

INCOME AND POVERTY ESTIMATES

SOUTHERN TIER EAST COUNTIES, CITIES AND SCHOOL DISTRICTS

2009



Southern Tier East Regional Planning Development Board

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This Monograph is one of a series of Monographs and technical papers on Census related topics, prepared by the Southern Tier East Regional Planning Development Board with the financial support of the Appalachian Regional Commission and the Board's member counties. Opinions presented in this monograph do not necessarily reflect positions of the Commission, the Board, or the Board's member counties, but rather are solely those of the author.

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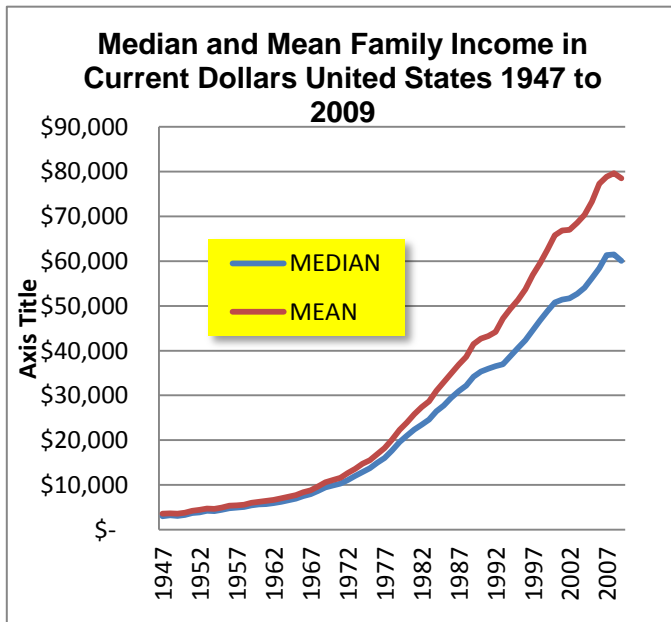
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INCOME AND POVERTY ESTIMATES

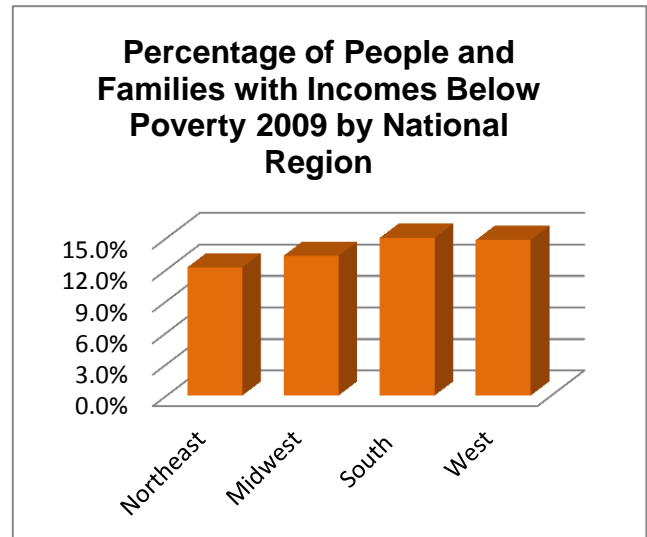
Southern Tier East Counties, Cities, and School Districts

This monograph has been prepared by the Southern Tier East Regional Planning Development Board to provide current information concerning income levels and the poverty status of the Region's population based upon information published by the US Census Bureau. Most of the information presented in this monograph is for the calendar year 2009 and was released in the early winter 2010.¹

NATIONAL HIGHLIGHTS



As is illustrated on the accompanying line graph, the mean and median family income for all families in the United States, measured in current dollars declined between 2008 and 2009, reflecting the present national recession.²



The United States Census in September 2010 estimated that the real median household income in 2009 was \$49,777 which, while a decline from the

¹ See Appendix A for the principal sources for this monograph and concerning information regarding the comparison of data from different sources.

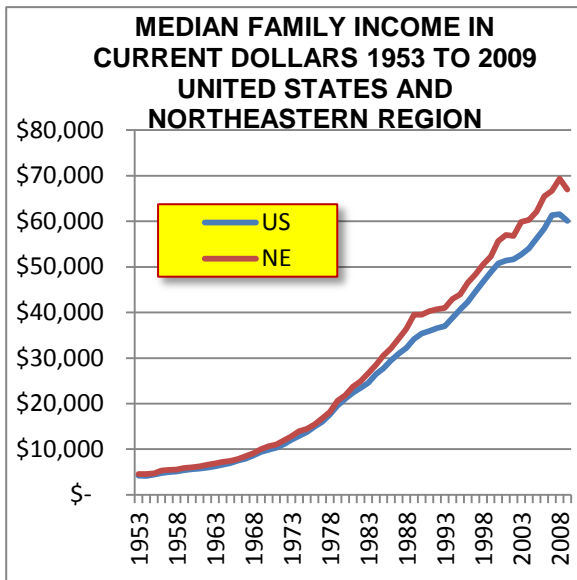
Poverty status is determined by the Census Bureau by comparing annual income to a set of dollar values called thresholds that vary based upon family size, number of children, and age of householder. If the family's before tax money income is less than the dollar value of their threshold, then the family, *and everyone in it*, is considered to be living in poverty. For people not living in families, poverty status is determined by comparing the individual's income to his or her threshold. Poverty Thresholds are updated annually to allow for changes in the cost of living using the Consumer Price Index (CPI-U). Thresholds are not adjusted based on geography. See 2009 SAIPE Highlights, Page 10. The median is the midpoint of the range numbers that are arranged in order of value, with half the range above and half below the reported value.

The 2009 Small Area Income and Poverty Estimates are available for roughly 3,140 counties and nearly 14,000 Title I-eligible school districts. The SAIPE is released annually, and provides county and state estimates for the total number of people in poverty, the number of children under 5 in poverty (for states only), the number of children 5 to 17 in families in poverty, the number of children under 18 in poverty and median household income.

