# INCOME IN THE AMERICAN COMMUNITY SURVEY: Comparisons to Census 2000

by Kirby Posey, Edward Welniak, And Charles Nelson

2003 American Statistical Association Meetings
San Francisco, CA

### Summary

- Introduction
- Major Census 2000/C2SS differences: data collection, capture, processing, and presentation
- Results: Comparisons of C2SS to Census 2000/CPS
- Exploring reasons for C2SS/Census 2000 income differences
- Conclusions/Avenues for further research

### **Terminology**

- American Community Survey (ACS) timely small area data—ultimate aim is to replace the Census "long form" for 2010 and beyond
- Census 2000 Supplementary Survey
   (C2SS)—a large-scale national test,
   conducted in 2000, using ACS methodology
- Current Population Survey (CPS)—Annual Supplement contains income questions

### **Data Collection**

- Reference Period—previous calendar year vs. previous 12 months
- Does this matter? Subject of Split-Panel Test Conducted in 1997

**Table 1**: Comparison of Median Income of Individuals by Income Type and Reference Period (asked October - December, 1997)

#### ACS SPLIT PANEL TEST

	PAST 12 MONTHS	CALENDAR YEAR 1996	DIFFERENCE
Wages or Salary	\$25,000	\$26,000	-\$1,000 *
Self-Employment	\$12,000	\$10,000	\$2,000 *
Interest	\$1,500	\$1,400	\$100
Social Security	\$7,932	\$8,028	-\$96
Retirement	\$9,700	\$10,000	-\$300
Public Assistance	\$3,438	\$3,872	-\$434
Other Income	\$3,000	\$3,000	\$0
Total Income	\$24,000	\$24,662	-\$662

Table 2 - Response Rates for All Sources of Income - Split Panel Test

Income	Period	Percent Reporting	Differenc	
meome	<u>r errou</u>	Income	<u>e</u>	
W age/Salary	Past 12 months	73.93%		
	Calendar year 1996	72.84%	+1.09	
Self-Employment	Past 12 months	73.72%		
	Calendar year 1996	72.68%	+1.04	
Interest, etc.	Past 12 months	72.07%		
	Calendar year 1996	71.05%	+1.02	
Social Security	Past 12 months	75.78%		
	Calendar year 1996	74.65%	+1.13	
Retirement	Past 12 months	75.36%		
	Calendar year 1996	73.96%	+1.40	
Public Assistance	Past 12 months	77.12%		
	Calendar year 1996	75.38%	+1.74 *	
Other Income	Past 12 months	76.40%		
	Calendar year 1996	75.23%	+1.17	
Total Income	Past 12 months	83.67%		
	Calendar year 1996	83.09%	+0.58	

Source: 1996 American Community Survey

<sup>\*</sup> Indicates statistical significant difference at 90-percent confidence level.

#### Adjusting Rolling Reference Period Income (Jan 2001 interview 1.000000. . . . ) Dec 2000 interview 1.002766. . . . ) Nov 2000 interview 1.005596. . . . ) Oct 2000 interview 1.008443. . . . ) Sep 2000 interview 1.011305...) Aug 2000 interview 1.014134...) Jul 2000 interview 1.017179....) Jun 2000 interview 1.020293....) May 2000 interview 1.022970. . . . ) Apr 2000 interview 1.025560. . . . ) Mar 2000 interview 1.028725. . . . ) Feb 2000 interview 1.031447....) Jan 2000 interview 1.033769. . . . ) J F M A M J J A S O N D J F M A M J J A S O N D J 1999

ACS Adjustment Factors = Sum of 2000 Monthly Consumer Price Index (CPI) Factors /Sum of Reference Period's Monthly CPI Factors

2000

2001

# Census 2000/C2SS Data Capture/Allocation Differences

- Data Capture--Very different systems Optical Character Recognition (OCR) vs. "keyers"
- Imputation—Very similar designs, main difference is in implementation—vastly different sample sizes (donor pools)

Table 3. Comparisons of Median Household Income in 2000 Dollars: C2SS/ACS, Census 2000, and the CPS

State/ACS Test Sites	C2SS/ACS Estimate (In dollars)	Census 2000 (Adjusted for inflation – In dollars)	Percent Difference (ACS- Census)	Statistically Significant Difference (denoted by "*")	Current Population Survey (CPS) 2000 Dollars	Percent Difference (ACS-CPS)	Statistic Significa Differer (denotec "*")
United States	41486	43396	-4.6	*	41990	-1.2	*
California	46617	49078	-5.3	*	46816	-0.4	
Texas	39398	41260	-4.7	*	38609	2.0	
New York	43735	44841	-2.5	*	40744	6.8	*
Florida	38054	40115	-5.4	*	38856	-2.1	
Illinois	45708	48145	-5.3	*	46064	-0.8	
Pennsylvania	39661	41445	-4.5	*	42176	-6.3	*
Ohio	39745	42323	-6.5	*	42962	-8.1	*
Michigan	43387	46158	-6.4	*	45512	-4.9	*
New Jersey	54276	56986	-5.0	*	50405	7.1	*
Georgia	41295	43849	-6.2	*	41901	-1.5	

# Exploring Reasons for Differences

- Data Collection
- Data Capture
- Allocation
- Other

## Conclusions/Avenues for Further Research

- Census 2000 incomes are consistently higher than C2SS
- CPS/Census 2000 results are puzzling
- Much more work needs to be done to understand differences
- CPS/Census match holds promise