Income and Benefits Data in Federal Surveys: Misreporting and Missing Data

Linda Giannarelli – Senior Fellow & TRIM3 Project Director, the Urban Institute

National Committee on Vital and Health Statistics,
Population Health Subcommittee Meeting:
Measuring SES in Federal Surveys

Hyattsville, Maryland -- March 9, 2012
Context

• Challenges faced as a user of the data
• Using survey SES data to assess program eligibility, including Medicaid/CHIP eligibility
• Analysis of the low-income population and subgroups of that population
  – Program participation, level of dependency
  – Impact of hypothetical changes in policies
Two Key Challenges

• Misreporting / Underreporting
  – Aggregate under-reporting vs. actual totals
  – Findings from exact-match projects

• Missing Data
  – Large role of allocated data
  – Some issues with allocated data

• Wish list
## CPS-ASEC Under-reporting: 2010 ASEC Amounts (CY 2009) vs. NIPA

<table>
<thead>
<tr>
<th>Income Type</th>
<th>Percent captured (includes allocated data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage and salary income</td>
<td>93%</td>
</tr>
<tr>
<td>Unemployment compensation</td>
<td>66%</td>
</tr>
<tr>
<td>Non-farm self-employment</td>
<td>32%</td>
</tr>
<tr>
<td>Rents and royalties</td>
<td>56%</td>
</tr>
<tr>
<td>Interest income</td>
<td>27%</td>
</tr>
<tr>
<td>Dividend income</td>
<td>14%</td>
</tr>
<tr>
<td>Social Security (OASDI)</td>
<td>85%</td>
</tr>
<tr>
<td>Pension income</td>
<td>67%</td>
</tr>
<tr>
<td>Veterans payments</td>
<td>63%</td>
</tr>
<tr>
<td>Supplemental Security Income (SSI)</td>
<td>75%</td>
</tr>
<tr>
<td>Supplemental Nutrition Assistance (SNAP)</td>
<td>56%</td>
</tr>
</tbody>
</table>

Source:  Austin Nichols and Karen Smith, APPAM conference presentation, 2011
## CPS-ASEC Under-reporting:
Reported Enrollment vs. Program Data

<table>
<thead>
<tr>
<th>Program</th>
<th>Percent of Enrollment Captured (including allocated responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANF, 2009 (average monthly units)</td>
<td>58%</td>
</tr>
<tr>
<td>SNAP, 2009 (average monthly units)</td>
<td>58%</td>
</tr>
<tr>
<td>Medicaid and SCHIP, 2008 (average monthly individuals)</td>
<td>87%</td>
</tr>
<tr>
<td>SSI, 2009 (annual individuals)</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: unpublished tabulations
ACS Income collection: Additional Challenges

• Many respondents fill out form independently
• Few income sources are collected individually (only wages/salaries, self-employment, Social Security, SSI)
• Amounts that are combined
  – All public assistance and welfare income
  – All asset income (interest, dividends, rent)
  – All retirement income
  – All other income (veterans payments, child support, workers’ comp, unemployment comp, anything else)
ACS 2008: Likely TANF Income vs. Program Data

• Likely TANF income = Income reported as “public assistance or welfare payments” that is reported by low-income families with children

• Likely-TANF income vs. program data, 3 states
  – Georgia: 84%
  – Illinois: 96%
  – Massachusetts: 23%

• Aggregate public assistance reported in IL exceeds total across all IL cash benefit programs
ACS 2008:
Likely Unemployment Compensation vs. Program Data

• Likely UC income = Income reported from “any other source”, reported by individuals with apparent unemployment

• Likely-UC income vs. program data, 3 states
  – Georgia: 23%
  – Illinois: 23%
  – Massachusetts: 26%
ACS 2008:  
SSI Income vs. Program Data

• Reported amount vs. program data, 3 states
  – Georgia: 81%
  – Illinois: 86%
  – Massachusetts: 85%

• Data show higher incidence of very-high amounts (over SSI maximum payment) vs. CPS-ASEC data
Comparisons of Survey Data on Benefits with Actual Benefit Status

• Exact match of a survey data file with an administrative data set, based on SSN
• Studies have been performed for Medicaid, SSI/Social Security, SNAP
• General findings:
  – Many actual recipients fail to report enrollment
  – Some reporters are not actually enrolled
SNAP Exact Match Study*

• Match of 2005 ASEC with SNAP program data from Texas, Maryland, and Illinois

• Estimates (weighted numbers of households)
  – 833,000 correct reporters
  – 922,000 false negatives
  – 92,000 false positives

* Julie Parker, Census Bureau working paper
“SNACC” Project – Medicaid Undercount Project *

- Involved CMS, ASPE, NCHS, AHRQ, Census Bureau, SHADAC, RWJ

- CY 2005 Estimates
  - 24.8 million correctly reported as enrolled
  - 18.7 million false negatives
  - 7.7 million false positives
  - Adjusted undercount estimate: 32%

Source: Phase V Research Results, Extending the Phase II Analysis, 2010
Why do people not report their benefits correctly?

• A few possible reasons
  – Long reference period
  – Confusion between programs
  – Stigma
  – Interview fatigue

• Ongoing research
  – Census Bureau cognitive testing
  – Exact-match analyses
Allocated Data

- Allocated data are a substantial portion of the data that users of public-use files are analyzing.
<table>
<thead>
<tr>
<th>Program</th>
<th>CPS-ASEC Annual Dollar Amount as Percent of Administrative Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Only truly-reported CPS amounts</td>
</tr>
<tr>
<td>TANF</td>
<td>40%</td>
</tr>
<tr>
<td>Food Stamps</td>
<td>43%</td>
</tr>
<tr>
<td>SSI</td>
<td>60%</td>
</tr>
</tbody>
</table>

Source: Wheaton, Laura, JSM 2007 conference paper
Issues with Allocated Data for Low-Income Families

• People allocated to be enrolled in a program are less likely to appear eligible than actual reporters

• Allocated data for benefit programs may be inconsistent with known policies

• Allocated income amounts (earnings, Social Security) can make a person who actually reported a benefit program appear ineligible
Implications

• Aggregate impacts of misreporting and allocation may not be significant, but...
• Impacts for specific studies, subgroups, can be substantial
• Allocated data are not the same as truly-reported data at the micro-level
Wish List – Specific Questions

• ACS
  – Ask about more individual income items
  – Reinstate the question on work-related disability
  – Ask if a household lives in public or subsidized housing

• CPS/ASEC
  – Identify individuals combining school and employment, at any age
Wish List -- General

• Continued cognitive testing – Why don’t people report all of their income and benefits?
• Continued refinements to CATI/CAPI systems
• Refinements to allocation methods
Cited Research

- Parker, Julie. “SNAP misreporting on the CPS: Does it affect poverty estimates?” SEHSD working paper number 2012-1
- Austin, Nichols, and Karen Smith. “Using NIPA and Tax Data to Assess the Quality of the March CPS”, APPAM
- SNACC Project: Phase V Research Results: Extending the Phase II Analysis of Discrepancies between the MSIS and the CPS-ASEC from Calendar Years 2000-2001 to Calendar Years 2002-2005.