

Income Data for 2002: A Comparison of Eight Surveys

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**Income Data for Policy Analysis:
A Comparative Assessment of Eight
Surveys**

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Purpose of the Project

- **Comprehensive and systematic assessment of income data across eight major surveys**
- **Study focused on three issues:**
 - **Quality and usability of each survey's income and poverty data for policy-related analyses**
 - **Overall impact of different design and methodological approaches**
 - **Specific design and processing choices that may be related to the quality and utility of income and poverty data in each survey**

Eight Surveys

- **Current Population Survey (CPS), Annual Social and Economic (ASEC) Supplement**
- **Survey of Income and Program Participation (SIPP)**
- **American Community Survey (ACS)**
- **National Health Interview Survey (NHIS)**
- **Medical Expenditure Panel Survey (MEPS) Household Component**
- **Medicare Current Beneficiary Survey (MCBS)**
- **Health and Retirement Study (HRS)**
- **Panel Study of Income Dynamics (PSID)**

Choice of Reference Period

- **Common reference period for income estimates is calendar year (CY) 2002**
- **This was the latest year for which estimates could be obtained for all eight surveys when the project was undertaken; this choice was approved by the TAG**
- **For the ACS, which has a rolling reference period, estimates from the 2002 survey provide closest approximation to CY 2002 income**
- **HRS and MCBS income for CY 2003 was deflated to CY 2002 using the CPI-U**



Standard Income Tabulations

- **Persons and their aggregate income classified by family income (poverty relatives and quintiles)**
- **Standardized universe**
- **Standardized family definition**
- **Standardized measure of income**
- **Standardized demographic and subpopulation groups**

Aggregate Income

- **There is no gold standard for survey estimates of income, but the CPS is the official source of estimates of income and poverty in the U.S.**
- **Aggregate income for a CY 2002 reference period is \$6.47 trillion in the CPS, \$6.35 trillion in ACS, \$6.26 trillion in MEPS, and \$6.12 trillion in NHIS—a range of just 5 percent despite substantial differences in measurement**
- **At \$5.77 trillion, SIPP was 89 percent of the CPS estimate**
- **PSID, despite a weighted population 21 million fewer than the CPS, has the highest aggregate income at \$6.72 trillion**

Aggregate Income as a Percent of CPS, by Quintile of Family Income

Quintile	CPS	ACS	SIPP	MEPS	NHIS	PSID
All persons	100.0	98.1	89.1	96.7	94.6	103.9
Lowest	100.0	99.5	105.6	97.2	84.7	101.4
Second	100.0	100.6	97.0	104.4	92.7	103.1
Third	100.0	99.7	92.5	105.0	97.1	101.2
Fourth	100.0	97.9	90.3	101.0	98.2	104.0
Highest	100.0	96.7	82.8	89.1	93.5	105.5

Average Income Per Capita by Quintile of Family Income

Quintile	CPS	ACS	SIPP	MEPS	NHIS	PSID
All persons	22,893	22,854	20,514	22,089	21,558	25,710
Lowest	6,513	6,526	6,962	6,352	5,528	7,178
Second	13,789	14,259	13,355	14,269	12,649	15,261
Third	19,293	19,576	17,946	20,052	18,493	21,132
Fourth	25,604	25,496	23,250	25,976	25,151	28,785
Highest	49,316	48,543	41,062	43,855	46,114	56,220

Persons with Earnings and Per Capita Amount

CPS	ACS	SIPP	MEPS	NHIS
Millions of Persons with Nonzero Earnings				
150.4	151.9	154.1	160.4	147.4
Average Earnings Per Worker				
35,591	34,279	30,899	32,813	35,707

