

*Child Care Data in the Survey of Income and Program Participation:
Inaccuracies and Corrections*

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Summary

The future of the Census Bureau's Survey of Income and Program Participation (SIPP) has recently come into question and has been the subject of much discussion. To contribute to that discussion, I thought it might be helpful to describe my understanding of the issue.

The Office of Management and Budget instructed the Census Bureau to cut \$40 million from its budget for FY2007. To do so, it had a choice between making smaller cuts from every project (as it has done in the past) or eliminating one entire project, such as the SIPP. Because of the SIPP's problems, the Census Bureau decided to terminate it and try to develop a more accurate, less expensive alternative.

This is a judgment concurred in by, among other people, Kenneth Prewitt, the Clinton administration's Census Director, who told the *Chronicle of Higher Education*:

I simply do not think that the bureau can be faulted for facing up to the fact that it's going to suffer budget cuts. If you cut across the board, it means that everything is going to suffer. To cut a single program strikes me as the prudent thing to have done under the circumstances.¹

The *Chronicle of Higher Education* summarized Prewitt's views as follows:

Many of the bureau's other specialized household surveys are done in concert with other government agencies, such as the Bureau of Labor Statistics or the National Center for Education Statistics.

The SIPP, however, has had no particular "partner agency." That has meant that Census Bureau employees have had to gain some expertise in the social-insurance programs covered by the survey. And that need for substantive policy expertise has conflicted with the bureau's fundamental role, Mr. Prewitt said.

"The Census Bureau is the home of statisticians and survey researchers and questionnaire designers," he said. "The Census Bureau itself does not write analyses of policy questions. It does not write white papers. So, in that sense, you do not particularly want a policy-analysis capacity in the Census Bureau. Its fundamental job is to be a purveyor of good data."²

I know a little bit about the SIPP's problems because of my work with its child care data. My office has been working on a large project in which we are estimating child care arrangements and subsidy patterns. When we started the project, we assumed that we would use the SIPP as a major source of information. We soon found, however, that inaccuracies in the SIPP made it impossible to use without substantial adjustment. As part of that process, we had to document the SIPP's data problems.

In doing so, we developed a report detailing the data inaccuracies in the SIPP. I have summarized some of its findings below.

The nation should have a high quality, reasonably accurate longitudinal survey of income and program participation. The SIPP, as it is *presently constituted*, is not that survey.

Sample loss in the SIPP has increased with every panel to the point that the second waves of the 2001 and 2004 panels suffer from a 22 percent sample loss that is about equal to the sample loss of the entire eight-wave panels of the SIPP from 1990 and 1991. The nonresponse rate continued to climb in both panels, with the 2001 SIPP panel at 32 percent nonresponse by its ninth and final wave. Through the 2004 SIPP panel's fourth wave, the most recent for which we have such data, the nonresponse rate rose steadily to about 28 percent, the highest fourth-wave nonresponse rate of any SIPP panel.

There is no simple decision rule to tell us the point at which sample loss rates render a survey no longer usable. That depends on the extent to which sample loss is random or introduces bias. But, in general, survey sample loss is not random. For one thing, economically marginal households are more likely to be lost.

Arguably, the quality of SIPP data, especially its core demographic, labor force, and major program participation data, has been subject to more intense and continuous scrutiny than any other federal survey, but many of the problems recognized at the start remain. Much of the core data, both cross sectional and longitudinal, has been shown to be useful, most notably in observing change. However, coverage of some events, especially when gathered only once or twice during a panel in a topical module, are so low in comparison to benchmarks as to raise the question of whether it would be less misleading to users if the Census Bureau were to simply stop asking about them.

The federal government needs, and is able to afford, a longitudinal survey of the general population. Currently, agencies fund longitudinal surveys of segments of the population of particular policy interest, but the only longitudinal survey of the general population other than the SIPP is the Panel Study of Income Dynamics (PSID), which is funded, but not fielded, by the federal government. The PSID is extremely valuable for its very long observation, but its frequency is too low, it has experienced severe sample loss over the years, and only occasionally supplements its original panel.

What should be the nature of such a survey? Annual recall misses or distorts the timing of most economic, demographic, and program transitions that are the heart of a longitudinal survey. The federal longitudinal survey should make at least semi-annual data collections for most items, and shorter intervals may be preferable, depending on how such intervals affect report accuracy and sample retention. Topics covered should mirror the broad scope of the current SIPP core, but details will probably need to be pared down as part of a general effort to reduce respondent burden and sample refusal and loss. SIPP topical modules have been of great value to many researchers, but their number and respondent burden should be scrutinized carefully for the sake

of reducing sample loss. Topical modules should be repeated within a panel only when they clearly exploit the longitudinal nature of the core data.