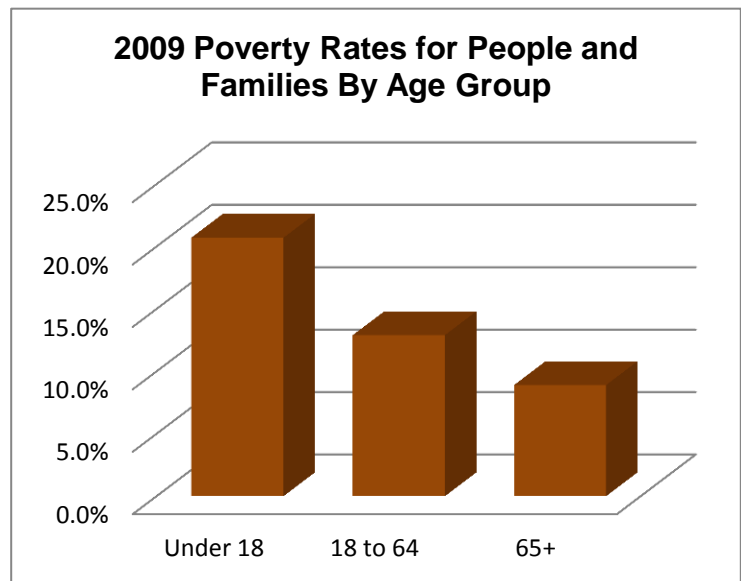
² The Census reports income data per capita, for households, for families and for persons, as well as by mean or median and in current or constant dollars. Each series is separate and not directly comparable to the other so caution must be used in identifying the sample population being used to reduce confusion. *Small Area Income and Poverty Estimates (SAIPE): 2009 Highlights*. Issued December 2010 by the U S Census Bureau, Housing and Household Economic Statistics (HHES) Small Area Estimates Branch (SAEB), and its accompanying data sets

\$50,112 reported for 2008, did not represent a statistically significant change from the prior year.³ It should be noted that the median household income was considerably lower than the \$61,265 (±\$311) median family income for 2009. The marked difference between the median household and family incomes appears to reflect the considerably lower median incomes for non-family households \$30,444 (±\$281).

However, the Census Bureau observed that real median household income in the West and Midwestern regions of the US declined by 2.1% and 1.9% respectively while there was no statistically significant change in the Northeast and South. As shown on the accompanying bar graph, at 12.2% of people and families living in poverty, the Northeastern Region of the US reported the lowest poverty rate among the national regions.



Nationally, family households reported a statistically significant decline of 1.8% in real median income between 2008 and 2009 while the median increased by 1.6% for non-family households. Interestingly it was also statistically significant that the median income of persons 65 years or older increased by 5.8% while that of persons 15 to 24 years old declined by 4.4%.



According to the Census Bureau, the official poverty rate in 2009 was 14.3% - an increase for the 13.2% reported for 2008. This represented the second statistically significant annual increase in the poverty rate since 2004.⁴ The Census also reported that the number of people in poverty in 2009 (43.6 million) is the largest in the 51 years for which poverty estimates have been published. Between 2008 and 2009, poverty rates increased for children under the age of 18, but declined for those over 65 years old.

Given the national figures as a background and context for understanding, this monograph focuses on sub-state estimates which were just recently released. According to the Census Bureau's 2009 Small Area Income and Poverty Estimates, county-level median household income ranged from \$18,860 to \$114,200 across the country with a middle value of \$41,061.⁵ Nationally the Census Bureau estimated that the

³ *Income, Poverty, and Health Insurance Coverage in the United States: 2009* Census Publication P60-238, Issued September 2010, Page 4 Note that this figure differs from the national figures reported in the SAIPE publication. "Real" income refers to income after adjusting for inflation based on percentage changes in prices from the Consumer Price Index Research Series (CPI-U-RS). The Census Bureau reported that real median income declined for Black and non-Hispanic White households, but was not statistically different for Asian and Hispanic households.

⁴ See *Income, Poverty, and Health Insurance Coverage in the United States: 2009*, Page 14

⁵ The figure of \$41,061 represents the middle value among the distribution of counties for 2009, not the U S median for that year which was \$50,221, according to the SAIPE report.

school-age poverty rate in 2009 was 18.2%, and estimated that 1,084 counties had a school-age poverty rate significantly above the national poverty rate. The Census also estimated that 866 counties were significantly below the national poverty rate.

The U S Census Bureau has also estimated that between 2007 and 2009, the poverty rate for children ages 5 to 17 in families rose in 295 counties, representing 9.4% of all U S counties.⁶ Only in 19 counties nationwide did the poverty rate decline. However, in the majority of counties across the United States, the poverty rate for children ages 5 to 17 in families showed no statistically significant change between these years. The 2009 estimates also show that 1,084 counties had child poverty rates (ages 5 to 17 in families) significantly above and 866 significantly below the national poverty rate of 18.2%.

Based on all age poverty, 453 counties or 14.4% of all counties had a statistically significant increase in the number and percentage of persons living in poverty between 2007 and 2009.⁷ Only thirty-eight counties had a decrease in poverty between the two years.

In 2009, there were 52.3 million school-age children in 13,619 school districts. Of these, 39% resided in districts whose total poverty rates were greater than 20%.⁸

The SAIPE combines the latest American Community Survey (ACS) data with aggregate data from federal tax information, administrative records on Supplemental Nutrition Assistance Program participation, 2000 Census statistics and annual population estimates. The 2009 ACS 1-year estimates were released in September. The 2005-2009 American Community Survey (ACS) 5-year estimates will be released later this month and provide data for all counties and school districts — along with additional geographies — and many more subjects.

COUNTY INCOME DATA

Presently there are several series of income estimates issued for counties by the Census Bureau. The two which are the sources for the data used in this monograph are the Small Area Income and Poverty Estimate (SAIPE) series which provides single year annual estimates and the American Community Survey (ACS) five year continuous sample data. In addition to remembering sources when comparing data, it is also important to recognize the population “universe” being described. For income reports are made for households, which are then subdivided into family and non-family households. Income is also reported per capita and for persons living in group quarters.⁹

⁶ See 2009 SAIPE Highlights, Page 4

⁷ The Census Bureau reported that 2007 was chosen for comparison because it was the year before the most recent recession. The National Bureau of Economic Research (NBER) is the official source for recession timing, and reported that the most recent recession began in December 2007 and ended in June 2009.

⁸ School district estimates from SAIPE are produced for the Department of Education to implement provisions of the “No Child Left Behind Act of 2001”. These data are also used for a variety of Federal, State , and local programs which are “means tested”

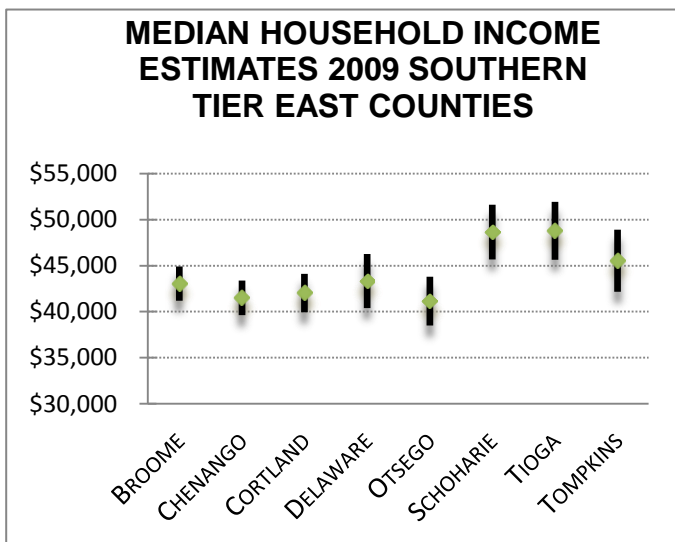
⁹ **The Census defines a household** as the total number of people who occupy a housing unit. People not living in households are classified as living in group quarters. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.

