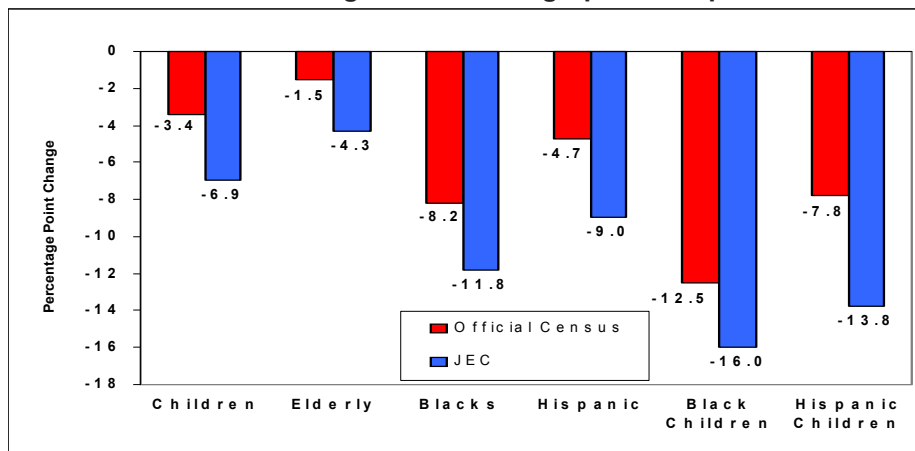


Chart 2 shows the change in poverty rates over the two decades for different age groups. As indicated above, the JEC measure yields a higher poverty rate among the elderly in 2000 compared to the official Census rate. However, it also suggests a significantly higher *reduction* in poverty among the elderly from 1979 to 2000. While the official poverty rate among the elderly fell by 5.3 percentage points, under the JEC measure the elderly poverty rate fell by 12.5 percentage points. The differences for child poverty are also significant. Under the official measure, child poverty declined by only 0.2 percentage points, while under the JEC measure it fell by 5.2 percentage points. Poverty among non-elderly adults actually increased under the official measure, by 0.7 percentage points, while under the JEC measure it decreased, by 2.3 percentage points. Appendix Table 2 provides a more detailed comparison of the official Census estimates to the JEC estimates for various demographic groups

Chart 3

Change in Poverty, 1989-2000, Among Various Demographic Groups



Source: Census Bureau and tabulations of Census Bureau public use files by the Joint Economic Committee Democratic staff.

interactive effects of the various adjustments to the official poverty measure, it is difficult to isolate the individual impact of each adjustment. For example, the combined effect of using the household rather than the family as the unit of analysis and applying a different equivalence scale to adjust the poverty thresholds is not necessarily equivalent to the sum of the isolated effects of each factor. Nevertheless, it is possible to examine the relative importance of various factors that help explain why the official poverty measure understates the level of poverty reduction over the last two decades.

Over 90 percent of the difference between the change in poverty over the 1980s under the JEC measure and the official Census measure is attributable to using a different price index to adjust the poverty thresholds for inflation (explained in more detail in the appendix.)

More factors come into play over the 1990s. Chart 4 illustrates the relative importance of each adjustment to the poverty measure in explaining the difference in the level of poverty reduction over the 1990s between the two measures. As shown, including the EITC in the definition of income explains about 39 percent of the difference between the JEC measure and the official Census measure. During this decade, the EITC was

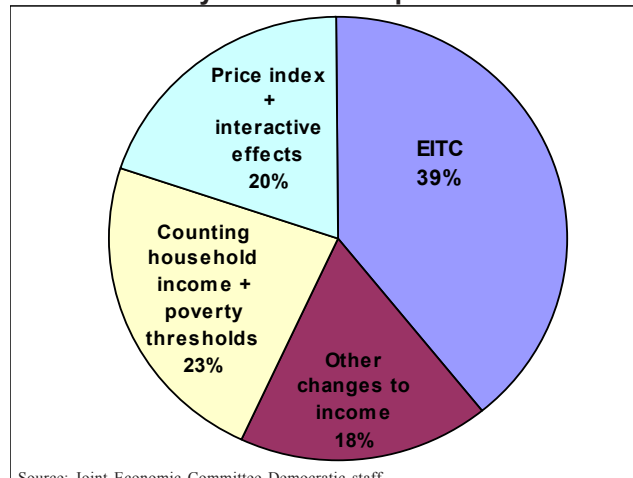
significantly expanded. Not surprisingly, the impact of the EITC is most significant in explaining differences in the level of poverty reduction for children, a group that as a whole is most likely to benefit from this program.¹ Specifically, including the EITC explains 56 percent of the difference in the reduction of child poverty under the two measures. For adults, including the EITC explains about 33 percent of the difference, while it explains only 2 percent of the difference for the elderly—the group least likely to receive EITC benefits.