Vague talk about replacing the SIPP with an untried approach to a longitudinal survey is not an acceptable alternative. If the SIPP is not going to be continued until a new survey has been designed and tested, there should be no more than a year without a new longitudinal survey in the field. *That points to a simple longitudinal design using as much of the current SIPP infrastructure as practical.*

Below we summarize the current SIPP's specific undercounts, as benchmarked against administrative data and the National Income and Product Accounts. We developed the former comparisons, and the latter come from a 2000 Census Bureau report using data that are now almost ten years old.³ Hence, before proceeding, we must lament the absence of more information about the quality of SIPP data from the Bureau. A survey of the SIPP's importance—and palpable problems—deserves and needs more attention to quality.

Comparisons to administrative data

The SIPP's data can be compared to various administrative data sets that report the number of recipients in various programs. This comparison indicates that the SIPP substantially undercounts the participation in many government programs. *Compared to the relevant administrative data:*

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- The SIPP *undercounted* 77 percent of Head Start children in the 1998/1999 school year (167,000 in the SIPP⁴ vs. 715,626 in the PIR⁵) and 77 percent in the 2001/2002 school year (200,000 in the SIPP⁶ vs. 852,401 in the PIR⁷) (see table 1);
- The SIPP *undercounted* 47 percent of the children receiving government subsidized child care in 1999 (1,089,000 in the SIPP⁸ vs. 2,040,000 in the HHS data⁹) and 42 percent in 2002 (1,353,000 in the SIPP¹⁰ vs. 2,322,000 in the HHS data¹¹) (see table 1);
- The SIPP *undercounted* 28 percent of TANF recipients in 1999 (4,936,000 in the SIPP¹² vs. 6,874,471 in the HHS data¹³) (see table 1);
- The SIPP *undercounted* 12 percent of food stamp recipients in 1999 (16,001,000 in the SIPP¹⁴ vs. 18,183,000 in the USDA data¹⁵) (see table 1); and
- The SIPP *undercounted* 29 percent of all WIC recipients, 34 percent of infant recipients, and 24 percent of the recipient children ages one to four in 1999.¹⁶ (See table 1.)

Moreover, the SIPP can be compared to the Census Bureau's October Current Population Survey (CPS) in order to gauge the accuracy of the SIPP's nursery and preschool data. Based on this comparison, the SIPP undercounted the number of children in nursery and preschool by 63 percent in the 1998/1999 school year (1,444,000 in the SIPP¹⁷ vs. 3,862,000 in the comparable CPS count¹⁸) and by 58 percent in the 2001/2002 school year (1,470,000 in the SIPP¹⁹ vs. 3,501,000 in the comparable CPS count²⁰). (See table 1.)

(We do not have sufficient data from the SIPP to benchmark TANF, food stamp, and WIC receipt after 1999.)

Table 1. Selected SIPP Undercounts (1999 and 2002)

	1999			2002		
	Benchmark data	SIPP	SIPP as percent of benchmark	Benchmark data	SIPP	SIPP as percent of benchmark
Head Start	715,626	167,000	23%	852,401	200,000	23%
Subsidized child care	2,040,000	1,089,000	53%	2,322,000	1,353,000	58%
TANF	6,874,471	4,936,000	72%	-	-	-
Food stamps	18,183,000	16,001,000	88%	-	-	-
WIC	-	-	71%	-	-	-
Infants	-	-	66%	-	-	-
Children (1–4)	-	-	76%	-	-	-
Nursery/preschool	3,862,000	1,444,000	37%	3,501,000	1,470,000	42%

Sources:

For the benchmark data:

For Head Start: U.S. Department of Health and Human Services, Head Start Bureau, “Head Start Program Information Report (PIR) for 1998–1999 Program Year, Summary Report” (Washington, DC: U.S. Department of Health and Human Services, undated); and U.S. Department of Health and Human Services, Head Start Bureau, “Head Start Program Information Report (PIR) for 2001–2002 Program Year” (Washington, DC: U.S. Department of Health and Human Services, undated).

