Challenges in Measuring Household Income and Poverty: Why Is It So Hard? Why Is It So Important?

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Constance F. Citro
Senior Scholar
Committee on National Statistics
Independent Consultant

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ABSTRACT

Income and poverty statistics are among the most important indicators of household economic well-being the federal statistical system produces. Income is also one of the most difficult items to obtain by asking people. Current income statistics from surveys such as the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) are flawed by unit and item nonresponse, coverage error, and item misreporting, as well as an outmoded income concept. Promising developments to produce improved household income statistics include the Bureau of Economic Analysis's experimental program of household distributions of Personal Income, and the Census Bureau's National Experimental Well-Being Statistics (NEWS) program, which is intended to improve the quality of the CPS ASEC statistics. Both efforts involve "blended data," including surveys and administrative records.

This paper—an expanded version of my 32nd Morris Hansen Lecture delivered in September 2024 (available at Washington Statistical Society)—takes an historical, organizational, and statistical perspective on the measurement of income and poverty distributions for households in the United States. It spans the pathbreaking effort to distribute national income by the newly formed National Bureau for Economic Research in 1921 through the first foray into collecting household income in the 1940 census and population surveys to the BEA and NEWS programs today. The historical record is one of bursts of policy interest in better measures coupled with efforts by relevant statistical agencies to respond—each in its own way. Busts, however, followed booms—retreats on the policy front with changes in agendas and retreats on the statistical front as evidence grew of the intractability of obtaining accurate income responses in surveys.

As of September 2024, it appeared that sustained progress was under way toward more relevant, accurate, and coherent income and poverty measures. As of the time of completion of this expanded version of my lecture (May 2025), the future looks uncertain, even while the need for better information on households' economic well-being has never been greater.

ACKNOWLEDGEMENTS

This paper is based on my years of experience at the Committee on National Statistics (CNSTAT), but the views expressed are my own and should not be assumed to represent the views of CNSTAT or the National Academy of Sciences.

I thank the many people who have educated me about household income statistics and who made it possible for me to give the 32nd Morris Hansen Lecture in September 2024 on this topic. I especially thank Marina Gindelsky (Bureau of Economic Analysis) and Jonathan Rothbaum (U.S. Census Bureau), who served as discussants of my presentation for the lecture, and the members of the Hansen Lecture Committee for 2024: Carolina Franco (NORC at the University of Chicago and 2024 committee chair); Jonathan Auerbach (George Mason University); William Bell (U.S. Census Bureau); Jeri Mulrow (Westat); Jenny Thompson (U.S. Census Bureau, retired); and Linda Young (National Agricultural Statistics Service, retired). I also extend special thanks to Robert Michael (University of Chicago, emeritus), who chaired the CNSTAT study that produced *Measuring Poverty: A New Approach* (National Research Council, 1995), and to David Johnson (International Association for Research in Income and Wealth) and Timothy Smeeding (University of Wisconsin–Madison, emeritus), who directed and chaired, respectively, the CNSTAT study that produced *Creating an Integrated System of Data and Statistics on Household Income, Consumption, and Wealth: Time to Build* (National Academies of Sciences, Engineering, and Medicine, 2024). Arthur Kennickell (Federal Reserve Board, retired, and shepherd of the Survey of Consumer Finances) read my paper, identified some factual errors (now corrected), and made some comments for further thought and possibly another paper.

This paper contains vignettes of Morris Hansen and eight other historical figures, many of whom I was honored to know, who played instrumental roles in the development of improved household income and poverty statistics. There are people at work today who will themselves deserve vignettes should the paper be updated in the future; I chose to memorialize those who rest in peace:

Morris Hansen, p. 4; Wesley Claire Mitchell, p. 14; Selma Fine Goldsmith, p. 21;
Mollie Orshansky, p. 33; Thomas Sawyer, p. 56; Roger Herriot, p. 63;
Rebecca M. Blank, Mark Levitan, and Katherine K. Wallman, p. 90.

Finally, I thank the devoted souls at statistical agencies who scanned paper copies of vital historical documents, such as early reports from the Current Population Survey income supplement, and uploaded them to the internet. I am in their debt. I take full responsibility for any omissions or errors of historical interpretation.

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PREFACE

Collection of high-quality information on households' economic well-being is one of the primary responsibilities of national statistical offices around the world. This paper documents the development of household income statistics in the United States, which have suffered in quality for reasons including the difficulty of getting households to provide complete and accurate information about their income in surveys and challenges in obtaining and using administrative records to improve on survey responses. The paper describes promising initiatives following the Great Recession to improve household income statistics that were well under way at the end of 2024 and into 2025.

Actions of the new administration to downsize large components of the federal government, however, call into question whether these initiatives can continue at the pace required to meet the information needs of policy makers and the public. With a few exceptions, federal statistical agencies have experienced collateral damage rather than being targeted directly. Yet the damage is real, including significant loss of staff and their expertise at the U.S. Census Bureau and other statistical agencies.[1]

At this writing, it is too early to tell how lasting the effects of staff and likely budget cuts will be on federal statistical agencies and whether they may be reversed in coming years. There may even be opportunities to consolidate agencies to achieve greater efficiencies in such areas as blending administrative and survey data for improved quality. Nonetheless, I am deeply concerned for the federal civil servants who work hard to provide accurate, timely, relevant, and

[1]See, e.g., American Statistical Association, The Nation's Data at Risk, Year Two - Ongoing Monitoring.

objective information for the public good. I fervently hope that they will be able to continue to serve the public well.

Constance F. Citro, May 2025

LIST OF ACRONYMS

AAPSS – American Academy of Political and Social Science
ACS – American Community Survey (Census Bureau)
AEA – American Economic Association
AFDC – Aid to Families with Dependent Children (now TANF)
ASA – American Statistical Association
ASPE – Assistant Secretary for Planning and Evaluation (DHEW, then DHHS)
BEA – Bureau of Economic Analysis (Department of Commerce)
BLS – Bureau of Labor Statistics
CBO – Congressional Budget Office
CDC – Centers for Disease Control and Prevention
CE – Consumer Expenditure Survey (BLS)
CEA – Council of Economic Advisers
CHIP – Children's Health Insurance Program
CNSTAT – Committee on National Statistics
CPI – Consumer Price Index (BLS)
CPS – Current Population Survey (BLS)
CPS ASEC – CPS Annual Social and Economic Supplement (Census Bureau)
DHEW – Department of Health, Education, and Welfare
DHHS – Department of Health and Human Services
EITC – Earned Income Tax Credit
FCSM – Federal Committee on Statistical Methodology
FICA – Federal Insurance Contributions Act (Social Security payroll tax)
FPI – Family Personal Income (OBE/BEA)
FMI – Family Money Income (OBE/BEA)
FRB – Federal Reserve Board
GDP – Gross Domestic Product (OBE/BEA)
IRA – Individual Retirement Account
IRS – Internal Revenue Service (Department of Treasury)
ISDP – Income Survey Development Program (ISDP) (ASPE, SSA, Census Bureau)
MATH – Micro Analysis of Transfers to Households Model
NBER – National Bureau of Economic Research
NEWS – National Experimental Well-Being Statistics (Census Bureau)
NIPAs – National Income and Product Accounts (OBE/BEA)
NSLP – National School Lunch Program
OBE – Office of Business Economics (Department of Commerce)
OMB – Office of Management and Budget
OPM – Official Poverty Measure (Census Bureau)
PCE price index – Personal Consumption Expenditures price index (or deflator) (BEA)
PI – Personal Income (OBE/BEA)
PSID – Panel Study of Income Dynamics (University of Michigan)
PUMS – Public Use Microdata Sample
PRWORA – Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (welfare reform)
SCF – Survey of Consumer Finances (FRB)

SEO – Survey of Economic Opportunity (Census Bureau)
SIE – Survey of Income and Education (Census Bureau)
SIPP – Survey of Income and Program Participation (Census Bureau)
SNAP – Supplemental Nutrition Assistance Program (successor to food stamps)
SOI – Statistics of Income (IRS)
SPD – Survey of Program Dynamics (Census Bureau)
SPM – Supplemental Poverty Measure (BLS, Census Bureau)
SSA – Social Security Administration
SSI – Supplemental Security Income
TANF – Temporary Assistance to Needy Families
TRIM – Transfer Income Model
UI – Unemployment Insurance
UNIVAC – Universal Automatic Computer
WC – Workers' Compensation
WIC – Special Supplemental Program for Women's, Infants', and Children's Nutrition
WPA – Works Progress Administration
WWI – World War I
WWII – World War II

EXECUTIVE SUMMARY

Policy makers, the media, and the public look to statistics on household income and poverty as key indicators of economic well-being in the United States and have done so for many decades. Conceptual, measurement, and comparability problems, however, have often undercut their quality and usefulness (as is true for other measures of economic well-being, such as consumption and wealth). Surveys that ask about household income typically miss the highest income groups and experience nonresponse and reporting errors. Essentially, people do not want to or cannot with any accuracy report their income from specific sources. Administrative records, such as tax returns, have their own errors of coverage and reporting. There are also differences in concepts of household income among federal statistical agencies, such as the Census Bureau and Bureau of Economic Analysis (BEA).

The solution is a blended approach that uses the strengths of both surveys and administrative records to improve the resulting statistics coupled with improvements in comparability of measures across agencies. Promising work is under way at the Census Bureau, BEA, and other statistical agencies toward this end, and I believe it essential for statistical agency leadership and stakeholders to support and further that work.

This paper, which extends my 32nd Morris Hansen Lecture remarks in September 2024,[2] reviews the history and quality of household income and poverty statistics in the United States over the past 100 years when the adoption of an income tax provided data that facilitated estimation. The paper focuses on relevance, accuracy and reliability, and coherence (or

[2]Morris Hansen (1910-1990) was a giant in statistics for the public good, fostering innovation at the U.S. Census Bureau, where he pioneered the use of probability sample surveys and computerized data processing, followed by many more accomplishments as chairman of the Board of Westat (see Box 3.1).

comparability) as three key quality metrics, drawing from the quality framework of the Federal Committee on Statistical Methodology (2020). As Morris Hansen so well knew, two additional criteria—costs and burden on the survey respondent or administrative records custodian—must be assessed together with data quality attributes to arrive at a cost-effective design of a data program.

The paper subdivides the previous 100 years into four "chunks": 1920-1960 (with a look back to 1790); 1960–1990; 1990–2010; and 2005 (covering the lead up to the Great Recession) to the present. Each chunk discusses the available data, new data developments and the reasons for them, and the implications for policy, followed by an assessment of what was known about data quality and what was learned about the challenges of collecting accurate income data. Box ES.1 provides highlights of the 100-year period.

It turns out that the problems with income statistics are longstanding. It also turns out that improvements in household income and poverty statistics follow a zigzag pattern over time. Bursts of policy interest in better measures trigger efforts by relevant statistical agencies to respond, although often without sufficient concern for coherence among data series. Busts then follow booms: retreats on the policy front and changes in agendas lead to retreats on the statistical front, exacerbated by declining resources and growing evidence of the intractability of obtaining accurate income responses in large-scale surveys. Nonetheless, the overall trajectory is one of improvements in the granularity and extent of relevant household income and poverty statistics to inform policy makers and the public.

At present, the statistical agencies are making strides toward major improvements in data quality and coherence, which I hope will go forward. What is required is commitment by statistical agency, departmental, and Office of Management and Budget leadership, adequate

resources, and expanded access to federal and state administrative records for statistical purposes only. The goal is "to produce the best possible income and poverty statistics given all available survey, decennial census, administrative, and third-party data" (Bee et al., 2025, p. 1).

Box ES.1 U.S. Household Income and Poverty Statistics in the Past 100 Years: Highlights

- 1790 to 1920: Decennial Census in the U.S. Constitution; Bureau of Labor Statistics established in 1884; income tax enacted in 1913
- 1920: National Bureau of Economic Research (NBER) established to study income inequality in the Gilded Age; Mitchell et al. (1921) provide first estimates of national income and its distribution among "income receivers" using tax and other aggregate data; in 1930s, NBER and the forerunner of BEA develop the National Income and Product Accounts, including Personal Income
- 1940: Census Bureau asks about wages and all other "money" income in the 1940 census; adds income questions to the Current Population Survey (CPS) in 1945 (excludes lump sums and noncash benefits, which sets up lack of comparability with BEA statistics)
- 1958: Goldsmith shows undercoverage of CPS income compared to adjusted BEA estimates (BEA discontinues household distributions of Personal Income in 1970s)
- 1962: Computers first used to process CPS income supplement and impute for missing data
- 1968: Census Bureau produces poverty statistics using the Orshansky thresholds compared to money income (made official in Budget Bureau Statistical Policy Directive No. 14)
- Late 1960s–early 1970s: Microsimulation models developed to estimate costs and benefits of changes in burgeoning assistance programs (e.g., food stamps); the models have to correct CPS income data for underreporting
- Early-mid 1980s: Assistance programs and statistical and social science budgets cut, but new Survey of Income and Program Participation (SIPP) launched to produce higher quality income estimates; questions added to CPS to measure noncash benefits; first estimates of effects of taxes and noncash benefits on poverty
- 1980s–1990s: SIPP runs into operational difficulties causing delays in data products; ultimately becomes useful policy analysis resource but quality of income data in CPS and SIPP deteriorates; experiment gets SIPP respondents to consult records but is not affordable; moreover, consulting records improves reports of amounts but only when respondent reports a source
- 1995: National Academies releases *Measuring Poverty: A New Approach*; Census Bureau and BLS produce plethora of experimental statistics on features of proposed measure (e.g., noncash benefits)
- 2005: American Community Survey replaces the census long-form sample, providing annually updated statistics on income and many other subjects for small geographic areas
- 2008: Lack of comparable macro and micro income statistics contributes to failure to foresee financial collapse and Great Recession
- FY2009 and several years thereafter: Statistical agencies receive resources to improve household income and poverty measures: BLS and the Census Bureau begin publishing Supplemental Poverty Measure (SPM) estimates in 2011, implementing the 1995 report; SPM captures effects of COVID era tax credit expansions and cutbacks; BEA undertakes work that reinstates household Personal Income series beginning in 2020; Census Bureau undertakes work using administrative records that produces improved estimates of household median income from the CPS beginning in 2023 in its National Experimental Well-Being Statistics (NEWS) program

1. INTRODUCTION

Morris Hansen devoted his entire career to the improvement of statistics for the public good. His goal was data quality in the broadest sense, whether in the development and implementation of a portfolio of sample designs for different uses, camping out on the doorstep of the builders of the UNIVAC 1 mainframe computer so that it could be used to help edit the 1950 census, or setting up rigorous experiments to estimate the substantial contribution of enumerator variance to error in the census and develop self-enumeration methods to reduce that error. He also fully grasped that federal statistical programs had to be cost-effective—that is, they had to balance quality against costs and respondent burden.[3]

MORRIS HANSEN
Federal Statistics Innovator
(1910-1990)
Education: B.A. in accounting and honorary doctorate, University of Wyoming; M.A. in statistics, American University
Career: U.S. Census Bureau, 1935–1968, last position: associate director for research and development; Westat (Rockville, MD), 1968–1990, last position: chairman of the Board
Selected Honors: fellow, American Statistical Association (ASA); member, National Academy of Sciences and its Committee on National Statistics; president, ASA and Institute of Mathematical Statistics
Sources: Olkin (1987); U.S. Census Bureau (1983); Waksberg & Goldfield (1996)

Hansen would have applauded the work that federal statistical agencies, including the Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), Census Bureau, Federal Reserve Board (FRB), and Statistics of Income Division of the Internal Revenue Service (SOI/IRS), are currently undertaking to improve the quality of key series on the economic well-being of households and families. Two such statistics—the distribution of household income and the poverty rate—are the focus of my paper. These series are extraordinarily important and extraordinarily challenging to measure.

Statistics on household income and poverty are extraordinarily important because they are key indicators of how the nation and its people are doing. Every statistical system in the

[3]See Section 3.3 below for further discussion of Hansen's key innovations in the service of cost-effective federal statistics.

world produces indicators of household economic well-being.[4] Many countries use consumption as their principal measure, and the National Academies of Sciences, Engineering, and Medicine (hereafter National Academies) (2024) recommended that relevant U.S. statistical agencies measure not only income, but also consumption and wealth, in an integrated system and ideally for the same households. Indicators of subjective well-being, material well-being, and insecurity (e.g., food insecurity) are also useful to follow. Yet income has had a pride of place in U.S. statistics for over 100 years (see Box 1.1). It is something that people and the media think they understand and something that policymakers have long viewed as a lever that policy can influence. More data are also available for household income, currently and historically, since the enactment of the federal income tax in 1913, than for other measures of household economic well-being.

Box 1.1 The Importance of Income Statistics: Selected Examples

- The first project of the National Bureau of Economic Research was to study the amount and distribution of national income (see Box 1.2) for the period 1909–1919, using a variety of administrative records sources, to resolve controversies about income adequacy for workers following rampant industrialization (Mitchell et al., 1921; Fabricant, 1984).
- Questions on cash and noncash household income were first asked in a probability survey in 1937; questions on regular money income (see Box 1.2) became standard in the Current Population Survey (CPS) income supplement beginning in 1945. (The CPS income supplement was renamed the Annual Social and Economic Supplement (ASEC) in 2002.)
- Participants in a March 1939 conference to advise on the 1940 census content recommended the addition of questions on wages and other income (Bouk, 2022, pp. 46-47). The American Community Survey (successor to the census long-form sample, which included the census income questions) now asks about 8 sources of income. Questions on consumption (expenditures) were not considered in 1940 or later.
- The National Academies laid out arguments for measuring income versus consumption poverty—while consumption may better measure well-being, income may better serve as a policy signal, given that consumption can be sustained by means (e.g., high-interest payday loans) that leave households economically at risk. Moreover, available data from the Consumer Expenditure Survey are poorly

[4]This paper uses "household" generically to mean a collection of people constituting an economic unit in a housing unit. When a specific type of economic unit is meant, the relevant term is used (e.g., household or everyone living in a housing unit, family or everyone living in a housing unit related by blood, marriage or adoption; or another term, such as consumer economic unit and primary economic unit, used in specific data series).

suited for poverty measurement (e.g., small sample size relative to the CPS ASEC) (National Research Council, 1995, pp. 211-213)

- Programs that allocate billions of dollars to state and local governments use income as a formula factor—for example, state per capita personal income in the federal medical assistance percentage (FMAP) reimbursement formula for state Medicaid outlays (Congressional Research Service, 2025); school-age children in poverty (income-based) in the formula for allocating Title I Elementary and Secondary Education Act funds to school districts for disadvantaged children (Congressional Research Service, 2018).
- An Interagency Technical Working Group on evaluating alternative measures of poverty (2021, p. 1) recommended both an income and a consumption-based poverty measure.

Statistics on household income and poverty are challenging to measure for a host of reasons. They pose difficult conceptual and definitional issues (see Box 1.2 on income concepts referenced in this paper). They also pose challenging measurement issues. Surveys that measure household income suffer from undercoverage of important income groups—especially at the high end. They also suffer from serious and increasing unit and item nonresponse and reporting errors. People do not want to or cannot with any accuracy report their income from specific sources, and this problem appears to be intractable (see Box 1.3). Administrative records, such as tax returns, have their own errors of coverage and reporting and their own definitional issues.[5] Income statistics also pose challenging issues for presentation, such as whether to provide them for households, families, individuals, or some other unit, whether to equivalize different types and sizes of households and families in preparing estimates, how to adjust estimates for price changes, and which categories to use for reporting distributions (e.g., quintiles, deciles, specific dollar-denominated categories).

[5]For example, the definition of adjusted gross income (AGI) is based on the tax code, which changes over time. Currently, AGI excludes pre-tax employee contributions to retirement plans, cafeteria benefit plans, etc.; it also excludes most cash and in-kind benefits and includes realized capital gains. See Czajka (2015) for a review of problematic aspects of administrative records for statistical use.

Box 1.2 Selected Income Concepts Used for Distributional Estimates

BEA concepts:

National Income—

- Concept used in first distributional estimates for income earners produced by NBER for 1909-1919 (Mitchell et al., 1921).
- Equivalent of gross domestic income produced quarterly and annually by BEA since 1947 (includes all government spending and retained business profits minus capital depreciation plus net income from abroad).
- Used today by the World Inequality Database to produce distributional income estimates for adults (see Chancel, et al., 2022).
- Concept is broader than other widely used concepts for distributional estimates.

Personal Income (PI)—

- BEA has produced aggregate monthly, quarterly, and annual personal income estimates since 1947.
- Beginning in 2020, BEA has produced annual ***personal income***, ***household income,*** and ***disposable (after-tax) household income*** estimates for ***households*** (available back to 2000), and beginning in 2022, annual ***adjusted disposable household income*** estimates (also back through 2000).
- Personal income includes *census money income* (see below), *plus* employer contributions to Social Security, pensions, and health insurance, imputed income from home ownership, noncash benefits including full costs of Medicare and Medicaid, imputed interest on pensions and investments, and net income of nonprofit institutions serving households (NPISH), *minus* pension distributions and Social Security payments. Household income is *personal income minus* NPISH. Adjusted disposable household income is *household income*, *minus* net taxes, *plus* social transfers in kind (STIK), such as government spending on education. This definition accords with OECD guidance.

Family Personal Income (FPI)—

- BEA periodically produced ***family personal income*** estimates for families and unrelated individuals for 1941, 1944–1964, and 1972.
- FPI included *personal income, minus* sources not accruing directly to families (e.g., income of institutional residents, people who died or entered the armed forces during the year, nonprofits serving households, and retained by private pension and trust funds)—roughly equivalent to BEA household income estimates today (see PI above).

Family Money Income (FMI)

- BEA periodically produced ***family money income*** estimates for families and unrelated individuals for 1941, 1944–1964, and 1972, to be comparable to the census money income concept.
- FMI began with *FPI* and added and subtracted various sources—it *subtracted* in-kind income, such as value of food and fuel produced and consumed on farms, rental value of farm and nonfarm homes, wages in kind, and imputed interest (from bank services and property income of life insurance companies), and *added* personal contributions for social insurance, net income from roomers and boarders, and payments from life insurance income.

Census Bureau concepts:

Regular Money Income (money income in the text)—

- The Census Bureau has produced annual ***regular money income*** estimates for families and unrelated individuals and adults beginning with income year 1944 and households beginning with income year 1967; ***regular money income-based poverty estimates*** for families and unrelated individuals beginning with estimates for income years 1959 to 1966 using the Orshansky thresholds (U.S. Census Bureau, 1968); and ***after-tax regular money income*** estimates beginning with income year 2021 (with separate reports on the effects of taxes on income and poverty issued as far back as the early 1980s).

- *Regular money income* includes pre-tax, pre-contribution (e.g., to a retirement plan) wages and salaries, net self-employment income, property income (interest, dividends, royalties, net rent, trusts), Social Security and Railroad Retirement payments, cash assistance payments (Supplemental Security Income or SSI, Temporary Assistance to Needy Families or TANF), social insurance payments (unemployment insurance, worker's compensation, veterans benefits, disability benefits), private pensions (until 2014, lump sum retirement payments from a 401K or other vehicle were not included), and net cash assistance from other households.

Notably, ***regular money income does not include in-kind benefits*** *(they are not money income)* ***or tax credits*** *(they are periodic rather than regular); it also* ***excludes contributions for retirement income*** *and* ***includes retirement receipts****, in contrast to PI and FPI.*

Income for the Supplemental Poverty Measure (SPM)—

- The Census Bureau has produced annual ***SPM*** poverty estimates since 2011 for SPM units (Census Bureau families broadened to include coresident unrelated children, foster children, and unmarried partners and their relatives, plus any remaining unrelated individuals).
- *SPM income* ("resources") includes *money income*, *plus* noncash benefits (excluding medical care) and tax credits, *minus* federal income and payroll taxes and nondiscretionary expenses (work-related expenses, out-of-pocket medical expenditures, child support payments). A recent National Academies report (2024) recommended changes to both the SPM thresholds and resource definition and broadening the economic unit to the entire household.

SOURCES: Bureau of Economic Analysis (2023, Chs. 01-14); U.S. Census Bureau (2024, p.2); author's review of BEA and Census Bureau publications.

Box 1.3 Income Reporting Challenges in Surveys

Moore, Stinson, & Welniak, Jr. (1997) conducted a comprehensive review of the literature on income measurement error in surveys in the 1990s, which remains relevant today. They found:

- income reporting errors in studies that compared or matched survey responses to administrative records;
- consistent, often large shortfalls in survey estimates versus independent benchmarks;
- considerable item nonresponse; and
- bias and random error in individual respondents' reports of both income sources and amounts (with the exception of wage reporting, which was generally reasonably accurate).

Their review of the cognitive literature suggested (p. 26) that the "field is a long way from having final and definitive information on how respondents understand … and form answers to income questions." The literature identified many possible contributors to inaccurate reporting: lack of knowledge, misunderstanding, other definitional issues, recall problems, confusion, and the sensitivity of some items to respondents (e.g., not wanting to report off-the-books self-employment income). They concluded: "[A]sking respondents to report their income is taxing … although no single cognitive issue seems predominant…. [It is d]aunting … that so many problems must be solved in order to significantly improve measurement quality…."

In the rest of this paper, I first describe what I mean by "data quality in the broadest sense" as a framework for evaluating household income and poverty statistics. I then provide an overview of the development of and reasons for statistics on household income and poverty in the United States, subdividing our history into four "chunks": 1920-1960 (with a look back to 1790); 1960–1990; 1990–2010; and 2005–present. For each chunk, I discuss the available data, new data developments and the reasons for them, and the implications for policy. I then review for each period what was known about data quality and what was learned about the challenges of collecting accurate income data. It turns out that the problems with income statistics are not new but longstanding. I conclude by highlighting current work to adopt a blended data approach that uses survey and administrative records data to improve quality and call on statistical agency leadership and stakeholders to embrace and further that work.