The net impact of other changes to the income definition—that is, including such resources as food stamps and housing subsidies and subtracting taxes and work-related expenses—explains an additional 18 percent of the difference between the official poverty figures and the JEC estimates.

The combined effect of using the household as the unit of analysis and applying a uniform equivalence scale to adjust poverty thresholds explains about 23 percent of the difference in the level of poverty reduction

Chart 4

Why Poverty Declined by a Larger Amount Over the 1990s Under JEC Poverty Measure Compared to Official Census



Source: Joint Economic Committee Democratic staff.

between the official Census figures and the JEC estimates. Finally, the net effect of using a different price index and the interactive effects of the various adjustments explains 20 percent of the difference.

Why Poverty Declined More in the 1990s versus the 1980s. As indicated above, the level of poverty reduction over the 1990s was ten times the level of poverty reduction over the 1980s. A combination of strong economic conditions, favorable demographic trends, and expansions in important safety net programs all contributed to the dramatic reduction over the 1990s. In particular, greater labor force participation among low-income households and real wage gains at the bottom of the wage distribution in the late 1990s resulted in higher earnings among these households. At the same time, declining teen birth rates, increases in the rate of cohabitation, and a corresponding drop in the proportion of households headed by single mothers meant that proportionately fewer children lived in households with the greatest risk of experiencing poverty. Finally, during the 1990s, significant expansions to the EITC, housing assistance, and school meal programs boosted household income among families living near the poverty line.

Conclusion

The results presented in this paper suggest much greater progress in poverty reduction over the last two decades than the official poverty measure would indicate. Anti-poverty programs such as the Earned Income Tax Credit, combined with changing family formation patterns, including declining teen birth rates and increases in cohabitation, resulted in significant decreases in poverty among all demographic groups. The level of poverty reduction was particularly dramatic during the decade of the 1990s.

Given the important role of the poverty measure in shaping public perception and public policy, a measure that accurately captures the change in poverty over time is essential. The JEC Democratic staff measure is just one approach. Other experimental measures incorporating the NAS panel's recommendations are also instructive. Regardless of which measure is

ultimately used, the sizeable differences between the official poverty measure and the results shown here make a strong case for the Census Bureau to more closely examine changes in poverty over time by incorporating recommended adjustments to the official poverty measure.

Endnotes

¹ Until 1993, the EITC was only available to workers with children.

Appendix

Table 1 of the paper presents the five principal differences between the official Census measure and the JEC Democratic staff measure. This appendix describes the differences in more detail.

Definition of Income. The official Census measure uses gross money income to determine poverty status. This means that it excludes near-cash benefits, such as food stamps and housing subsidies. It also excludes taxes, including payroll, income, and sales taxes and the Earned Income Tax Credit (EITC).² Finally, the current measure does not account for work-related expenses, such as transportation and child care.

To more accurately account for the disposable income available to low-income individuals, the JEC definition of income includes the value of near-cash benefits, including food stamps, school meal benefits, home energy assistance, and housing subsidies.³ It also includes the EITC. It subtracts payroll and federal income taxes as well as Census estimates of work-related expenses. Due to data limitations, however, this definition does not account for child care subsidies or expenses, a principal component of work-related expenses.

The JEC definition of disposable income is imperfect in other ways as well. In particular, it does not account for subsidized medical insurance or medical out-of-pocket expenses. Analysts have produced important research exploring various methods of accounting for medical benefits and expenses. However, because this analysis focuses on the change in poverty since 1979, it requires a consistent definition of income over the entire time period. Like child care data, data on medical costs and benefits do not exist that far back.