For subsidized child care: for CCDF, U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, “Child Care and Development Fund Statistics,” various years (Washington, DC: U.S. Department of Health and Human Services, various years), <http://www.acf.hhs.gov/programs/ccb/research/index.htm> (accessed March 20, 2006); for TANF child care data, Melinda Gish, *Child Care: Funding and Spending under Federal Block Grants* (Washington, DC: Congressional Research Service, March 19, 2002) and unpublished CRS tables; and for SSBG: U.S. Department of Health and Human Services, Administration for Children and Families, “Annual Report on Expenditure and Recipients,” *Social Service Block Reports* (Washington, DC: U.S. Department of Health and Human Services, undated), <http://www.acf.hhs.gov/programs/ocs/ssbg/docs/reports.htm> (accessed January 21, 2005).

For TANF recipients: U.S. Department of Health and Human Services, Administration for Children and Families, “Aid to Families with Dependent Children (AFDC) and Temporary Assistance for Needy Families (TANF), Average Monthly Families and Recipients for CALENDAR YEARS 1936 – 2001” (Washington, DC: U.S. Department of Health and Human Services, May 23, 2002), <http://www.acf.dhhs.gov/news/stats/3697.htm> (accessed February 9, 2004).

For food stamp recipients, U.S. Department of Agriculture, Food and Nutrition Service, “Food Stamp Program Participation and Costs (Data as of January 23, 2004)” (Washington, DC: U.S. Department of Agriculture, January 23, 2004), <http://www.fns.usda.gov/pd/fssummary.htm> (accessed February 9, 2004).

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For nursery/preschool: U.S. Census Bureau, “School Enrollment–Social and Economic Characteristics of Students: October 1998,” *Current Population Reports*, P20-521 (Washington, DC: U.S. Census Bureau, September 1999), table 2, <http://www.census.gov/population/socdemo/school/p20-521/tab02.pdf> (accessed December 8, 2005); U.S. Census Bureau, “School Enrollment–Social and Economic Characteristics of Students: October 2001,” Detailed Tables (Washington, DC: U.S. Census Bureau, August 28, 2003), table 2, <http://www.census.gov/population/socdemo/school/cps2001/tab02.pdf> (accessed March 7, 2006); U.S. Department of Health and Human Services, Head Start Bureau, “Head Start Program Information Report (PIR) for 1998–1999 Program Year, Summary Report” (Washington, DC: U.S. Department of Health and Human Services, undated); and U.S. Department of Health and Human Services, Head Start Bureau, “Head Start Program Information Report (PIR) for 2001–2002 Program Year, Summary Report” (Washington, DC: U.S. Department of Health and Human Services, undated). The number of children in nursery and preschool is the CPS figure minus the number of children in Head Start reported in the PIR.

For the SIPP, U.S. Census Bureau, “Who’s Minding the Kids? Child Care Arrangements: Spring 1999,” Detailed Tables (Washington, DC: U.S. Census Bureau, January 24, 2003), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-168.html> (accessed April 3, 2003); U.S. Census Bureau, “Who’s Minding the Kids? Child Care Arrangements: Winter 2002,” Detailed Tables (Washington, DC: U.S. Census Bureau, October 2005), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-177.html> (accessed March 6, 2006); and, U.S. Census Bureau, “Dynamics of Economic Well-Being: Program Participation 1996 to 1999, Who Gets Assistance?” *Current Population Reports*, P70-94 (Washington, DC: U.S. Census Bureau, October 2005), P70-94, tables A-2 and A-4, <http://www.census.gov/prod/2003pubs/p70-94.pdf> (accessed February 9, 2004).

For SIPP undercounts of WIC recipients: Marianne Bitler, Janet Currie, and John Karl Scholz, “WIC Eligibility and Participation,” Institute for Research on Poverty Discussion Paper no 1255-02, table 2, http://www.econ.ucla.edu/people/papers/currie/more/WIC_jhr.pdf (accessed March 20, 2006).

Comparisons to the NIPAs and the CPS

The SIPP’s data can also be compared to the U.S. Bureau of Economic Analysis’s National Income and Product Accounts (NIPAs), which report income data collected from various administrative sources. This comparison indicates that the SIPP substantially undercounts many forms of income, and that the problem has worsened over time. We also benchmark the Current Population Survey’s (CPS) income data against the NIPAs, a comparison that shows the income data in the CPS to be substantially more accurate and more stable than in the SIPP. *Compared to the NIPAs benchmark data:*

- The SIPP *undercounted* about 12 percent of aggregate earnings in 1996. The 1996 SIPP undercount is three times the size of the 1996 CPS undercount (12 percent in the SIPP vs. 4 percent in the CPS).²¹
- The SIPP *undercounted* about 43 percent of aggregate property income in 1996. It undercounted interest income by 50 percent, dividend income by 49 percent, and rent or royalty income by 18 percent. The 1996 SIPP undercount of aggregate property income is 49 percent higher than the 1996 CPS undercount (43 percent in the SIPP vs. 29 percent in the CPS).²²