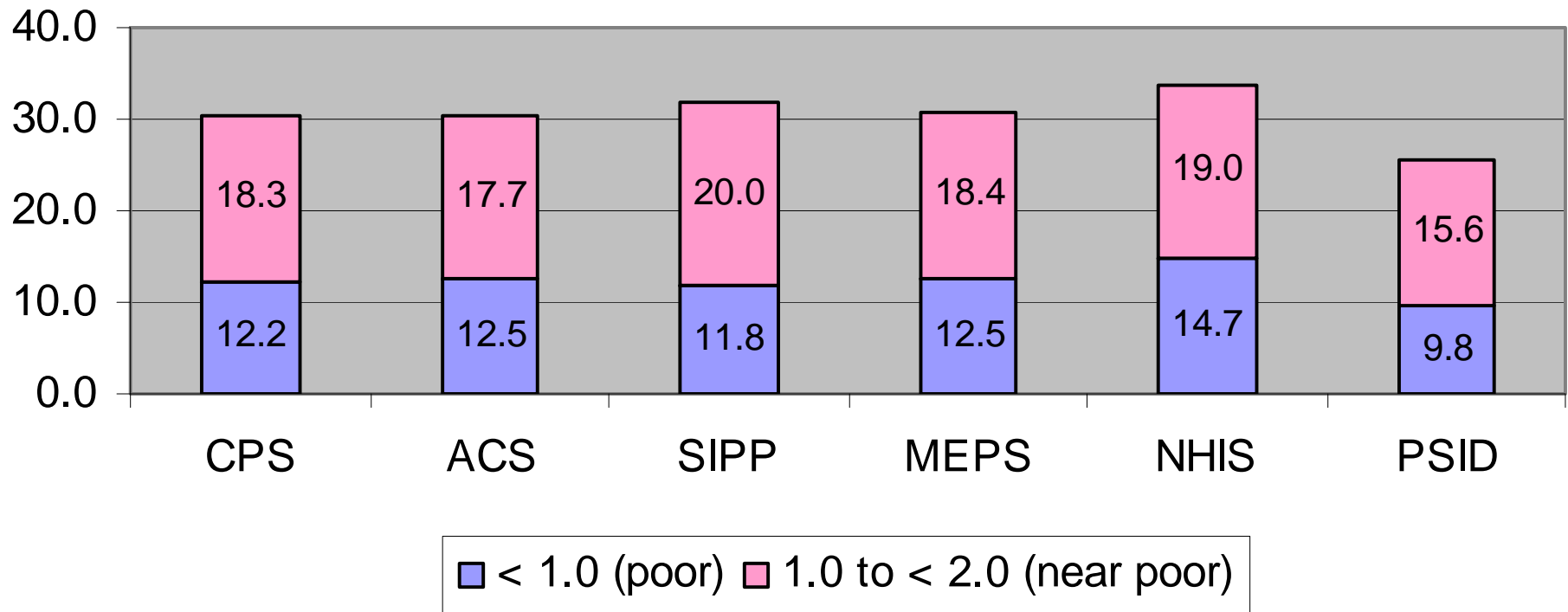
Earned Income as % of CPS by Quintile of Family Income

Quintile	CPS	ACS	SIPP	MEPS	NHIS
All persons	100.0	97.3	88.9	98.3	98.3
Lowest	100.0	117.3	113.9	108.8	111.6
Second	100.0	104.1	97.3	113.4	94.7
Third	100.0	98.8	89.5	106.9	99.9
Fourth	100.0	97.6	89.1	102.6	103.7
Highest	100.0	93.6	85.0	89.1	94.8

Unearned Income As % of CPS by Quintile of Family Income

Quintile	CPS	ACS	SIPP	MEPS	NHIS
All persons	100.0	102.2	90.3	89.2	76.7
Lowest	100.0	83.4	98.2	86.6	60.3
Second	100.0	92.2	96.3	83.4	88.0
Third	100.0	103.8	106.2	96.4	84.6
Fourth	100.0	99.7	98.3	90.9	62.2
Highest	100.0	122.8	64.5	89.5	82.7

Percent of Persons by Ratio of Income to Poverty: Six Surveys



Percent of Population Participating in Selected Programs

Program	CPS	ACS	SIPP	MEPS	NHIS
Welfare/Food Stamps	7.3	8.8	11.2	7.1	5.0
SSI	1.7	1.6	3.0	2.3	1.9
Medicaid					
Ever in prior year	11.6	NA	17.1	14.6	NA
Current month	NA	NA	11.8	12.3	10.5

Income of Persons 65 and Older

- **Comparisons involving the MCBS were restricted to persons 65 and older**
- **The MCBS collects income for the sample beneficiary and spouse, if present; this results in a double-counting of spouse income, as spouses may be beneficiaries and their incomes represented by other sample members**
- **Best way to assess MCBS income data is to limit comparisons to unmarried persons, who are one-third of persons 65 and older**
- **MCBS per capita income for this population is \$20,661, which compares to \$21,379 for CPS, \$22,777 for ACS, and \$19,033 for SIPP**