Data restrictions also prevent an accounting for tax payments other than the federal income and payroll taxes (for example, state taxes), as well as the costs to non-resident parents of child support payments made to custodial parents (these payments *are* accounted for as income to the custodial parents). Finally, the

JEC income definition does not adjust for geographical differences in the cost of living.

Whose Income is Counted. The official Census measure uses the family unit as the basis for analysis. That approach is based on the assumption that unrelated household members do not share resources to the same extent as family members. However, over the past two decades the number of cohabiting couples has increased significantly. While cohabitators may not always share finances to the same extent as married couples, research suggests that on the whole their financial contribution to household income has become increasingly significant. Accounting for such contributions thus is likely to provide a more accurate picture of the poverty status of individual household members. For that reason, the JEC measure uses the household as the unit of analysis. Specifically, it compares total household income to the threshold for the given household size. This is the same unit of analysis used by the Congressional Budget Office (CBO) in its analysis of income and tax trends.

Poverty Thresholds. To compare poverty trends over time, the JEC overall poverty rate estimate for the most recent year of analysis, 2000, is standardized to the official Census poverty rate for that year. Specifically, the poverty thresholds for that year are adjusted by a factor of 1.15. Using the same starting point in 2000 allows a comparison of differences in the change in poverty from 1979 and from 1989.

Following the NAS panel's recommendation, the JEC measure uses a household of two adults and two children as the reference household. It uses the official poverty threshold for that family type and size, and then applies the CBO equivalence scale to derive the poverty thresholds for all other household sizes.

Adjusting for Inflation. Each year, the Census Bureau adjusts the poverty thresholds for inflation using the Consumer Price Index (CPI). This overall index does not reflect changes in consumer spending patterns as relative prices change. To adjust for such changes, the Bureau of Labor Statistics uses a CPI for urban consumers, called the CPI-U. Since 1977, the Bureau

has improved its calculation of the CPI-U by introducing a number of methodological shifts.⁵ To eliminate the historical inconsistencies that result from such changes, the “CPI-U research series” recalculates the CPI-U as if all the methodological shifts had been used all along. The result is an inflation index that is likely to more accurately reflect changes in the real value of resources over time. Both the Census Bureau and CBO use the CPI-U research series to adjust income for inflation. For consistency, the JEC measure also uses the CPI-U research series to adjust the poverty thresholds over time.

Appendix Table 1

Comparison of Poverty Thresholds for Selected Households Under JEC versus Official Census Poverty Measures, 1979, 1989 and 2000

	Household Size and Type					
	Childless Household of One		Childless Household of Two		Non-Elderly Households with Children	
	Elderly	Non-Elderly	Elderly	Non-Elderly	Two adults, two children	Two adults, four children
2000						
Official Census	8,259	8,959	10,409	11,531	17,463	23,009
JEC Measure	10,042	10,042	14,200	14,200	20,082	24,596
Difference	22%	12%	36%	23%	15%	7%
1989						
Official Census	5,947	6,451	7,495	8,303	12,575	16,569
JEC Measure	7,487	7,487	10,588	10,588	14,974	18,339
Difference	26%	16%	41%	28%	19%	11%
1979						
Official Census	3,557	3,858	4,483	4,966	7,521	9,910
JEC Measure	4,568	4,568	6,461	6,461	9,137	11,190
Difference	28%	18%	44%	30%	21%	13%

Source: Census Bureau and tabulations of Census Bureau public use files by the Joint Economic Committee Democratic staff.

Appendix Table 2

**Comparison of Poverty Rates for Selected Demographic Groups Under JEC
versus Official Census Poverty Measures, 1979, 1989 and 2000**