One person in each household is designated as the householder. Any adult household member 15 years old and over could be designated as the householder, although typically it is the owner or leasee of the housing unit.

Households are classified by the presence of relatives. Two types of householders are distinguished: a family householder and a non-family householder. A family householder is a householder living with one or more individuals related to him or her by birth, marriage, or adoption. The householder and all people in the household related to him or her are family members. A nonfamily householder is a householder living alone or with non-relatives only.

MEDIAN HOUSEHOLD INCOME

According to 2009 Census Bureau estimates, the median household income for households in counties within the Southern Tier East Region ranged from a low of \$38,507 (the low 90% confidence level estimate for Otsego County) to a high of \$51,942 (the high 90% confidence level estimate for Tioga County). These numbers correspond to the national county-level median household income which as was noted earlier, ranged from \$18,860 to \$114,200 with a middle value of \$41,061.



**TABLE 1
ESTIMATED MEDIAN HOUSEHOLD
INCOME 2009 FOR COUNTIES IN
SOUTHERN TIER EAST REGION**

County	\$	90% Confidence Level	
		Low	High
Broome	\$ 43,065	\$41,199	\$ 44,930
Chenango	\$ 41,515	\$39,628	\$ 43,403
Cortland	\$ 42,032	\$39,939	\$ 44,126
Delaware	\$ 43,340	\$40,398	\$ 46,282
Otsego	\$ 41,157	\$38,507	\$ 43,807
Schoharie	\$ 48,640	\$45,668	\$ 51,612
Tioga	\$ 48,788	\$45,634	\$ 51,942
Tompkins	\$ 45,535	\$42,158	\$ 48,913

Source: Small Area Income and Poverty Estimates (SAIPE): 2009 Highlights, Issued December 2010 by the U S Census Bureau, Housing and Household Economic Statistics, Small Area Estimates Branch

The accompanying chart, which is based upon Table 1 which appears at the top of the next page, illustrates both the reported median household income estimates, in the form of a green diamond, and the range for the 90% confidence level, represented by the vertical line through the diamond.¹⁰ According to Census Bureau sources estimated values which lie within overlapping confidence levels may or may not be statistically significant because they fall into the estimated margin of error.

As is shown on Table 1, median household income estimated for 2009 for the counties in the Southern Tier East region ranged from a low of about \$38,500, estimated for Otsego County to a high of around \$48,700 for Schoharie and Tioga Counties. There is no statistically significant difference between the median household income reported for Schoharie and Tioga Counties; however, the difference between the estimate for these two counties and the others counties is statistically significant.

The national median household income annual estimate for 2009 was \$49,777, with a 90% confidence level of \pm \$350. This indicates that all of the Region's counties were estimated to have had median household incomes which fall below the national household median. However, the upper values of the 90% confidence level for Schoharie and Tioga Counties is greater than the upper range of the national median.

Data on median household income is also available from the recently released multi-year American Community Survey. While some ACS data is available on an annual basis, population size restrictions and

¹⁰ The 90% confidence level for the national totals was \pm 0.2% and therefore did factor into the illustrations which accompanied the discussion of these nationwide estimates. Even the regional breakdowns on age and region were usually less than \pm 0.6%.

the corresponding limits on the sample size means that comparable data for all of the Region's counties and cities is only available in the form of the 5-year estimates.¹¹

MEDIAN HOUSEHOLD INCOME IN PAST 12 MONTHS
(IN 2009 INFLATION ADJUSTED DOLLARS) 2005-2009 American Community Survey 5-year Estimates

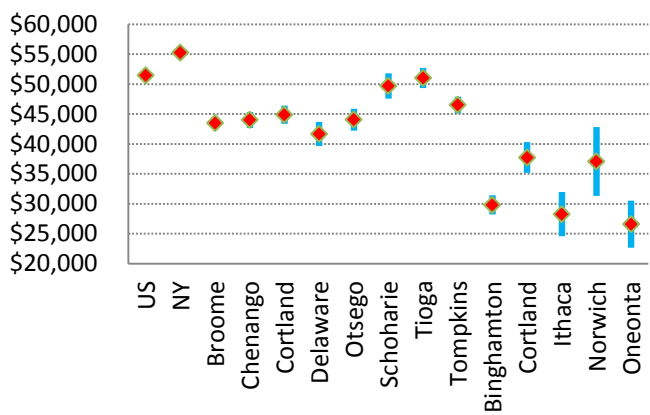


TABLE 2
MEDIAN HOUSEHOLD INCOME
IN PAST 12 MONTHS
(IN 2009 INFLATION ADJUSTED DOLLARS)
2005-2009 American Community Survey 5-year Estimates

	Median HOUSEHOLD Income		
	Low	High	Median
United States	\$ 51,342	\$ 51,508	\$ 51,425
New York State	\$ 55,054	\$ 55,412	\$ 55,233
Broome	\$ 42,476	\$ 44,458	\$ 43,467
Chenango	\$ 42,673	\$ 45,309	\$ 43,991
Cortland	\$ 43,327	\$ 46,379	\$ 44,853
Delaware	\$ 39,656	\$ 43,656	\$ 41,656
Otsego	\$ 42,238	\$ 45,876	\$ 44,057
Schoharie	\$ 47,593	\$ 51,797	\$ 49,695
Tioga	\$ 49,315	\$ 52,707	\$ 51,011
Tompkins	\$ 45,099	\$ 47,913	\$ 46,506
Binghamton City	\$ 28,213	\$ 31,413	\$ 29,813
Cortland City	\$ 35,144	\$ 40,292	\$ 37,718
Ithaca City	\$ 24,572	\$ 31,930	\$ 28,251
Norwich City	\$ 31,328	\$ 42,788	\$ 37,058
Oneonta City	\$ 22,657	\$ 30,511	\$ 26,584

Source: Table B19013 Median Family Income in Past 12 Months (2009 Inflation Adjusted Dollars) 2005-2009 American Community Survey 5-year Estimates, Released December 2010

Table 2 reports the median household income for the Nation and state, along with data for the region's counties and cities, based upon the recent release of the 5-year estimates from the American Community Survey. From the table it will be noted that the ACS median Household income is reported as \$51,425 (± \$83). Accompanying the table is a chart which illustrates the data presented on Table 2, and which dramatically illustrates how the margin of error (at the 90% confidence level) increases as the population of the geographic area being reported (and therefore its sample size) becomes smaller.

As a general observation confidence levels often reflect the sample size upon which the data is based. Estimates which involve very detailed data classifications and/or very localized geographical areas will tend to rely upon small sample sizes and will therefore tend to have very broad confidence level and margins of error. In extreme instances a margin of error can be greater than the reported estimate itself.

MEDIAN FAMILY INCOME

Household incomes may include any number of persons living in a housing unit and one or more of these persons may have a job or other source of income. The same is true of family households where in fact multiple sources of income are often present. For example the householder and spouse may both work, but one of their children may also have a part-time after school job and a resident grandparent may be collecting social security or a retirement benefit.