I believe it is important for federal statisticians to understand the history of the statistics they devote their working hours to, as part of a culture of what Keller (2023) calls "statistical product first." Statistical agencies understandably focus on data production, including collection, processing, and estimation, but this focus can lead to tunnel vision. Agencies may give priority to producing estimates from a data program, whether a survey or administrative records-based program, rather than giving priority to producing the best quality estimates for a quantity such as household income, even and especially if that means that systems must be redesigned to pull together relevant data from multiple sources. In an earlier paper (Citro, 2014), I stated the matter as follows: "… official statistical programs must start with user needs for information for policy development, program evaluation, and understanding societal trends, and ***work backwards*** from concepts to appropriate data sources."

2. DATA QUALITY

The meaning of "data quality" in federal statistics has gone through an evolution from a focus on sampling error in surveys to a broad framework. The first broadening of data quality occurred in survey research, which developed the Total Survey Error Framework. That framework calls for identifying all errors in the design, collection, processing, and analysis of survey data that cause a survey estimate to differ from the underlying true value (see, e.g., Groves & Lyberg, 2010). The hope originally was to develop a quantitative estimate encompassing all such sources of error (Brooks & Bailar, 1978). In practice, reports of survey results typically provide calculations of sampling variability and a description of other sources of errors, which can include coverage error, imputation error, response error, and others.

Even for survey data, however, the total survey error framework omits important aspects of quality from the user perspective, such as relevance, accessibility, and consistency. Moreover, administrative and commercial data, which are increasingly used in federal statistical programs, are typically collected for purposes that differ from those motivating surveys (e.g., tracking participants in benefit programs, with a focus on accuracy only for variables that matter for providing benefits). Biemer (2010) and Amaya, Biemer, and Kenyon (2020) accordingly adapted the total survey error framework to "big data" processing, listing relevant error sources, although they also omitted some quality aspects, such as accessibility. The Eurostat Quality Assurance Framework (Eurostat, 2019), developed by the European Statistical System Committee, has five major criteria for assessing the quality of statistics in a broad sense: relevance; accuracy and reliability; timeliness and punctuality; accessibility and clarity; and coherence and comparability. Building on these and other quality frameworks, the Federal Committee on Statistical

Methodology (FCSM) developed a set of 11 quality criteria, organized into three domains (Federal Committee on Statistical Methodology, 2020)—see Box 2.1. For my purposes in evaluating the quality of household income and poverty data, relevance, accuracy and reliability, and coherence are front and center. I will assume that the data meet the other criteria. Two additional criteria—costs and burden on the data provider, whether a survey respondent or an administrative records custodian—must be assessed together with data quality attributes to arrive at a cost-effective design of a data program.

Box 2.1 FCSM Data Quality Framework

Utility—	Relevance, accessibility, timeliness, punctuality, granularity
Objectivity—	Accuracy and reliability, coherence
Integrity—	Scientific integrity, credibility, computer and physical security, confidentiality

NOTE: This framework explicitly nests within the three domains–utility, objectivity, and integrity–included in the 2000 Information Quality Act (IQA), which required OMB to promulgate guidance ensuring the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by federal agencies. OMB issued final guidance in 2002, Federal Register :: Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication, and updated guidance in 2019, MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES.

SOURCE: Federal Committee on Statistical Methodology (2020).

3. 1920 TO 1960: THE DEVELOPMENT OF INCOME DATA

3.1 A Quick Look Back to 1790

The United States has statistics built into its DNA. The Constitution provided for a decennial census in Article 1, Section 2, and Alexander Hamilton initiated foreign trade statistics in George Washington's first administration (see Anderson, 2015; Anderson, Citro, and Salvo, 2011; Citro, 2016b). Trade statistics were needed for administering tariffs and excise taxes, which were the principal sources of federal government revenues for over a century. From the beginning, there was interest in learning more from the census than just the population count, such as occupation and industry—but not yet income.[6] The 1820 census asked about employment in three sectors: agriculture (83% of the population), manufacturing (14%), and commerce (3%). Most censuses beginning in 1850 asked about property wealth—initially defined broadly and then limited to home ownership and in some censuses home value.[7]

The Bureau of Labor (predecessor to BLS) was established in 1884 after almost 20 years of lobbying by labor unions and others consequent to the nation's rapid industrialization. (Thirteen states had already established labor statistics bureaus beginning with Massachusetts in 1869.) The new agency conducted special studies of working conditions, including wages, spending, and cost of living, in specific urban areas and sectors, leading in the early 20th century to continuous series on urban industrial wages and hours (see Goldberg & Moye, 1985). BLS

[6]Notably, James Madison pushed for questions on the "interests" of the United States in 1790, such as the proportion of the population in agriculture, so that public policy could be based on evidence. See Article 1, Section 2, Clause 3: James Madison, Census Bill, House of Representatives.

[7]See Goldfield (1958, pp. 40-41), for the 1850–1950 censuses.

collected total consumer unit income chiefly as a variable to use in analyses of spending patterns rather than to produce income statistics as such. [8]

The massive changes in the economy and society after the Civil War fueled an interest in statistics on income and the distribution of income that came to fore at the beginning of the 20th century. The United States became majority urban by the 1920 census, registered huge waves of immigration that kept the foreign-born population at 13-15% of the total from 1860 through 1920, and experienced a decline in agricultural employment from around 80% of total employment in the early 19th century to around 25% by 1920. The growth of an industrialized workforce elevated concern about wage adequacy. The frequent, often severe, economic downturns from 1865 through World War I without a social safety net led to growing disputes about their causes and whether labor was getting a fair share of the pie. Some argued that corporate greed (this was the period of the "Gilded Age" and "Robber Barons") had undercut labor income in favor of capital income; while others blamed the high levels of immigration for suppressing wages or denied any significant increase in income inequality. Economists began taking strong public stands on the matter and hurling critiques at one another (see Rockoff, 2019). The states also ratified the 16th Amendment in 1913 enabling an income tax,[9] which provided a data series on taxable income, as well as raising issues about the definition of income for taxation purposes.

[8]In recent decades, Lindert and colleagues have estimated the distribution of U.S. household labor and property income by occupation and location, using a variety of sources, for the benchmark years 1774, 1800, 1850, 1860, and 1870 (Lindert & Williamson, 2016).

[9]An income tax was levied during the Civil War beginning in 1861; the authorization for it lapsed in 1873. An income tax adopted in 1894 was ruled unconstitutional in 1895, leading to the 16th amendment.

3.2 1920 to 1960: Macro Estimates of National Income

Wesley Claire Mitchell
Pioneer in Distributional Income Statistics
(1874–1948)
Education: Ph.D., economics, University of Chicago
Career: professor of economics, Columbia University, 1913–1944; first NBER director, 1920–1945; a founder of New School for Social Research
Selected Honors: fellow, ASA; president, AEA
Sources: Kuznets (1949); Rockoff (2019)

The first—macro—strand of distributional income statistics emerged in the early 20th century. These statistics derived from aggregate estimates of national income (see Box 1.2 on income definitions), developed from a variety of data sources (what we would call "blended data" today). Distributional concerns were central to these efforts, which arose from the disputes described above among economists about income inequality. A Committee on the Distribution of Income was organized in 1917 followed by the establishment of the National Bureau of Economic Research (NBER) in 1920 with a mandate to produce high-quality, nonpartisan estimates of labor's share of national income and related topics.[10, 11]

The very first NBER report was titled *Income in the United States: Its Value and Distribution: 1909 –1919* (Mitchell et al., 1921, 2 vols.). The rationale for the report (from the Prefatory Note to Volume I) reads:

> A desire to learn whether the National Income is adequate to provide a decent living for all persons, whether this income is increasing as rapidly as the population, and whether its distribution among individuals is growing more or less unequal, and to sift the divergencies among the current estimates led the National Bureau of Economic Research to choose this field for its first investigation.

[10]NBER was funded, ironically, by foundations established by the Carnegie and Rockefeller families—classic examples of "robber barons."

[11]The U.S. Census Bureau (1929) issued a monograph on per capita earnings of factory workers, 1899–1927, based largely on payroll data from the census of manufactures, but this report did not provide distributions.

Mitchell et al. (1921) is a remarkable document for its clarity, transparency, use of graphs, and evaluation of data sources and assumptions. The authors, using separate staffs, estimated national income by two methods: (1) "estimate by sources of production"—that is, estimate the value added by every sector of the economy (manufacturing, agriculture, government, etc.); and (2) "estimate by income received"—that is, estimate the income of individuals and of businesses not distributed to the owners. As it turned out, the two estimates differed by a maximum of 7% for one year in the period covered and not at all in several years. A close correspondence was expected because the authors took national income "to consist of the commodities and services produced by the people of the country or obtained from abroad for their use, with the omission of goods for which no price is commonly paid, for example the services of housewives" (Mitchell et al., 1921, p. 42). The estimates included food and firewood produced and consumed on farms and the rental value of homes occupied by owners. Finally, income was reckoned on a net basis, deducting losses, maintenance, and depreciation, but not "extensions and betterments." This concept is very similar to that in gross national income today.

The NBER 1921 report estimated not only aggregate national income, but also its distribution among income recipients, although the authors admitted that "data regarding the detailed distribution of personal incomes are scanty and difficult to systematize" (Mitchell et al., 1921, p. 147). Their best estimates were that in 1918 the top 10% percent of income receivers (not the same as the total population or the total adult population) had 35% of total national income and the top 1% of income receivers had 14% of total national income. Looking before and after World War I (WWI), the NBER 1921 report estimated that the top 5% of income

receivers had about one-third of national income pre-WWI, falling to about one-quarter after WWI (see Table 3.1).

Table 3.1 Percent of National Income Received by Top 5% of Income Receivers, Selected Years, 1913–1919

Year	Percent of National Income Received	
	By Top 5% of Income Receivers	By Top 5% Excluding Farmers
1913	33%	35%
1915	32%	35%
1917	29%	32%
1919	24%	27%

SOURCE: Mitchell et al. (1921, Table 23).

NBER continued estimating national income, and a group of its staff, led by Simon Kuznets, worked with Department of Commerce staff to develop the full National Income and Product Accounts (NIPAs). The Office of Business Economics (OBE), which became BEA in 1972, estimated aggregate Personal Income (PI) as a component of the NIPAs. OBE also periodically produced estimates of "size" distributions of Family Personal Income (FPI), which was a more intuitive concept than PI for assessing current family economic well-being (see Box 1.2).[12] Goldsmith (1955, 1960), for example, reported FPI estimates for 1950–1953 and 1956–1959, respectively, while Goldsmith (1958) reported FPI estimates for 1941 and 1944–1954. Goldsmith (1958) also reported estimates for 1941 and 1944–1954 of size distributions of Family Money Income (FMI), which permitted comparison with CPS money income estimates from the Current Population Survey (CPS) (see Section 4.1).

[12]Size" distribution referred to the distribution by decile or a similar metric for families and unrelated individuals, as distinct from distributions by industry, income type, or geographic area.

FPI and FMI during this period were calculated using tables of data from various sources, principally IRS individual tax returns but also Social Security data and other sources.[13] In the years 1913-1916, the number of tax returns filed (330–to 440 thousand) was less than 2 percent of households, which meant that tax data were not useful for estimating income for the bulk of the population. Tax law changes, however, greatly broadened filing requirements, such that by 1946, the number of returns filed (50 million) exceeded the number of households, making tax return data highly useful in estimating income for most families[14]

3.3 1920 to 1960: Micro Estimates of Money Income

The second—micro—strand of distributional income statistics emerged later in the first half of the 20th century. These statistics comprised family and household money income estimates from the population census and surveys (see Box 1.2 on income definitions). It took longer for survey-based income statistics to become established compared with the macro estimates discussed earlier—not surprisingly, given that survey sampling was not itself established as a useful tool for federal agencies until the late 1930s. (See Box 3.1 for the role of Morris Hansen in fostering probability sampling and other innovations at the Census Bureau.)

Noteworthy was the large-scale 1937 Study of Consumer Purchases of BLS and the Bureau of Home Economics in USDA with funding from the Works Progress Administration (WPA), in which a two-stage national probability sample of nearly 300,000 families answered

[13]The Conference on Research in Income and Wealth (CRIW), established by NBER in 1936, published a volume on data sources that could be used to estimate the "size" distribution of income (CRIW, 1943). The available sources (summarized in Ch. 2) had grown in number and included several surveys and program administrative records. This same report (Ch. 4) recommended ways to "reduce the heterogeneity of data," including using money income as a standard of comparison for estimates from different agencies and researchers.

[14]See Hollenbeck & Kahr (2008, Table 1) for tax returns; Gibson (2015, Figure 6.1) for households.

detailed questions about their cash and noncash income and spending in 1935–1936. The data from this survey, adjusted with IRS tax data, were used by the National Resources Committee (1939, App. C) to construct distributional estimates of "spending unit" money income plus the value of farm home-produced and home-consumed food and the net income value of owner-occupied housing.[15]

Box 3.1 The Seminal Role of Morris Hansen in R&D at the Census Bureau, 1935–1968

Morris Hansen began his career at the Census Bureau in 1935 in the personnel department, joining a small research division in 1936. He became chief of the Statistical Research Division in 1947, assistant director for statistical standards in 1949, and associate director for research and development in 1961. After retiring from the Census Bureau in 1968, he joined Westat, Inc.

He cared passionately about data quality in terms of total survey error and cost-effectiveness in terms of considering costs and respondent burden along with quality. Three key innovations due to his leadership were:

- ***The development and legitimization of probability sampling in federal statistics*** An early project compared a sample survey-based estimate of unemployed people with a 1937 attempt at a census by the postal service—the survey estimates were more credible and sampling error could be estimated for them. These results led the WPA to initiate a monthly unemployment report in 1940 which became the CPS in 1942. Hansen subsequently developed the bible for the burgeoning survey field: Morris Hansen, William Hurwitz, & William Maddow*, Sample Survey Methods and Theory*, 2 vols, first published in 1953, issued in paperback in 1993, and still available through print-on-demand.
- ***Bringing the first non-defense mainframe computer, UNIVAC 1 (now in the Smithsonian), to the Census Bureau*** It arrived at the tail end of the 1950 census processing. In the 1960 census, UNIVAC computers processed census records stored on magnetic tapes, created by microfilming paper questionnaires and putting them through a Film Optical Sensing Device for Input to Computers (FOSDIC) invented at the Census Bureau. The 1960 census was the first to use "hot deck" imputation for missing responses, instead of leaving them blank or, in some cases, using pre-set values for imputation ("cold deck"). Hot deck imputation, in which "nearest neighbor" records with valid responses were used to fill in responses for the next record with missing data (records were processed by geographic areas), was a major step forward in data quality and usability. Hot deck methods were first used for income data in the CPS in 1962 (U.S. Census Bureau, 1963, p. 22).[16]

[15]The National Resources Committee was a committee of cabinet members who established study committees on various aspects of the population and economy.

[16]U.S. Census Bureau (1963) describes the new hot deck imputation procedure for missing income but does not use the term "hot deck," which borrows "deck" from punch card technology but otherwise has nothing to do with punch cards. There is an erroneous story (see e.g., Andridge & Little, 2010) that "hot decks" were so named because punch cards heated up when being run through machines that read the information. In fact, the first documented use of hot deck imputation was in processing the 1960 census (Nordbotten, 1963, p. 26), in which paper questionnaires were microfilmed and read into mainframe computers using FOSDIC (no punch cards involved).

- ***Improving census quality and cost-effectiveness by moving from enumerator collection to self-response*** Concerns about census costs, workforce availability, and the growing evidence of high enumerator variance drove the Census Bureau to explore self-response methods for the census. Hansen oversaw carefully designed experiments of the feasibility of self-enumeration household questionnaires in special censuses. Both the 1950 and 1960 censuses included enumerator variance studies. Overall, enumerator variance was estimated to reduce the 1950 census to the equivalent of a 25% sample, while enumerator variance in 1960 was 25-33% of 1950 because of the significant amount of self-response in 1960 (Powell [Bailar] & Pritzker, 1965).[17]

SOURCES: Olkin (1987); U.S. Census Bureau (1983); Waksberg (1998); Waksberg & Goldfield (1996). See also Duncan & Shelton (1976) on the "revolution in government statistics" from 1926–1976, which singles out probability sampling and computerization, along with the development of the NIPAs and statistical coordination, as key innovations that moved federal statistics forward.

Advisers to the Census Bureau on the content for the 1940 census strongly advocated adding for people aged 14 and older a question on wages and one on all other income: the amount of money wages and salary (including commissions) received in 1939 (exact amount not asked if more than $5,000) and whether received any other income of $50 or more (yes/no). "Asking the income question signaled … that the United States was no longer a land dominated by propertied wealth, feudal relations, family relations, or mass enslavement—it had become a land of wage workers…." (Bouk, 2022, pp. 46-47). Some members of Congress opposed the questions on privacy grounds, but their opposition was not successful. The Census Bureau advertised an option for providing income data confidentially on a special mailback form. In the end, the nonresponse rate to these questions was only 2%, and only 200,000 people used the self-response option. Finally, the Census Bureau added questions on 7 sources of regular money income received in calendar 1944 to the May 1945 questionnaire for what was then called the "Monthly Report of Unemployment," known today as the Current Population Survey (CPS).

Why the Census Bureau decided on a regular money income definition is not clear. An early publication from the new CPS income supplement referred to "inherent difficulties" of

[17]Arthur Kennickell in his work with the Federal Reserve's Survey of Consumer Finances has emphasized repeatedly the importance of interviewers for the quality of the data (see, e.g., Kennickell, 2002).

"obtaining and evaluating" noncash income (U.S. Census Bureau, 1948, p. 3), although the NIPAs included noncash sources in its income estimates from the beginning. Admittedly, such noncash benefit programs as the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) and Medicaid did not exist at the time. Yet Congress passed the National School Lunch Act in 1946 (based on experimental school feeding programs during the Great Depression) and made employer health insurance benefits tax-free during World War II, encouraging their use. In addition, the value of food and fuel produced and consumed on the farm was not insignificant in 1945.

Excluding inheritances, lottery wins, and similar sources of lump sum income from regular money income could be justified, but what about lump sum distributions from defined contribution retirement plans and IRAs, and what about tax credits, such as the Earned Income Tax Credit (EITC), which is a major source of income support for the working poor? Over time, with expanded noncash benefits and tax credits and with the decline of defined benefit pension plans that pay regular annuities in favor of IRAs and 401Ks, regular money income became more and more out of touch with the real world.[18]

[18]For example, in 1975, 71% of private sector workers with either defined benefit or defined contribution pension plans had defined benefit plans, while in 2019, only 13% had defined benefit plans (Congressional Research Service, 2021).

4. 1944 TO 1960—INCOME DATA QUALITY

In this and later sections on income data quality, I discuss relevance and coherence first, followed by accuracy & reliability. Coherence essentially means comparability, and, from the outset, there were differences in definitions and other features of key income statistics. These differences affect relevance because they have lent themselves to cherry-picking to support particular policy agendas, and different estimates only sporadically have been reconciled in an understandable way for users.

4.1 Relevance and Coherence

Clearly, the availability of income statistics for families and individuals—periodically from OBE and annually from the Census Bureau beginning with estimates for 1944 and 1945 (U.S. Census Bureau, 1947)—was a positive step in serving important data needs of economic policy makers, researchers, and others. The Census Bureau, however, used an income definition—regular money income—that was outmoded the day it was adopted. Moreover, money income differed from—did not cohere with—OBE's preferred concept for Family Personal Income, which had to be estimated in the first place from Personal Income. For apples-to-apples comparisons, OBE had to first construct FPI and then construct Family Money Income. For

SELMA FINE GOLDSMITH
Federal Economist Who Carefully Constructed Distributional Estimates from Multiple Sources
(1912-1961)
Education: B.A., Cornell University; Ph.D., economics, Harvard University
Career: USDA; Natural Resources Planning Board; Office of Business Economics (chief income division); Census Bureau (chief income statistics branch)
Selected Honors: fellow, ASA; Dept. of Commerce Medal; Rockefeller Public Service Award to study size distribution of income in the UK and Canada
Source: Neil (2021).

its 1944–1954 estimates, FPI ranged from 89% to 97% of PI, and FMI ranged from 84% to 94% of PI (Goldsmith, 1958, Table 1; see also the first two columns for each year shown in Figure 4.1 in Section 4.2 below).

Box 4.1 lists PI components that OBE had to subtract to estimate FPI for 1952 plus components that it had to further subtract or add to estimate FMI for 1952 (Goldsmith, 1958, pp. 97-98). Overall, for 1952, FPI was 94.8% of PI and FMI was 90.4% of PI (net of subtractions of 6.6% and additions of 2.2%). OBE produced FPI and FMI estimates through 1963, but then let the program lapse for the next decade due to budget constraints.

Box 4.1 Personal Income, Family Personal Income**,**
and Family Money Income: Example for 1952

Personal Income (PI): $271 billion.

Personal Family Income (FPI): $257 billion (94.8% of PI), calculated to approximate the CPS civilian population universe
= PI (100%) **minus** [Military cash and noncash pay: 2.8% of PI; Employer contributions to private pension and welfare funds: 1.6% of PI; All other (net property income of fiduciaries, nonprofit property income, miscellaneous): 0.8% of PI] = PI (100%) minus 5.2% of PI

Family Money Income (FMI): $245 billion (90.4% of PI), calculated to be as comparable as possible to money income
= PI (100%) minus 5.2% (difference between PI and FPI)
minus [Imputed interest: 2.0% of PI; Net rental value of owner-occupied nonfarm homes: 1.5% of PI; Value of food and fuel produced and consumed by farm operator families and gross rental value of farm homes: 1.3% of PI; All other subtractions (noncash civilian farm and nonfarm wages, noncorporate nonfarm inventory valuation adjustment, value of change in farm inventories, accrued interested on unredeemed U.S. bonds, and miscellaneous): 1.8% of PI] = minus 6.6% of PI
plus [Personal contributions for social insurance: 1.4% of PI; Estimated net income from roomers and boarders in private homes: 0.3% of PI; Estimated periodic payments received from life insurance companies: 0.4% of PI] = plus 2.2% of PI
= PI (100%) minus 5.2% minus 6.6% plus 2.2% = PI minus 9.6% of PI

SOURCE: Goldsmith (1958, Table 1, pp. 97-98).

The statistical system acknowledged the lack of coherence of available income statistics in this period. A contemporary report of an interagency task force for the Office of Statistical Standards in the Budget Bureau in 1964 described the differences among definitions, family concepts, and other features of income statistics from the 1960 Census, 1961 CPS income supplement, 1960-1961 Consumer Expenditure Survey, and 1961 OBE FPI series. The report concluded with recommendations—not acted on—to coordinate and reconcile the various series (U.S. Bureau of the Budget, 1966, p. 23):

> As the result of our experience in reviewing these four income data sources, we recognize that further work to coordinate the several efforts on income and related data for families and consumers generally needs to be done. We recommend the establishment of a continuing technical committee for this purpose. Income distributions serve so many varied purposes, that no single set of estimates can be considered the best. Ideally, we should be capable of tailoring the definitions to the specific purpose. *Equally important, different distributions should be reconcilable to each other*. [emphasis added] It is hoped that in the near future the new electronic data processing equipment will give us the flexibility to achieve this ideal.

4.2 Accuracy Indicators

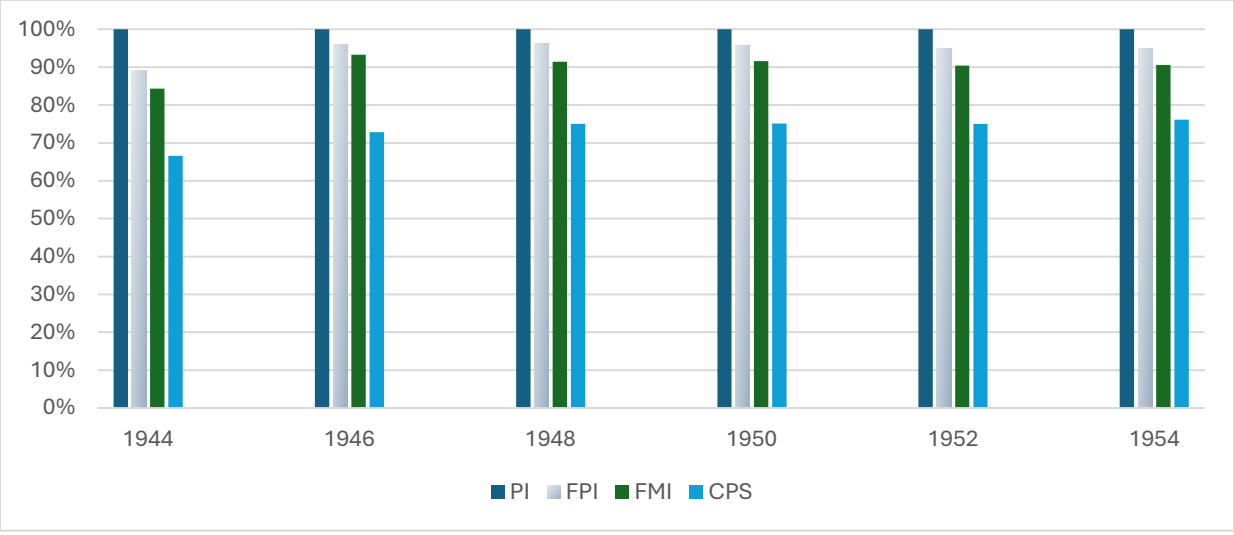
Unit and item response rates are long-standing indicators of survey data quality in terms of accuracy and reliability—lower rates increase variance and may increase bias. Unfortunately, clear definitions for nonresponse to all or parts of the CPS income supplement are lacking for the 1944–1960 period, and the available item nonresponse rates cannot readily be compared with later periods. Census P-60 publications for this period cite rates of nonresponse to the main

monthly CPS, which held steady at 4-6%, and percentages of families and people with incomplete income data, which also held steady at 9-11%.

