

UPDATING THE GALLUP POVERTY THRESHOLD TO 2000 WITH
ESTIMATES OF ITS VALUE THROUGH 2020

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The views expressed are the author's and do not necessarily represent the position of the Social Security Administration or the Census Bureau or any other Bureau staff. The original research was published while the author was employed by the Social Security Administration (SSA). The update was begun while the author was an employee of the Census Bureau and was completed after he retired from the Bureau. It has undergone a more limited review than official publications, and is released to inform interested parties of research and to encourage discussion.

Updating the Gallup measure to account for changes in family income since 1990

The original research on which this update is based was undertaken more than ten years ago (Vaughan 1993, 2004).¹ It is of interest how the income levels associated with the Gallup poverty measure has evolved over the ten-years corresponding to the decade of the 1990ies, how it compares with official poverty thresholds for the same period, and so forth. Unfortunately, the last Gallup measure was collected in 1989. Since then no consistent set of comparable measures have been undertaken. However, the retrospective relationship between the median income of four-person families, net of tax, to the Gallup poverty threshold can plausibly be extended for the years lacking observations. It was shown that the Gallup measure averaged 50 percent of the median income of four-person families, net of tax, for roughly thirty years between 1960 and 1989. Furthermore there was no obvious trend over the same period. In the six four-year periods considered in the analysis, the average value of the thresholds varied between 51.8 and 48.6 percent of the median income measure that was used. Since the income is measured annually in the Current Population Survey and the tax concept employed is reproducible in a manner consistent with the study, dollar amounts corresponding to the Gallup poverty standard, calculated at 50 percent of the median income of four-person families, are easily derived. The necessary calculations were carried out and are presented in table B-1 (see p. 9 of this report) for the period 1990 to 2000. The official poverty threshold for four-person families, and the before- and after-tax median income of four-person families is also given for purposes of comparison.² At the beginning of the period, the Gallup standard (1990) was 129 percent of the official standard. Over the decade, it rose along with the median income of four-person families. Since there was little trend in the ratio of before-tax to after-tax income for the period, taxes do not influence the trend Gallup standard during decade. Only the base level, at the beginning of the period, is affected, lowering it by about 17 percent from a before-tax level. During the 1990's, both the before- and after-tax income of four-person families increased by a little over 50 percent. Since the official standard rose only in response to the changes in the Consumer Price Index (CPI), it rose by less, only little more than 32 percent as family income gains generally outpaced inflation during the period. Consequently, the Gallup poverty standard reached 146 percent of the official threshold by the end of the decade. This underscores the principal characteristic of a socially-defined standard which responds to growth in family income that reflects increases in the general standard of living, while the official measure changes only in response to increases in the prices and remains fixed in real terms. Thus, in any period of real income growth, the official standard is bound to fall behind a social standard that tracks changes in both prices and real growth in income.

Projections beyond the present

Recently research has been conducted under the sponsorship of the Social Security Administration on projecting income of the retirement age population through 2020 in order to better understand the implications of various Social Security reform plans and their possible impact on poverty rates of the elderly (Butrica , Smith and Toder, 2002). Given that benefits under current law are indexed by growth in real wages as well as prices, they chose two methods to update poverty thresholds to the end-point of their simulations: a simple extension of the current official thresholds in real terms and updating the current thresholds by increases in wages as projected by the Social Security Actuaries. While growth in wages will not be the same as growth in total family income, before or after tax, updating by the projected rate of wage growth serves to illustrate the long range implications of updating the official poverty thresholds without taking into account increases in the standard of living.³ After all, future wage growth is a useful indicator of the likely evolution of living standards over time and is the basic rationale behind tying Social Security benefits at retirement to previous growth in wages. Wage indexation of benefits in the Social Security program represents a policy decision that workers' benefits in retirement should reflect increases in the standard of living associated with improvements in productivity and the level of wages that occurred during their working life (Ball and Bethel 2000, pp. 8-9).⁴