The potential of multiple wage earners is supported by the fact that the annual Census estimates for 2009 report the median income for families to be \$61, 265 (± \$311) with the income for traditional "married couple" family households being even higher at \$71,830 (± \$410).¹²

TABLE 3
MEDIAN FAMILY INCOME
IN PAST 12 MONTHS

¹¹ For a discussion of the issue of comparing data from 1, 3, and 5 year ACS estimates, see Appendix A to this monograph. The Census Bureau discourages attempts to compare 1 year or 3 year data with 5 year. The 5 year sample includes data which was collected as part of the five 1-year and parts of several 3 year samples

¹² Table 1, "Income and Earnings Summary Measures by Selected Characteristics" *Income, Poverty, and Health Insurance Coverage in the United States:2009*, Page 5

(IN 2009 INFLATION ADJUSTED DOLLARS)

2005-2009 American Community Survey 5-year Estimates

	Low	High	Median
US	\$ 62,197	\$ 62,529	\$ 62,363
NY	\$ 66,759	\$ 67,321	\$ 67,040
Broome	\$ 56,356	\$ 58,976	\$ 57,666
Chenango	\$ 51,190	\$ 55,064	\$ 53,127
Cortland	\$ 54,109	\$ 58,213	\$ 56,161
Delaware	\$ 48,762	\$ 53,336	\$ 51,049
Otsego	\$ 52,352	\$ 56,768	\$ 54,560
Schoharie	\$ 55,257	\$ 60,295	\$ 57,776
Tioga	\$ 57,027	\$ 61,499	\$ 59,263
Tompkins	\$ 67,297	\$ 71,281	\$ 69,289
Binghamton City	\$ 35,505	\$ 42,847	\$ 39,176
Cortland City	\$ 52,988	\$ 59,878	\$ 56,433
Ithaca City	\$ 59,454	\$ 67,280	\$ 63,367
Norwich City	\$ 43,919	\$ 59,341	\$ 51,630
Oneonta City	\$ 50,123	\$ 59,003	\$ 54,563

Source: Table B19113 Median Family Income in Past 12 Months (2009 Inflation Adjusted Dollars) 2005-2009 American Community Survey 5-year Estimates

MEDIAN FAMILY INCOME IN PAST 12 MONTHS (2009 INFLATION ADJUSTED DOLLARS) 2005-2009 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES

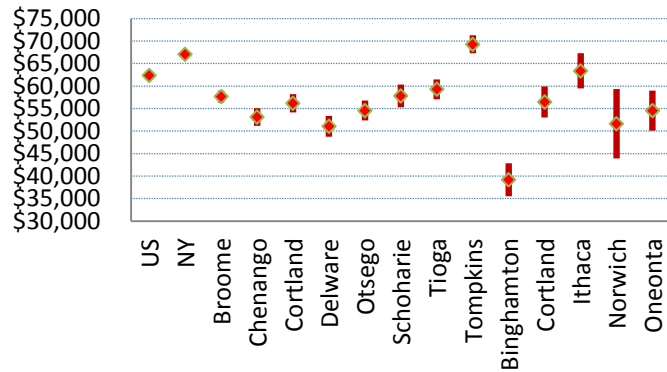


Table 3 reports that the national 12-month median family income according to the multi-year ACS results was \$ 62,363 (± \$ 166). The difference between the annual estimate and the 12-month estimate based upon a 5-year sample reflects the fact that the annual estimate reflects incomes during the 12 months of calendar year 2009 which were during a period of national recessions, while the 12-month mean from the ACS reflects a 60 month period which includes the twelve months in 2009, but also includes more affluent months from January 1, 2005 to December 31, 2009.

PERSONS LIVING IN POVERTY

In accordance with Statistical Policy Directive 14 of the Federal Office of Management and Budget's (OMB's), the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level." 13

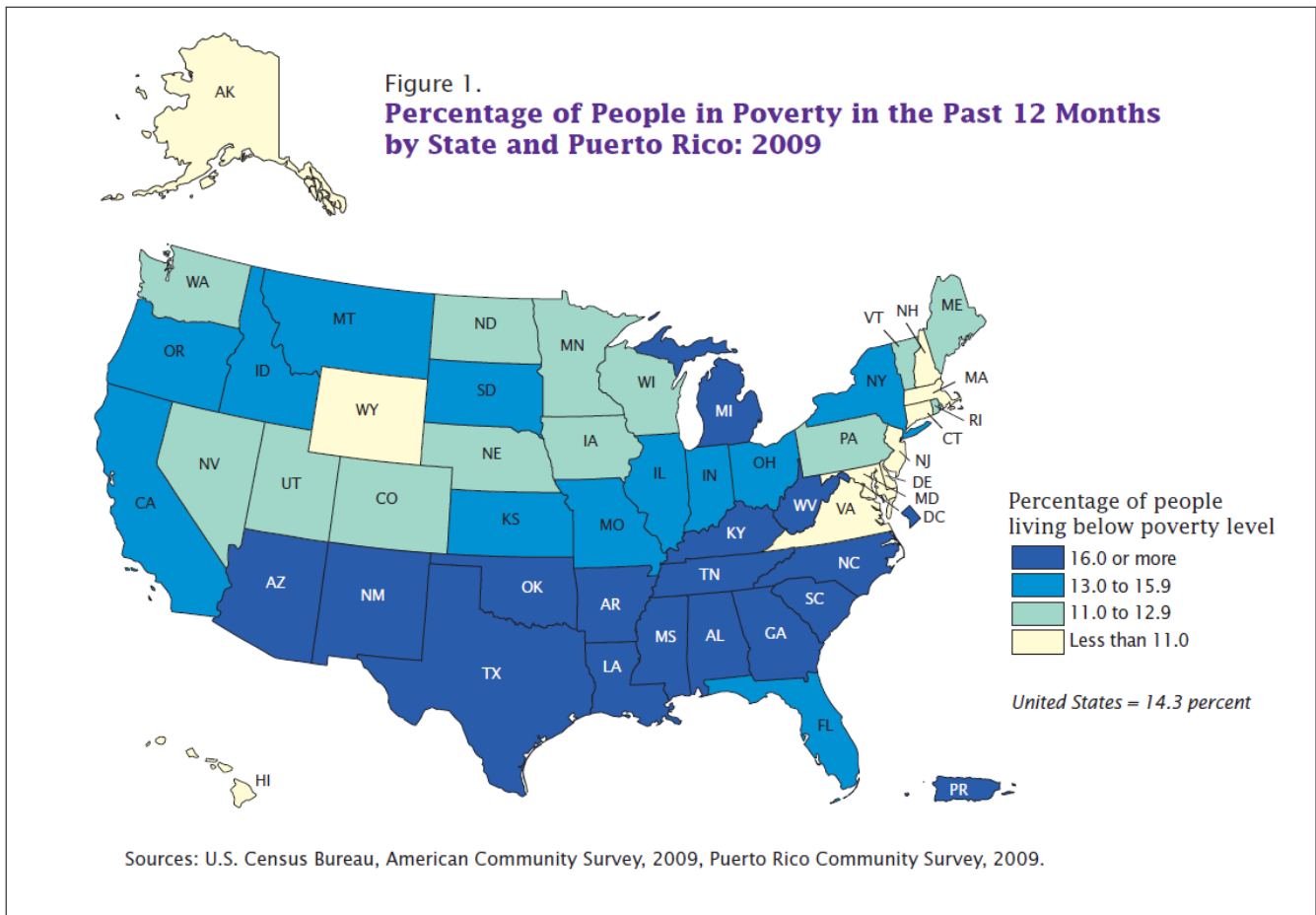
According to the most recent SAIGE estimates from the Census Bureau, for 2009 the official annual poverty rate nationally was 14.3% (±0.2%) which represented an increase from 13.2% the previous year. 14

