

Subnational Measures of Income and Well-being: U.S. Experience

David S. Johnson, Chief
Social, Economic and Housing Statistics Division
U.S. Census Bureau
February 2013



U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

Spatially-disaggregated information on income distribution and poverty: US

- Poverty and income distribution statistics produced at myriad levels of geography.
 - National – Current Population Survey
 - States – American Community Survey - 1 year data
 - County, city, census tract, block group – ACS
 - 1 year data – 7,433 geographies
 - 3 year data – 14,811 geographies
 - 5 year data – 743,653 geographies
 - Single year school district level poverty estimates – model-based (SAIPE)



U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

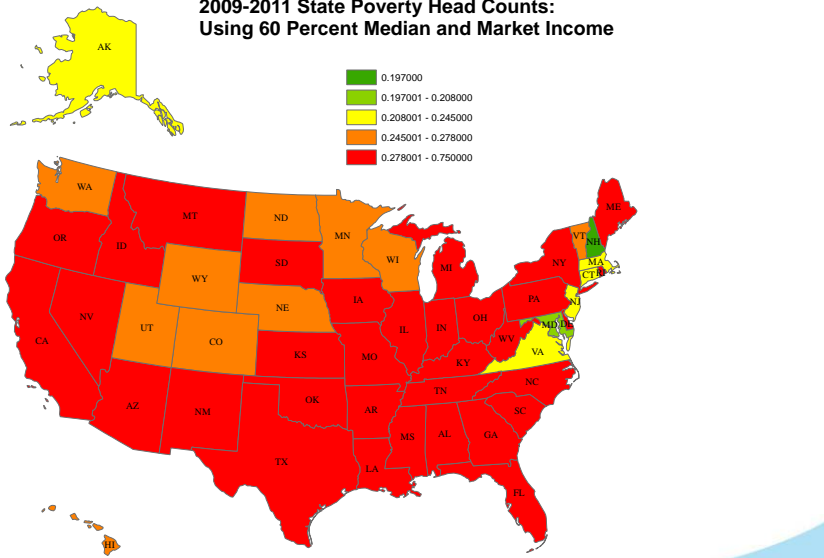
Challenges

- Must educate users to select the correct data source
- Changes in geographic boundaries
- Disclosure avoidance: Use “PUMAs” – Public Use Microdata Areas for public use data sets
- Some issues with comparability
 - Reference period – previous 12 months vs. previous calendar year
 - Number of income sources included in total income
- Try to separate release dates to minimize confusion

The possibility for U.S. of producing state estimates of the OECD indicators using American Community Survey (ACS) data

- ACS has more limited data on transfers
 - Asks only about receipt of food stamps – not amount
 - No questions on school lunch programs
- ACS does not have estimates of federal, state or local taxes
 - Paucity of relationship pointers makes it difficult to form tax filing units from the ACS data
 - Aggregated income sources (eight) complicate calculation of taxable income
- Census researchers are investigating mechanisms for imputing these variables for ACS respondents
- Indicators can be produced using 3 year average data from the Current Population Survey

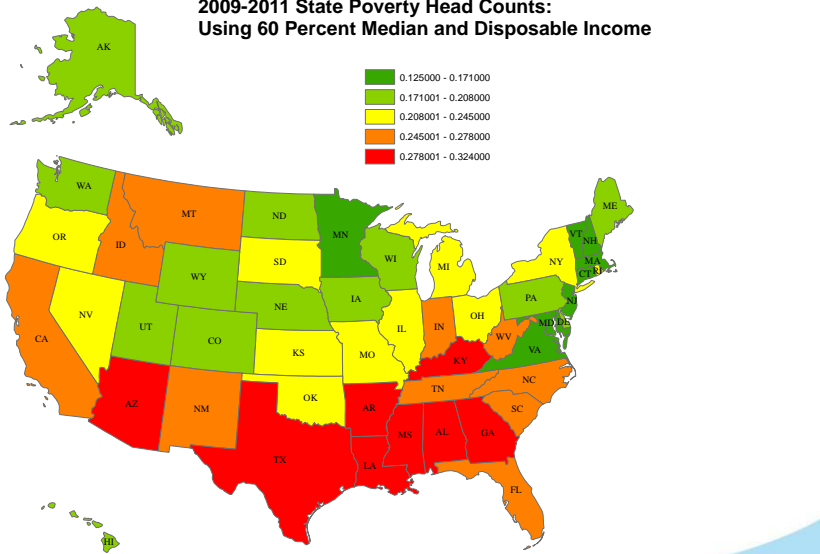
2009-2011 State Poverty Head Counts: Using 60 Percent Median and Market Income