Income of Persons 51 and Older

- To avoid double-counting of spouse income in the HRS, we compare the average family income of persons 51 and older
- This average in HRS (\$72,303) is 27 percent higher than the CPS (\$56,800) while ACS is \$58,625 and SIPP is \$51,546
- HRS income exceeds CPS by 17 to 18 percent in each of bottom four quintiles but is 37 percent higher in top quintile
- Despite the higher income by quintile, the HRS poverty rate lies between SIPP and ACS; however, the near poor are fewer in the HRS

Impact of Family Definition on Poverty Rate

- Including unmarried partners and their relatives in the family definition reduces the number of poor compared to the CPS family definition
- In both NHIS and MEPS, the broader family definition reduced the number of poor by 2.6 million and the overall poverty rate by 0.9 percentage points
- In MEPS, the broader family definition:
 - Reduced the child poverty rate by 1.7 percentage points
 - Reduced the poverty rates for single parents and their children by over 5 percentage points
 - Did not change the elderly poverty rate

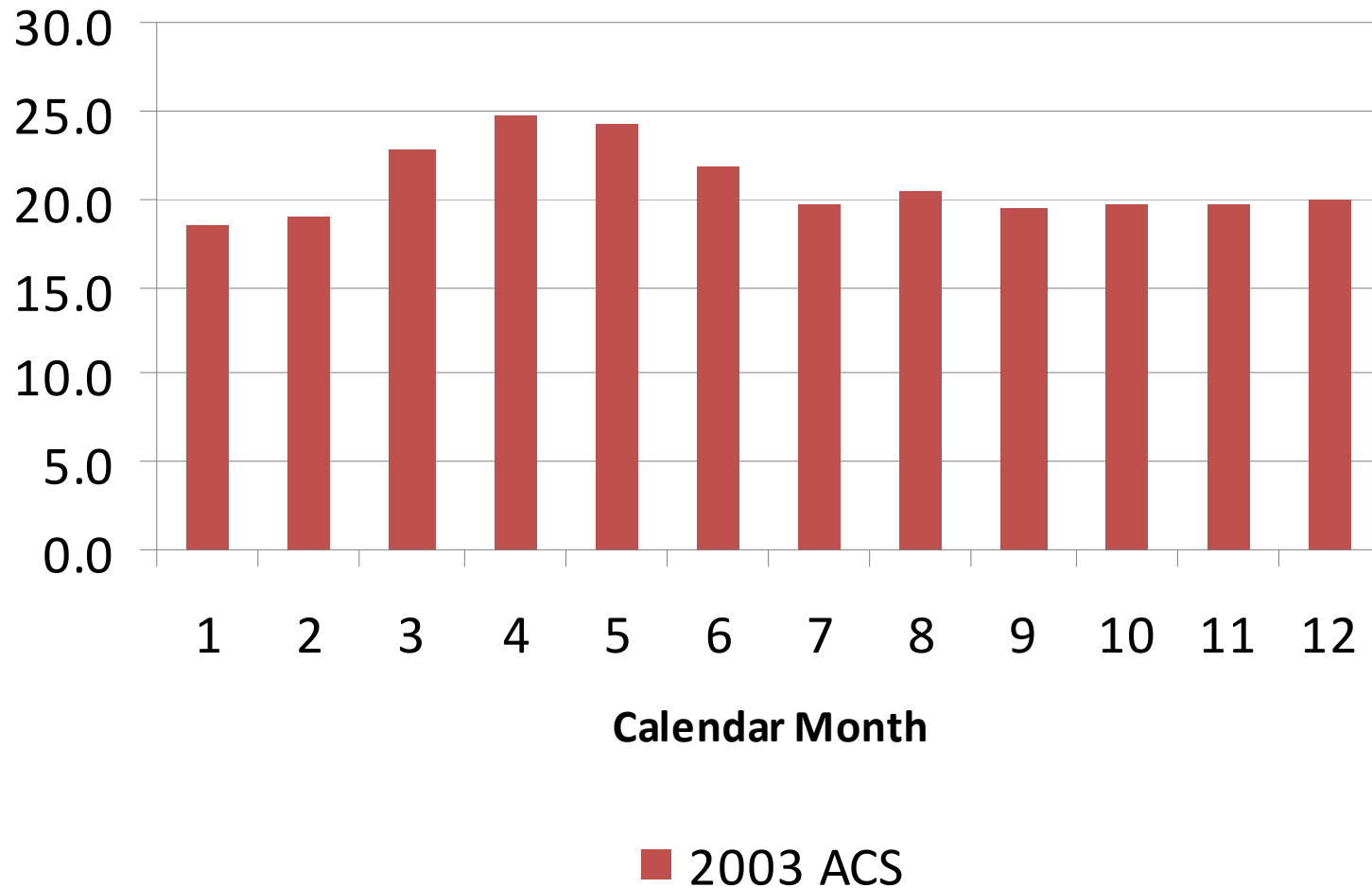
Timing of Family Composition Relative to Income Reference Year