13 The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) and two-person families vary by age (under 65 years or 65 years and older). If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Similarly, if an unrelated individual's total income is less than the appropriate threshold, then that individual is considered to be in poverty. The poverty thresholds do not vary geographically. They are updated annually to allow for changes in the cost of living (inflation factor) using the Consumer Price Index (CPI). Poverty status was determined for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old. These groups were excluded from the numerator and denominator when calculating poverty rates.

Since the ACS is a continuous survey, people respond throughout the year. Because the income items specify a period covering the last 12 months, the appropriate poverty thresholds are determined by multiplying the base-year poverty thresholds (1982) by the monthly inflation factor based on the 12 monthly CPIs and the base-year CPI. Poverty estimates from the ACS differ from those based on the Current Population Survey Annual Social and Economic Supplement (CPS- ASEC), which is the official source of poverty statistics for the United States.

14 See Income, Poverty, and Health Insurance Coverage in the United States:2009, Page 14. The official determination of poverty levels is made by the U S Office of Management and Budget, and is updated every year using the change in the average annual Consumer Price Index for All Consumers (CPI-U). As the CPI-U for 2009 was slightly lower than that for 2008, the poverty threshold is about 0.4% lower. The OMB guidance on this matter is reported in the Statistical Poverty Directive 14.

The ACS also provides poverty estimates for counties, places, and other localities. In the 2009 ACS, 14.3% of the U.S. population had income below their respective poverty thresholds. The New York State poverty rate was 14.2% or almost exactly the same as the national proportion. Nationally, from 2008 to 2009 the number of people in poverty increased to 42.9 million.



The national map which appears above which has been copied from a Census Bureau report on Poverty shows that with the exception of Michigan, poverty rates are reported to be highest in southern states.¹⁵ Thirty-one states saw increases in both the number and percentage of people in poverty between the 2008 and the 2009 ACS while no state had a statistically significant decline in either the number in poverty or the poverty rate. The national average increase was 1.0% ($\pm 0.1\%$) while the poverty rate increase for New York State was 0.4% ($\pm 0.3\%$).

Other national comparisons showed that in the 2009 ACS, 18.9% of people in the United States had income less than 125 percent of their poverty threshold, compared to 17.6 percent in the 2008 ACS. At the lower extreme the percent of people with income less than half their poverty threshold increased from 5.6 percent in the 2008 ACS to 6.3 in the 2009 ACS.

**TABLE 4
 NUMBER AND PERCENT OF ALL PERSONS
 WITH INCOMES BELOW POVERTY
 COUNTIES IN SOUTHERN TIER EAST REGION 2009**

County	90%	90%
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¹⁵ **Poverty: 2008 and 2009**, American Community Survey Briefs ACSBR/09-1, issued by the U S Census Bureau September 2010. The map which is copied above in this monograph appears on Page 2. The national highlights which appear below are from this same source.

	#	Confidence Level		%	Confidence Level	
		Low	High		Low	High
Broome	30,112	26,572	33,652	16.3%	14.4%	18.3%
Chenango	7,641	6,190	9,092	15.5%	12.6%	18.4%
Cortland	7,914	6,703	9,126	17.8%	15.0%	20.5%
Delaware	6,710	5,419	8,002	15.4%	12.5%	18.4%
Otsego	9,261	7,933	10,590	16.4%	14.0%	18.7%
Schoharie	3,560	2,775	4,345	11.9%	9.3%	14.5%
Tioga	5,607	4,569	6,646	11.3%	9.2%	13.4%
Tompkins	16,715	14,337	19,094	18.8%	16.2%	21.5%

Source: *Small Area Income and Poverty Estimates (SAIPE): 2009 Highlights*, Issued December 2010 by the U S Census Bureau, Housing and Household Economic Statistics, Small Area Estimates Branch

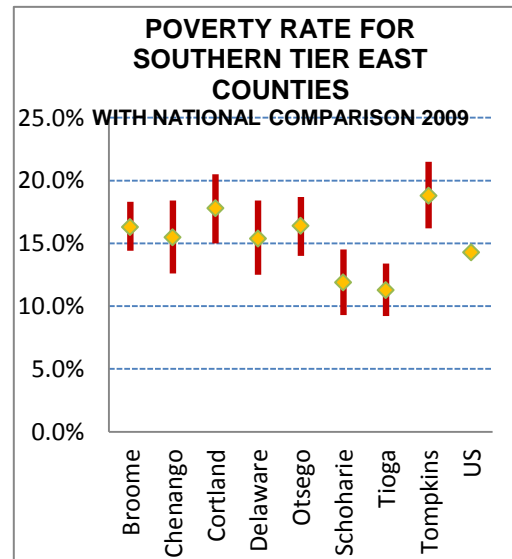


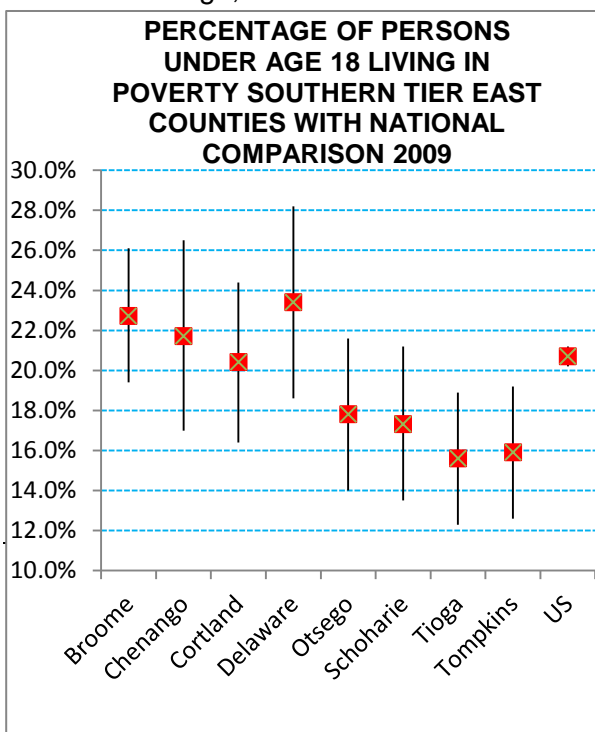
Table 4 shows that according to the 2009 Census Bureau estimates, there were approximately 82,000 persons living within the Southern Tier East Region had incomes which were below the national poverty level. The counties with the largest populations living in poverty are also the counties with the largest overall population and therefore a comparison of poverty rates is more useful.