United States
Census
Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

2009-2011 State Poverty Head Counts: Using 60 Percent Median and Disposable Income



United States
Census
Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

The possibility for U.S. of producing state estimates of the OECD indicators using American Community Survey (ACS) data

OECD Indicator	State Level estimates using the ACS?
Mean disposable income by quintile	NO – need to develop a tax calculator; impute food stamp amounts and impute school lunch reciprocity
Gini	NO – need to develop a tax calculator; impute food stamp amounts and impute school lunch reciprocity
Gini before taxes and transfers	YES
S80/S20 income quintile share	NO – need to develop a tax calculator; impute food stamp amounts and impute school lunch reciprocity
Poverty – before taxes and transfers	YES
Poverty – after taxes and transfers	NO – need to develop a tax calculator; impute food stamp amounts and impute school lunch reciprocity



U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

Definition and use of indicators of the statistical precision of the estimates

- All American Community Survey tables show 90 percent confidence intervals
- For the 1-year and 3-year ACS data, if the median Coefficient of Variation (CV) for the table is greater than 61 percent, the table is not published
(https://www.census.gov/acs/www/Downloads/survey_methodology/acs_design_methodology_ch13.pdf)
- Sometimes when a table does not meet these reliability tests, a simpler table that collapses some of the detailed lines together may be available for the original, more detailed table.
- Fewer tables are published for the five-year ACS data. For example, 52 detailed poverty tables, only 5 available at the block group level



U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

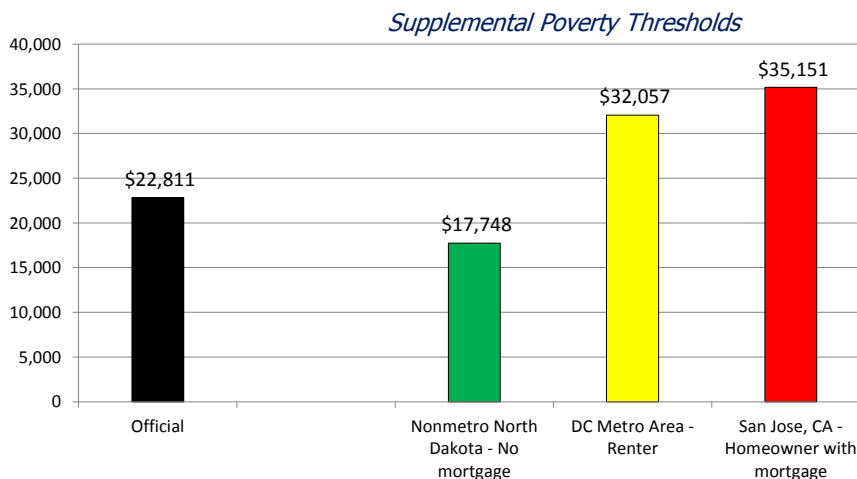
Geographic adjustments in the Supplemental Poverty Measure

- *Poverty thresholds should be adjusted for price differences across geographic areas using the best available data and statistical methodology.*
 - *Adjust the housing portion of the threshold*
 - *American Community Survey (ACS)*
 - *For Metropolitan Statistical Areas (MSAs) and by non-MSA areas in each State*
 - *Utilize a 5-year moving average of the data for each year*
- *Over time this adjustment mechanism may be modified and improved.*
- BEA also produces a Regional Price Parity index (RPP)