Comparisons with other data sources, principally administrative records, believed to be more accurate than a survey are also widely used in evaluating survey quality. Of course, the alternative sources can themselves have errors, and it is commonplace to have to adjust one or another source or both to make them coherent and appropriate for comparison. The available comparisons for this period make it clear that the CPS income supplement had response errors from the beginning.

Figure 4.1 displays aggregate estimates for OBE Family Personal Income, OBE Family Money Income, and money income from the CPS income supplement as a percentage of OBE Personal Income for selected years from 1944–1954. In every year, the shortfall of the CPS money income estimates compared with FMI estimates, which indicates reporting errors, is larger than the adjustments for conceptual differences to get from PI to FPI and then to FMI.

Figure 4.1. Aggregate family personal income, family money income, and CPS money income as a percentage of aggregate personal income for selected years, 1944–1954

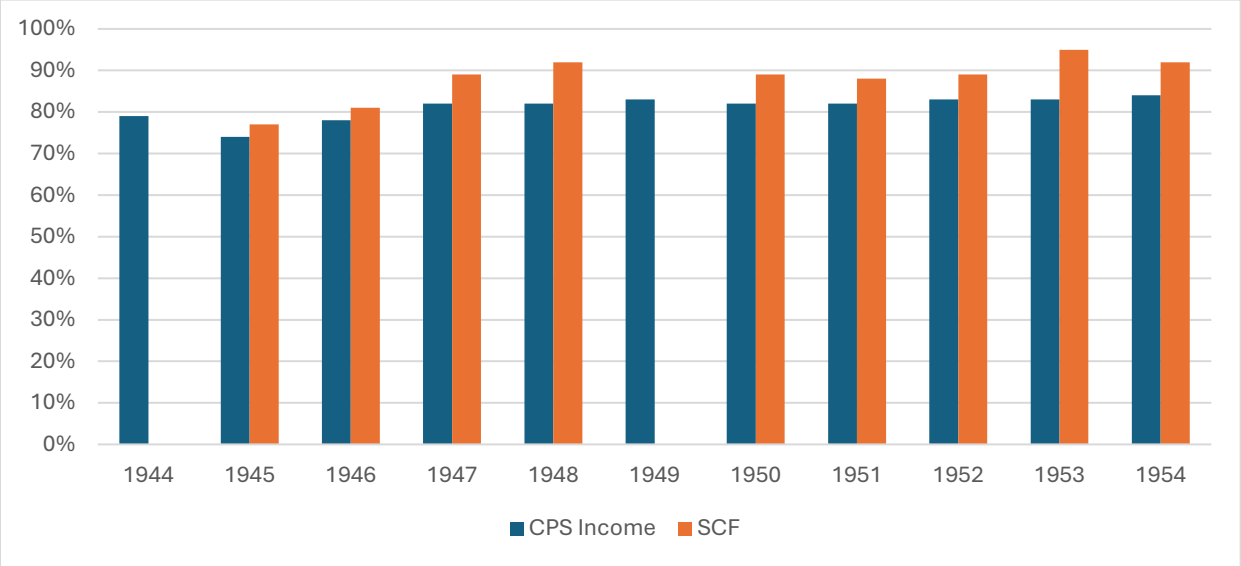


SOURCE: Goldsmith (1958, Table 1).

Figure 4.2 shows aggregate money income estimates from the CPS income supplement and the Survey of Consumer Finances (SCF) for income years 1944–1954 as percentages of FMI estimates. In this comparison, the CPS income supplement also fell short.[19] Goldsmith in her landmark analysis (1958) noted that the FMI estimates were not without error themselves but concluded that such error was minimal compared to the error revealed in the FMI comparisons to money income. The SCF, while also falling short of the FMI estimates, captured more income than the CPS income supplement except for 1944-1945. The explanation likely includes these three reasons: (1) the SCF sample was designed to oversample higher-income spending units (Goodman, 1947); (2) the SCF sample size was about 3,000 interviewed spending units compared to 7,000–25,000 (median 15,000) interviewed households in the CPS income supplement over this period (Goldfield, 1958, Table 1); and (3) the SCF was not a supplement to another survey. The last two factors enabled the SCF interviewers to concentrate on obtaining good quality income data from a smaller caseload.

[19]From 1946 to 1971, the University of Michigan conducted an annual SCF with funding from the National Science Foundation and private foundations.

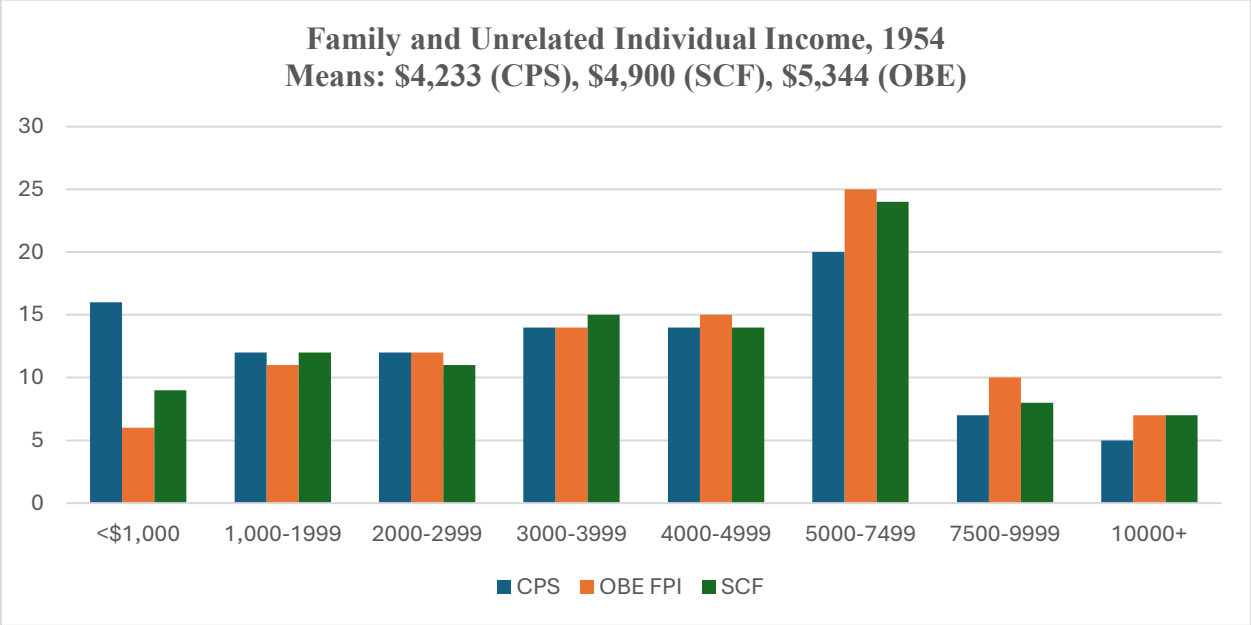
Figure 4.2 Aggregate money income from the Current Population Survey (CPS) and Survey of Consumer Finances (SCF), as a percentage of OBE family money income, 1944–1954



NOTE: The CPS estimate for income year 1946 is from the CPS income supplement (nonfarm households) plus the Bureau of Agricultural Economics 1947 Quarterly Survey of Agriculture (rural nonfarm households); the CPS estimate for income year 1949 is from the 1950 Census.
SOURCE: Goldsmith (1958, Table 1).

Looking at the size distribution for families and unrelated individuals by income categories of OBE family personal income (i.e., including sources not in family money income), CPS money income, and SCF money income for 1954 gives the comparisons shown in Figure 4.3. The OBE and SCF distributions track closely, but the CPS distribution has many more families in the lowest category (under $1,000) and many fewer families in the categories with incomes of $5,000 or more. Goldsmith attributes the differences between the SCF and OBE series in the lowest category to the inclusion of noncash income in the OBE series. She attributes the differences between the CPS and SCF series to the fact that the CPS had more unrelated individuals, who tended to have low incomes, than the SCF and that the CPS did not obtain income for people in the household during the reference year who had left the household by the time of interview (e.g., due to divorce, death).

FIGURE 4.3 Current Population Survey and Survey of Consumer Finances money income and Office of Business Economics family personal income, by amount category, income year 1954



SOURCE: Goldsmith (1958, Table 4).

By type of income, Goldsmith (1958, Table 2) presents limited comparisons (because of limited differentiation of income types in the CPS) of CPS estimates with FMI estimates for income years 1946 and 1954.[20] The CPS accounted for an estimated 91% of FMI wages in both years and 84% (1946) and 90% (1954) of total FMI earnings, adding farm and nonfarm net self-employment income to wages. The CPS accounted for only 53% (1946) and 50% (1954) of all other FMI income. More detail is available on non-earnings sources for income year 1946, showing that the CPS accounted for only 23% of FMI interest and dividends, 63% of FMI rent, 68% of FMI military benefits, and 66% of FMI Social Security plus all other income. As we will see, these patterns have persisted to the present.

[20]The 1946 CPS estimate combines nonfarm income from the CPS income supplement with farm income from the January 1947 Quarterly Survey of Agriculture of the Bureau of Agricultural Economics (predecessor to the USDA Economic Research Service), which the two bureaus (Census and Agricultural Economics) had agreed to collect independently (Goldfield, 1958, pp. 50-51).

An important point to note is that, although wage reporting continues to compare favorably with benchmarks, since wages are such a large and salient component of most households' income, missing even 9-10% as in 1946 and 1954 amounts to missing a substantial portion of money income. Thus Goldsmith (1958, p. 178):

> Of the $43 billion of income not covered in the 1954 CPS [of an estimated total of $261 billion], about $17 billion was wages and salaries, $5 billion business and professional income, $15 billion interest, dividends, and rent, and about $6 billion social insurance and veterans' payments, and miscellaneous income.

5. 1960 TO 1990—ADVANCES AND A SETBACK

The 30 years from 1960 through 1990 comprised two distinct periods for federal statistics on income and poverty. The first 20 years (1960–1980) were a golden age for social and economic federal statistics broadly, and for societal policies and policy analysis based on statistics, while the last 10 years (1980–1990) were a lost decade for federal statistics and for social science data, research, and policy analysis generally.

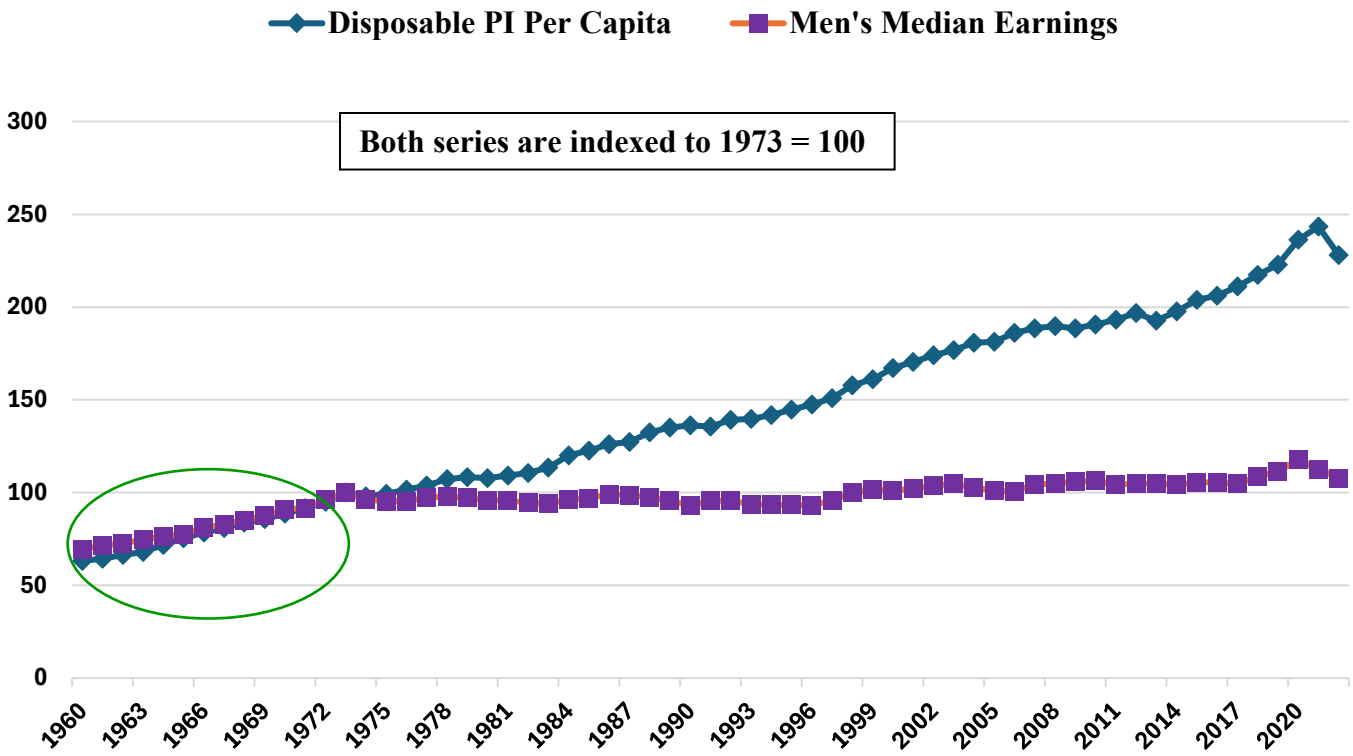
5.1 1960 to 1980: Golden Age

From 1947 through 1980, the United States experienced a doubling of real personal income per capita. Growth was especially strong during the recession-free decade of the 1960s, and the fruits of growth were shared widely. For example, men's median earnings grew in parallel with disposable PI per capita (see portion of Figure 5.1 circled in green—this figure will appear again). Prosperity and policies such as the Servicemen's Readjustment Act of 1944 (GI Bill) and the National Defense Education Act of 1958 led to a robust middle class, a more highly educated population, and a decline in income inequality measured by the Gini index.[21] Yet some people were left behind. Arguably, general prosperity, together with the Civil Rights movement, facilitated and made it possible to fund a renewed interest in policymaking to help lower income people, which, in turn, demanded data.[22]

[21]FRED GINI Index for the United States (SIPOVGINIUSA) | FRED | St. Louis Fed (stlouisfed.org).

[22]As an example of the interest in poverty, *The Other America* by Michael Harrington sold more than 70,000 copies in its first year (1962), more than enough to put it on bestseller lists.

FIGURE 5.1 Trends in disposable income per capita and men's median earnings, 1960–2022

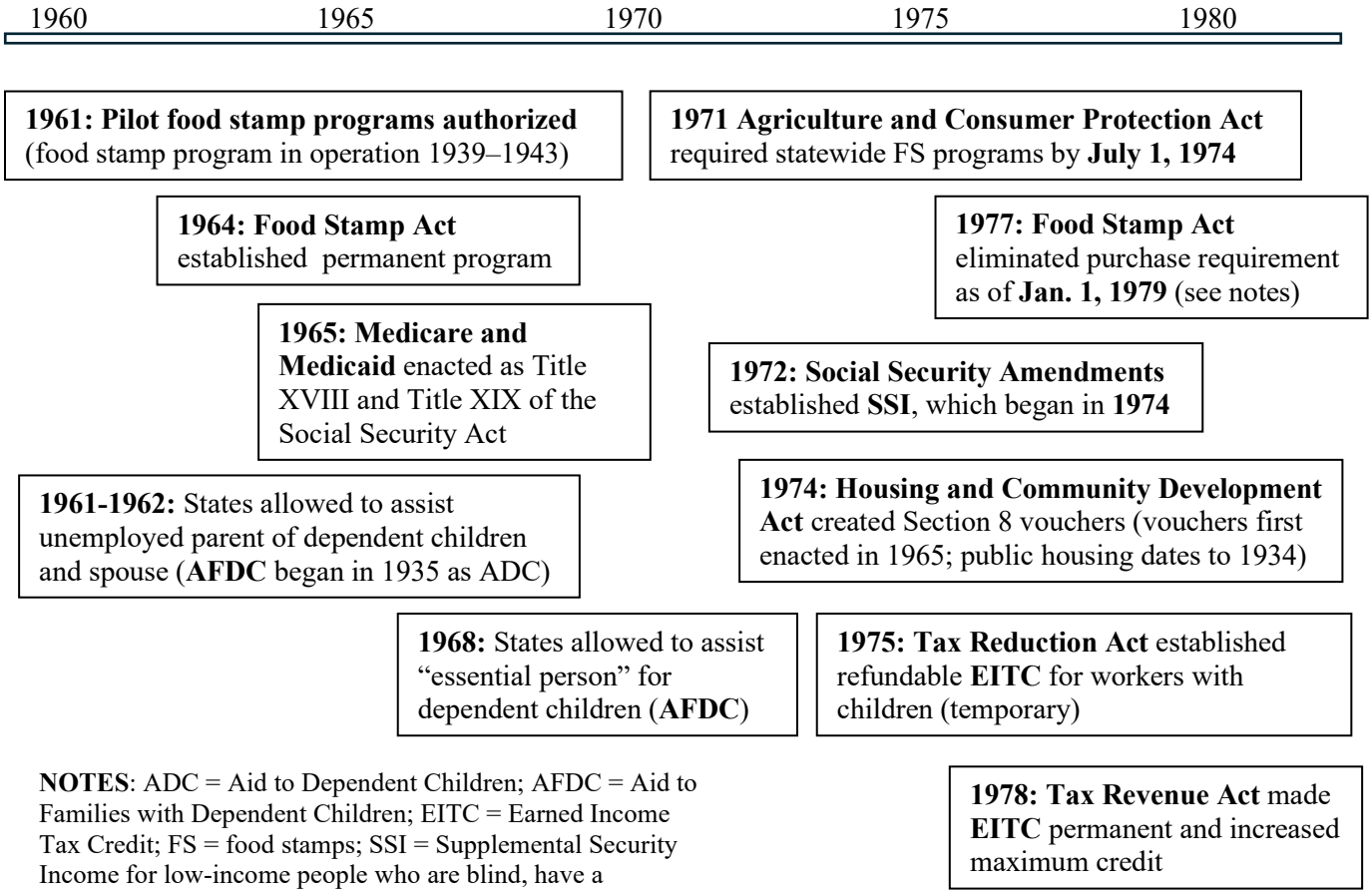


NOTES: Disposable PI (BEA) and men's median earnings (CPS ASEC) are in 2017 chained dollars; disposable PI = first quarter values; median earnings = for men ages 15+ (14+ before 1980) working full-time year-round (civilian workers only before 1989).
SOURCES: Real Disposable Personal Income: Per Capita (A229RX0) | FRED | St. Louis Fed; U.S. Census Bureau, Table P-38. Full-Time, Year-Round Workers by Median Earnings and Sex: 1960 to 2023, Historical Income Tables: People.

The War on Poverty was officially launched in 1965, which led, in turn, to the adoption of an official poverty measure. The period from 1965–1975 saw significant expansion of social insurance and income assistance programs (see Figure 5.2),[23] which, in turn, led to demands for improved and more comprehensive income data.

[23]In addition to the programs shown in Figure 5.2, the Special Supplemental Feeding Program for Women, Infants, and Children (WIC) was piloted beginning in 1972 and made permanent nationwide in 1975 with eligibility extended to nonbreastfeeding in addition to breastfeeding mothers up to 6 months and children up to age 5 (previously up to age 4); the reach of the National School Lunch Act of 1946 (built on prior local, state, and federal school feeding programs) was extended in the 1966 Child Nutrition Act, which established the School Breakfast and Summer Food Service Programs; and unemployment insurance, established in 1935 with federal payroll taxes on employers that supported state-run programs, was expanded in 1970 to provide for federal funds picking up one-half the cost of extended unemployment benefits when unemployment was high in a state.

FIGURE 5.2 Key legislation: Selected social welfare programs, 1960 to 1980



NOTES: ADC = Aid to Dependent Children; AFDC = Aid to Families with Dependent Children; EITC = Earned Income Tax Credit; FS = food stamps; SSI = Supplemental Security Income for low-income people who are blind, have a disability, or are age 65 and over;
Purchase requirement = eligible households paid the full estimated cost of a nutritional diet up front and received partial reimbursement in the form of food stamps; after repeal, they pay only their share.

SOURCES: Food Stamps (now the Supplemental Nutrition Assistance Program, SNAP): A Short History of SNAP | Food and Nutrition Service; Housing: Sec1.03_Historical-Overview_2015.pdf; Medicare/Medicaid: Medicare and Medicaid Act (1965) | National Archives; SSI: SSI: 50 Years of Financial Security | SSA; AFDC: 1history.PDF; EITC: Congressional Research Service (2022).

This period also saw government, academic, and commercial survey organizations acquire mainframe computers and use them to process census and survey data and to develop machine-readable data products. These products included not only summary files of detailed tables (many more than could be printed), but also public use microdata sample (PUMS) files. The first PUMS file from the 1960 decennial census was released in 1962 and from the CPS income supplement in 1973 (beginning with the March 1968 file).[24]

PUMS files in turn formed the basis for detailed microsimulation models to support social welfare policymaking. These tools enabled policymakers to assess the impacts of alternative designs for social insurance and assistance programs, which further escalated the demands for detailed, high quality data on income sources in a virtuous feedback loop. Similarly, an expansion in formula grant programs, many of which used BEA per capita income estimates in the formula (e.g., in the 1965 Medicaid reimbursement formula and the 1972 General Revenue Sharing program), or census long-form income and poverty estimates (e.g., for allocation of 1965 Title I education funds to school districts with low-income children), placed a premium on high-quality small-area statistics on income and poverty.

5.1.1 Official Poverty Measure

[24]Microdata files for earlier years (1964–1967) were made available for use by the President's Commission on Income Maintenance programs (Allen, 1973, pp. 191-193).

Discussions during this period about programs to combat poverty began under the administration of John F. Kennedy, Jr., but it was Lyndon Johnson who jumped on the idea.[25] He officially launched a "War on Poverty" in his January 1964 State of the Union address and oversaw the enactment of the Economic Opportunity Act of 1964, which established Head Start, the Job Corps, and other anti-poverty programs, and also established the Office of Economic Opportunity (OEO) in the Executive Office of the President to oversee the administration of most of the new programs.

The OEO immediately sought benchmark data with which to measure progress against poverty, adopting in 1965 a set of poverty thresholds developed by Mollie Orshansky at the Social Security Administration (SSA) based on the costs of a minimum adequate diet times three for other expenses (not including taxes). The underlying data came from a 1955 Household Food Consumption Survey. The Orshansky thresholds (see Fisher, 1992), which varied by the dietary requirements and opportunities for economies of scale for different size and composition families (there were also separate thresholds for farm households), were compared with family's resources as measured by regular money income in the March CPS to determine a family or unrelated individual's poverty status.

MOLLIE ORSHANSKY

Federal Statistician Who Constructed Poverty Thresholds for 1963 for Different Type Families Based on Food Needs—Became Official Thresholds in 1969

(1915-2006)

Education: B.A., Hunter College, mathematics and statistics; graduate work in economics and statistics, American University

Career: Children's Bureau; NYC Dept. of Health; USDA (family and food economist); SSA Office of Research and Statistics

Selected Honors: Distinguished Service Award from DHEW for leadership in creating the first nationally accepted measurements of income adequacy and applying them to public policy

Source: Fisher (2008).

[25]Work on poverty measurement in the United States extends back to the early 20th century with the development of family budgets at different living levels (see Assistant Secretary for Planning and Evaluation, 2000; Fisher, 1995), but it was the Johnson War on Poverty that catalyzed the need for an official measure against which to measure change.

In 1969 the Bureau of the Budget adopted the thresholds (increasing the level for farm households relative to nonfarm households), to be updated yearly with the CPI, and the money income resources definition as the "official" poverty measure (OPM) in Statistical Policy Directive No. 14 (see Box 5.1). The directive said the measure was not to be used for programs, but almost immediately it was so used, and those uses made it impossible politically to update the thresholds in real terms because of the likely increase in program costs. The only subsequent changes occurred in 1981, when the farm thresholds were eliminated, the separate thresholds for families headed by men and women were averaged, and the largest family size category was increased from 7 to 9 people.

Box 5.1 OMB Statistical Policy Directive No. 14, Excerpts

For the years 1959-1968 the statistics on poverty contained in the Census Bureau's Current Population Reports, Series P-60, No. 68, shall be used by all executive departments … for statistical purposes. For the years 1969 and thereafter, the statistics contained in subsequent applicable reports in this series shall be used....
``
The poverty levels used by the Bureau of the Census were developed as rough statistical measures to record changes in the number of persons and families in poverty and their characteristics, over time. While they have relevance to a concept of poverty, **these levels were not developed for administrative use in any specific program….**

SOURCE: OMB Statistical Policy Directive No. 14

5.1.2 Microsimulation Models For Social Welfare Policy

Executive branch agencies pioneered the use of microsimulation models for detailed cost and distributional analysis of proposed policy changes. In the early 1960s, Treasury Department analysts encouraged work by the Brookings Institution to assess tax burdens by using a large

micro database and a model to calculate taxes for each individual filing unit (e.g., a married couple or a single adult) in the sample (Atrostic & Nunns, 1991, pp. 43-47). At the same time, analysts at the Department of Health, Education, and Welfare (DHEW) and OEO looked into the microsimulation modeling techniques pioneered by Guy Orcutt for analysis of social welfare program policy alternatives. In 1968, the President's Commission on Income Maintenance developed the first operational social welfare policy model—Reforms in Income Maintenance (RIM)—which was used extensively over the next few years to model alternative welfare reform proposals (Orcutt et al., 1980, pp. 84-85). RIM used the 1967 Survey of Economic Opportunity (SEO) as its database.

Beginning in the mid-1970s, not only the executive branch but also the Congress became accustomed to receiving detailed estimates of the anticipated cost and social impact of legislation. In particular, Congress wanted to know which groups—the elderly, children, the middle class—and which states and districts would gain and which would lose by a proposed program change. As an example, in the two years leading up to the Food Stamp Reform Act of 1977, the Food and Nutrition Service in the Department of Agriculture used the Micro Analysis of Transfers to Households (MATH) model, based on the CPS income supplement, to produce cost and distributional estimates for at least 200 variations of the proposed legislation (Beebout, 1980).[26] Congress further shaped the legislation, based on model outputs, to reflect congressional priorities with regard to geographic effects, income cutoff levels, work incentives, and other factors (Shipp, 1980).