As is shown on Table 4, and illustrated on the accompanying chart, the poverty rate for the Region's counties ranged from a low of 11.3% in Tioga County to a high of 18.8% in Tompkins County.¹⁶ As the illustration dramatically shows, only in Schoharie and Tioga Counties is the proportion of persons living in poverty significantly below the national average.¹⁷ Conversely, only in Cortland and Tompkins Counties was the percentage of persons living in poverty significantly above the national average. While the estimated poverty rate for Broome and Otsego is greater than the national estimate, the difference falls within the margin of error at the 90% confidence level and therefore may not be of any statistical significance.

CHILDREN LIVING IN POVERTY

According to the U S Census 20.7% (±0.5%) of the national population under the age of 18 years were living individually or in families with incomes below the poverty level.

Poverty is particularly an issue when related to children. Table 5 and its accompanying chart show that about half the Region's counties have proportions of children living in poverty which are higher than the national average, and half lower. However, except for the Tioga and Tompkins counties where the percentages are below 16%, the national percentage falls within the upper or lower range of the 90% confidence level for the county percentage.¹⁸



**TABLE 5
PERSONS UNDER AGE 18
WITH INCOMES BELOW POVERTY
COUNTIES IN SOUTHERN TIER EAST REGION 2009**

reflection of a very large population of graduate students associated with Cornell University, who are in school.

s buried beneath the symbol showing the estimated value and therefore appears to be missing from

ntage of population living in poverty, but the lowest percentage of persons under 18 years old appears s influenced by the graduate students, most of whom would be older than 18.

County	#	90% Confidence Level		%	90% Confidence Level	
		Low	High		Low	High
Broome	8,857	7,561	10,153	22.7%	19.4%	26.1%
Chenango	2,407	1,880	2,934	21.7%	17.0%	26.5%
Cortland	1,995	1,604	2,385	20.4%	16.4%	24.4%
Delaware	2,028	1,609	2,446	23.4%	18.6%	28.2%
Otsego	2,006	1,582	2,431	17.8%	14.0%	21.6%
Schoharie	1,083	843	1,323	17.3%	13.5%	21.2%
Tioga	1,780	1,407	2,152	15.6%	12.3%	18.9%
Tompkins	2,560	2,033	3,088	15.9%	12.6%	19.2%

Source: Small Area Income and Poverty Estimates (SAIPE): 2009 Highlights, Issued December 2010 by the U S Census Bureau, Housing and Household Economic Statistics, Small Area Estimates Branch

On Table 5 Delaware County is reported as having the highest proportion of children under the age of 18 living in poverty. It is important to note, however, that the proportion reported for Delaware County falls within the margin of error for three other counties in the Region (Broome, Chenango, and Cortland) and the national average percentage falls within the lower estimate for Delaware County at the 90% confidence level.

SCHOOL DISTRICT POVERTY ESTIMATES¹⁹

The data presented on Table 5 is for each of the Region's Counties. In New York State, school districts rarely follow county boundaries, and in fact most counties have more than a dozen districts wholly or partially. Further, the Census data is for the entire population under the age of 18, while school related poverty estimates look at persons 5 to 17 years of age. According to the Census Bureau, between 2007 and 2009 the poverty rate for children ages 5 to 17 in families rose in 295 of the 3,140 counties in the United States and declined in only 19.

The Census Bureau, as part of the Small Area Income and Poverty Estimates (SAIPE) program, produces annual estimates of children living in poverty by school district. The *No Child Left Behind Act of 2001* (NCLB) directs the Department of Education to distribute Title I basic and concentration grants directly to school districts on the basis of the most recent estimates of children in poverty available from the Census Bureau. These estimates are based on Census 2000, aggregated tax data, and the SAIPE program's model-based estimates of poverty for all counties. SAIPE school district estimates incorporate updated school district boundaries every two years. Thus, the 2009 estimates correspond with 2009-2010 school district boundaries.

The SAIPE program provides three estimates for each school district: total population, children ages 5-17 years, and related children ages 5-17 in families in poverty. The number of related school-age children in families in poverty in each school district is provided as a component of the determination of Title I grants. The estimate of the total population of each district is provided for use in the small district (fewer than 20,000 population) provision. The figure for school-age children is provided so that the proportion of children in poverty can be determined to document eligibility for grants. It is important to understand that the Census Bureau acknowledges that a true poverty "rate" for children cannot be determined from these figures because the numerator and denominator in the formula used in its calculation refer to slightly different populations.

¹⁹ Discussions among Affiliate Census Data Centers in New York and the State Data Center suggest that the Census' school district numbers have significantly large margins of error and therefore should be used only with extreme caution. Based upon several examples, it appears that if the number looks unusual it should be explored further from other sources to determine whether or not it is real or a statistical aberration. Unfortunately, the tables available at the time this monograph was prepared did not include the 90% confidence level margin of error.

The 2009 Small Area Income and Poverty Estimates are available for 13,619 Title I eligible school districts across the country. The SAIPE program combines the most recent American Community Survey (ACS) data with aggregate data from federal tax information, administrative records on Supplemental Nutrition Assistance Program participation, 2000 Census statistics, and annual Census Bureau population estimates. The school district data produced by the SAIPE program was prepared for the US Department of Education as part of the implementation of the No Child Left behind Act of 2001.

Table 6, which because of its size is split into two parts, provides data concerning the number and percentage of school age children who are living in households where the household's income is below the poverty level. Data is shown for all of the school districts in the Southern Tier East Region, arranged alphabetically.²⁰

School districts were identified in the 2009 school district mapping survey, which asked about school districts as of January 1, 2010, and used school district boundaries for the 2009-2010 school year.

The 2009 poverty estimates are consistent with the population controls used in the 2009 American Community Survey single year estimates.

According to the SAIPE survey slightly over 80% of all children 5 to 17 years old were in school districts with total populations of 20,000 persons or more. Only four of the school districts in the Southern Tier East Region (Ithaca, Binghamton, and Union-Endicott, and Cortland) were this large. The Oneonta City and Johnson City Central School Districts served populations which were just below this threshold.