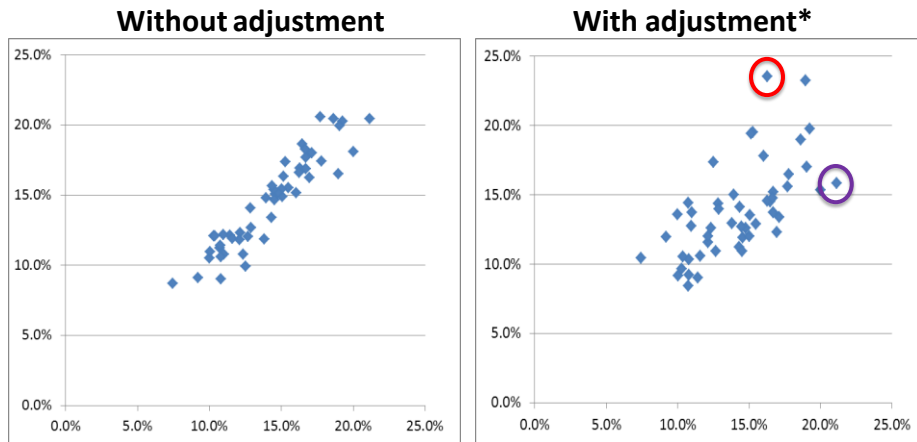
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

Official and Research SPM Thresholds for Two Adult, Two Child Units with Geographic Adjustments: 2011

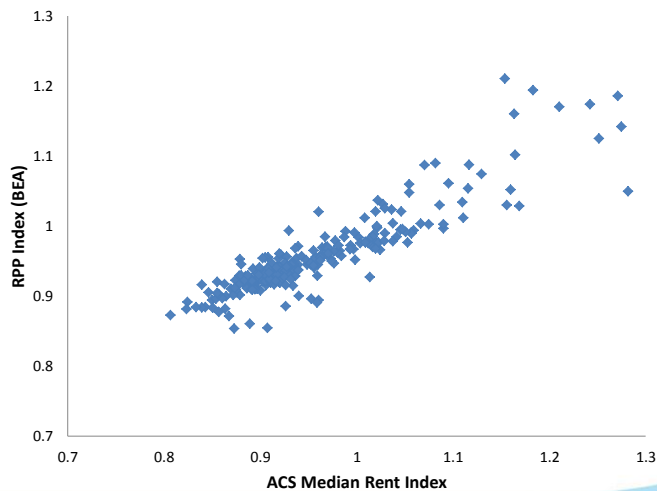


U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU

Impact of Geographic differences in thresholds SPM for states with and without Geographic adjustment compared to OPM



ACS median rent index and BEA RPP, by Metro Area



Example of Thresholds: San Francisco vs. Rural Mississippi

2010– Two Adults Two Children	San Francisco	Mississippi Nonmetro Areas
Official Poverty Threshold	\$22,113	\$22,113
SPM Threshold: Renters	\$24,391	\$24,391

Source: SPM Threshold from Thesia Garner, May 2011

Example of Thresholds: San Francisco vs. Rural Mississippi

2010 – Two Adults Two Children	San Francisco	Mississippi Nonmetro Areas
Official Poverty Threshold	\$22,113	\$22,113
SPM Threshold: Renters	\$24,391	\$24,391
Rent-based Index Using ACS	\$1,378/\$820 =1.680	\$523/\$820=0.638

Example of Thresholds: San Francisco vs. Rural Mississippi

2010– Two Adults Two Children	San Francisco	Mississippi Nonmetro Areas
Official Poverty Threshold	\$22,113	\$22,113
SPM Threshold: Renters	\$24,391	\$24,391
Rent-based Index Using ACS	\$1,378/\$820 =1.680	\$523/\$820=0.638
Housing Portion of Thresholds	49.7% x 24,874=\$12,122	
Calculation	\$12,122 X 1.680+ \$12,269 =	\$12,122 X .638+ \$12,269 =
Adjusted SPM Threshold	\$33,634	\$20,002

Official and Research SPM Thresholds for Units with Two Children, Two Adults: 2011

Supplemental Poverty Thresholds