Congress institutionalized modeling and data as essential parts of legislative policymaking in the Budget Act of 1974. That act specified a formal process for setting budget

[26]Another widely use microsimulation model was the Transfer Income Model (TRIM) (Zedlewski & Giannarelli, 2015, pp. 9, 13-26).

targets and authorized the establishment of a Congressional Budget Office (CBO), charging it to provide Congress with analyses of the federal budgetary cost impact of every piece of legislation reported by a congressional committee. CBO, which opened in 1975 under its first director, Alice Rivlin, continues to use a variety of models and datasets to provide the information that Congress seeks.

5.2 Search for New and Improved Income Data from Surveys

The intense interest in and need for income data for households, families, and individuals for policy led to major innovations and research and development (R&D) in the 1960–1980 period. The CPS income supplement was enhanced, new surveys were launched to add depth and breadth on income resources available to households, and extensive R&D was funded with the goal to inaugurate a new, continuing Survey of Income and Program Participation (SIPP) that could eventually replace the CPS income supplement.

5.2.1 Expansion of Income Sources in the CPS

From 1945 to 1957, the CPS income supplements asked about only a handful of income sources (wages, nonfarm self-employment, farm self-employment, and other income), except for 1946 and 1947, which asked about a dozen sources. Beginning in 1958, the number of sources increased incrementally until 1980 when the questionnaire exploded to cover 51 sources, with households able to provide amounts for up to 27 of them. The 1980 revision added questions on five major noncash benefit programs—food stamps, school lunch, Medicare, Medicaid, and

public and assisted housing, plus employer health insurance. A prime reason for the Census Bureau to add noncash benefit programs to the questionnaire and to develop a tax model was to respond to congressional interest. By 1979, spending on in-kind benefits and tax credits had grown substantially[27]—for example, federal food stamp expenditures stood at $6.5 billion in 1979,[28] while federal spending on AFDC stood at $6.6 billion in 1979 (up from $2 billion in 1969).[29] Spending on Medicare Parts A and B stood at $28.1 billion in 1979 (up from $14.1 billion in 1975).[30] Congress understandably wanted data on the effectiveness of these programs in ameliorating poverty.

5.2.2 New Surveys

An array of new and significantly revamped surveys on income and wealth came on line in the late 1960s through the early 1980s (see Table 5.1). In addition, DHEW (as of 1980, the Department of Health and Human Services (DHHS)) sponsored large-scale controlled experiments of a guaranteed income in the late 1960s through the 1970s. The New Jersey, Seattle, Denver, and Gary Income Maintenance Experiments gathered detailed quarterly longitudinal data on participating families.

[27]Spending amounts are in current dollars because this is how Congress would typically see them (i.e., not adjusted for inflation).

[28]Bixby (1981, Table 1).

[29]Assistant Secretary for Planning and Evaluation, Table 4.2, 4SPENDING.PDF

[30] aspe.hhs.gov/sites/default/files/private/aspe-files/210901/sec05.txt)

Table 5.1 New and Modified Surveys on Income and Wealth, Late 1960s–Early 1980s

Survey/Type	History/Purpose	Key Design Features/Importance
Survey of Consumer Finances (SCF) (periodic cross-section—every 3 years)	The University of Michigan conducted an SCF annually in 1946–1971, funded by NSF; the Census Bureau conducted an SCF in 1962 for the FRB and reinterviewed the 1962 respondents in 1963; Michigan conducted an SCF in 1977 for the FRB, FDIC, and Treasury Department. The current SCF, conducted by contractors for the FRB Microeconomic Surveys Unit, began its every-3-year cycle in 1983. Respondents to the 1983 survey were briefly reinterviewed in 1986 and more extensively in 1989. Respondents to the 2007 survey were reinterviewed in 2009 to shed light on impacts of the Great Recession (Bricker et al., 2011, p. 3).	Major focus is on household income, assets, debt, and major transactions. Sample size about 6,000 "primary economic units" (single person or couple with anyone else in the household financially dependent on them). Important because of detail on income and assets and its supplementary sample of tax returns for high-income people who do not typically fall into general population samples and who are not likely to respond if they do.
Survey of Economic Opportunity (SEO) (2-year panel)	OEO commissioned the Census Bureau to conduct the SEO in March 1966 and 1967 to provide microdata for research on poverty	Sample of 35,000 families: 18,000 families drawn like the CPS sample and 12,000 families from an oversample of urban poverty areas. Included CPS income supplement content with new questions on health status, poverty status, assets, income, child spacing, and wages and hours for the survey week.
Panel Study of Income Dynamics (PSID) (long-running panel)	To build on the SEO to learn about dynamics of poverty over time, OEO contacted the University of Michigan Survey Research Center (SRC) about following a subsample of SEO households. SRC added sample households from its national sampling frame to represent the entire population. What began as the 5,000 Families study in 1968 became the PSID, which continues to provide invaluable longitudinal information on economic and social well-being in the United States.	Original sample 5,000 families—2,000 low-income families from the SEO plus 3,000 families from the SRC national sampling frame. Follows up family members who move away from original households. Interviews families every 2 years.
Survey of Income and Education (SIE) (one-time cross-section)	Conducted in April–July 1976 by the Census Bureau for DHEW to obtain reliable state-level estimates of children in poverty for Title I education fund allocations, as mandated in the	Sample size of 158,000 households (about 3 times the CPS sample at that time), of which 151,000 responded. Used CPS income supplement questions on current employment, past work experience, and income; added questions

	Educational Amendments of 1974 (see, e.g., U.S. Census Bureau, 1978).	on school enrollment, disability, health insurance, bilingualism, food stamp recipiency, assets, and housing costs.
Consumer Expenditure (CE) Survey (repeated cross-section) [31]	BLS survey, conducted by the Census Bureau, previously conducted in 1950, 1960–61, and 1972–73, became continuous beginning in 1980. Provides market basket information for the Consumer Price Index and data on consumption patterns.	Quarterly interviews of about 6,800 consumer units (similar to households), plus 2-week diaries of detailed expenditures collected from about 6,000 consumer units. Collects detailed income and asset data to use in describing and analyzing expenditures.

NOTES: BLS = Bureau of Labor Statistics; CPS = Current Population Survey; FDIC = Federal Deposit Insurance Corporation; FRB = Federal Reserve Board. SIPP came on line in 1983—see Sections 5.2.3 and 5.3 below.
SOURCE: Author's review of BLS, Census Bureau, FRB, and University of Michigan websites.

5.2.3 R&D for a New Survey of Income and Program Participation

Problems with the CPS income supplement for analyzing low-income assistance programs and proposed policies led to one-time surveys such as the SEO and SIE described above and an interest in a separate and continuing income survey. These problems included:

- underreporting of public assistance, public and private pensions, and property income;
- lack of information on noncash benefit programs (partially remedied with the expansion of the questionnaire in 1980);
- lack of information on assets, taxes, and expenses used in determining program eligibility and benefits;
- lack of information on intra-year fluctuations in income; and

[31] The CE was conducted under different names at intervals of 10-15 years between 1901 and 1950.

- that the CPS household interviewed in March may have excluded (included) people who were (were not) present in the household during the income reference year (see below on Data Quality).

After several years of discussion, the DHEW Office of the Assistant Secretary for Planning and Evaluation (ASPE) launched the Income Survey Development Program (ISDP) in 1975 with the Census Bureau and SSA (Ycas & Lininger, 1981). The ISDP included four data collection components and contracts with four organizations to conduct relevant research. The four components were:

- A Site Research Test in five cities in 1977–1978 with a sample of 5,500 adults drawn from AFDC and SSI administrative records and a household area frame;
- A nationwide 1978 Research Panel in 1978–1979 with a sample of 2,350 households drawn from an area frame and SSI records interviewed over 5 quarters;
- A nationwide 1979 Research Panel in 1979–1980 with a sample of 9,300 households from the Census Bureau's area frame and the SIE with oversampling of SIE households in the lowest and highest of nine income categories, plus 1,000 households each from SSI and Basic Education Opportunity Grant records, interviewed over 5 quarters; and
- A Special Frames Study, which examined subpopulations drawn from six different administrative records systems in five states in 1980.

On the basis of the ISDP results (see Section 6.2.1 below), SIPP was launched in fall 1983 as a series of short term panels, each panel interviewed at 4-month intervals (waves) over 8

waves and new panels introduced every year. SIPP has had a rocky path and been redesigned several times, but it continues to serve as a valuable tool for policy analysis.

5.3 1980 to 1990—Setback

The Reagan Administrative took office in early 1981 with the intention of cutting assistance programs and also the data collection, policy analysis, and microsimulation model infrastructure that supported policymaking in this area. ASPE—the DHHS headquarters policy analysis group—experienced significant staff losses from 1980–1988 and a stunning reduction of 86% of its funding in real terms for policy research and modeling (National Research Council, 1991, p. 36). Large-scale controlled experiments were a thing of the past.

The operating budgets of nine major federal statistical agencies that produce key economic statistics—such as GDP, the CPI, the unemployment rate, and the poverty rate—declined by nearly 13% percent in real terms from 1980–1988 (National Research Council, 1991, p. 37). The number of professional statistical staff also declined, as did the number of OMB staff charged with coordinating federal statistical programs (there was no chief statistician from 1981–1985). Budget cuts for the Census Bureau caused delays in release of 1980 census data products from the long-form sample (which included income) and delays in revising the March CPS processing system to fully use the expanded number of income sources introduced on the questionnaire in 1980—the new processing system was not operational until 1988.

The research and statistics office (now the Office of Research, Evaluation, and Statistics, ORES) in SSA also experienced sizeable cutbacks in staff and budget, which profoundly affected the history of SIPP. All along the intention had been for SIPP to be sponsored by SSA with the

Census Bureau collecting the data, similar to the arrangements under which the Census Bureau conducts many "reimbursable" surveys (e.g., the National Health Interview Survey for the National Center for Health Statistics and the National Crime Victimization Survey for the Bureau of Justice Statistics). The intent was also to field SIPP beginning in 1981, but the incoming SSA commissioner pulled SSA out of this commitment. The new director of the Census Bureau, Bruce Chapman, convinced Ed Meese, one of President Reagan's key counselors, to have the Census Bureau take over and launch SIPP with the argument that poverty rates estimated from SIPP would be lower than those from the CPS income supplement because of the more complete income reporting expected with SIPP. The Census Bureau began interviewing for SIPP in fall 1983 (see National Research Council, 2009, Ch. 2).

6. 1960 TO 1990: DATA QUALITY AND METHODOLOGICAL RESEARCH

6.1 Quality Indicators

What about the quality of the CPS income supplement data during this period? In terms of relevance and coherence, the same problems identified in Section 4.1 on data quality for 1944–1960 remained—chiefly, the Census Bureau's continued reliance on money income and lack of comparability with BEA's family personal income series. In terms of accuracy and reliability, carefully constructed comparisons with other data sources show CPS underreporting persisting. Such standard indicators as unit and item response rates are not informative for this period.

6.1.1 Comparisons of CPS and BEA Estimates

After almost ten years when budget was not available for this work, BEA researchers produced a size distribution of family personal income for 1964, using the power of computers and newly available microdata for the CPS, matched with tax data and other sources (Budd and Radner, 1975). They extrapolated the 1964 estimates to 1970 and 1971 (Radner & Hinrichs, 1974). Several years later, a team of BEA and SSA researchers produced micro-based family personal income estimates for 1972 using the 1973 Exact Match CPS-IRS-SSA file statistically

matched with other sources (Radner, 1981).[32] Budget constraints again led to the discontinuation of this program, which was not revived until recently. Passage of the 1974 Privacy Act and the 1976 Tax Reform Act also made it more difficult to blend survey and administrative data as was done for the 1973 Exact Match file (see Box 6.1).

Box 6.1 Brief History of Exact Match Files of CPS, IRS, and SSA Records

In the 1970s, interagency agreements permitted the linkage of microdata from the Internal Revenue Service (IRS), the Social Security Administration (SSA), and the Census Bureau's Current Population Survey (CPS) income supplement. A publicly available 1973 CPS-SSA-IRS exact-match file (Kilss and Scheuren, 1978) was the basis for a major dynamic microsimulation model of social welfare policies and retirement income (DYNASIM) and was also used to analyze the quality of income reporting in the March CPS. A 1978 CPS-SSA exact-match file was the basis for another microsimulation model of retirement income (PRISM), although that file was not made publicly available (see National Research Council, 1991, p.121).

Linked data present challenges for minimizing the likelihood of re-identifying individuals, and after the passage of the 1974 Privacy Act and the 1976 Tax Reform Act, agencies curtailed the development of linked microdata files for public use. The linkages that were performed (for example, by the Census Bureau of CPS income supplement files matched with limited tax return information) were for internal use only or for research use in secure centers (see National Research Council, 1991, pp. 66-68, 134-135).

Table 6.1 shows CPS money income by type as a percentage of BEA family money income (FMI) for 1946, 1954, 1964, 1972, and 1979. Although categories are not comparable over time for other than earnings, it can reasonably be inferred that wages and salaries and Social Security were easy for respondents to report; less so for self-employment income, and very much not so for property income. Note that pensions were well reported in 1972, perhaps reflecting the dominance of defined benefit pensions at that time. Goldsmith, who prepared the 1946 and 1954 comparisons, took care to discuss errors in the FMI estimates but concluded that the magnitude

[32]Exact match files derive from linking records on two or more microdata files that share a common identifier, such as Social Security Number or name and birthdate. Statistically matched files use model-based probabilities developed from variables common to two or more files to predict the best match from one file to another (see Cohen, 1991).

of differences between the CPS estimates of, say, interest income, with the FMI OBE estimates could not be attributed to errors in the latter.

The limited information available indicates that underreporting of public assistance was a continuing problem for the CPS income supplement as well. In fact, from the outset, microsimulation models such as TRIM and MATH had to adjust participation and benefit amounts on the CPS income supplement PUMS files for such programs as food stamps (once the CPS added a food stamps question), AFDC, and SSI to match aggregate administrative controls. Without such adjustments, the models could not properly estimate a "baseline" to compare with proposed policy changes. The adjustment process was costly, duplicative across models, and less accurate than what the Census Bureau could do given its ability to access administrative records. A report of a CNSTAT panel to evaluate microsimulation models for social welfare programs (National Research Council, 1991, pp. 149-152) recommended that the Census Bureau adjust the CPS income supplement for underreporting as part of its work to release PUMS files, but this has never been done. A recent report of a CNSTAT panel on an integrated system of income, consumption, and wealth (National Academies, 2024) called for using survey and administrative data to adjust for income reporting errors in the CPS income supplement and other surveys. The Census Bureau's recently begun National Experimental Well-Being Statistics (NEWS) program, described in Section 9.1.4 below, is moving in this direction.

Table 6.1 CPS Money Income as a Percentage of OBE/BEA Money Income, Selected Income Types, 1946, 1954, 1964, 1972, 1979

Type of Income/ Income Year	1946	1954	1964	1972	1979
Wages/Salaries	91%	91%	92%	97%	97%
Nonfarm self-employment	59%	89%	98%	87%	90%
Farm self-employment	67%	73%	54%	59%	61%

Property income (interest, dividends, net rents, royalties, estates/trusts)	23% (interest, dividends) 63% (rents)	N.A.	34%	43%	42% (interest) 44% (dividends) 78% (rents, royalties)
Social Security [SS], Railroad Retirement	66% (SS + other)	N.A.	91%	97%	91%
Public Assistance [PA]	N.A.	N.A.	65% (PA + UI)	74%	69% (SSI) 77% (AFDC)
Other government transfers (UI, WC, veterans benefits, government pensions)	N.A.	N.A.	N.A.	69%	75% (veterans benefits) 69% (UI) 42% (WC) 92% (federal pensions) 78% (state, local pensions)
Private Pensions, Annuities	N.A.	N.A.	N.A.	90% (pensions + other)	75%
Total	78%	84%	84%	89%	89%

NOTES: Income types not named are not shown in an "Other" category because the content varies so much from year to year. AFDC = Aid to Families with Dependent Children; BEA = Bureau of Economic Analysis; OBE = Office of Business Economics; SSI = Supplemental Security Income; UI = unemployment insurance; WC = workers compensation.

SOURCES: 1946, 1954: Goldsmith (1958, Table 2, from aggregate data); 1964: Radner & Hinrichs (1974, Table 1, from a statistical match of IRS tax data with the March 1965 CPS income supplement); 1972: Radner (1981, Table 2, CPS aggregate divided by adjusted aggregate, from exact and statistical matches using the 1973 CPS-SSA-IRS exact-match file and additional IRS data by income type and for high-income tax filers); 1979: U.S. Census Bureau (1982, Table A-2, from internal comparisons of IRS and CPS data).

6.1.2 CPS Response Rates and Sample Size

Clear definitions for nonresponse to all or parts of the income supplement are lacking for the entire 1944–1990 period, and the available item nonresponse rates cannot readily be compared with later periods. Thus, while percentages of families and people with incomplete data rose steadily, the number of separate sources of income asked of respondents also rose, which increased the chances that people would fail to provide amounts for every source they mentioned. Consequently, I do not cite the available estimates of percent incomplete income data.

Prior to 1962, there was no form of imputation for missing income amounts—instead, statistics were reported for complete income reporters only (except for numbers of total persons and families). Subsequently, hot deck imputation was used for missing income amounts, with the imputation procedures becoming more elaborate over time. Sample sizes (eligible households) also increased significantly over the period from about 22,000 cases (1948–1956), to 35,000 cases (1957–1966), 49,000 cases (1967–1976), 58,000 cases (1977–1979), and 68,500 cases in 1980 (U.S. Census Bureau, 1982, p. 232).[33] These increases were due to additions to the CPS sample overall and to a decision as of 1966 to administer the income supplement to all 8 rotation groups, instead of 6 (previously the two incoming rotation groups were omitted). Both sample increases and imputation increased the effective sample size for estimates, which reduced variance.

Beginning in 1973, Census Bureau publications began reporting the amount of income "allocated" (i.e., imputed) in the income supplement—13% in 1972 rising to 19% in 1979. The income allocation rate indicates both (1) the difficulties of getting respondents to provide income amounts, and (2) the potential for variance and bias from the extent of imputation. Note that imputation was never done for people who likely failed to report an income source but only for people who affirmed receiving a source but did not provide an amount. See Section 8.1, Figure 8.2, below for a time series (1989–2016) of income allocation rates in the income supplement.

[33]The figures cited should be viewed as approximate; there is not agreement among Census Bureau sources about sample sizes for every year of the CPS income supplement.

6.1.3 Studies of CPS Nonrespondents

Relatively few studies of the kinds of people who do not respond to the CPS income supplement have been conducted. One study of nonrespondents to the 1970 CPS found that groups least likely to provide income amounts included: white men ages 45-64 with 12 or more years of school in large metropolitan areas; people who were self-employed or worked full-time year-round; and proxy respondents who reported income amounts for other household members. This study also established that income allocations (imputations) raised average household income (Spiers, Coder, & Ono, 1971).

A second study examined income reporting in the second quarter of 1983 among CE households. It found that groups least likely to provide income amounts included: self-employed people, older people, college graduates, homeowners, and households headed by Black people (Garner & Blanciforti, 1987).

6.1.4 Early Comparisons of the CPS and SIPP

SIPP had a rocky rollout. The first SIPP panel introduced in October 1983 had about 21,000 original sample households interviewed for nine 4-month waves. Budget cuts necessitated reductions in the number of households and waves in the 1984 and subsequent panels through 1990 (see National Research Council, 1993, p. 93). Wave 1 response rates declined modestly from 95.1% for the 1984 panel to 92.5% and 92.9% for the 1988 and 1990 panels, respectively (the 1989 panel was cut short after 3 waves—see National Research Council, 1993, Table 4-1). While interviewing ran relatively smoothly, processing and

estimation could not keep up with the flood of incoming and highly complex data. An initial quarterly publication series (see, e.g., U.S. Census Bureau, 1984) was cancelled after a few releases, and long delays occurred before public use microdata files were available.

On the positive side, in terms of data quality as measured by response indicators, SIPP performed better in its first decade than the CPS income supplement and the 1979 ISDP Research Panel, especially for lower income households. Thus:

- Income allocation rates in 1984 for SIPP were 11% versus 20% for the CPS income supplement (National Research Council, 1993, Table 3-6);
- Item nonresponse rates in the 1984 SIPP panel were low for income recipiency; they were higher for income amounts than recipiency but lower than the CPS income supplement (e.g., item nonresponse rates for self-employment income were 16% in SIPP versus 26% in the CPS income supplement—National Research Council, 1993, Table 3-4.)
- Item nonresponse rates for asset balances in the 1984 SIPP were high but lower than the rates in the 1979 ISDP Research Panel (e.g., 42% for the market value of stocks and mutual funds in SIPP versus 62% in the 1979 ISDP—National Research Council, 1993, Table 3-9).

A new problem, referred to as the "seam problem." arose for SIPP from the fact that SIPP households were interviewed at 4-month intervals. Essentially respondents anchored their program participation and benefits at the end of the reference period (i.e., close to the time of interview)—they were either on or off a program for all 4 months of an interview wave

regardless of when they actually transitioned during the wave. This phenomenon undercut the ability of SIPP to accurately capture the duration of part-year program participation spells.[34]

Table 6.2 compares the completeness of income reporting by type compared with benchmarks for SIPP and the CPS income supplement in selected years after the launch of SIPP from 1984–1996. During this period, SIPP captured more self-employment income than the CPS income supplement, although reporting fell off in both surveys over time. SIPP captured more Social Security and SSI income except in 1996 for Social Security. SIPP also captured more AFDC benefits. For veterans' compensation and unemployment insurance, SIPP had more complete reporting in 1984 and 1990 but less complete reporting in 1993 and 1996 compared with the CPS income supplement. Neither survey performed well for interest and dividends except for the CPS income supplement in 1993 and 1996.[35]

Finally, SIPP fell short of the CPS income supplement in reporting of wages, which is problematic given the importance of wages for total income. Roemer (2002) analyzed the quality of wage reporting in the CPS income supplement and the SIPP in the 1990s through an exact match to the SSA Detailed Earnings Record. He found that SIPP had an excess of low wages and a shortage of high wages compared to the CPS income supplement. Contributing factors included that more self-employment income was reported as wages in the CPS than in SIPP and that the CPS appeared to capture more "underground" income not reported in records.

[34]The seam effect occurs in many longitudinal datasets (e.g., the PSID), but it was not remarked on until analyses of SIPP uncovered it (see Callegaro, 2007, p. 3933).

[35]The Census Bureau in the early 1980s implemented a post-imputation adjustment to reported interest income in the CPS income supplement (but not the SIPP) to compensate for known downward biases in reporting (see Coder & Scoon-Rogers, 1996, pp. 25-27).

TABLE 6.2 SIPP and CPS Income Supplement Money Income as a Percentage of BEA Money Income, Selected Income Types, 1984, 1990, 1993, 1996

	1984		1990		1993		1996	
Income Type	SIPP	CPS	SIPP	CPS	SIPP	SIPP	SIPP	CPS
Wages	91	97	92	97	89	100	91	102
Self-Employment	103	70	78	67	76	59	69	53
SSI	89	85	95	89	83	84	101	84
Social Security	96	92	98	93	93	88	88	92
AFDC	84	78	70	72	89	76	76	68
Veterans' Compensation	82	60	84	78	78	85	73	90
Unemployment Insurance	76	75	84	80	77	78	63	82
Interest	48	56	53	61	62	80	50	84
Dividends	66	52	46	31	96	54	51	59

NOTES: AFDC = Aid to Families with Dependent Children. Estimates for the same survey and year do not always agree among sources. For example, self-employment income in 1990 for SIPP is estimated to be 85% of the BEA aggregate in National Research Council (2009, Table A.1), compared with 78% as shown above.
SOURCES: 1984, 1990: U.S. Census Bureau (1998, Table 10.2—from Coder & Scoon-Rogers, 1996, Table 2); 1993, 1996: National Research Council (2009, Tables A.1, A.2—from Roemer, 2000).

6.2 Methodological Research

6.2.1 ISDP Experiments

The ISDP was the main vehicle at this time for methodological research on improving the quality of income and program participation reporting; it undertook an amazing amount of data collection from 1977–1980 (see Section 5.2.2 above). A good deal was learned from the ISDP, although the analysis was not as extensive as planned due to budget cuts beginning in 1981 as described previously (see Kulka, 1984, on the 1979 ISDP Panel). Also, the results were intended to inform the design of SIPP, which followed original sample members over several interview waves, and not cross-sectional surveys such as the CPS income supplement. (See Section 6.2.2 below for experimentation conducted as part of SIPP in the 1980s.)

Some of the most important methodological results from the ISDP included:[36]

- ***Income recall period***—The ISDP Site Research Test, conducted in fall 1977–spring 1978, compared income responses collected in two quarterly interviews (3-month recall) with one interview with 6-month recall. It found that significantly fewer people reported income receipt with a longer recall period compared to a shorter period, although income levels for types reported were not significantly different between the two recall lengths. Based on this result, SIPP for many years used a 4-month recall period as a compromise between survey costs and the likelihood of more complete income data (see Huang et al., 1993).[37]
- ***Annual vs. quarterly wage reporting***—The ISDP 1978 Research Panel asked for wages at each quarterly interview and an annual amount at the 5th interview with encouragement to consult W-2 records (Feldman, Nelson, & Coder, 1980). Means and medians from the 5th interview and from summing the 1st-4th interview amounts were similar due to compensating errors; people who worked full-year and who consulted their records had more consistent reporting. Comparing individuals, only 55% were on the diagonal of annual earnings versus the sum of quarterly earnings. The analysis could only use 54% of the jobs reported by respondents because of missing data problems in one or more quarterly interviews or the 5th annual retrospective interview.
- ***Household vs. person screening for income recipiency***—The 1979 ISDP Research Panel included a controlled experiment in the 1st wave in which some households were asked about income recipiency for all members before querying individual members and other

[36]The results provided in this list from the 1979 ISDP Panel are from Kulka (1984, Table 2).