TABLE 6
[Part 1 A to L]
NUMBER AND PERCENT OF CHILDREN 5 TO 17 YEARS OLD
RELATED TO HOUSEHOLDER AND LIVING IN HOUSEHOLDS
WITH INCOMES BELOW POVERTY LEVEL 2009

School District	Grades Served	Total	District Population		
			Children 5-17 Related to Householder		
			Total	in Poverty	
				Number	%
Afton Central School District	KG-12	3,966	683	135	19.8%
Andes Central School District	PK-12	1,188	138	18	13.0%
Bainbridge-Guilford Central School District	PK-12	5,417	929	115	12.4%
Berlin Central School District	KG-12	6,765	1,176	178	15.1%
Binghamton City School District	PK-12	46,024	6,170	2,129	34.5%
Binghamton Common School District	KG-12	446	66	3	4.5%
Candor Central School District	KG-12	5,087	919	116	12.6%
Charlotte Valley Central School District	PK-12	2,872	438	90	20.5%
Chenango Forks Central School District	PK-12	9,598	1,762	196	11.1%
Chenango Valley Central School District	PK-12	12,744	1,942	221	11.4%
Cherry Valley-Springfield Central School District	PK-12	4,027	689	108	15.7%
Cincinnatus Central School District	PK-12	3,969	684	142	20.8%
Cobleskill-Richmondville Central School District	PK-12	13,519	2,055	276	13.4%
Cooperstown Central School District	KG-12	6,981	1,080	131	12.1%
Cortland City School District	KG-12	23,364	2,782	554	19.9%
Delhi Central School District	KG-12	7,450	935	121	12.9%
Deposit Central School District	KG-12	3,707	624	187	30.0%
Downsville Central School District	PK-12	2,055	275	65	23.6%
Dryden Central School District	KG-12	12,678	2,132	339	15.9%
Duanesburg Central School District	KG-12	4,956	936	86	9.2%
Edmeston Central School District	KG-12	2,879	483	78	16.1%
Franklin Central School District	PK-12	2,078	340	57	16.8%
Gilbertsville-Mount Upton Central School District	KG-12	3,103	540	77	14.3%
Gilboa-Conesville Central School District	KG-12	2,446	350	70	20.0%
Groton Central School District	PK-12	6,067	1,106	163	14.7%
Hancock Central School District	PK-12	2,759	421	84	20.0%
Harpursville Central School District	PK-12	5,304	1,084	192	17.7%
Homer Central School District	KG-12	12,303	2,280	323	14.2%
Ithaca City School District	PK-12	65,714	5,692	773	13.6%
Johnson City Central School District	KG-12	19,640	2,540	606	23.9%
Lansing Central School District	KG-12	7,289	1,430	104	7.3%
Laurens Central School District	KG-12	2,690	445	68	15.3%
Lisbon Central School District	KG-12	3,477	634	137	21.6%

TABLE 6
[Part 2 M to Z]
NUMBER AND PERCENT OF CHILDREN 5 TO 17 YEARS OLD
RELATED TO HOUSEHOLDER AND LIVING IN HOUSEHOLDS

²⁰ Because school districts and county boundaries rarely coincide, the list presented on Table 4 may not be complete

WITH INCOMES BELOW POVERTY LEVEL 2009

School District	Grades Served	Total	District Population		
			Children 5-17		
			Related to Householder		
			Total	in Poverty	
Number	%				
Maine-Endwell Central School District	KG-12	14,674	2,356	261	11.1%
Marathon Central School District	PK-12	4,617	959	127	13.2%
Margaretville Central School District	KG-12	3,970	504	127	25.2%
McGraw Central School District	KG-12	3,437	621	91	14.7%
Middleburgh Central School District	PK-12	6,240	970	203	20.9%
Milford Central School District	PK-12	2,873	457	63	13.8%
Newark Valley Central School District	KG-12	7,703	1,351	165	12.2%
Newfield Central School District	PK-12	5,668	940	182	19.4%
Norwich City School District	PK-12	13,166	2,137	472	22.1%
Oneonta City School District	PK-12	19,392	2,035	316	15.5%
Otego-Unadilla Central School District	KG-12	6,961	1,152	154	13.4%
Owego-Apalachin Central School District	PK-12	14,265	2,303	273	11.9%
Richfield Springs Central School District	KG-12	4,030	618	127	20.6%
Roxbury Central School District	PK-12	2,613	349	85	24.4%
Schenevus Central School District	PK-12	2,502	376	54	14.4%
Schoharie Central School District	KG-12	6,844	1,147	100	8.7%
Sharon Springs Central School District	KG-12	2,060	379	87	23.0%
Sherburne-Earlville Central School District	KG-12	8,488	1,540	286	18.6%
Sidney Central School District	KG-12	7,713	1,271	221	17.4%
Walton Central School District	KG-12	6,452	977	206	21.1%
Waverly Central School District	KG-12	9,998	1,649	325	19.7%
West Valley Central School District	PK-12	2,191	394	54	13.7%
Whitney Point Central School District	PK-12	9,141	1,844	399	21.6%
Windsor Central School District	KG-12	10,329	1,884	282	15.0%
Worcester Central School District	KG-12	2,544	407	62	15.2%
South Kortright Central School District	KG-12	2,400	427	73	17.1%
Spencer-Van Etten Central School District	PK-12	5,709	1,021	153	15.0%
Stamford Central School District	KG-12	2,513	342	92	26.9%
Susquehanna Valley Central School District	KG-12	11,237	2,077	292	14.1%
Tioga Central School District	KG-12	5,480	1,071	146	13.6%
Trumansburg Central School District	KG-12	7,354	1,335	143	10.7%
Unadilla Valley Central School District	PK-12	5,630	933	210	22.5%
Union-Endicott Central School District	KG-12	30,625	4,531	788	17.4%
Vestal Central School District	KG-12	29,677	4,045	373	9.2%

As reported on Table 6, two of the Region's school districts – the urban Binghamton City School District and rural Deposit Central School District were reported as having 30% or more of their students living in poverty.

At the other end of the spectrum only 4.5% of the 66 children identified to be in the Binghamton Common School District which is a non-operating suburban district in the Town of Binghamton which contracts with the Binghamton City School District for services. The Binghamton Common School District is also the smallest district in the Southern Tier East Region.

Source: **Small Area Income and Poverty Estimates (SAIPE): 2009 Highlights**, Issued December 2010 by the U S Census Bureau, Housing and Household Economic Statistics, Small Area Estimates Branch

APPENDIX A

CENSUS BUREAU ANNUAL SURVEYS AND ESTIMATES

The Census Bureau continuously collects survey data throughout the year – not just the decennial census with which it is so closely identified. In addition the Bureau, through its various branches and offices periodically issues a number of studies and publications which provide information concerning income and poverty in the United States.

Traditionally, reliance was placed upon the detailed data produced by the decennial censuses which were then supplemented by periodic estimates undertaken by various Census Bureau branches. However, the 2000 Census was the last census to collect detailed statistics. The 2010 Census was basically limited to a count of the number of households and population, with detail limited to a small set of age/sex/race characteristics as well as several household related questions.

The so-called “long form” detailed questionnaire which was completed by a sample of the total population every 10 years was replaced by the “American Communities Survey” which has been conducted on a continuing basis throughout the year since 2005. While this is basically a switch from one survey to another, it also involved a significant decrease in the sample size and forces a change in the interpretation of the data.