Demographic Group	Year			Change Over Time	
	1979	1989	2000	1989-2000	1979-2000
Overall					
Official Census	11.7%	12.8%	11.3%	-1.5	-0.4
JEC Measure	15.7%	15.3%	11.3%	-4.0	-4.4
By Race and Hispanic Origin					
White, Non-Hispanic					
Official Census	8.1%	8.3%	7.4%	-0.9	-0.7
JEC Measure	11.9%	10.8%	7.8%	-2.9	-4.1
Black, Non-Hispanic					
Official Census	31.0%	30.7%	22.5%	-8.2	-8.5
JEC Measure	35.2%	33.5%	21.7%	-11.8	-13.4
Hispanic					
Official Census	21.8%	26.2%	21.5%	-4.7	-0.3
JEC Measure	27.0%	29.3%	20.3%	-9.0	-6.7
By Age, Race and Hispanic Origin					
Children, All					
Official Census	16.4%	19.6%	16.2%	-3.4	-0.2
JEC Measure	19.7%	21.4%	14.5%	-6.9	-5.2
White, Non-Hispanic					
Official Census	10.1%	11.5%	9.1%	-2.4	-1.0
JEC Measure	13.3%	13.4%	7.9%	-5.5	-5.3
Black, Non-Hispanic					
Official Census	41.2%	43.7%	31.2%	-12.5	-10.0
JEC Measure	43.5%	44.4%	28.4%	-16.0	-15.2
Hispanic					
Official Census	28.0%	36.2%	28.4%	-7.8	0.4
JEC Measure	32.8%	39.3%	25.6%	-13.8	-7.2
Non-Elderly Adults, All					
Official Census	8.9%	10.2%	9.6%	-0.6	0.7
JEC Measure	11.6%	11.9%	9.3%	-2.6	-2.3
White, Non-Hispanic					
Official Census	6.3%	7.0%	6.7%	-0.3	0.4
JEC Measure	8.8%	8.4%	6.6%	-1.8	-2.2
Black, Non-Hispanic					
Official Census	23.8%	23.3%	17.9%	-5.4	-5.9
JEC Measure	27.3%	26.1%	17.4%	-8.7	-10.0
Hispanic					
Official Census	16.8%	20.9%	17.7%	-3.2	0.9
JEC Measure	21.7%	23.4%	16.5%	-6.9	-5.2
Elderly, All					
Official Census	15.2%	11.4%	9.9%	-1.5	-5.3
JEC Measure	27.7%	19.4%	15.2%	-4.3	-12.5
White, Non-Hispanic					
Official Census	12.9%	9.2%	7.9%	-1.3	-5.0
JEC Measure	25.1%	16.8%	13.0%	-3.8	-12.1
Black, Non-Hispanic					
Official Census	36.2%	30.7%	21.8%	-8.9	-14.4
JEC Measure	51.1%	42.9%	27.0%	-15.9	-24.1
Hispanic					
Official Census	26.8%	20.6%	20.9%	0.3	-5.9
JEC Measure	39.2%	30.7%	29.2%	-1.5	-10.0

Source: Census Bureau and tabulations of Census Bureau public use files by the Joint Economic Committee Democratic staff.

Endnotes

¹While many low-income families with children do not pay income taxes, many individuals without children do; their tax liabilities often exceed the EITC offset.

²This analysis uses the Census Bureau's imputations of housing subsidies, which are based on inflation-adjusted survey results from 1985. Given changes in housing subsidy policy and family and household composition patterns, the survey data, even updated for inflation, likely do not reflect today's reality. Specifically, research exploring alternative valuation methods suggests that the Census imputations may underestimate the actual value of housing subsidies. At the same time, although housing subsidies free up income, "leftover" subsidies cannot be used to buy food and other necessities. See Kathleen Short, *Experimental Poverty Measures: 1999*. Census Bureau, Current Population Reports, October 2001.

³The official thresholds for each family type were developed separately, without the use of an explicit equivalence scale applied to a designated reference family.

⁴Such changes include making the CPI-U sensitive to changes in the quality of many consumer goods (for example, because a dollar spent on a new computer provides more "computing" capability than a dollar spent on an older model, the price of computing has gone down), reducing substitution bias (which stems from the likelihood that rather than consuming a fixed market basket of goods, consumers will purchase less of a good whose price is rising relative to other goods), and improving estimates of the costs of home ownership. For a detailed list of the methodological adjustments included in the CPI-U research series, see Kenneth J. Stewart and Stephen B. Reed, "Consumer Price Index Research Series Using Current Methods, 1978-98," *Monthly Labor Review*, June 1999, pp. 29-38.