[37]The 1979 ISDP Research Panel experimented with 3-month versus 6-month recall for asset values, but the data were never analyzed. It also experimented with 1, 2, and 3 months recall, finding little effect (Kulka, 1984, Table 2).

households went straight to querying individuals. The results indicated that household screening did not improve quality or reduce interview time compared to not screening.

- ***Maximum self-response vs. proxy response rules***—The 1979 panel assigned some households to a maximum self-response treatment while allowing proxy responses more readily for other households. Maximum self-response was slightly more expensive and produced slightly better quality data but had lower interview rates than the proxy response treatment.
- ***Feasibility of obtaining quarterly nonfarm self-employment income through separate mailback surveys***—The 1979 panel abandoned asking self-employed people to mail in quarterly income reports because of poor response at the outset.
- ***Costs of following up movers***—The 1979 panel determined that following up people who left their households increased costs by about 8 percent but improved data quality.

6.2.2 Early SIPP Experiments

The new SIPP, launched in fall 1983, benefitted from some ISDP results, although much ISDP research was not completed due to the funding cuts at ASPE. SIPP itself from the outset had an active research and development program. In its initial years, research focused on such topics as wave nonresponse and its treatment; field considerations, such as mover follow-up rules; comparisons of survey responses with administrative data; issues in developing longitudinal data products from SIPP; and the "seam" problem discussed above. Experiments included maximal use of telephone interviewing to reduce costs (adopted in 1992 for most waves); providing respondents with prior-year asset amounts to improve reporting of changes in

assets; and collecting data on employer-provided benefits. Research findings on data quality problems led to dropping a second administration of an assets module in each panel and to deleting a "missing wave" module designed to fill gaps when someone did not participate in a wave but rejoined in a subsequent wave. Research on some topics, such as the seam problem, was inconclusive, and budget cuts prevented some improvements, such as changes to imputation and weighting procedures to ameliorate biases uncovered in research (National Research Council, 1993, pp. 204-205).

7. 1990 TO 2010: INNOVATION WITHOUT INTEGRATION

The period from 1990–2010 saw significant developments for income and poverty statistics, building on the foundations laid in the 1960–1980 period, and also missed opportunities. On the plus side, the CPS income supplement, which became the CPS ASEC in 2002, added sample and questions, which made possible alternative estimates of after-tax and transfer income and poverty followed by experimental estimates of poverty based on the recommendations of a National Academies report (National Research Council, 1995). BLS was an active partner with the Census Bureau in the experimental poverty estimates work, moving with alacrity to implement experimental poverty thresholds with CE data. In addition, as part of welfare reform legislation in 1996, some SIPP panels were followed for a 10-year period in a new Survey of Program Dynamics (SPD), and small-area modeling techniques with administrative records enabled the development of the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program in the late 1990s for use in Title I fund allocations to school districts. Finally, in a major innovation, the continuous American Community Survey (ACS) replaced the census long-form sample in 2005.

On the deficit side, BLS only belatedly, in 2004, began imputing missing income amounts for use in analyzing expenditure patterns at different points in the income distribution. BEA, while making improvements in the NIPAs and developing satellite accounts (e.g., travel and tourism in 1998), did not revive its program of personal income distributional estimates for families or households. The quality of income reporting in surveys (see Section 8 below) declined over the period.

Overall, there was a lack of leadership by the statistical system to reach closure on such matters as adopting a new poverty measure or a preferred method of valuing health care and other in-kind benefits. One reason is that the Census Bureau does not "own" the poverty measure in the way that BLS "owns" the consumer price index or BEA "owns" the NIPAs, because the poverty measure is specified in an OMB statistical policy directive, which requires action by the administration (and/or Congress) to change.

There was also no effort to make the available macro estimates, such as personal income, coherent with micro estimates, such as household money income (see, e.g., Ruser, Pilot, & Nelson, 2004). Nor were there steps to adjust for income reporting errors by such means as ratio adjusting to benchmark amounts the way that surveys are routinely ratio-adjusted to census-based population estimates by age, sex, race, and ethnicity (see, e.g., Shapiro & Kostanich, 1988).

THOMAS SAWYER
Member of Congress, Champion of Federal Statistics
(1945-2023)
Education: B.A., M.A., University of Akron
Career: teacher; member of Ohio state house of representatives, 1977-1983; mayor of Akron, Ohio, 1984-1986; congressional representative (D), 1987-2003; member of Ohio state senate, 2007-2016
Selected Initiatives: chaired subcommittee overseeing the 1990 census, urged statistical adjustment for coverage errors; mandated studies of poverty measure and small-area poverty estimates for Title 1 fund allocations; mandated Local Update of Census Addresses Program; urged revision of Statistical Policy Directive No. 15 (race and ethnicity)
Source: Bioguide Search.

Congress provided leadership in some areas, including the push to add questions on in-kind benefits to the CP income supplement, which occurred in 1980, the mandate for the 1995 National Academies poverty report,[38] the mandate for what became the SAIPE program, and the mandate for the SPD. Congress also passed the Confidential Information Protection and Statistical Efficiency Act (Title V of the E-Government Act of 2002 and now Title III of the Evidence Act of 2018). Based on the unstinting work of the

[38]Ruggles (1990) was a major impetus for the congressional mandate to the National Academies to study poverty concepts, information needs, and measurement methods.

chief statistician, CIPSEA extended uniform confidentiality protections and penalties for disclosure of identifying information to the entire federal statistical system. It also provided for sharing of federal administrative data among BEA, BLS, and the Census Bureau—necessary for any "blended data" solution for improving income and other economic statistics. However, the resistance of the Treasury Department and the Joint Committee on Taxation to sharing of tax data limited the scope of this provision.

Overall, while this period saw important advances in household income and poverty statistics, there were also important gaps, a lack of coherence between the available macro and micro series, and a plethora of data and estimates without agreement on key concepts and that were not of comparable quality. These problems contributed to the lack of foreknowledge of the impending Great Recession of 2008–2009 (see Section 9.1 below).

7.1 Survey Improvements

This section describes enhancements to the CPS and CPS ASEC in sample size and questionnaire detail (7.1.1); redesigns of SIPP (7.1.2); the 10-year SPD (7.1.3); and the replacement of the decennial census long-form sample with the continuous ACS (7.1.4). See Section 7.2 for alternative estimates of income and poverty made possible by the new questionnaire detail in the CPS ASEC, and Section 7.3 for the use of blended survey and administrative data for the SAIPE program.

7.1.1 Improvements to the CPS and CPS ASEC

CPS ASEC sample expansion The Balanced Budget Act of 1997, which funded the Children's Health Insurance Program (CHIP), included a provision for ASPE/DHHS to fund an expansion of the income supplement sample to support state-level estimates of children eligible for CHIP. To accommodate this need, the Census Bureau beginning in 2002 did three things: (1) asked the ASEC questions of one-quarter of the February and April CPS samples not also included in the March sample; (2) asked the ASEC questions of selected sample households from the preceding August through November CPS sample during the February-April period; and (3) increased the monthly CPS sample in states with high sampling errors for uninsured children. The ASEC sample today includes the regular sample of 70,000 households (including the CHIP expansion to boost the sample in selected states), plus 6,000 Hispanic households from the November CPS (part of the ASEC since 1976), plus 19,000 households added as just described with CHIP funding.[39] The total CPS ASEC sample size is about thus about 95,000 households (see Figure 8.1 below for CPS ASEC response rates).

CPS ASEC and CPS questionnaire expansions The Census Bureau added questions to the CPS ASEC to enable estimation of variations of the poverty measure recommended in the National Academies 1995 report without having to impute values from other sources. The added questions covered medical-out-of-pocket (MOOP) expenditures, child support paid, and other items.

[39]See technical documentation for the 2024 CPS ASEC at 2024 CPS Supplement Technical Documentation, p. 2-2. Note that other sources indicate that the basic CPS sample size is 60,000 households and that the CPS ASEC sample size is 89,500 households (see, e.g., Methodology; U.S. Census Bureau, 2024, p. 50).

Another questionnaire addition—this time to the basic monthly CPS—was a question added around 1992 on family money income in the last 12 months. The question originally contained 14 categories up to $75,000 or more, increased to 16 categories up to $150,000 or more in October 2003. A consulting firm published a monthly household income series based on this item (neither BLS nor the Census Bureau publishes the data, which are available in public use microdata sample files) from October 2011 through December 2019.[40] Several researchers published a monthly poverty series beginning in the early months of the COVID-19 pandemic through 2022, using a question on total family income in the main (monthly) CPS.[41]

7.1.2 SIPP's Redesigns

Given the rollout problems for SIPP described in Section 6.1.4 above, the Census Bureau investigated alternative designs for SIPP. Census Bureau staff (John Coder and Roger Herriot) proposed in 1988 to integrate the CPS ASEC and SIPP with administrative records to produce improved income and program participation data. They began by examining the potential for integrating IRS and survey data on earnings for married couples, but the available software and methods were not up to the task, so the idea was dropped (see National Research Council, 1993, pp. 38-39).

To gain some breathing room, the Census Bureau did not field a SIPP panel in 1994 or 1995. A National Research Council (1993) report recommended a design in which new panels would be introduced every two years rather than every year and extend over 4 years, with each

[40]This series has recently been revived—see Household Income Series – Data-driven insights on the U.S. economy and society.

[41]See COVID-19 Poverty Dashboard – Poverty Measurement; see also Han, Meyer, & Sullivan (2022).

panel having twelve 4-month interview waves. Others argued for non-overlapping panels to provide larger sample sizes each year.[42] Ultimately, beginning with the 1996 panel, the Census Bureau opted for 4-year non-overlapping panels with twelve 4-month waves each. This design guaranteed larger annual sample sizes, emphasized the longitudinal nature of the data, and reduced the strain on field staff and processing from having to deal with multiple panels at the same time.

The inability, however, to come up with solutions to stem the decline in SIPP data quality, continuing delays in releasing data products, and budget cutbacks led Census Bureau leadership in early 2006 to propose to eliminate SIPP in its fiscal 2007 budget to make up a shortfall in the Census Bureau's top line budget number from OMB.[43] David Johnson, chief of the Social, Economic, and Housing Statistics Division, used the metaphor of Phoenix rising for an idea to use the CPS ASEC, administrative records, and follow-up surveys to replace SIPP with a higher quality and more timely Dynamics of Economic Well-Being System (DEWS). Heather Boushey (then with the Center for Economic and Policy Research) led a campaign to urge Congress to save SIPP (over 400 researchers signed a letter in SIPP's support that appeared in the New York Times) (see National Research Council, 2009, pp. 26-0).

Congress appropriated additional funds for fiscal 2007 to retain SIPP, although not the full amount heretofore allotted. The Census Bureau cut the sample in half for the last 4 waves of the 2004 SIPP panel and eliminated its topical (supplemental) modules, using the remaining funds for R&D work to determine yet another design. With adequate funds in fiscal 2008 to

[42]The original plan had been for the Census Bureau to combine data from two panels for an adequate sample size for each year; however, it proved difficult to accomplish this on a timely basis.

[43]Budget shortfalls led the Census Bureau to delay the 2000 panel to 2001 and that panel had a 25% cut in sample beginning in Wave 2; the 2004 panel saw a 58% cut in sample and elimination of topical modules in its last four waves (National Research Council, 2018, p. 18).

embark on a 2008 panel under the old design and a congressional directive not to use the DEWS approach, the Census Bureau worked toward implementation of a redesign. The new design assumed that each panel would have 4 yearly interviews over 4 years, and the questionnaire would incorporate an event history calendar with the expectation to reduce costs and improve or at least maintain data quality compared to the previous schedule of interviews every 4 months. The new design was implemented in the 2014 panel (see National Research Council, 2018, Ch. 2).

The saga of SIPP redesigns was not over, however. For 2019, the Census Bureau decided to revert to a design of overlapping panels, with a new panel introduced each year. Budget was also obtained to increase sample in the 2022 and 2023 panels, but sample for the 2024 panel had to be cut back. The Census Bureau began work on yet a new design of panels with interviews every 6 months.[44] (Table 7.1 charts sample size and number of interviews for SIPP panels from 1984 to 2022.) It is unclear whether funding will be available to enable a redesign or allow current SIPP interviewing to go forward.

Table 7.1 Survey of Income and Program Participation Panels, 1984–2022, Initial Sample Size and Number of Interviews

Panel	Wave 1 Eligible Households (nearest thousand)	Number Interviews (Waves)— (4 months through 2008, 1 year thereafter)
1984	20,000	9
1985	14,000	8
1986	12,000	7
1987	13,000	7
1988	13,000	6
1989	13,000	3
1990	20,000	8
1991	16,000	8
1992	22,000	10
1993	22,000	9

[44]See SIPP SEAMLESS: Modernizing the Survey of Income and Program Participation.

1996	40,000	12
2001	51,000	9
2004	51,000	12
2008	52,000	16
2014	42,000	4
2018	45,000	4
2019	25,000	1
2020	22,000	4
2021	15,000	Ongoing
2022	48,000	Ongoing

NOTE: Documentation is not available for the 2023 or 2024 panels.
SOURCE: U.S. Census Bureau (2023a, Table 1-2).

7.1.3 Welfare Reform and the Survey of Program Dynamics (SPD)

In 1996, Congress passed the Public Responsibility and Work Opportunity Reconciliation Act (PRWORA, otherwise known as "welfare reform"), which made sweeping changes to AFDC. Created by the 1935 Social Security Act, AFDC was an entitlement program in which the federal government reimbursed a substantial portion of state costs (the matching rate was higher for states with lower per capita income), and states had considerable latitude to set benefit levels and other program provisions. AFDC's replacement, Temporary Assistance to Needy Families (TANF), is a block grant program to the states, which retain latitude over many provisions but must adhere to such federal requirements as a 5-year lifetime participation limit.

Congress also instructed the Census Bureau to collect data to permit analysis of the effects of PRWORA on participation, employment, and related topics—specifically, to continue to follow households that participated in the 1992 and 1993 SIPP panels through 2001. The Survey of Program Dynamics (SPD), as it was named, provided 10 years of data: 3 years before PRWORA from SIPP itself and 7 post-PRWORA years from annual data collection. Its response rates were reasonably comparable to other longitudinal household surveys, such as the PSID,

achieved by using incentives and making special efforts to return nonrespondents to the survey (see U.S. Census Bureau, 2003c).

7.1.4 Implementation of the American Community Survey (ACS)

Interest in small-area data on income and other topics goes back in the United States at least as far as 1941, when then deputy director of the Census Bureau, Philip Hauser, proposed an "annual sample census." In the 1980s, statistical luminaries made similar proposals (e.g., Kish in 1981 called for "continuous measurement" or a "rolling census" design in which one-tenth of the nation would be surveyed each year; Horvitz in 1986 proposed a design that would survey one-tenth of the nation's counties each year). In 1988, Roger Herriot, then chief of the Population Division, proposed an ongoing "Decade Census" program that combined elements of Kish's and Horvitz's suggestions (see National Research Council, 2007, pp. 20-22).

ROGER HERRIOT
Federal Statistician Who Facilitated the ACS, SIPP, Blended Data, Small-Area Estimation . . .
(1941-1994)
Education: B.A., Colorado State University; M.A., economics, University of Connecticut
Career: 1969-1990, U.S. Census Bureau, including chief, Population Division; 1991-1994, associate commissioner for statistical standards and methodology, National Center for Education Statistics
Selected Awards: Fay-Herriot (1979) model for small-area estimation widely cited/used; ASA fellow; Julius Shiskin Award for Economic Statistics; Roger Herriot Award for Innovation in Federal Statistics established in his honor
Source: ROGER A. HERRIOT DIES - The Washington Post

Following concerns raised about the impact of lower response rates for the long-form sample in the 1990 census on census coverage and a growing need for up-to-date small-area estimates, the Census Bureau set up a staff to research a continuous measurement design—what became the American Community Survey. It was originally hoped that the ACS could replace a long-form sample in 2000, but, wisely, the

decision was made to conduct further tests and make comparisons with the long-form sample in 2000. Tests included four counties in 1996, expanded to 36 counties in 1999-2004, and included a national Census 2000 Supplementary Survey (C2SS) conducted monthly throughout 2000, demonstrating feasibility. The ACS went operational for households in 2005 and added group quarters in 2006 (see National Research Council, 2007, p. 22; see also Anderson, Citro, & Salvo, 2011). The ACS content includes eight types of income and total income for each person in a sampled household and the value of owned housing.

The 2000 census was the last to include a long-form sample, and its results bore out the concern about quality. In particular, imputation rates were generally higher for the 2000 long-form sample compared to the 1990 long-form sample—thus, 30% of people had some or all of their income imputed in 2000 compared to 13% in 1990 (National Research Council, 2004, Table 7.4). In addition, the gap between short-form and long-form return rates (mail questionnaires received as a percentage of those mailed to occupied households) widened from 5 percentage points in 1990 to 9 percentage points in 2000 (National Research Council, 2004, Box 4.1).

The ACS, in contrast, had lower imputation rates than the 2000 census long-form sample. In the 2005 ACS, 18% of people had some or all of their income imputed, although that percentage has risen over time, standing at 31% in 2023 (still lower than the CPS ASEC rate of over 40%—see Figure 8.2 below).[45]

[45]See Item Allocation Rates | American Community Survey | U.S. Census Bureau for ACS allocation (imputation) rates over time. One reason for somewhat better data quality in the ACS may be that, as part of the decennial census program, response to it is mandatory unlike other surveys, including the CPS ASEC, for which response is voluntary.

7.2 Alternative Income and Poverty Estimates Based on the CPS ASEC Questionnaire Expansion

7.2.1 Income and Poverty Estimates Taking Account of In-Kind Benefits and Taxes

The 1980 expansion of the questionnaire to include in-kind benefits sparked the initial Census Bureau efforts to produce alternative estimates of income and poverty from the CPS ASEC—that is, estimates not restricted to money income. Smeeding in *Technical Paper No. 50* (1982) did important groundwork by assessing various methods of valuing in-kind benefits and the effects on poverty (see Table 7.2). The thorniest definitional issue concerned valuation of medical care benefits. Adding the full insurance costs of Medicare and Medicaid to income (as is done in BEA's personal and household income series, in an early Congressional Budget Office (CBO) publication [1977], and in the series CBO began on disposable household income in 2011 with estimates back to income year 1979) makes older people and disabled people look well off regardless of whether they have enough income to pay for rent or other necessities. Including no value for these programs, however, makes uninsured people look as well off as people with benefits. The Census Bureau later adopted a "fungible value" definition for Medicare and Medicaid (see Box 7.1), which it used for its alternative poverty estimates series for income years 1992–1994.[46]

[46]The Census Bureau treated employer contributions to health insurance as part of wages and included their full value in income (see, e.g., U.S. Census Bureau, 1993, p. B-3).

Table 7.2 Percentage of People in Poverty, Official Thresholds, Alternative Income Definitions, 1979

Population Group	All People (%)			People Ages 65 and Older (%)		
Income Concept	**Market Value**	**Recipient Value**	**Budget Shares**	**Market Value**	**Recipient Value**	**Budget Shares**
Money Income (MI)	11.1	11.1	11.1	14.7	14.7	14.7
MI + Food + Housing	9.4	9.5	9.8	12.9	13.1	13.7
MI + Food + Housing + Noninstitutional Medical Care	6.6	8.7	8.9	5.2	9.3	10.8
MI + Food + Housing + All Medical Care	6.4	8.2	8.9	4.5	7.0	10.8

NOTE: The budget shares method limits the value of food, housing, or medical benefits to proportions spent on those items by people at or below the poverty line in 1960-61 when in-kind transfers were minimal. Later, the Census Bureau used a "fungible value" method used (see Box 7.1).
SOURCE: Smeeding (1982, Tables A, B).

Box 7.1 Valuing Medicare and Medicaid Benefits Using a "Fungible Value" Approach

For determining the "fungible value" of Medicare and Medicaid costs to include in family resources for determining poverty status, the Census Bureau:

- determined the family's minimum food and housing needs, using the Thrifty Food Plan costs for the family's size and composition and HUD's Fair Market Rents by county;
- subtracted the family's food and housing minimum needs from its money income plus food stamps and housing subsidies;
- compared the family's remaining resources, if any, to the mean Medicare and Medicaid expenditures in its risk class (aged 65 and over, disabled, all other).

If the family had zero remaining resources, then no value was added for Medicare or Medicaid; otherwise, some or all of mean Medicare or Medicaid expenditures were added to family resources depending on the difference between resources and minimum food and housing needs.

SOURCE: U.S. Census Bureau (1993, pp. B-2, B-3).

Separately in the early 1980s, the Census Bureau conducted research on the effect of taxes on income distributional measures. An expansion and integration of these research efforts led to the publication of a report entitled *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1986* (U.S. Census Bureau, 1988). That report presented calculations showing how income and poverty estimates changed when specific taxes were deducted and specific benefits

were added to the income definition. Similar reports with somewhat different names were published for income years 1989, 1990, 1991, 1992, 1993, 1994, 2003, and 2004, and U.S. Census Bureau (1992) presented estimates for 1979–1991. These publications included from 14 to as many as 18 definitions. The reports for income years 2003 and 2004 each presented 17 definitions but focused on just a few of them (U.S. Census Bureau, 2005, 2006). The report for 2004 focused on just four: money income, market income, post-social insurance income, and disposable income. Not until the report for income year 2021 did the Census Bureau regularly publish an alternative definition—namely, after-tax money income.

Table 7.3 provides the 18 alternative income definitions and poverty rates under each that the Census Bureau published for income year 1992. For the total population, many definitions have minimal effects on the poverty rate. Limiting money income to market income (definitions 1 and 2) makes a dramatic difference—official poverty increases from 14.5% to 22.6%. Including all cash and noncash benefits, tax credits, and the annuity value of owning a home produces the lowest poverty rate of 10.4%.

Table 7.3 Eighteen Alternative Definitions of Income and Their Effects on Official Poverty Rates for All Persons in the Poverty Universe, Income Year 1992

Definition	Poverty Rate (%)
1. Money income excluding (realized) capital gains (current measure)	14.5
1a. Money income after taxes (not counting the EITC)	15.8
1b. Money income after taxes (counting the EITC)	14.9
2. Definition 1 less government money transfers (Social Security, Railroad Retirement, SSI, unemployment benefits, workers' compensation, veterans' payments, AFDC, other cash public assistance)	22.6
3. Definition 2 plus (realized) capital gains	22.5
4. Definition 3 plus health insurance supplements to wage or salary income	21.9
5. Definition 4 less Social Security payroll taxes	22.9
6. Definition 5 less federal income taxes (excluding the EITC)	23.2

7. Definition 6 plus the EITC	22.4
8. Definition 7 less state income taxes	22.6
9. Definition 8 plus nonmeans-tested government cash transfers (Social Security, Railroad Retirement, unemployment benefits, workers' compensation, veterans' payments, Black Lung payments, Pell grants and other educational assistance)	15.5
10. Definition 9 plus the fungible value of Medicare	15.1
11. Definition 10 plus subsidies for regular price school lunches	15.1
12. Definition 11 plus means-tested government cash transfers (AFDC, other cash public assistance, SSI, means-tested veterans' benefits)	14.0
13. Definition 12 plus the fungible value of Medicaid	13.0
14. Definition 13 plus other means-tested government noncash transfers (food stamps, subsidies for free and reduced-price school lunches, housing subsidies)	11.7
14a. Definition 14 minus fungible value of Medicare and Medicaid	12.6
15. Definition 14 plus net imputed return on equity in own home (a calculated annual benefit of converting one's home equity into an annuity, net of property taxes)	10.4

Notes: AFDC = Aid to Families with Dependent Children; EITC = Earned Income Tax Credit. The official "poverty universe" excludes people in institutions, the homeless, foster children, and other unrelated children under age 15. In the fungible value approach, Medicare or Medicaid benefits are counted as income to the extent that they free up resources that could have been spent on medical care. If family income is not sufficient to cover the family's basic food and housing requirements, then Medicare or Medicaid have no income value. Otherwise, Medicare or Medicaid have the income value of the excess of family income over basic needs up to the amount of the market value of the medical benefits.
Source: U.S. Census Bureau (1993, pp. vii-viii, xvii, J-1, J-3).

7.2.2 Poverty Estimates Based on the 1995 National Academies Report

In 1995, the National Academies released a congressionally mandated report, *Measuring Poverty: A New Approach*, which recommended ditching the official poverty measure and replacing it with a measure that revised both the thresholds and the resource definition (see Table 7.4 for a comparison of the official and recommended measures). In a nutshell, the recommended measure took account of basic needs estimated from Consumer Expenditure Survey data for the thresholds and expanded the resource definition from money income to disposable money and

near-money income, excluding nondiscretionary expenses. The rationale for these extensive changes was that the official measure could not capture important components of families' resources or update the thresholds for changes in the standard of living. For example, an increase or decrease in Social Security payroll taxes, the EITC, or nutritional benefits could have no effect on the official poverty measure, by definition.

The Chief Statistician of the United States in OMB, Katherine Wallman, immediately put into place an interagency technical working group and obtained funding for the Census Bureau, BLS, and David Betson, a member of the National Academies' study panel, to begin kicking the tires on the report's recommendations. From 1999 to 2003, the Census Bureau, with input from BLS, issued experimental estimates of poverty that varied one or more aspects of the thresholds or the resource definition or both. For estimating resources, the Census Bureau used alternative data sources where necessary to impute some components of income and nondiscretionary expenses and new questions on the CPS income supplement as soon as they were added. Box 7.2 lists the relevant reports and their experimental poverty measures.