- Simulations with SIPP show that:
 - Poverty rates are lowest when income and family composition are measured at the same time, by month
 - If family composition is defined at a fixed point in time and each family member's income collected for a prior, 12-month reference period, poverty rates grow modestly with the interval between the income reference period and the fixed date at which family size and composition are determined
 - The percentage of persons misclassified as poor or non-poor greatly exceeds the net change in the poverty rate

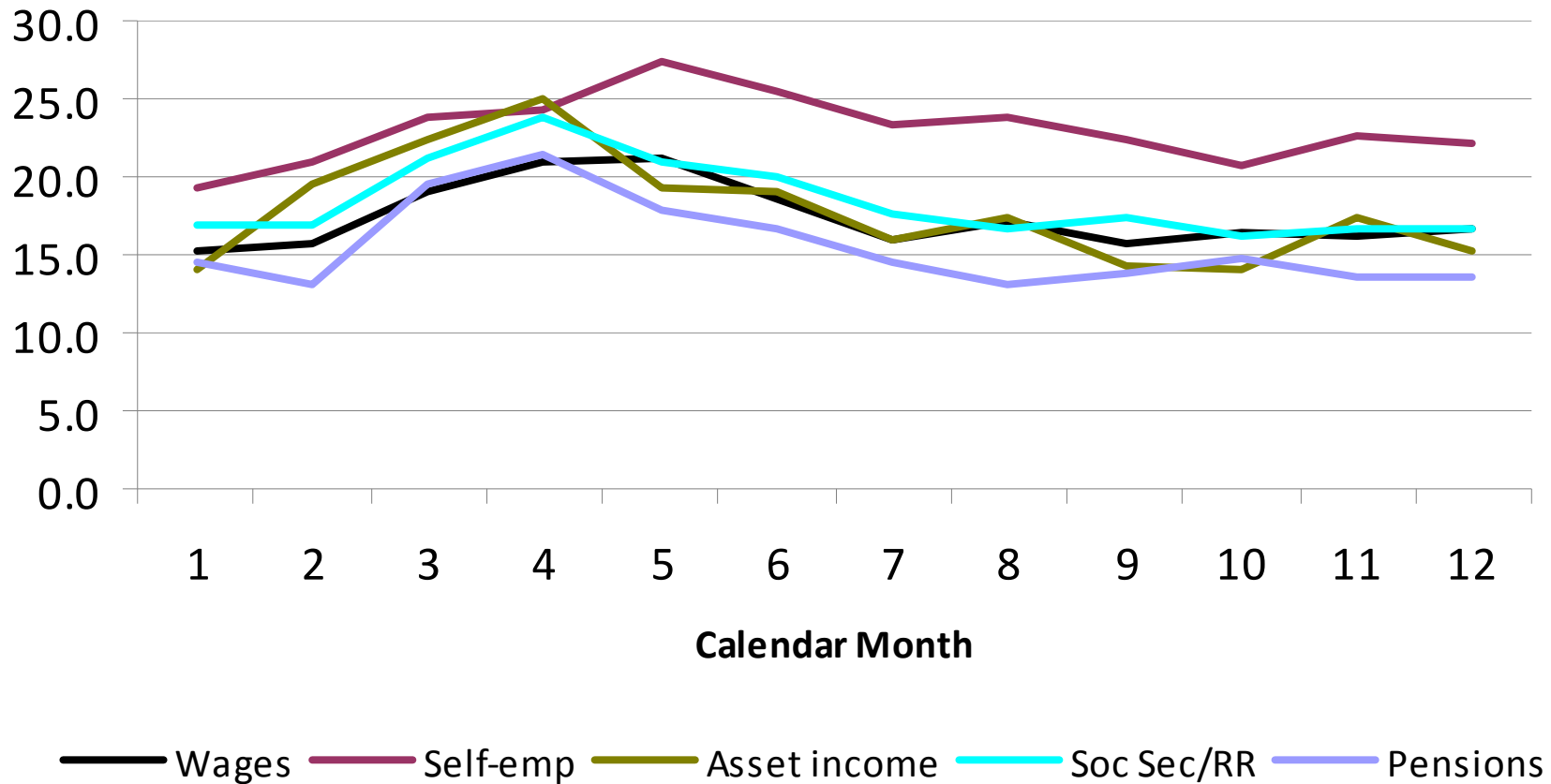
Response to Income Questions by Interview Month: Rolling Sample