- The SIPP *undercounted* about 14 percent of aggregate government transfer income in 1996. It undercounted unemployment compensation by 31 percent and worker's compensation by 28 percent. The 1996 SIPP undercount of government transfers is 17 percent higher than the 1996 CPS undercount (14 percent in the SIPP vs. 12 percent in the CPS).²³
- The SIPP *undercounted* about 14 percent of total national aggregate income in 1996. The 1996 SIPP undercount of total national aggregate income is almost twice the size of the 1996 CPS undercount (14 percent in the SIPP vs. 7 percent in the CPS).²⁴

¹ David Glenn, "Social Scientists Protest Plan to End Federal Study of Income and Hardship," The Chronicle of Higher Education, March 2, 2006, <http://chronicle.com/daily/2006/03/2006030202n.htm>.

² *Ibid.*

³ Marc I. Roemer, "Assessing the Quality of the March Current Population Survey and the Survey of Income and Program Participation Income Estimates, 1990–1996" (Washington, DC: U.S. Census Bureau, June 16, 2000), tables 2 to 7 and tables A to T, <http://www.census.gov/hhes/www/income/assess1.pdf> (accessed March 22, 2006).

⁴ Authors' calculation based on U.S. Census Bureau, "Who's Minding the Kids? Child Care Arrangements: Spring 1999," Detailed Tables (Washington, DC: U.S. Census Bureau, January 24, 2003), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-168.html> (accessed April 3, 2003).

⁵ U.S. Department of Health and Human Services, Head Start Bureau, "Head Start Program Information Report (PIR) for 1998–1999 Program Year, Summary Report" (Washington, DC: U.S. Department of Health and Human Services, undated). The PIR figure used in this comparison is the end-of-month enrollment figure for March 1999, because the 1999 SIPP was fielded between April and July and collected data on child care for the period from March through June.

⁶ U.S. Census Bureau, "Who's Minding the Kids? Child Care Arrangements: Winter 2002," Detailed Tables (Washington, DC: U.S. Census Bureau, October 2005), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-177.html> (accessed March 6, 2006).

⁷ U.S. Department of Health and Human Services, Head Start Bureau, "Head Start Program Information Report (PIR) for 2001–2002 Program Year, Summary Report" (Washington, DC: U.S. Department of Health and Human Services, undated). The PIR figure used in this comparison is the end-of-month enrollment figure for April 2002, because the 2002 SIPP was fielded between February and May and collected data on child care for January to April.

⁸ Julia Overturf Johnson, "Who's Minding the Kids? Child Care Arrangements: Spring 1999," *Current Population Reports*, P70-101 (Washington, DC: U.S. Census Bureau, October 2005), table 7, <http://www.census.gov/prod/2005pubs/p70-101.pdf> (accessed March 21, 2006).

⁹ Authors' calculation from U.S. Department of Health and Human Services, Administration for Children and Families, "Child Care and Development Fund Statistics, Revised 1999 CCDF Data Tables" (Washington, DC: U.S. Department of Health and Human Services, undated),

<http://www.acf.hhs.gov/programs/ccb/research/index.htm> (accessed March 20, 2006); Melinda Gish, *Child Care: Funding and Spending under Federal Block Grants* (Washington, DC: Congressional Research Service, March 19, 2002); and U.S. Department of Health and Human Services, Administration for Children and Families, “Annual Report on Expenditure and Recipients,” *Social Service Block Reports 1999* (Washington, DC: U.S. Department of Health and Human Services, undated), <http://www.acf.hhs.gov/programs/ocs/ssbg/docs/reports.htm> (accessed January 21, 2005).

¹⁰ Julia Overturf Johnson, “Who’s Minding the Kids? Child Care Arrangements: Spring 1999,” *Current Population Reports*, P70-101 (Washington, DC: U.S. Census Bureau, October 2005), table 7, <http://www.census.gov/prod/2005pubs/p70-101.pdf> (accessed March 21, 2006).

¹¹ Authors’ calculation from U.S. Department of Health and Human Services, Administration for Children and Families, “Child Care and Development Fund Statistics, 2002” (Washington, DC: U.S. Department of Health and Human Services, undated), <http://www.acf.hhs.gov/programs/ccb/research/index.htm> (accessed March 20, 2006); unpublished CRS tables; and U.S. Department of Health and Human Services, Administration for Children and Families, “Annual Report on Expenditure and Recipients,” *Social Service Block Reports 2002* (Washington, DC: U.S. Department of Health and Human Services, undated), <http://www.acf.hhs.gov/programs/ocs/ssbg/docs/reports.htm> (accessed January 21, 2005).