Table 7.4 Elements of the Official and 1995 National Academies' Recommended Poverty Measures

Element	Official Measure	1995 Proposed Measure
Threshold Concept	Food times a large multiplier for all other expenses	Food, clothing, shelter (including utilities), plus a little bit more for other needs
Updating Method for Thresholds	Adjust annually by the CPI-U (absolute thresholds) (from 1963–1969, the thresholds were updated by the change in the per capita cost of the economy food plan)	Update starting threshold for real change in standard of living; then update annually by change in spending in food, clothing, and shelter over previous 3 years for 2-adult/2-child families (quasi-relative thresholds)
Threshold Adjustments By Family type By Geographic Area	Separately developed thresholds by family type based on dietary needs; lower thresholds for elderly singles and couples No geographic adjustments	Determine reference family threshold and adjust with a two-parameter equivalence scale for economies of scale for larger families and that children need less than adults Adjust for housing cost differences by region and size of metropolitan area using HUD Fair Market Rents

Family Resource Definition (to compare to threshold to determine poverty status)	Gross before-tax regular money income from all sources	Gross money income plus value of nearcash in-kind benefits (e.g., food stamps), minus nondiscretionary expenses (income and payroll taxes, capped child care and other work expenses, child support paid to another family, and health insurance premiums and other medical out-of-pocket expenses [MOOP])
Unit of Analysis	Families and unrelated individuals	Families (including cohabiting couples) and unrelated individuals
Data Sources for Thresholds and Resource Measurement	1955 survey for thresholds; CPS income supplement for resources	CE Interview Survey for thresholds; SIPP for resources
Revision Schedule	None—minor changes were made to reduce the number of thresholds in 1969 and 1981; otherwise, the measure remains the same as when it was first developed in the 1960s	Measure should be thoroughly reviewed every 10 years and revised as appropriate (National Academies, 2023c, represents the first such review subsequent to adoption of the Supplemental Poverty Measure—see Section 9.1.1).

SOURCE: National Academies (2023c), Appendix A; see also Fisher (1992).

Box 7.2 Census Bureau Reports with Experimental Poverty Measures Based on the 1995 National Academies Report

U.S. Census Bureau (1999, June). *Experimental Poverty Measures: 1990 to 1997*. By Kathleen Short, Thesia Garner, David Johnson, and Patricia Doyle. Report P60-205.

Presented alternatives for each of the following:

- Experimental thresholds
- Equivalence scales
- Geographic adjustments
- Food stamps and school lunch subsidies added to resources
- Housing subsidies and heating assistance added to resources
- Valuations of work-related expenses subtracted from resources
- Taxes in resources
- All in-kind transfers in resources, before and after taxes
- Treatment of medical care
- Treatment of owner-occupied housing
- Units of analysis

U.S. Census Bureau (2000, September). *Poverty Among Working Families: Findings From Experimental Poverty Measures: 1998*. By John Iceland. Report P23-203

Focuses on three measures:

- NAS: Measure that most closely follows the 1995 National Academies' report's recommendations
- DCM2: NAS measure except uses a different method to estimate child care costs
- NAS-NGA: NAS measure except makes no adjustments to the thresholds for differences in housing costs among regions and metropolitan area size categories

U.S. Census Bureau. (2005, June). *Alternative Poverty Estimates in the United States: 2003*. By Joe Dalaker. Report P60-227.

5 measures use official thresholds (times two inflation adjustments*) and vary income definitions:

- MI = Money income (official definition)
- MI-Tx = Money income plus realized net capital gains, less federal and state income taxes and payroll taxes
- MI-Tx+NC = MI-Tx plus value of employer-provided health benefits and noncash transfers
- MI-Tx+NC-MM = MI-Tx+NC minus value of Medicare and Medicaid
- MI-Tx+NC+ HE = MI-Tx+NC plus the annual benefits of converting one's home equity into an annuity net of property taxes

7 measures use money income definition and vary thresholds (times two inflation adjustments):**

- No geographic adjustment of thresholds:
  - Official measure
  - MSI-NGA (Medical out-of-pocket expenses [MOOP] subtracted from income)
  - MIT-NGA (MOOP in the thresholds)
  - CMB-NGA (Combined methods—includes expected MOOP in the thresholds and subtracts the difference between expected and actual MOOP from income)
- Geographic adjustment of the thresholds for housing costs:
  - MSI-GA
  - MIT-GA
  - CMB-GA

* CPI-U, as in the official measure, and CPI-U-RS, which corrects for past overestimates of inflation (as of 2001, the two measures produce very similar estimates)

**CPI-U and using three years of CE Interview data as recommended in the 1995 report.

U.S. Census Bureau (2006, February). The Effects of Government Taxes and Transfers on Income and Poverty: 2004.

For poverty measurement, uses official threshold for the reference family with a 3-parameter equivalence scale for thresholds for other family types and four income definitions:

- Money income
- Market income = Money income minus government cash transfers (e.g., Social Security, SSI), plus imputed realized net capital gains and return on homeowner equity, minus non-child care work-related expenses (imputation of child care expenses excluded because method in flux)
- Post-social insurance income = Market income plus non-means-tested government cash transfers (e.g., Social Security, UI, WC)
- Disposable income = Post-social insurance income plus means-tested government cash and noncash transfers (SNAP, NSLP, public or subsidized housing) minus taxes (federal payroll taxes, federal and state income taxes, property taxes on owner-occupied homes)

U.S. Census Bureau (2007, March). *The Effect of Taxes and Transfers on Income and Poverty in the United States: 2005*. Report P60-232.

For poverty measurement, uses official threshold for the reference family with a 3-parameter equivalence scale for other family types and four income definitions:

- Money income
- Market income
- Post-social insurance income
- Disposable income

Also provides time series from 1978–2005 with thresholds adjusted by the CPI-U and CPI-U-RS.

7.3 Blended Data—Small-Area Income and Poverty Estimates (SAIPE) Program

Income and poverty estimates for states and smaller geographic areas figure into federal fund allocation for several programs, such as the Community Development Block Grant Program, the Job Training Partnership Act, the Head Start Program, and Title I of the 1965 Elementary and Secondary Education Act, which provides funding for states and school districts for economically disadvantaged children. Traditionally, the decennial census long-form sample was the source for income and poverty estimates in formulas, but those estimates became more and more out of date while waiting for the next census.

In 1993, agencies in five cabinet departments (Agriculture, Education, Health and Human Services, Housing and Urban Development, Labor) agreed to provide funding for the Census Bureau to make postcensal estimates of income and poverty. The IRS Statistics of Income Division became a partner in the project. Congressman Tom Sawyer (D-OH), learning of these efforts, pushed for what became the Improving America's Schools Act of 1994, which mandated the Census Bureau to develop annual estimates of poor school-age children for Title I allocations. The legislation also mandated that a CNSTAT panel be established to evaluate the Census Bureau's estimation methods and recommend their use (or not) to the Secretaries of Commerce and Education. The panel, chaired by Graham Kalton (Westat), ultimately issued 5 reports. The first report recommended further evaluation by the Census Bureau of its estimation models and that the estimates for Title I allocations in 1997 average the model-based estimates for 1973 with estimates from the 1990 census. Subsequent reports recommended full adoption of the Census Bureau's model-based estimates. The last two reports summarized the first three reports and outlined a research program for the future (National Research Council, 2000a, b).

The Census Bureau used a hierarchical Bayes modeling approach to produce reliable estimates for states and counties. It originally estimated equations to predict state and county income and poverty in the CPS income supplement using administrative data from tax returns and the Food Stamp Program (the state model also used SSI program records). The predicted values were averaged with the actual reported values for states and counties with sample in the CPS income supplement. For school districts, the Census Bureau used a shares approach that allocated the county estimates to districts based on the district shares of poor school-age children in the 1990 census. Today, the models for states and counties predict poverty in the ACS, and the school district model uses 5-year ACS data and tax information to allocate shares of the relevant county-level estimates.[47] Other programs that allocate funds to larger areas, such as states or large counties (e.g., CDBG, Head Start), use ACS estimates directly instead of the SAIPE estimates.

[47]See Small Area Income and Poverty Estimates (SAIPE) Program. There is also a Small Area Health Insurance Estimates (SAHIE) Program.

8. 1990 TO 2010: DATA QUALITY AND METHODOLOGICAL RESEARCH

This chapter reviews the quality of income and program participation data from the CPS ASEC (Section 8.1) and SIPP (Section 8.2). While response rates generally held up during this period, the percentage of people with some or all income allocated increased and the completeness of income reporting compared with BEA benchmarks declined for many sources. The concluding Section 8.3 reports on methodological research to improve the quality of SIPP income and program participation data by encouraging respondents to consult their own records, which turned out to be ineffective. Striving to garner accurate income reporting from people via surveys became an increasingly losing battle.

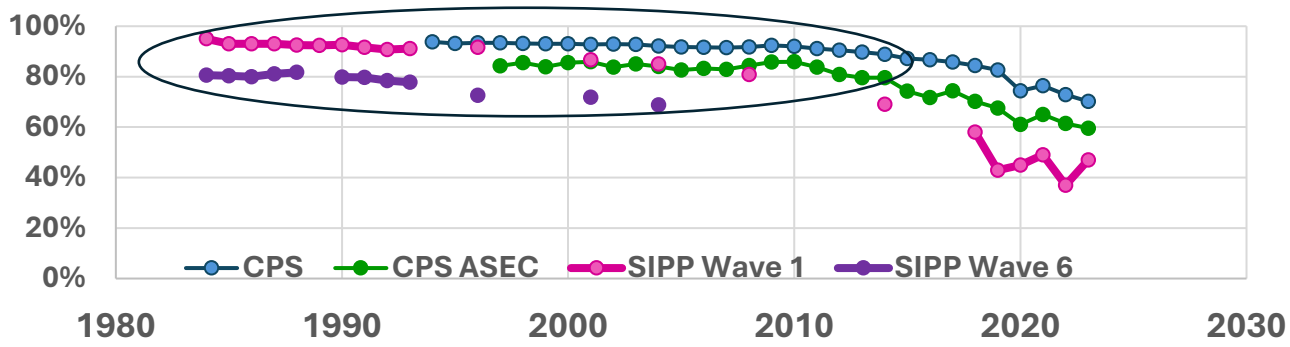
8.1 CPS ASEC Data Quality

What about the quality of the CPS income supplement data during this period? In terms of relevance and coherence, the same problems identified in Section 4.1 on data quality for 1944–1960 and in Section 6.1 on data quality for 1960–1990 remained. The Census Bureau continued to rely on an outmoded money income definition for estimating household income and official poverty rates, and the CPS ASEC estimates could not readily be compared with BEA's Personal Income series.

In terms of accuracy and reliability, Figure 8.1 shows that response rates for the main CPS remained quite steady at about 92-93% of eligible households from 1994 through 2011, with rates for the CPS ASEC ranging between 84-86% from 1997 through 2011 (SIPP rates are

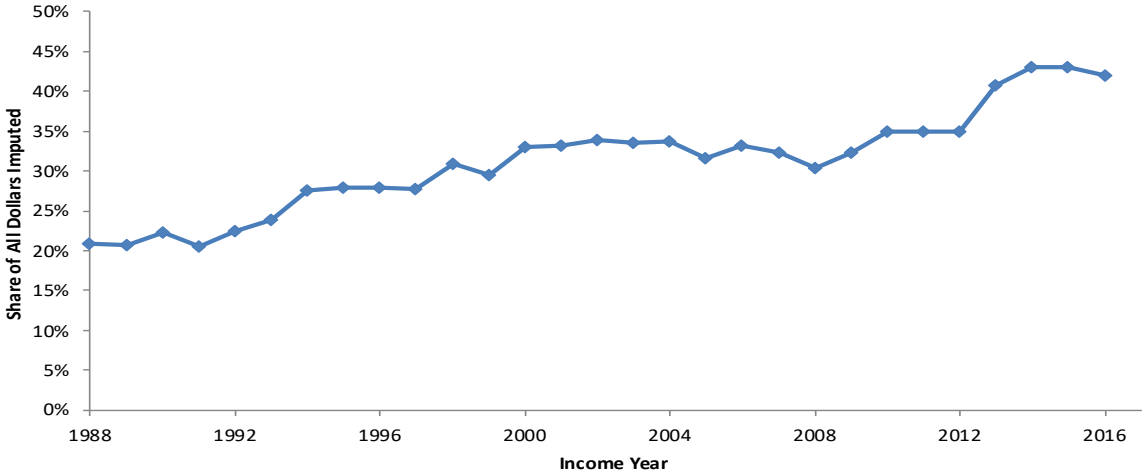
discussed in Section 8.2 below). However, data quality of the CPS ASEC as measured by rising income allocation (imputation) rates and shortfalls for some income sources in comparison with independent estimates worsened during the 1990–2010 period and beyond (see Figure 8.2 and Table 8.1). In an assessment of wage reporting in an exactly matched CPS ASEC-SSA Detailed Earnings Record file for workers ages 18–69, Purcell (2024) found that underreporting by lower earning people and overreporting by higher earning people increased over the period studied (2005–2021).

Figure 8.1 Response rates CPS, CPS ASEC, SIPP waves 1 and 6, variable years, 1984–2024



SOURCES: CPS, CPS ASEC: Katharine Abraham and David Johnson from Census Bureau staff (earlier years not available); SIPP (Wave 1 rates): National Research Council (2009, Table 2-1); U.S. Census Bureau (2023a, Figure 1.2); SIPP (Wave 6 cumulative rates): National Research Council (2009, Table 2-1) (later panels not available or not comparable). See also Czajka & Beyler (2016) for response rates for 8 surveys including the CPS ASEC from the 1990s through 2013–2015.

Figure 8.2. Percentage of total income imputed in the CPS ASEC, 1988–2016



NOTE: Hokayem, Raghunathan, & Rothbaum (2022) cite a 40% allocation rate for 2021.
SOURCE: 1989-2017 Current Population Survey Annual Social and Economic Supplements, compiled by Jonathan Rothbaum, U.S. Census Bureau.

Table 8.1 CPS ASEC Estimates as a Percentage of BEA Benchmarks, by Income Source, 1984, 1990, 1996, 2012

Income Source	1984	1990	1996	2012
Wages	97%	97%	102%	98%
Self-Employment	70	67	53	32
SSI	85	89	84	89
Social Security	92	93	92	90
AFDC	78	72	68	17
Veterans' Compensation	60	78	90	68
Unemployment Insurance	75	80	82	68
Interest	56	61	84	72
Dividends	52	31	59	98

NOTE: Estimates for the same year differ somewhat among sources; AFDC, SSI = see List of Acronyms.
SOURCES: 1984, 1990: U.S. Census Bureau (1998, Table 10.2—from Coder & Scoon-Rogers, 1996, Table 2); 1996: National Research Council (2009, Table A-2—from Roemer, 2000); 2012: Rothbaum (2015, Table 7).

Another source of variability and possibly bias are the generally necessary improvements to data processing in a long-running survey such as the CPS—for example, incorporating

population estimates controls from a new census, accommodating new questions, and the like. Box 8.1 lists the main processing changes over the history of the CPS income supplement. An early consequential change was the introduction of imputation for missing income amounts in 1962. Imputation increases sample size but can introduce bias (for studies of bias in wage estimates from imputation, see, e.g., Lillard, Smith, & Welch, 1986, and Bollinger et al., 2018; Hokayem, Ziliak, and Bollinger, 2012, examine the effects of biased wage estimates on trends in poverty).

Consequential changes for measuring income inequality over time were the increase in maximum income amounts that could be accepted for processing in various years, culminating with an increase in 1994 that occurred with the introduction of CAPI for interviewing (see Welniak, Jr., 2003). These changes are generally footnoted in Census Bureau historical tables; ideally, there would be overlapping series for every consequential data processing change and not just the instances noted in Box 8.1 for income years 2013 and 2017.

Box 8.1 Processing Changes to the CPS ASEC, 1962 TO THE PRESENT

1962 – Began imputing missing income amounts using hot deck procedures instead of publishing income estimates for complete income reporters; initially imputed all income sources if one or more missing; imputed just missing sources beginning in 1966
1967 –Implemented new processing system; started publishing income for households and not only families and unrelated individuals
1970 – Recording limits for some income sources raised from $9,999 to $99,999
1971 – Introduced 1970 census-based sample design and population controls
1972 – Fully implemented 1970 census-based sample design
1974 – Implemented new processing system; questionnaire expanded to ask 11 income sources
1976 – Added Hispanic sample (from November cases)
1979 – Implemented 1980 census-based population controls; questionnaire expanded to obtain up to 27 income amounts by asking up to 51 income sources
1984 – Introduced 1980 census-based sample design; added Hispanic population weighting controls
1985 – Fully implemented 1980 census-based sample design; increased amount of earnings from longest job that could be recorded to $299,999
1987 – Implemented new processing system; expanded edits and imputations to all income amounts ascertained and not the smaller number ascertained prior to 1980; imputed entire sets of cash and

noncash income (instead of separate imputations for earnings, unearned, and noncash); under previous system, sometimes reported data were removed, not so under new system
1992 – Implemented 1990 census-based population controls
1993 – Data collection method changed from paper and pencil to computer-assisted interviewing; processing system revised to allow for recording of different income amounts for some sources (earnings limits increased to $999,999; Social Security limits increased to $49,999; SSI and public assistance limits increased to $24,999; veterans' benefits limits increased to $99,999; child support and alimony limits decreased to $49,999)
1994 – Introduced 1990 census-based sample design
1995 – Fully implemented 1990 census-based sample design; reduced sample by 7,000 households; revised editing of race
1999 – Implemented 2000 census-based population controls; question added on whether paid for child care for work
2000 – Expanded sample by 28,000 households
2009 – Median income calculations used upper limit of $250,000 instead of $100,000; question added on payments for health insurance premium and other medical out-of-pocket costs (MOOP)
2010 – Implemented 2010 census-based population controls
2013 – Produced two sets of estimates: one from 68,000 households using the questionnaire before the addition of revised questions on health insurance (including ACA marketplace insurance) and income (including retirement account withdrawals); the other from 30,000 households using the revised questionnaire
2017 – Produced two sets of estimates: one with a new processing system that improved imputation procedures and made other changes and the other with the old processing system
2020 – Implemented 2020 census-based population controls
2023 – Work begun to modernize the main CPS with an internet response option and other improvements

NOTE: Years shown are income reference years (i.e., the year preceding the time of data collection).
SOURCE: Footnotes to U.S. Census Bureau, Table A-4a, Selected Measures of Household Income Dispersion, 1967 to 2023 (Historical Income Tables: Income Inequality (census.gov)); see also Jones, Jr., & Weinberg (2000); Welniak, Jr. (2003); Rothbaum (2015).

8.2 SIPP Data Quality

What about data quality for SIPP in the 1990–2010 period? Response rates for Wave 1 of each SIPP panel declined from 95% for the 1984 panel to 81% for the 2008 panel (see Figure 8.2 above). Response rates for Wave 6 of each panel declined from 81% for the 1984 panel to 70% for the 2004 panel. These rates were still quite high, but the trend was concerning.

Table 8.2 compares SIPP's estimates for selected broad types of income to benchmarks for selected years from 1990 to 2012. Except for the transfer category, completeness of reporting declined over the period. The decline was particularly steep for property income.

Table 8.2 Survey of Income and Program Participation Income Estimates as a Percentage of BEA Benchmarks, by Broad Income Category, Selected Years, 1990–2012

Source of Income	1990	1995	2001	2005	2010	2012
Earnings	89%	84%	87%	85%	82%	78%
Property	57	45	35	24	17	12
Transfers	93	88	85	91	87	88
Pensions	92	95	87	83	78	75
Total Income	86	82	83	82	78	73

NOTES: Benchmarks are from the National Income and Product Accounts adjusted to money income, although no documentation is available as to how the adjustments were done. Earnings = wage and salary income, self-employment; Property = interest, dividends, rents and royalties; Transfers = Social Security and Railroad Retirement, Supplemental Security Income, family assistance, other cash welfare, unemployment compensation, workers' compensation, veterans' payments; Pensions = private, federal, military, state, local.
SOURCE: National Academies (2018, Table 7.1); see also Czajka (2009) for comparisons of SIPP with benchmarks and the CPS ASEC by specific income sources; and Czajka, Mabli, & Cody (2008) for an evaluation of Social Security reporting in SIPP and the CPS ASEC.

8.3 SIPP Methodological Research

During the period from its launch through the 1990s, SIPP was an important locus for experimental research on ways to improve reporting of income and program participation. Research focused on the "seam bias" and on ways to encourage people to use their own financial records when filling out the questionnaire to improve accuracy.

A "Record Check Experiment" (Marquis & Moore, 1990) was conducted to quantify the problem of income and program participation reporting. Data from the first two waves of the 1984 SIPP panel were matched with administrative records for four states for Social Security, SSI, federal pensions, AFDC, food stamps, veterans' benefits, unemployment insurance, and

workers' compensation. The analysis confirmed serious reporting errors and misdating of transitions in program participation. For example, 25%-40% of true program participation months were *not* reported.

The Record Check Experiment was followed by the SIPP Cognitive Research Evaluation Experiment (Moore, Marquis, & Bogen, 1997) to determine if getting more respondents to consult their own records would help the accuracy of reporting. The experiment's design placed highest priority on accuracy even if a design feature increased costs or decreased response rates. The experiment redesigned the data collection process to emphasis record use in interviewer training, supervision, questionnaire design, and other aspects. Budget constraints limited pretests to small samples (e.g., 100 addresses) and also necessitated a "kitchen-sink" approach for the full experiment rather than testing one or two changes at a time. The experiment had 810 cases each in the experimental and control groups with the hope of obtaining 350 interviews from each. The cases were drawn from AFDC, SSI, UI, food stamps, and employer records so people's responses could be matched to their records. Respondent households were interviewed twice.

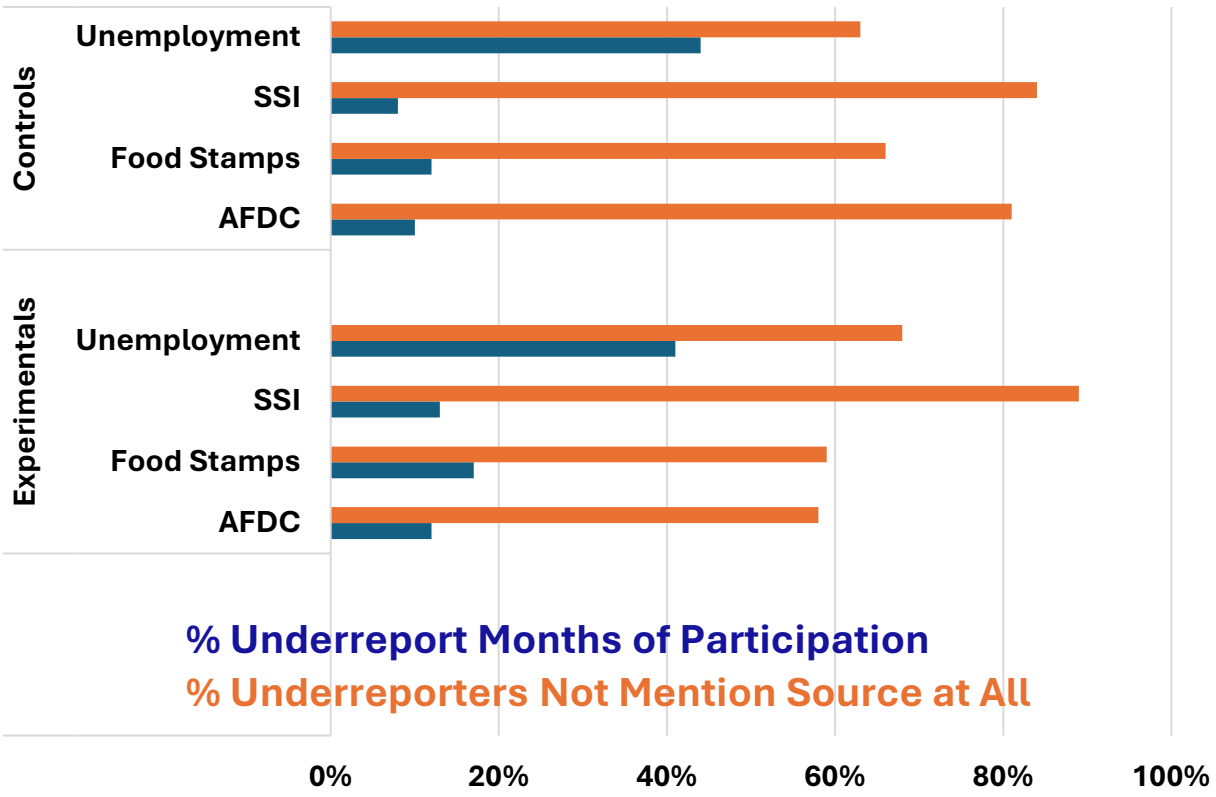
The experiment was successful in that 71-74% of experimental households in Wave 1 used records in some way, rising to 84-87% in Wave 2, compared with 25% of control households using records in Wave 1 and 22% in Wave 2. On the down side, the sample loss by Wave 2 was 27% of experimental households compared with only 8% of control households. Moreover, the costs to complete an interview were $51 in Wave 1 and $49 in Wave 2 per experimental household, compared to $24 in Wave 1 and only $18 in Wave 2 per control household. The experimenters had to conclude that the new approach could not be justified in cost-benefit terms. Reasons for the increased costs were that the experimental interviews required 1.5 hours on average to complete compared with 1 hour for the control interviews and

that the experimental cases required more visits to initiate and complete. Possibly confounding these results were that the experimental case interviewers were inexperienced.[48]

What about the effects of the experimental treatment on data quality? Respondents use of their records helped greatly with accuracy of income reporting for a source, especially in Wave 2, *if* the source were reported in the first place. There was no effect on failure to report a source, and standard imputation methods could not help in that situation either (see Figure 8.3). Moreover, there was as much seam bias in the experimental group as in the control group. It was not clear how much of the failure to report a source was due to recall problems or a respondent's not wanting to acknowledge the source.