In B-2 (see this report, p. 10) the Gallup poverty standard is updated from 2000 to 2020 by the projected rates of growth of real annual wages and compared to the official threshold maintained in real terms. Neither is adjusted for prices in the first two columns of the table. Thus the official threshold remains at the value it had in 2000 (\$17,603); the Gallup standard begins with the value estimated for 2000 also (\$25, 694) but is updated for growth in wages was projected by the Office of the Actuary (SSA 2002, table VB.1, intermediate assumptions).⁵ Additional assumptions are required for the update of the Gallup standard. For example, total Federal and State income and FICA taxes and the Earned Income Tax Credit at the median income of four-person families are held constant as a percentage of total family income, real wage growth is assumed to translate directly into increases in living standards, and the translation is assumed to be equally distributed among families of different size.

However, none of these assumptions is very critical to the point to be illustrated. What the table shows is that by 2020 the social standard increases to between 1.2 and 1.3 times its level today (2000). In comparison to the official level it increases from a little less than 1.5 times the current poverty threshold for four-person families to 1.8 and 1.9 times the official standard in 2020. While the official standard remains fixed in real terms, a social standard, indexed by real wage growth, increases markedly. Recall (Vaughan 2004: table 1b, p. 63) that at the beginning of the post-war period, a standard that was conceptually equivalent to the official threshold exceeded

the Gallup threshold by nearly 35 percent. It then declined to the about the same level as the Gallup standard at the time of the unofficial introduction of the Orshansky thresholds in 1963.

From that point onward, the poverty thresholds (introduced as official measure in 1969) consistently lagged behind the Gallup standard. By 1990, the official threshold was about 25 percent below the level consistent with the Gallup measure. At the end of the 1990's, it had fallen further to 32 percent below an income level associated with the with the Gallup standard. By 2020, using projected wage growth to update the social standard and maintaining the official standard in real terms by updating only by estimates of changes in the Consumer Price Index, the official standard would be 46 percent below a social standard based on the Gallup level. Indexing the Gallup standard by wage growth might at first seem to result in a poverty line that is unrealistic by today's standards. However, if living standards increase as much as the wage growth is projected to increase by Social Security Actuaries over the next 15-20 years, based on history of the public's views over the 50 years since World War II, a socially defined poverty line is likely to change apace. Then the official measure, if it remains fixed in real terms, is likely to come under increasing scrutiny as society's standards change with the continued evolution of living standards in the new century.

Changes in the real value of the social standard over time

An issue that was not dealt with in the original article concerns the increase in real income implied with the use of socially-defined needs standard. It turns out that over the fifty years between the end of World War II and the turn of the century, the real income of those living at the "poverty level" as measured by the Gallup poverty standard, has doubled.⁶ What does this imply about the standard and how is it to be interpreted? Some may suggest that those living at the Gallup poverty level are objectively much better off in terms of the quantity of good and services that they have at their disposal than they were at the middle 1940's.⁷

With a standard informed by relative incomes this is not really surprising. With the substantial economic growth experienced in the United States over the past 40 years, the quantity and variety of goods and services commanded by those living at the income level implied by the Gallup standard has necessarily increased markedly. But is the significance of such changes? The standard of living that this increase affords, and the level of material resources it entails, lies behind the common observation that the poor in the United States have a higher standard of living than many middle class families in the developing world, or even in certain dimensions of consumption, Western European countries. But what is the relevance of such an observation for understanding the phenomenon of poverty in the United States? America's poor are Americans by residence and

by residence and partake, for the most part, in the expectations and aspirations of those living here, not in Africa, Asia or Latin America or other countries. In the body of the article readers are invited to imagine and urban New Yorker of 1850. Such a person “would hardly have felt deprived by not being able to afford a telephone, radio or television; as such goods did not exist, they were not part of the choice set of a member of New York’s society of 140 years ago.” Simply because such goods have entered the common choice set, and, along with many others, they have become an established part of people’s expectations. This was considered relevant to the topic of poverty because it is also posited that “a consistent inability to meet ... [typical consumption aspirations] that arises from financial constraints is likely to take a heavy toll on individuals who see themselves as [or who aspire to be], ‘family providers’” (Vaughan 2004:3) or otherwise see themselves as attempting to live by conventional norms. This is especially so when the shortfall is marked, such as when a person has at most only half the typical income of his society.