- **Both non-response and allocation rates are significantly higher in March, April and May than other months of the year (ACS)**
- **Finding holds for five of the seven income sources reviewed**
 - **Wages and salaries**
 - **Self-employment income**
 - **Asset income**
 - **Social Security**
 - **Pensions**
- **Pattern did not hold for SSI or public assistance**

Percent of Income Allocated: 2003 ACS



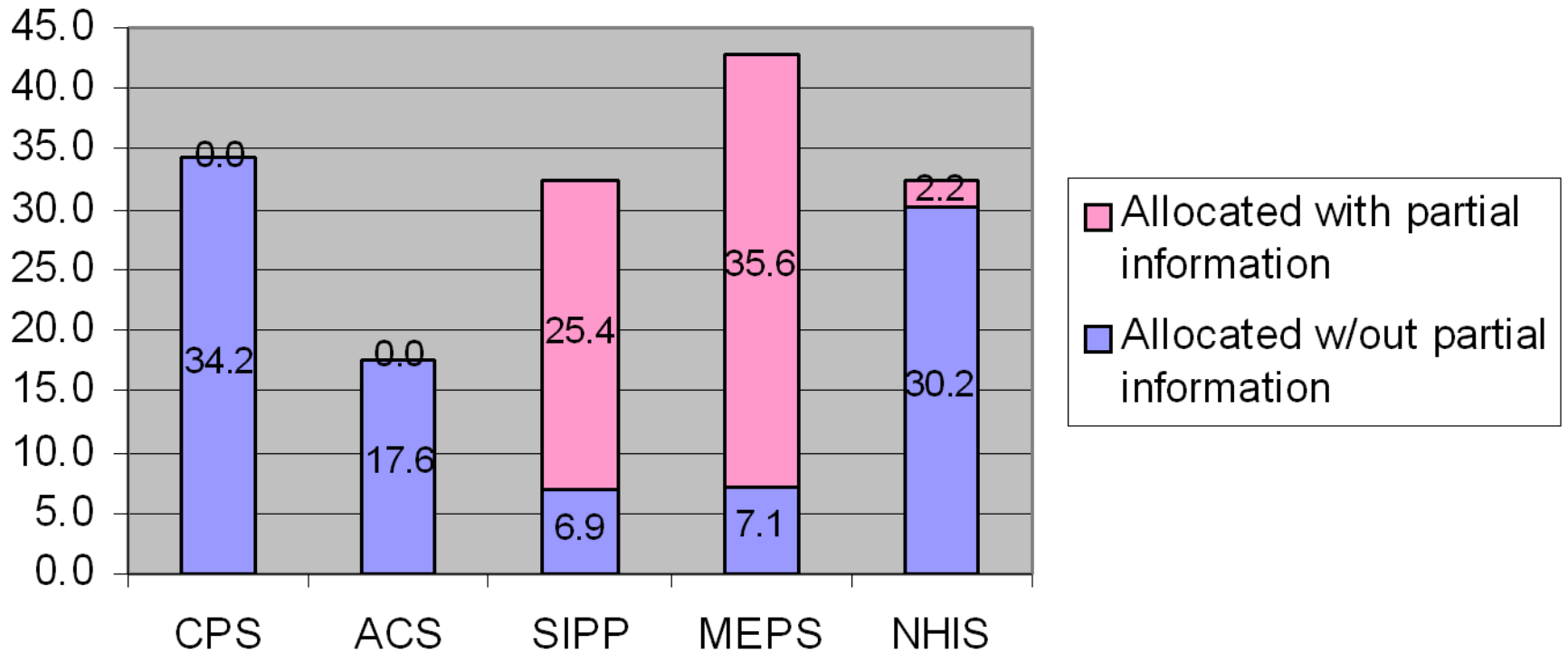
Percent of Income Allocated by Income Source: 2003 ACS



Allocation Analysis

- **Allocation encompasses any method of replacing missing values created by item or unit non-response and left after editing**
- **If available, partial information—such as bracketed amounts or, for panel surveys, values from prior interviews—can lead to qualitatively better imputation of missing amounts**
- **Our estimates of allocation frequency focus on percent of income allocated, which avoids bias arising from the number of income questions**