[48]Kennickell (1999) documented the importance of interviewers for obtaining responses to the 1995 SCF. He also noted that the area sample achieved a 66% response, compared to only a 30% response from the high-income list frame sample. The high-income respondents said the survey was too personal and too long.

Figure 8.3 Effects on completeness of reporting months of participation, experimental vs. control groups, SIPP Cognitive Research Evaluation Experiment, waves 1 and 2, 1992–1993



SOURCE: Moore, Marquis, & Bogen (1996, Tables 11, 13).

9. 2005 TO THE PRESENT—RECESSION AND RECOVERY

The missed opportunities described in Chapter 7 (e.g., no move to make income statistics congruent across statistical agencies or to adopt a revised definition of poverty in place of the outdated OPM) contributed to a polity-wide failure to anticipate and perhaps ameliorate the depth and breadth of the Great Recession (see Section 9.1 below). Subsequently, however, the Phoenix rising metaphor was never more apt, as statistical agencies made major strides toward improved income and poverty statistics (see Section 9.2). At present, there is great uncertainty about the future of these efforts (see Preface to this paper), but the work of everyone involved in them merits applause and support.

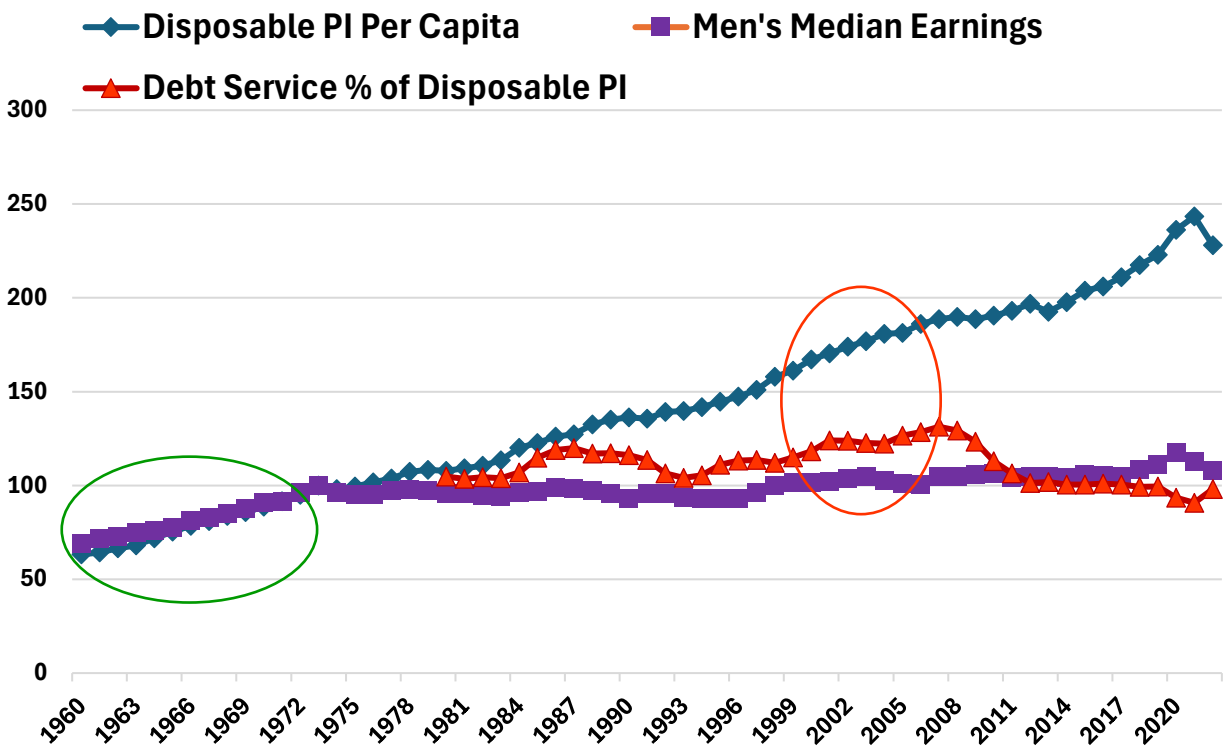
9.1 Lead Up to the Great Recession

A disturbing aspect of the Great Recession that began in 2008 is that very few analysts saw it coming.[49] A look at more statistics than GDP or Personal Income per capita, such as *median* earnings and households' debt as a percentage of their resources (see Figure 9.1), could and should have suggested that trouble was imminent. Several factors contributed to this failure, which had dire consequences for the nation. First, economic forecasting models are notoriously bad at predicting large changes up or down in the economy. Relatedly, financial leaders including the chair of the Federal Reserve Board failed to fully understand the risks of some of the "innovative" products marketed by Wall Street, particularly "derivatives."[50]

[49]See, e.g., 6 economists who predicted the global financial crisis | INTHEBLACK. The six focused on rising consumer debt, the questionable value of new financial instruments such as derivatives, and what they saw as a housing bubble financed by predatory mortgages (e.g., mortgages with low opening interest rates).

[50]See, e.g., Greenspan admits 'mistake' related to financial crisis.

Figure 9.1 Trends in disposable personal income per capita and men's median earnings, 1960–2022, and in debt service as a percentage of disposable personal income, 1980–2022

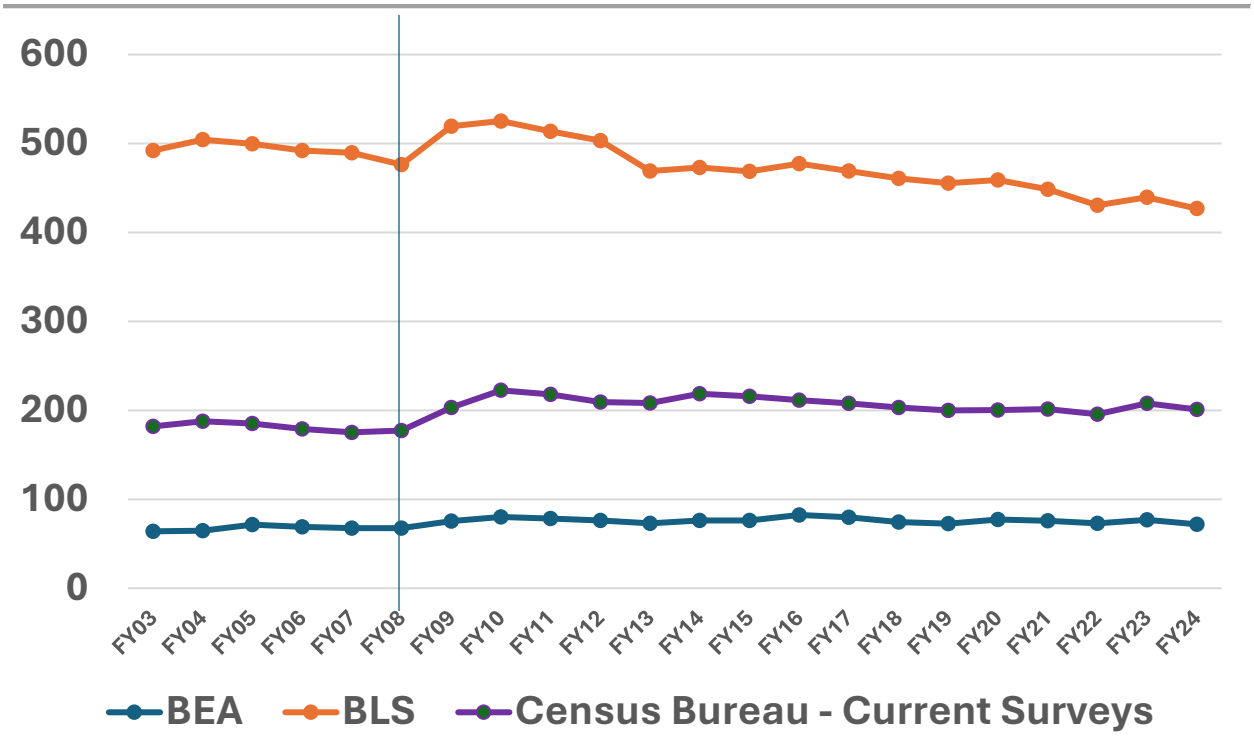


NOTES: Disposable PI (BEA) and men's median earnings (CPS ASEC) are in 2017 chained dollars indexed to 1973 = 100; disposable PI = first quarter values; median earnings = for men ages 15+ (14+ before 1980) working full-time year-round (civilian workers only before 1989); debt service (FRB) = mortgage + consumer debt. Median household debt service as a percentage of median disposable personal income might show an even bigger increase than total household debt service as a percentage of total disposable PI, but medians are not available.
SOURCES: Real Disposable Personal Income: Per Capita (A229RX0) | FRED | St. Louis Fed; U.S. Census Bureau, Table P-38. Full-Time, Year-Round Workers by Median Earnings and Sex: 1960 to 2022; Household Debt Service Payments as a Percent of Disposable Personal Income (TDSP) | FRED | St. Louis Fed

It is also the case that the available macro and micro data on household and family economic well-being did not well serve economic forecasting and policy analysis. The reasons included important gaps, incoherence between and among available macro and micro series, lack of agreement on key measurement issues together with a plethora of micro estimates, quality problems with micro series, and that macro and micro series had their own users who did not put the two kinds of data together. The relevant statistical agencies' budgets were flat in this period (see Figure 9.2), with little room to address these problems, which are summarized in Table 9.1.

Fortunately, the statistical agencies following the Great Recession received a one-time bump in funding to work on data quality and coherence for household income measurement. These efforts have begun to bear fruit in the last few years (see Section 9.2). They need priority attention and additional resources to achieve the promise of integrated, high-quality information on household economic well-being (see Section 10).[51]

Figure 9.2 Real funding levels, FY 2003–FY 2024 (millions of FY 2003 $), Bureau of Economic Analysis, Bureau of Labor Statistics, U.S. Census Bureau current surveys



NOTE: Adjusted with GDP Deflator.
SOURCE: Pierson, Schwartz, & Auerbach (2024).

[51]Similar efforts are under way in OECD countries, including the United States, to improve not only income, but also household wealth and consumption statistics (OECD, 2013, 2021).

Table 9.1 Problems of Available Macro and Micro Series on Income and Poverty for Assessment of Trends in Household Economic Well-Being Leading Up to the Great Recession

Aggregate (Macro) Annual and Quarterly Household Sector Income Estimates from BEA	
BEA Personal Income (see Table 1.2) estimates available for nation, states, regions, and by components (e.g., Medicare, Medicaid, employer benefits)	Gaps: No "size" distribution estimates available (i.e., no estimates for households or families—series discontinued after production of 1972 estimates); analysts had to laboriously adjust BEA PI estimates to Census money income for comparisons, and available adjustments differed in some respects (e.g., compare Coder & Scoon-Rogers, 1996, with Roemer, 2000) Easy to be misled: Per capita (average PI) rose continuously, which may have contributed to false sense of security
Aggregate (Macro) Annual Employment Cost Index (ECI) from BLS	
Begun in 1970s; combines wages and benefits; useful for what its name implies—namely, employer costs for a "standard worker"	Easy to be misled: Some analysts interpreted ECI as a measure of worker economic well-being; the ECI did rise 4.9% in real terms from 2001–2008, but wages rose just 1.4%, while benefits rose 13.8% (mostly health care cost increases); health care is beneficial but does not provide current income to workers (see: Tables : U.S. Bureau of Labor Statistics (bls.gov)).
Distributional (Micro) Annual Household Income and Poverty Estimates from the Census Bureau	
CPS ASEC annual household income estimates; annual official poverty (families and unrelated individuals) estimates	Same quality problems as before, including limited money income definition and underreporting (wages and Social Security reporting reasonably good, other sources problematic) (see Section 8.1 above).
CPS ASEC periodic alternative estimates of effects of in-kind benefits and taxes on income and poverty; periodic experimental estimates of variations of 1995 National Academies recommendations for new poverty measure	Many alternative and experimental income and poverty estimates (see Section 7.2 above); prone to cherry-picking. CNSTAT held workshop in 2004 to identify agreement/disagreement with *Measuring Poverty* recommendations but no movement toward one or a handful of definitions (National Research Council, 2005).
ACS income and poverty estimates	ACS just under way with limited income detail and no in-kind benefits.
SAIPE income and poverty estimates	SAIPE estimates became more robust when models could predict ACS instead of CPS ASEC school-age poverty, but SAIPE provides only a handful of indicators.
SCF income and wealth estimates	SCF had better asset and debt information than SIPP (see, e.g., Czajka, Jacobson, & Cody, 2003), but its income data had about the same quality as other income surveys (although Dettling et al., 2015, concluded that the SCF income, wealth, and consumption data were suitable for research use; see also Johnson and Moore, 2005). The SCF was also limited in sample size and frequency.

SIPP income and poverty estimates	SIPP lost ground on quality and timely data release (see Section 8.2 above) and was redesigned with not much improvement.

SOURCE: Author's summations.

9.2 Phoenix Rising

The aftermath of the Great Recession led to soul-searching among economists and statisticians about the problems with available data on household income and poverty for informed policy making (see, e.g., Landefeld et al., 2010). BEA, BLS, the Census Bureau, the Congressional Budget Office, and the Federal Reserve undertook innovative work toward more relevant and higher quality income and related statistics for households and families. Distributional statistics gained a new emphasis. A primary motivation for this work here and abroad has been to better understand inequality and to answer such questions as whether and the extent to which middle class wages have stagnated (or not) and whether income, consumption, and wealth inequalities have increased (or not) over time and across countries.

Notable developments in the United States included: closure on a new and more informative Supplemental Poverty Measure (SPM), which uses a disposable cash and nearcash income definition (Section 9.2.1); the development of distributional estimates of Personal Income (PI) for households by BEA (Section 9.2.2) and of household income by CBO (Section 9.2.3); and renewed efforts by the Census Bureau to use blended administrative and survey data to produce higher quality income estimates from the CPS ASEC (Section 9.2.4). In addition, BLS, BEA, and the Federal Reserve initiated distributional estimates of wealth and consumption

(see Box 9.1). At this writing, much work remains to be done in an environment of budget scarcity; nonetheless, the progress is exciting—the Phoenix is indeed rising![52]

Box 9.1 Consumption and Wealth Distributions Estimated by BLS, BEA, and the FRB

2019—The **FRB** began releasing quarterly (with a one-quarter lag) distributional financial accounts (DFAs) or wealth estimates; available back to the 3rd quarter of 1989; produced by combining the SCF with the aggregate Financial Accounts for SCF primary economic units (essentially single people living alone plus couples living alone or with other people economically dependent on them).
2022—BLS began publication of CE-based consumer unit distributions of **BEA** Personal Consumption Expenditures (PCE) for 2017–2020; the latest available distributions cover 2004–2022.
2023—BLS issued preliminary CE-based consumer unit distributions of consumption for 2019–2021.
2024—BEA and **BLS** issued CPS ASEC-based household distributions of personal saving for 2004–2022; estimated from the joint distribution of disposable PI and PCE.

NOTE: See National Academies (2024, Table 3.1) for definitions of PCE, BLS expenditures, and BLS consumption.
SOURCES: The Fed - Distributional Financial Accounts Overview; Distribution of Personal Consumption Expenditures : U.S. Bureau of Labor Statistics (also includes distribution of personal saving); see also Garner et al. (2023).

9.2.1 Supplemental Poverty Measure—New York City Leads the Way

Movement toward a more informative poverty measure based on the National Academies' 1995 report seemed stymied in the mid-2000s (see Section 7.2.2 and Table 7.1 above). Meanwhile, in 2006 NYC Mayor Bloomberg put forward a goal of reducing poverty in the city in his 2006 State of the City address and established a Commission for Economic Opportunity to recommend appropriate policies. The Commission determined that a new poverty measure was needed to be able to evaluate such policies as a city EITC. Mayor Bloomberg accepted that recommendation and established the Center for Economic Opportunity (CEO), directed by Mark Levitan, which had development of a new poverty measure for NYC high on its agenda. Levitan decided to use the Academies' 1995 recommendations as a framework and

[52]See the Preface for why progress may slow down or stall under the current (2025–2029) administration.

consulted far and wide with experts, including staff at BLS, the Census Bureau, and OMB, to implement an Academies-like measure. Fortuitously, small-area data from the new American Community Survey had just become available. NYC augmented the ACS data with its own administrative records and imputed some needed variables. The first CEO poverty measure covered income year 2006 and was published in 2008 (NYC Center for Economic Opportunity, 2008). Several other states and cities (e.g., California, New York State, and Wisconsin) proceeded to emulate NYC's work (see, e.g., Engelhardt and Skinner, 2013).

Meanwhile Rebecca Blank, noted economist and member of the National Academies' poverty study panel, called for a new poverty measure in her presidential address at the 2007 conference of the Association for Public Policy & Management. To end run-around the political obstacles to revising Statistical Policy Directive No. 14, she proposed a "Supplemental Poverty Measure" for the Census Bureau to publish in addition to the Official Poverty Measure. Blank was confirmed as Commerce Undersecretary for Economic Affairs (overseeing BEA and the Census Bureau) in 2009. She established an Interagency Technical Working Group (ITWG), which she co-chaired with chief statistician Katherine Wallman. In 2010, the ITWG issued "observations" to guide BLS and the Census Bureau in developing an SPM, and the first SPM estimates were published in 2011 in a separate report released later than the regular income and poverty report (U.S. Census Bureau, 2011). SPM estimates are now included alongside OPM estimates in the income and poverty report. (See Table 9.2 for the differences between the original SPM and the National Academies' 1995 recommendations and changes made since 2011).

REBECCA M. BLANK

Economist Who Facilitated the Supplemental Poverty Measure

(1955-2023)

Education: B.A., University of Minnesota, economics; Ph.D., MIT, economics

Career: professor, Northwestern University; dean, Ford School of Public Policy, University of Michigan; chancellor, University of Wisconsin-Madison; fellow, Brookings Institution; director, Northwestern/University of Chicago Joint Center for Poverty Research; member, President Clinton's Council of Economic Advisers; President Obama's undersecretary for economic affairs, deputy secretary, acting secretary, U.S. Department of Commerce

Selected Honors: AAPSS Daniel Patrick Moynihan Prize; distinguished AEA fellow

Source: Traub (2023).

MARK LEVITAN

Economist Who Constructed a Meaningful Poverty Measure for New York City and Encouraged the Federal Government to Do the Same

(1948-2021)

Education: B.A., Boston University, philosophy; Ph.D., New School for Social Research, economics

Career: factory worker; organizer for International Socialists; researcher, United Auto Workers; senior policy analyst, Community Service Society of New York; director, poverty research, NYC Center for Economic Opportunity (2007-2014)

Source: Roberts (2021).

KATHERINE K. WALLMAN

Federal Statistician Who Facilitated the Supplemental Poverty Measure and Led the Federal Statistical System

(1943-2024)

Education: B.A., Wellesley College, sociology

Career: National Center for Education Statistics; deputy chief statistician, OMB and Commerce Department, (1978-1981); founding executive director, Council of Professional Associations on Federal Statistics (1981-1992); chief statistician, OMB (1992-2017)

Selected Honors: Presidential Meritorious Executive (two awards); fellow, ASA and AAAS; elected member, ISI; Julius Shiskin Award for Economic Statistics; PAA Excellence in Public Service Award

Sources: Citro (2016a); Katherine K. Wallman

Figure 9.3 makes clear the importance of the SPM. It reproduces a Census Bureau graph, which shows a dramatic decline in poverty in 2021 and an equally dramatic increase in 2022. An expanded Child Tax Credit, stimulus payments through the tax system, and other programs to bolster economic well-being in the depths of the COVID-19 pandemic were captured in the SPM but not the OPM; similarly, the SPM captured the poverty-increasing effects of the winding

down of these programs, which the OPM could not do.[53] The SPM was affected, like the OPM, from the underreporting of income in the CPS ASEC (and other surveys), but the resource concept was a definite improvement.

Table 9.2 Elements of the National Academies' 1995 Proposed Poverty Measure and the SPM as Originally Adopted and Currently Configured

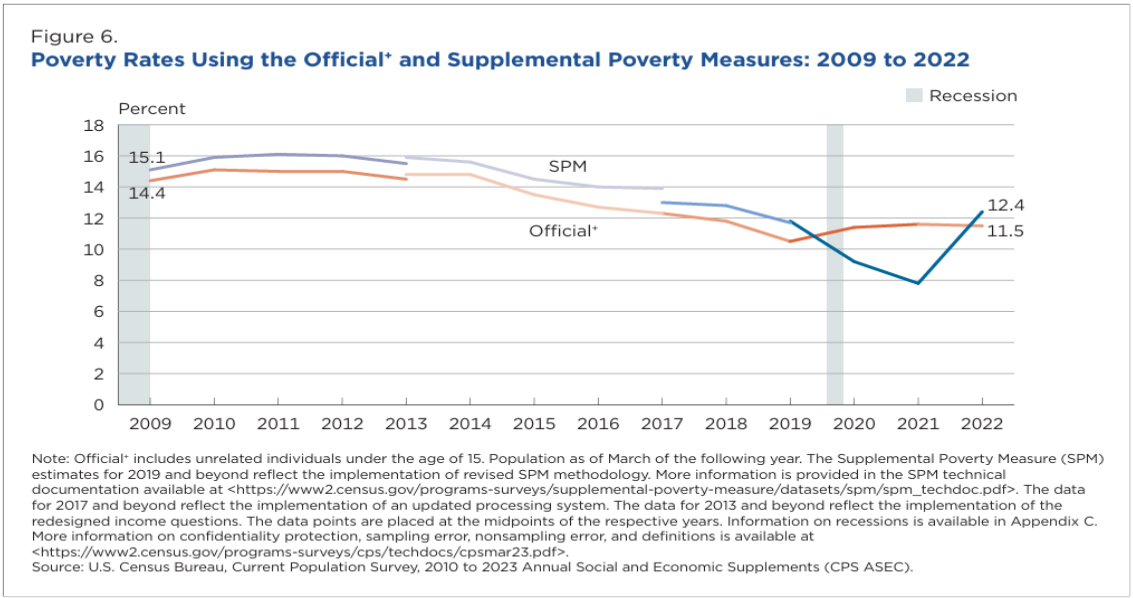
Element	1995 Proposed Measure	Supplemental Poverty Measure (a) 2011–2018; (b) 2019–present
Threshold Concept	Food, clothing, shelter (including utilities), plus a little bit more for other needs (FCSU+)	(a) Same as 1995 proposal (b) Food, clothing, shelter [housing], utilities (except telephone), telephone, internet, plus a little bit more (FCSUti+)
Updating Method for Thresholds	Update starting threshold for real change in standard of living; then update annually by change in spending in food, clothing, and shelter over previous 3 years for 2-adult/2-child families (quasi-relative thresholds)	(a) Starting threshold set at 30-36th percentile of FCSU times 1.2 for families with 2 children; recalculated each year with 5 years of CE data (b) Move threshold from 30-36th percentiles of FCSU to 83 percent of 47th-52nd percentiles of FCSUti for all families with children; lag CE threshold data by 1 year; add imputed LIHEAP, NSLP, WIC to CE data (SNAP implicitly included in CE food expenditures)
Threshold Adjustments by Family type	Determine reference family threshold and adjust with 2-parameter equivalence scale for economies of scale for larger families and that children need less than adults	(a) Determine reference family threshold and adjust with 3-parameter equivalence scale with different values for 1-2-adult families, single-parent families with 1 or more than one child, and all other families with and without children (b) Same as (a)
Threshold Adjustments by Geographic Area	Adjust for housing cost differences by region and size of metropolitan area using HUD Fair Market Rents	(a) Same as 1995 proposal (b) Same as 1995 proposal
Threshold Adjustments by Owner/Mortgage	1995 report discussed fact that homeowners without a mortgage are generally better off than others but did not make a recommendation	(a) Three thresholds: homeowners without a mortgage; homeowners with a mortgage; renters (b) Same as (a)
Family Resource Definition (to	Gross money income plus value of nearcash in-kind benefits (e.g., food	(a) Same as 1995 proposal (b) Same as 1995 proposal

[53]The media emphasized the SPM results—see, e.g., Poverty Increased in 2023 as Prices Rose and Pandemic Aid Programs Expired - The New York Times.

compare to threshold to determine poverty status)	stamps), minus nondiscretionary expenses (federal and state income and payroll taxes, capped child care and other work expenses, child support paid to another family, health insurance premiums and other medical out-of-pocket expenses [MOOP])	
Unit of Analysis	Families (including cohabiting couples, foster children, and unrelated children under age 15) and unrelated individuals	(a) Same as 1995 proposal (b) Same as 1995 proposal
Data Sources for Thresholds and Resource Measurement	CE Interview Survey for thresholds; SIPP for resources	CE Interview Survey for thresholds; CPS ASEC for resources
Revision Schedule	Measure should be thoroughly reviewed every 10 years and revised as appropriate	Same as 1995 proposal; minor updates made beginning with 2019 thresholds; considering changes recommended in National Academies (2023c)

Source: National Academies (2023c, Table A-2).

Figure 9.3 Effect of the Supplemental Poverty Measure (SPM)vs. the Official Poverty Measure (OPM) on poverty rates, 2009–2022



SOURCE: U.S. Census Bureau (2023b, p. 9).

9.2.2 BEA Produces Household Personal Income Estimates

The lack of distributional estimates of Personal Income since the early 1970s greatly handicapped assessment of how families at different points in the distribution were doing. Average or per capita PI could be readily calculated, but with evidence of increasing inequality, averages were misleading.