Recall also that it was argued that the Gallup standard may be interpreted as measuring the social costs of living in society and is defined by the material offerings of a specific time and place.⁸ From this perspective, the criteria for judging what is sufficient or reasonable must be informed by the norms present in a given society at a given time. Such norms are likely to be a function of the selection of goods and services that are being consumed in that society’s present. Seen in this light, the seeming contradiction between increasing standards of living and poverty is not so hard to appreciate. Many new goods and services have entered circulation in our society over time. Take consumer durables as an example. At the end of World War II television was just making its presence felt and was infrequently owned. Now the black and white TV has passed into oblivion and colored TV’s are ubiquitous. Housing standards have increased markedly. In-door plumbing and central heating are nearly universal. Modalities of transportation have changed substantially with the evolution of the suburbs; and ownership of an automobile, more often than not, has become a necessary requirement for employment. With the increasing presence of women in the work place have come new expenses of transportation and childcare. These changes and a host of others have raised the objective cost subsistence in the United States. What were once luxuries have become necessities. In addition to the objective costs of subsistence there are the additional costs associated with adequate performance of key social roles. These costs lie at the core of a socially-defined needs standard. They distinguish it from a standard which reflects the changes in the objective costs of a minimal standard of living, and even more from a fixed subsistence standard, such as the official poverty threshold, which remains the same regardless of changes in the general standard of living.

In principal, considerable insight could be gained into the kinds and quantities of goods and services required to carry out these roles. How those requirements have evolved concretely

over the past 50 years could be explored by examination of the patterns of consumption of specific goods and services associated with the Gallup poverty standard as revealed in the decennial consumer expenditure surveys of the period. More attempts to measure social standards in current government surveys such as was done in the Consumer Expenditure Survey in the early eighties (see Garner and de Vos 1980), and more recently in the Survey of Income and Program Participation (Garner, 2002), would be most helpful. Special attention should be given eliciting information about the resource requirements successful performance of social roles associated with marriage, family life, and parenting. Exploration of specific consumption goods central to a social standard of poverty would also be helpful (Vaughan 1996). If finding a place in Federal surveys proves infeasible,⁹ then reestablishment of a Gallup-like series in the private sector can, and should be, pursued.

NOTES

¹ This update was completed in 2003. The author would like to thank Kathleen Short for her encouragement to undertake this work and to her and Sharon Johnson, of the Social Security Administration (SSA), for special tabulations of before- and after-tax income from the Current Population Survey. Michael Leonesio of SSA provided material on the rationale for wage indexing in the context of the social security program, as well as several helpful comments concerning the text. I have also benefited from conversations with Bruce Klein, Richard Silva and the editorial assistance of Katalin Zentai.

² The tax concept utilized to develop the estimates for the update differs slightly from the original version in that it includes State income taxes and the Earned Income Tax Credit (EITC). They account for about 3-4 percent of the before-tax median income of four-person families through out the 1990's, and taking them into account results in a corresponding proportional reduction in the Gallup poverty standard over the period.

³ Fisher (1999:25-29) argues that the original poverty line was intended by Orshansky to be consistent with contemporary living standards and that the CNSTAT Panel's recommended update of the measure would take into account the real growth in the general population's standard of living.

⁴ A with any major decision of this magnitude there was considerable discussion of the implications at the time (1977). The discussion hinged on the choice between indexation for prices and indexation of wage levels. It was realized at the time that indexation by prices implied measuring standards of living in absolute terms while wage indexing implied measuring standards of living in relative terms (Munnell 1977, pp. 52-53). Ball argues that without wage indexing, the program "would soon provide benefits that did not reflect previously attained living standards". The discussion is reminiscent of the same concerns, pro and con, that arise when updating the poverty measure is considered. See also the Report of the Consultant Panel ... (1976, pp. 7-8) where the issue of comparative costs of the two alternatives is discussed.

⁵ Estimates pertain to the estimated growth in the annual wage in covered employment. Estimates of the Consumer Price Index and the real wage differential are also given.