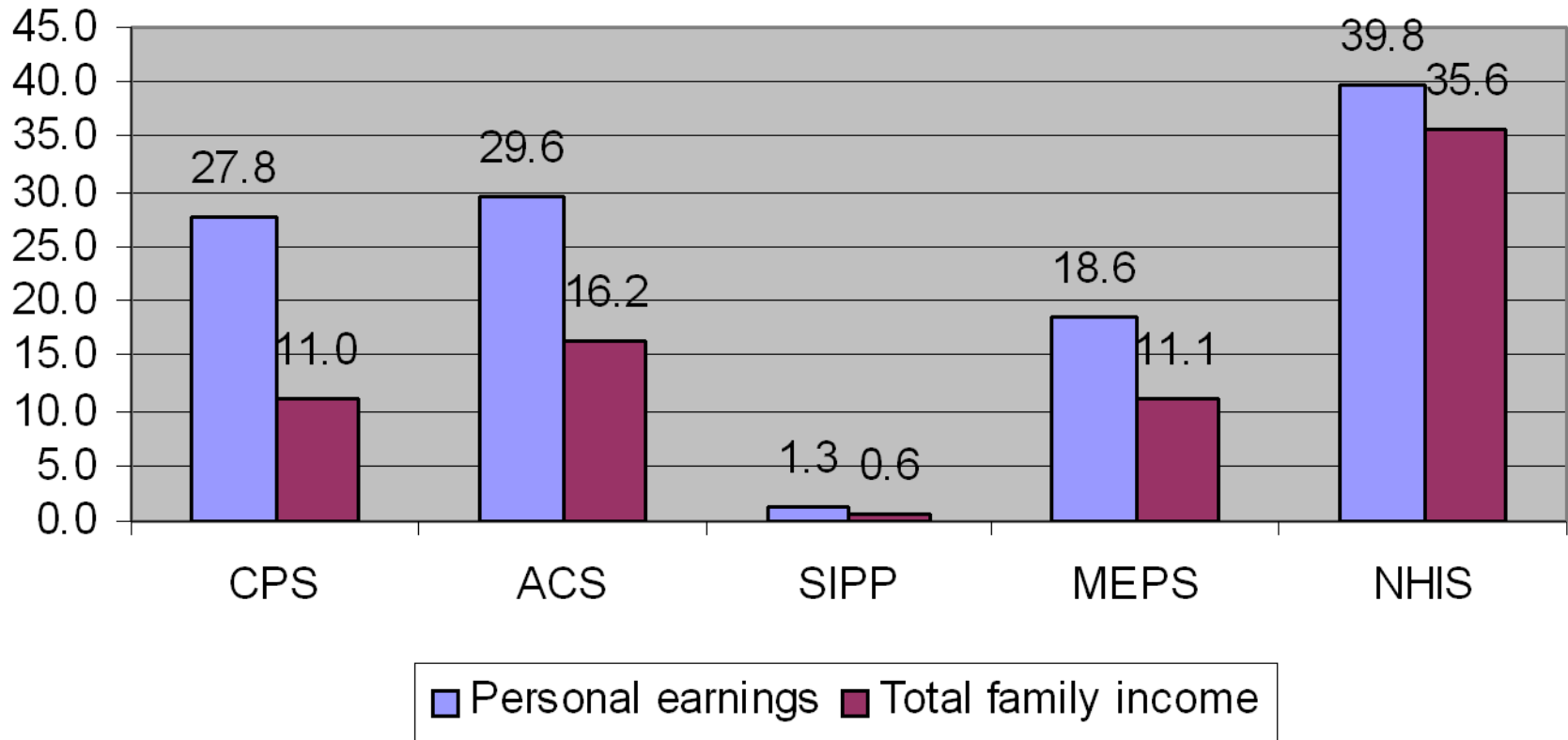
Percent of Income Allocated, With or Without Partial Information



Rounding of Reported Income

- **We cannot assess the accuracy of reported incomes, but one way that respondents may reduce their accuracy is to use a high level of approximation**
- **When numerous respondents round their reported incomes, this creates spikes in the distribution**
- **The frequency of round responses can be quantified**
- **Pervasive rounding distorts the results of policy simulations that use income thresholds to establish eligibility**

Percent of Reported Incomes Divisible by \$5,000 among Positive Dollar Amounts below \$52,500



What Comes Next?

- **Scope of study excluded recommendations**
- **Study provides groundwork for a discussion of future directions and work on issues in individual surveys**
- **We hope it will serve as the basis for recommendations on survey improvements and future innovations**