In the aftermath of the Great Recession, Fixler and Johnson at BEA (2012) reported on work to decompose PI to permit estimation of median as well as mean income and other measures of the household income distribution. Their goal was to better understand the relationship between growth in gross domestic income and product and growth in income inequality over the period 1999 to 2010 (Fixler & Johnson, 2012). They began by reestimating PI to be comparable to CPS ASEC income (e.g., subtracting such components as employer health and pension benefits, imputed interest, imputed rent for homeowners, government in-kind transfers). They then used their revised aggregate PI estimates by income source (similar to the FMI distributions produced by OBE decades ago—see Section 4.1 above) to adjust the CPS ASEC distribution. The result was a considerably higher estimated mean and median income than in the original CPS ASEC (indicative of underreporting) and a larger increase in inequality using the Gini index. Further modifying the adjusted PI/CPS ASEC distribution to reflect the distribution available from tax records yielded a further increase in inequality. Finally, imputing the value of in-kind health care benefits yielded a *decrease* in inequality. This paper was the beginning of renewed work at BEA to develop household income distributional measures (see also, Furlong, 2014; Fixler et al., 2016).[54]

[54]Language in BEA appropriations for fiscal 2019 encouraged BEA to report on how economic growth is distributed across the income spectrum. In the same vein, Senator Schumer (D-NY) and Senator Heinrich (D-N.M.)

Fixler, Gindelsky, and Johnson (2019) described the methodology adopted by BEA to construct "prototype" estimates of PI for households distributed among ten deciles by allocating PI income components to CPS ASEC microdata records for people and households (see Table 9.3 for the latest methodology). The first prototype estimates were released in March 2020 for income years 2007–2016 under the "Special Topics" portion of the BEA website.[55] Subsequently, BEA has produced household PI distributions every December in final for year *t–2* and provisionally for year *t-1*, with estimates available back to 2000. BEA added disposable (after-tax) PI household distributions in 2020, internationally comparable (with OECD concepts) distributions in 2022, and state PI distributions (for 2012–2021 currently) in October 2023.

BEA is working on "nowcasting" its PI distributional estimates so that they can be more up to date. It also has plans to develop money income distributions (analogous to the FMI distributions prepared by OBE decades ago), which are still needed for direct comparisons with the CPS ASEC and SIPP.

Table 9.3 BEA Distributional Household Personal Income Statistics, Current Methodology

Personal Income (PI) Component and How Allocated to CPS ASEC Persons/Households (code in parens)	Explanation of Allocation Code
Adjusted Money Income (AMI)[a] Wages and salaries (1, 2) Farm self-employment income (1, 2) Nonfarm self-employment income (1, 2) Rental income of persons (1, 2) Interest income (1, 2) Dividend income (1, 2) Federal cash benefits: Social Security, Railroad Retirement, black lung benefits, Pension Benefit	(1) PI amount allocated proportionately to corresponding variable in CPS ASEC (except as modified in (2)) (2) Share of PI amount for each of wages and salaries, self-employment, dividends, interest, and rents and royalties to allocate to CPS ASEC tax units with AGI under $200,000, $200,000–$500,000, and $500,000+ determined from IRS/SOI data

introduced legislation on August 28, 2018, to require BEA to report how economic growth is distributed across the income spectrum by 2020, with the expectation that the estimates would be quarterly (see https://www.democrats.senate.gov/newsroom/press-releases/schumer-heinrich-introduce-legislation-to-require-new-income-growth-data-alongside-quarterly-gdp-reports).

[55] Distribution of Personal Income | U.S. Bureau of Economic Analysis (BEA) . See Fixler, Gindelsky, and Johnson (2020) for an analysis of inequality using the new distributional estimates and comparisons with other sources.

Guaranty, veterans' benefits, workmen's compensation (1) Federal cash benefit: unemployment insurance (1)[b] State and local cash benefits (e.g., temporary disability insurance, assistance, employment and training, education) (1) Supplemental Security Income (3) Transfer receipts from nonprofit institutions (4)	adjusted for noncompliance, and the corresponding amounts allocated as in (1)[c]
Financial Items Employer contributions to life insurance (5) Employer contributions to pensions/profit-sharing (distinguishing DB from DC plans) (5) Imputed interest and dividends (6) Rental income from owner-occupied housing (7)	(3) Allocated using a method similar to CBO's adjustment for underreporting in CPS ASEC (see Habib, 2018) (4) Allocated using educational assistance received by CPS ASEC household (5) Allocated using CPS ASEC wages to people participating in employer plans (6) Allocated using imputation from SCF data (7) Allocated using imputation from CE data by income bracket for 2000–2004; ACS data subsequently
Health Items Employer health insurance contributions (8) Military medical insurance (9) Medicare (10) Medicaid (11) Other medical assistance (12) Children's Health Insurance Program (CHIP) (13)	(8) Imputed using family size, plan type, firm size, and state from Medical Expenditure Panel Survey data for 2010 forward (9) Allocated to CPS ASEC households with active military members
Other Transfers (net) Employer/employee contributions to OASDI (14) Employer contributions to WC/supplemental UI (5) Other employer/employee/self-employed contributions to government social insurance (5) Military medical insurance ((federal benefits and employee/self-employed contributions) (9) Supplemental Nutrition Assistance Program (SNAP) (3) Refundable tax credits (15) Energy assistance, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (1) All other transfers (12) Transfer receipts from business (net) (16)	(10) Average individual expenditures allocated by year, age category, and disability status using Medicare 5% data, (11) Allocated by assigning state average expenditure (from CMS) to CPS ASEC persons reporting receipt of Medicaid (12) Allocated to CPS ASEC households reporting SNAP, WIC, or other welfare assistance (13) Allocated to CPS ASEC households reporting children covered by CHIP (14) Allocated using imputed FICA value as calculated by NBER TAXSIM (15) Calculated using NBER TAXSIM and CPS ASEC recipiency of earned income tax credit, child tax credits (16) Allocated according to the sum of all other components of PI for CPS ASEC households

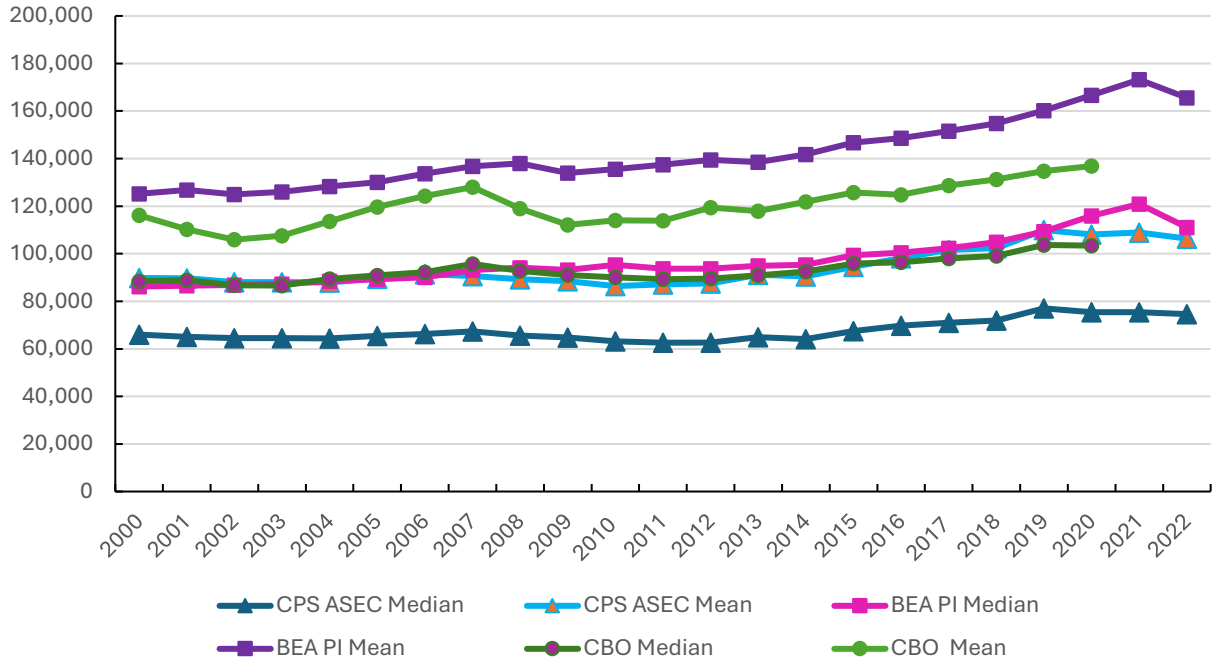
[a]AMI: CPS ASEC regular money income minus items not included in PI (e.g., retirement disbursements, certain sources of disability and survivor income—see Gindelsky, 2024, pp. 10-11).
[b]Amounts for 2020–2021, when UI was expanded during the COVID-19 pandemic, adjusted using a crosswalk from Larrimore, Mortenson, & Splinter (2023), which corrects for underreporting in the CPS ASEC based on administrative data.
[c]See Gindelsky (2024, pp. 4-6 and Section 9).
NOTE: See list of acronyms.
SOURCE: Gindelsky (2024); tables available at Distribution of Personal Income | U.S. Bureau of Economic Analysis (BEA).

9.2.3 CBO Produces Household Income Distributions

CBO began in 2011 to produce an annual publication with household income distributions for 1979 to year *t-2*, which is widely cited (see, e.g., Congressional Budget Office, 2024). It uses a concept of cash and nearcash income (including health care benefits at full cost to the government), plus realized capital gains. Each year's report provides estimates for income quintiles (more detail for the highest quintile) for household income before and after taxes and transfers, market income, social insurance income, means-tested transfer income, and federal taxes. CBO prepares its estimates by statistically matching income tax records to the CPS ASEC and correcting for underreporting of Medicaid, SNAP, and SSI benefits using a regression model based on income and demographic characteristics to impute receipt and benefits (Habib, 2018).

Figure 9.4 shows mean and median household income from 2000–2022 for CPS ASEC money income, BEA Personal Income, and CBO market + social insurance income. CPS ASEC median money income is the lowest line on the graph, while CBO and BEA mean incomes are the highest lines. Note that with the exception of BEA mean PI, none of the lines shows much, if any, increase in real terms over the 22-year period, leaving aside the height of the COVID-19 pandemic when the generous government assistance available to households also shows up in BEA median PI. Also note that if the 2018 NEWS Version 2 estimate of median household money income ($78,000in 2022 dollars) were shown on the graph (see Section 9.2.4 below), it would be higher than the corresponding CPS ASEC estimate ($71,800).

Figure 9.4 CPS ASEC money income, BEA personal income, CBO market + social insurance income, households, mean and median, 2000–2022 (2022 $)



NOTE: Estimates are in 2022 dollars using the PCE deflator; BEA estimates are for equivalized households; CBO estimates are for 2022–2020 for "income before transfers and taxes," or market + social insurance income.
SOURCES: Distribution of Personal Income | U.S. Bureau of Economic Analysis (BEA), full dataset of all available years and metrics; U.S. Census Bureau, Historical Income Tables: Households, Table H-5;
Trends in the Distribution of Household Income From 1979 to 2020 | Congressional Budget Office, Supplemental Tables, Sheets 3, 4.

9.2.4 Census Bureau Initiates Use of Blended Data for Household Income Estimates

Researchers outside the Census Bureau had for years been reporting on the large and increasing rates of nonreporting and underreporting of income and program participation. Some work compared publicly available aggregate estimates (e.g., Meyer, Mok, & Sullivan, 2009), while other work (e.g., Shantz & Fox, 2018) compared confidential microdata, accessed as a Census Bureau employee or by a special sworn researcher working in one of the secure Federal

Statistical Research Data Centers (FSRDCs).[56] In 2018, Bruce Meyer of the University of Chicago obtained grant funding to undertake a project through the FSRDC network, to develop the Comprehensive Income Dataset (CID), which has linked federal and state administrative records with the ACS, CPS ASEC, SIPP, and other datasets to generate more complete and accurate income data. He and his colleagues have produced an impressive amount of work (see, e.g., Meyer & Mittag, 2015; Meyer & Mittag, 2021; Meyer, Mittag, & Goerge, 2022; Meyer & Sullivan, 2023).[57]

In 2019, Bee and Rothbaum issued a landmark paper outlining ways for the Census Bureau to use administrative records not just to evaluate the CPS ASEC income data but to improve them and to use the improved data as the basis for official estimates. This paper represents the first time in which the Census Bureau effectively made a public commitment to produce the most accurate income data possible by blending survey responses with administrative records and other sources.

In 2023, the Census Bureau released its first experimental National Economic Well-Being Statistics (NEWS) for income year 2018 (Bee et al., 2023). The estimates were for CPS ASEC money income with the following enhancements to the underlying microdata:

- Bee et al. (2023) improved the survey weights to address nonresponse bias.
- They improved the imputation routines for missing income information in both the CPS ASEC and various administrative datasets.

[56]See Bee & Rothbaum (2019, footnote 1 and pp. 4-7), for a comprehensive bibliography of relevant work through 2019, and Bee et al. (2023, footnote 5), for later work.

[57]See also Czajka & Denmead (2008, 2012) for a comprehensive comparative assessment of income and program participation data in eight surveys, including the SIPP, the CPS ASEC, the ACS, the Household Component of the Medical Expenditure Panel Survey, the National Health Interview Survey, the Medicare Current Beneficiary Survey Cost and Use files, the Health and Retirement Study, and the Panel Study of Income Dynamics.

- They combined or replaced survey responses with administrative information to address misreporting.
- Each improvement involved the use of multiple data sources and modeling as recommended in several National Academies' reports (2017a,b, 2023a,b, 2024).

NEWS produced a 6% higher median household money income estimate compared to the official estimate. For people ages 65 and older, the NEWS median household income estimate was 27% higher than the official estimate. This jump was largely due to the use of administrative records to improve the estimates of income from private defined contribution (DC) pension plans, IRAs, and the like, from which retirees increasingly take lump sums rather than annuities. The Census Bureau had revised the retirement income questions in the CPS ASEC beginning in 2014 to capture lump sums from DC plans (many years after DC plans overtook defined benefit plans) and also made questionnaire changes to improve the reporting of interest. Aggregate amounts of retirement and interest income reported did increase after the questionnaire changes (Semega and Welniak, 2015), but the CPS ASEC still fell short of administrative records benchmarks (National Academies, 2018, Table 7.6; see also Czajka & Rosso, 2015).

In January 2025, the Census Bureau released expanded NEWS estimates of household income in 2018 (version 2) using three definitions: (1) money income; (2) disposable (after-tax) income (definition 1 minus net federal and state income and payroll taxes and credits); and (3) disposable after-tax-and-in-kind transfers income (definition 2 plus noncash benefits from NSLP, SNAP, WIC, housing assistance, and energy assistance).[58] NEWS estimates were also released for 2018 for the SPM in addition to the OPM.

[58] Census Bureau Releases Updated Estimates from NEWS Project.

The NEWS team achieved major reductions in reducing the time necessary to blend all of the input data and perform needed imputations (partly by integrating machine learning into its imputation models), with the goal of more timely production of estimates. The team also updated its model for combining survey and administrative earnings data, which differ in important respects, to obtain improved estimates of the unobserved, underlying distribution of earnings. The team's expressed goal for NEWS is "to produce the best possible income and poverty statistics given all available survey, decennial census, administrative, and third-party data" (Bee et al., 2025, p. 1).

Table 9.4 shows some of the most striking results for estimates of household median income and people in poverty comparing NEWS (Version 2) with the CPS ASEC for 2018. The large differences between NEWS and CPS ASEC estimates largely reflect survey underreporting of income of various types depending on the population group.

Table 9.4 Estimates of Household Median Money and After-Tax-and-Transfer Income for Selected Types of Households and OPM and SPM Poverty Rates for Selected Types of People, NEWS (Version 2) Compared with CPS ASEC, Income Year 2018

Estimates/Type of Household	All Households	Households Headed by Hispanic People	Households Headed by People Ages 65+	Households Headed by People Ages 25+ without a High School Diploma
NEWS Median Household Money Income	$67,050	$55,800	$55,760	$31,660
Percent NEWS Difference from CPS ASEC	6.1%	8.6%	27.6%	11.7%
NEWS Median Household After-Tax-and-Transfer Income	$59,520	$52,860	$51,950	$34,550
Percent NEWS Difference from CPS ASEC	7.1%	11.4%	24.5%	16.2%
Estimates/Type of Person	All People	Hispanic People	People Ages 65+	People Ages 25+ without a High School Diploma
NEWS Official Poverty Measure	10.3% poor	14.3% poor	5.7% poor	20.5% poor
Percentage Point NEWS Difference from CPS ASEC	-1.5PP	-3.2PP	-4.0PP	-5.4PP
NEWS Supplemental Poverty Measure	10.4% poor	14.5% poor	7.6% poor	18.7% poor
Percentage Point NEWS Difference from CPS ASEC	-2.4PP	-5.8PP	-6.0PP	-10.1PP

SOURCE: Bee et al. (2025, Tables 1, 3, 4, 5).

10. CONCLUSION

The initiatives of BEA, BLS, the Census Bureau, and other agencies for improved distributional series for income (and consumption and wealth) are a major step forward for policy, research, and other uses that require relevant, accurate, timely, granular, and coherent household income data. As just one example, once NEWS is able to move from research to production, CBO and microsimulation modelers will no longer need to perform their own adjustments for income underreporting. Yet there is a long way to go to make all of these new or revised series relevant, timely, and coherent. NEWS, in particular, has a heavy lift to move from research to production and to routinely produce timely estimates.

Importantly, the various series—specifically, BEA's Personal Income, CBO's after-tax-and-transfer income, the Census Bureau's money income, and the Census Bureau's NEWS after-tax-and-transfer income—are not coherent or comparable without significant adjustment. The series differ in concepts, operational definitions, measurement methods, tabulation categories, timeliness, units of analysis, and virtually every feature one can name. Table 10.1a lists key differences in concepts, while Table 10.1b lists differences in selected tabulation categories (see National Academies, 2024, Chaps. 3-4, for detailed comparisons for a range of features).

Table 10.1a Conceptual Differences (What Is Included in Income), Household Income Series, Bureau of Economic Analysis, Census Bureau, Congressional Budget Office, Federal Reserve Board, and Statistics of Income, by Income Source

Income Source/ Series	BEA Disposable Household Income	Census After-Tax Money Income	Census (NEWS) After-Tax-and-Transfer Income	CBO After-Tax-and-Transfer Income	FRB Income (from the SCF)	SOI Adjusted Gross Income (AGI)
Earnings	Yes	Yes	Yes	Yes	Yes	Yes*
Property	Yes	Yes	Yes	Yes	Yes	Yes
Social Security Benefits	**No** (instead, **employer contribu-tions** count as income)	Yes	Yes	Yes	Yes	Yes (taxable portion)
SSI	Yes	Yes	Yes	Yes	Yes	**No**
Cash Welfare	Yes	Yes	Yes	Yes	Yes	**No**
Non-Cash/Non-Health Benefits[a]	Yes	**No**	Yes	Yes	Yes	**No**
Health Care Benefits	Yes	**No**	**No**	Yes	**No**	**No**
Other Social Insurance (UI, WC, Veterans, Disability)	Yes	Yes	Yes	Yes	Yes	UI = Yes; Veterans, WC = **No;** Private disability = Depends
Pensions	**No** (instead, **employer contribu-tions** count as income)	Yes	Yes	Yes	Yes	Yes
Realized Capital Gains	**No**	**No**	**No**	Yes	Yes	Yes
Net Rental Value of Owned Home	Yes	**No**	**No**	**No**	**No**	**No**
Payroll Taxes	Yes	Yes	Yes	Yes	**No**	**No**
Federal Income Taxes (Net of EITC, CTC)	Yes	Yes	Yes	Yes	**No**[b]	**No**

State Income Taxes	Yes	Yes	Yes	Yes	**No[b]**	**No**

[a]SNAP, WIC, NSLP, housing assistance, energy assistance
[b]Tax information is available internally for SCF primary economic units.
NOTE: See list of acronyms.
SOURCE: Adapted from National Academies (2024, Ch. 2, Table 2.1a).

Table 10.1b Differences in Selected Tabulation Categories, Household Income Series, Bureau of Economic Analysis, Census Bureau, Congressional Budget Office, Federal Reserve Board, and Statistics of Income

Tabulation Categories/ Series	BEA Household Income	Census Money Income	Census (NEWS) After-Tax-&-Transfer Income	CBO After-Tax-and-Transfer Income	FRB Income (from the SCF)	SOI Adjusted Gross Income (AGI)
Income Categories	Mean, median, share, 10 deciles; share bottom 5%, top 5%, top 1%	Mean, median, share, 5 quintiles; top dollar amount, deciles; mean, share, top dollar amount, top 5% (also income categories for people 15+)	Median, total households, only	Mean, median, bottom dollar amount, quintiles, 81st-90th percentiles, 91st-95th, 96th-99th percentiles, top 1%	Mean, median, bottom 4 quintiles, top 2 deciles	Mean, share, AGI categories (19 from no AGI to $10 million+); top 50%, 40%, 35%, 25%, 20%, 10%, 5%, 4%, 3%, 2%, 1%, 0.1%, 0.01%, 0.001%
Age Categories (reference person)	None[a]	15–24, 25–34, 35–44, 45–54, 55–64, 65+	15–24, 25–34, 35–44, 45–54, 55–64, 65+	Number children, adults, elderly	<35, 35-44, 45-54, 55-64, 65-74, 75+	<26, 26–34, 35–44, 45–54, 55–64, 65+
Household/ Family Type Categories	None	Married couple; single-parent (female, male); non-family by living alone/not (female, male)	Married couple; single-parent (female, male); non-family (female, male)	None	Single (with children); single <55 (no child); Single 55+ (no child): couple (children); couple (no children)	Married filing jointly; married filing separately; head of household; single

[a]BEA tables do not include socio-demographic tables, although some are provided in working papers (see, e.g., Gindelsky, 2022, which has estimates by race and age).

NOTE: See list of acronyms.
SOURCES: Adapted from National Academies (2024, Ch. 3, pp. 137-140, Table 3.3); see also Bee et al. (2025, Table 3); Distribution of Personal Income | U.S. Bureau of Economic Analysis (BEA); CPS Income Data Tables; The Distribution of Household Income in 2021 | Congressional Budget Office (supplemental tables); Federal Reserve Board - Survey of Consumer Finances (SCF) (historic tables); SOI Tax Stats - Individual income tax return (Form 1040) statistics | Internal Revenue Service.

While it can be useful and appropriate to have different income definitions for different purposes, many differences among series appear to be historical accidents, perpetuated because "this is how we have always done things." At the least, users need full explanations and side-by-side comparisons in one place, as recommended in National Academies (2024, Recommendations 3.1, 3.2; see also National Academies, 2022). Ideally, BEA and the Census Bureau would undertake a joint project to produce harmonized income series, and other agencies, including BLS, CBO, FRB, and SOI, would harmonize to the extent feasible and appropriate.

It would likely take four factors for such a joint project to come to fruition:

- **Priority** by agency and departmental leadership and OMB, affirming that income, poverty, and other bedrock series on household economic well-being need to be "statistical products first." In other words, they need to be based on the best blended data rather than a single data source, such as the CPS ASEC, with its known flaws in relevance and accuracy.
- **Coherence and transparency**, achieved by establishing an interagency working group that works with a timetable and defined interim and longer term goals to determine the minimum best set of concepts to produce for publication,[59] thrash out consistent cross-tabulation

[59]It will be essential for BEA to produce comparable series to the NEWS before-and-after tax and transfer income and components so that appropriate comparisons can be performed without having to adjust the BEA series from scratch.

categories (e.g., deciles rather than dollar categories of income), and the like. The group should issue a periodic (say, every 3 years) report explaining differences and setting forth deadlines for work to achieve as much coherence as feasible (see National Academies, 2024, recommendation 3.2).

- **Adequate resources**, a difficult ask in the current political environment, even though BEA, BLS, and Census Bureau budgets have been flat in real terms since about 2013 and declined in 2024 (see Figure 9.2 above). A coordinated, sustained outreach effort to Congress is needed to present the benefits and efficiencies from an integrated, coherent, relevant, and accurate system of household income statistics.
- **Readier access** to relevant federal and state administrative records. The Evidence Act of 2018, Section 3581, provides for statistical agency access to federal records as a matter of course ("presumption of accessibility"), and requires OMB to issue a regulation to implement that provision.[60] Even with such a regulation, there are still legal and administrative barriers to overcome. Title 26 is a legal barrier, as it strictly limits access to tax records, which are essential for improved income data, even for statistical purposes. Recently, under its existing regulatory powers, IRS has permitted greater access by the Census Bureau to tax information for statistical purposes,[61] but there are still variables that the Census Bureau needs to which it does not have access (see, e.g., Bee et al., 2025, p. 6, footnote 9). The Evidence Act does not address access to state records, even though such access was recommended by the Commission on Evidence-Based Policymaking (2017, p. 5, recommendation 2-7). An amendment to the Evidence Act would be necessary and funding to the states for technical

[60] Text - H.R.4174 - 115th Congress (2017-2018): Foundations for Evidence-Based Policymaking Act of 2018 | Congress.gov | Library of Congress

[61] eCFR :: 26 CFR 301.6103(j)(1)-1 -- Disclosures of return information reflected on returns to officers and employees of the Department of Commerce for certain statistical purposes and related activities.

assistance would be appropriate to facilitate statistical agency access. Currently, agencies such as the Census Bureau have to request permission state-by-state for such federally funded programs as SNAP and school lunch.[62]

With a focus on deep and broad collaboration among relevant statistical agencies to serve the nation's need for high-quality, relevant, and coherent information on the economic well-being of its households and people, the goal set out by the NEWS team (Bee et al., 2025, p 1) should be in reach. That goal, to repeat, is "to produce the best possible income and poverty statistics given all available survey, decennial census, administrative, and third-party data."

[62]Executive Order, 14243, March 20, 2025, calls for "Stopping Waste, Fraud, and Abuse by Eliminating Information Silos." It appears to give sweeping authority to federal agencies to share microdata and to obtain microdata from states for programs funded by the federal government, with no provisions for confidentiality protection, data stewardship, or public input. Federal Register :: Stopping Waste, Fraud, and Abuse by Eliminating Information Silos

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