¹² U.S. Census Bureau, “Dynamics of Economic Well-Being: Program Participation 1996 to 1999, Who Gets Assistance?” *Current Population Reports*, P70-94 (Washington, DC: U.S. Census Bureau, October 2005), P70-94, tables A-4, <http://www.census.gov/prod/2003pubs/p70-94.pdf> (accessed February 9, 2004).

¹³ U.S. Department of Health and Human Services, Administration for Children and Families, “Aid to Families with Dependent Children (AFDC) and Temporary Assistance for Needy Families (TANF), Average Monthly Families and Recipients for CALENDAR YEARS 1936 – 2001” (Washington, DC: U.S. Department of Health and Human Services, May 23, 2002), <http://www.acf.dhhs.gov/news/stats/3697.htm> (accessed February 9, 2004).

¹⁴ U.S. Census Bureau, “Dynamics of Economic Well-Being: Program Participation 1996 to 1999, Who Gets Assistance?” *Current Population Reports*, P70-94 (Washington, DC: U.S. Census Bureau, October 2005), P70-94, tables A-2, <http://www.census.gov/prod/2003pubs/p70-94.pdf> (accessed February 9, 2004).

¹⁵ U.S. Department of Agriculture, Food and Nutrition Service, “Food Stamp Program Participation and Costs (Data as of January 23, 2004)” (Washington, DC: U.S. Department of Agriculture, January 23, 2004), <http://www.fns.usda.gov/pd/fssummar.htm> (accessed February 9, 2004).

¹⁶ Marianne Bitler, Janet Currie, and John Karl Scholz, “WIC Eligibility and Participation,” Institute for Research on Poverty Discussion Paper no 1255-02, table 2, http://www.econ.ucla.edu/people/papers/currie/more/WIC_jhr.pdf (accessed March 20, 2006).

¹⁷ Authors’ calculation based on U.S. Census Bureau, “Who’s Minding the Kids? Child Care Arrangements: Spring 1999,” Detailed Tables (Washington, DC: U.S. Census Bureau, January 24, 2003), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-168.html> (accessed April 3, 2003).

¹⁸ U.S. Census Bureau, “School Enrollment—Social and Economic Characteristics of Students: October 1998,” *Current Population Reports*, P20-521 (Washington: U.S. Census Bureau, September 1999), table 2, <http://www.census.gov/population/socdemo/school/p20-521/tab02.pdf> (accessed December 8, 2005); and U.S. Department of Health and Human Services, Head Start Bureau, “Head Start Program Information Report (PIR) for 1998–1999 Program Year, Summary Report” (Washington, DC: U.S. Department of Health and Human Services,

undated). For comparability with the SIPP, we subtract the number of children in Head Start, as reported by the PIR, from the CPS's count of children in nursery and preschool.

¹⁹ U.S. Census Bureau, "Who's Minding the Kids? Child Care Arrangements: Winter 2002," Detailed Tables (Washington, DC: U.S. Census Bureau, October 2005), PPL tables 1A and 3A, <http://www.census.gov/population/www/socdemo/child/ppl-177.html> (accessed March 6, 2006).

²⁰ U.S. Census Bureau, "School Enrollment—Social and Economic Characteristics of Students: October 2001," Detailed Tables (Washington, DC: U.S. Census Bureau, August 28, 2003), table 2, <http://www.census.gov/population/socdemo/school/cps2001/tab02.pdf> (accessed March 7, 2006); and U.S. Department of Health and Human Services, Head Start Bureau, "Head Start Program Information Report (PIR) for 2001–2002 Program Year, Summary Report" (Washington, DC: U.S. Department of Health and Human Services, undated). For comparability with the SIPP, we subtract the number of children in Head Start, as reported by the PIR, from the CPS's count of children in nursery and preschool.

²¹ Marc I. Roemer, "Assessing the Quality of the March Current Population Survey and the Survey of Income and Program Participation Income Estimates, 1990–1996" (Washington, DC: U.S. Census Bureau, June 16, 2000), tables 2 to 7 and tables A to T, <http://www.census.gov/hhes/www/income/assess1.pdf> (accessed March 22, 2006).

²² *Ibid.*

²³ *Ibid.*

²⁴ *Ibid.*