⁶ The Gallup-poverty level was \$1,688 in 1947 (1947 dollars, see Vaughan 2004, Table 1b, p.63) and the 1999 value of the Gallup based social standard was \$24,558 (1999 dollars, Table B-1 p. 9, this study). Deflating the 1999 value of the social standard to the price level of 1947 yields a dollar value of \$3,567 or about 2.11 times its 1947 value in real terms.

⁷ For a discussion that focuses heavily the effects of this phenomenon but draws nearly opposite conclusions about its significance concerning poverty in the present day United States, see Rector and Johnson (2004).

⁸ Adam Smith (1937, pp. 821-822) clearly understood that poverty involved a social component that was every bit as important as the material goods "necessary to support life". In his classic work on markets he comments on the distinction between necessities and luxuries, and how this distinction may vary between different countries at a given point in time. His discussion recognizes that the significance of particular commodities stems from the specific social context in which they

are consumed and not only its intrinsic contribution to subsistence.

By necessities I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example is strictly speaking, not a necessary of life. The Greek and Romans lived, I suppose, very comfortably, though they had no linen, but in the present time, through the greater part of Europe, a creditable day-labourer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty, which, it is presumed no body can well fall into without extreme bad conduct. Custom, in the same manner, has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. In Scotland, custom has rendered them a necessary of life to the lowest order of men; but not to the same order of women, who may, without and discredit, walk about bare-footed. In France, they are necessities neither to men nor to women; the lowest rank of both sexes appearing there publicly, without any discredit, sometime in wooden shoes, and sometime barefooted. Under necessities therefore, I comprehend, not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people.

- ⁹ The challenges that so-called subjective measures have faced in finding a place in the Federal survey environment has been documented by the author (see Vaughan 1996).

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Table B-1.-- Comparison of median four-person family income, before- and after-tax, the "official" four-person family poverty threshold and a social standard based on 50 percent of the median after-tax income of four-person families, 1990-2000

[Current dollars]

| Year | Median 4-person income | | | "Official" 4-person standard | | | Standard based on 50% of the after-tax median income | |
|-------------------|----------------------------|-----------|--------------------------|------------------------------|---|-----------|--|---------------------------------|
| | Annual amount ¹ | | After as % of before tax | Annual amount ¹ | As % of the median 4-person family income | | Annual amount ³ | As % of the "official" standard |
| | Before tax | After tax | | | Before tax | After tax | | |
| | | | | | | | | |
| 1990..... | 41,451 | 34,321 | 82.8 | 13,359 | 32.2 | 38.9 | 17,161 | 128.5 |
| 1991..... | 43,052 | 35,450 | 82.3 | 13,924 | 32.3 | 39.3 | 17,725 | 127.3 |
| 1992..... | 44,251 | 36,482 | 82.4 | 14,335 | 32.4 | 39.3 | 18,241 | 127.2 |
| 1993..... | 45,161 | 37,292 | 82.6 | 14,763 | 32.7 | 39.6 | 18,646 | 126.3 |
| 1994..... | 47,012 | 38,785 | 82.5 | 15,141 | 32.2 | 39.0 | 19,392 | 128.1 |
| 1995..... | 49,687 | 40,917 | 82.3 | 15,569 | 31.3 | 38.1 | 20,458 | 131.4 |
| 1996..... | 51,102 | 42,295 | 82.8 | 16,036 | 31.4 | 37.9 | 21,148 | 131.9 |
| 1997..... | 53,191 | 43,748 | 82.2 | 16,400 | 30.8 | 37.5 | 21,874 | 133.4 |
| 1998..... | 55,872 | 46,414 | 83.1 | 16,660 | 29.8 | 35.9 | 23,207 | 139.3 |
| 1999..... | 59,433 | 49,115 | 82.6 | 17,029 | 28.7 | 34.7 | 24,558 | 144.2 |
| 2000..... | 62,519 | 51,387 | 82.2 | 17,603 | 28.2 | 34.3 | 25,694 | 146.0 |
| Percent change | | | | | | | | |
| 1990 to '94 | 13.4 | 13.0 | ... | 13.3 | ... | ... | 13.0 | ... |
| 1990 to '95 | 19.9 | 19.2 | ... | 16.5 | ... | ... | 19.2 | ... |
| 1990 to '96 | 23.3 | 23.2 | ... | 20.0 | ... | ... | 23.2 | ... |
| 1990 to '97 | 28.3 | 27.5 | ... | 22.8 | ... | ... | 27.5 | ... |
| 1990 to '98 | 34.8 | 35.2 | ... | 24.7 | ... | ... | 35.2 | ... |
| 1990 to '99 | 43.4 | 43.1 | ... | 27.5 | ... | ... | 43.1 | ... |
| 1990 to '00 | 50.8 | 49.7 | ... | 31.8 | ... | ... | 49.7 | ... |

Note: The symbol "... " indicates not applicable.

¹The median value of total family cash income, family of four. Taxes include Federal and state income and FICA taxes and the Earned Income Tax Credit as simulated by the Bureau of the Census. All estimates tabulated specifically for this study.

²Weighted average poverty threshold for a family of four (<http://www.census.gov/hhes/povertyhistpov/hstpov1.html>).

³Calculated as 50 percent of the after-tax median income of four-person families as estimated in the table (see note 1).

Table B-2.-- Projection of a social (Gallup level) poverty standard from 2000 to 2020 on the basis of the future growth in covered wages¹ as compared to the value of the "official" standard for the same period

| Year | Constant 2000 dollars | | | Social standard minus "official" standard / by the Gallup standard x 100 | Official standard indexed by the CPI ² | Social threshold indexed by the CPI ² + growth in real wages |
|---------------------------|--|---|---|--|---|---|
| | Social poverty standard indexed by growth in real wages ¹ | "Official" poverty standard for 4-person family | Ratio of the "official" standard to the social standard | | | |
| 2000..... | ³ \$25,694 | ³ \$17,603 | 1.46 | 31.5 | ³ \$17,603 | ³ \$25,694 |
| 2001..... | 26,413 | 17,603 | 1.50 | 33.4 | 18,096 | 27,133 |
| 2002..... | 27,153 | 17,603 | 1.54 | 35.2 | 18,639 | 27,974 |
| 2003..... | 27,832 | 17,603 | 1.58 | 36.8 | 19,105 | 29,345 |
| 2004..... | 28,249 | 17,603 | 1.60 | 37.7 | 19,621 | 30,577 |
| 2005..... | 28,588 | 17,603 | 1.62 | 38.4 | 20,960 | 31,831 |
| 2010..... | 29,221 | 17,603 | 1.66 | 39.4 | 23,405 | 38,876 |
| 2015..... | 30,864 | 17,603 | 1.75 | 43.0 | 27,133 | 47,527 |
| 2020..... | 32,599 | 17,603 | 1.85 | 46.0 | 31,455 | 58,102 |
| Ratio of threshold values | | | | | | |
| 2005 to 2000 | 1.11 | 1.00 | ... | ... | 1.15 | 1.24 |
| 2010 to 2000 | 1.14 | 1.00 | ... | ... | 1.33 | 1.51 |
| 2015 to 2000 | 1.20 | 1.00 | ... | ... | 1.54 | 1.85 |
| 2020 to 2000 | 1.27 | 1.00 | ... | ... | 1.79 | 2.26 |

(...) - Not applicable

¹Using projected growth in real wages covered wages, intermediate assumptions, OASDI Trustees Report, Trustees Report, Principal Economic Assumptions, table as given in 2002 V.B1 (http://www.ssa.gov/OACT/TR/TR02/V_economic.html).

² Indexed by increase in consumer prices as estimated through 2020, as given in the 2002 OASDI Trustees Report (see note 1, this table).

³ Starting values: Social standard estimated as 50 percent of the after-tax median income for four-person families, see table B-1; the "official" poverty standard is the weighted average poverty threshold for four-person families; both as of the year 2000

Source: Table B-1 of this paper and calculations by author.