AMERICAN COMMUNITY SURVEY (ACS)

The ACS collects income related data throughout the year on an on-going, monthly basis.²¹ This ongoing statistical survey by the U.S. Census Bureau is sent to approximately 250,000 addresses monthly (or 3 million per year). The ACS gathers information previously contained only in the long form of the decennial census. Like the 2010 Census, ACS data is primarily collected by mail, with Census Bureau telephone and personal visit follow-up procedures to get as complete a response as possible.

Processed survey responses provide annual estimates for all states, cities, counties, metropolitan areas, and other population groups of 65,000 people or more. For smaller areas, the Census Bureau expects useful samples to develop over three years in areas with 20,000 to 65,000 people, and five years in areas with fewer than 20,000 people. The quality of these samples is expected to match that of the decennial census. However, the small area and sub-group sample is not anticipated to be benchmarked to the 2010 Census short form for cities and smaller areas, but instead to total population estimates at the county level. This is expected to create large differences in basic count 2010 ACS estimates and the 100% 2010 United States Census counts for cities and sub-areas, and for all sub-groups within the county.

In the 2000 Census, income figures were obtained for a fixed period of time - the calendar year 1999. In contrast, because the ACS collects data throughout the year on an on-going, monthly basis it asks for a respondent's income over the "past 12 months." This is further complicated by the fact that much of the ACS data is reported for a multi-year period. For example, the 2005-2009 ACS 5-year data reflect incomes over 2004-2009.

²¹ Questions 47 and 48 on the American Community Survey 2010 form asks about individual income during the past 12 months. Question 47 asks individual income figures for 8 types of income, while question 48 is the sum of those 8 categories less any losses. The eight income categories identified on the form include: wages, salary, commissions, tips, and bonuses; non-farm self-employment income; interest, dividends, rental or royalty income; social security or railroad retirement income; supplemental security income; public assistance or welfare payments; retirement, survivor, or disability pensions; and any other regularly received income such as Veteran's Administration payments, unemployment compensation, child support, or alimony.

In a comparison study between Census 2000 income data and the 2000 ACS, the Census 2000 incomes were found to be about 4 percent higher than that in the 2000 ACS. Furthermore, direct comparisons of income and earnings distributions between Census 2000 and the 2009 ACS are not possible due to inflation.

Comparing ACS With 2000 Census

According to the Census Bureau, American Community Survey (ACS) 1-year estimates with Census 2000 and other ACS 1-year data. However, since ACS variables change over time, some areas and subjects must be compared with caution, or not compared at all. The Bureau also reports that generally, American Community Survey (ACS) 3-year and 5-year estimates can be compared with Census 2000 data, but that there are differences in the universe, question wording, residence rules, reference periods, and the way in which the data are tabulated which can impact comparability.

The Census Bureau also suggests that when comparing multi-year estimates for different areas, the same period length should be used for each estimate. For example a 1-year estimate should not be compared to a 3 or 5-year estimate. In addition the Census Bureau discourages direct comparisons between estimates for overlapping periods. For example the 2005-2007 ACS estimates and the 2006-2008 ACS estimates each contain the same data for 2 of the 3 years in the sample - 2006 and 2007. According to the Census Bureau, the ACS is best in estimating characteristic distributions and therefore users should compare derived measures such as percents, means, medians, and rates rather than estimates of population totals.

In 2010 the American Community Survey will issue data in three series: the 2009 ACS 1-year estimates which are based on data collected between January 2009 and December 2009 for selected geographic areas with populations of 65,000 or greater; the 2007-2009 ACS 3-year estimates which are based on data collected between January 2007 and December 2009 and published for selected geographic areas with populations of 20,000 or greater; the 2005-2009 ACS 5-year estimates which are based on data collected between January 2005 and December 2009 and published for small geographic areas.

CURRENT POPULATION SURVEY (CPS)

The Current Population Survey Annual Social and Economic Supplement (CPS-ASEC) is an annual report which is based upon a monthly CPS survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. For more than 50 years the CPS is the primary source of information on the labor force characteristics of the U.S. population. The sample is scientifically selected to represent the civilian non-institutional population. Respondents are interviewed to obtain information about the employment status of each member of the household 15 years of age and older. The sample provides estimates for the nation as a whole and serves as part of model-based estimates for individual states and other geographic areas.

In addition to earnings, estimates obtained from the CPS include employment, hours of work, and other indicators. Data are available by demographic characteristics as well as by occupation, industry, and class of worker. Supplemental questions to produce estimates on income and other topics are often added to the regular CPS questionnaire.

SMALL AREA INCOME AND POVERTY ESTIMATES (SAIPE)

Within the U S Census Bureau, the Housing and Household Economic Statistics (HHES), Small Area Estimates Branch (SAEB) periodically issues annual "Small Area Income and Poverty Estimates" (SAIPE) which provides limited income and poverty data concerning income and poverty statistics for states,

counties and school districts. The information produced as part of this program is principally focused on providing data for school nutrition programs.

These estimates are based on models using data from a number of sources including current surveys, administrative records, intercensal population estimates and personal income data published by the Bureau of Economic Analysis. According to the Census Bureau, in general, SAIPE estimates have lower variances than ACS estimates but are released later because they incorporate ACS data in the models.

APPENDIX B

METHODOLOGY FOR SAIPE SCHOOL DISTRICT POVERTY ESTIMATES

The Census Bureau's 2009 school district estimates are based upon tabulations of poverty from the 2000 Decennial Census and tax year 2008 IRS income tax data, using school district boundaries corresponding to school year 2009-2010, and combined with the SAIPE program 2009 county estimates of poverty. By construction, the SAIPE program school district estimates are arithmetically consistent with the SAIPE program county and state estimates.

SPATIAL BOUNDARIES OF SCHOOL DISTRICTS

The boundaries of the school districts used in the SAIPE program are based upon the Census Bureau's TIGER database, updated by each School District Review Program; the most recent was completed in 2010.

For each school district, the Census Bureau estimates pertain to all resident school-age children ages 5-17, inclusive, whether enrolled in public or private school, or not enrolled in any school. Where two districts divide the children of an area between them by grade, the estimates do so as well. Children are assigned to districts based upon 2000 Census "long form" responses or based upon grade assignments according to their age as of October 1, 1999.

With the Census 2000 record for each child assigned to a single school district, to which that child is said to be "relevant," the Census Bureau then tabulates the following for each district: the number of "relevant" children ages 5-17, inclusive; the number of "relevant" children who are related to the householder and reside in families whose 1999 income falls below the poverty threshold appropriate to that family; and the total population of all ages residing in the spatial boundaries of the district.²²

Related children are people ages 5-17 related by birth, marriage, or adoption to the householder of the housing unit in which they reside; foster children, other unrelated individuals, and residents of group quarters are not "related children."

The SAIPE program procedure for estimating poverty among relevant children ages 5-17 in families works with geographical units the Census Bureau calls school district-county-pieces. These pieces are defined as the intersections of school districts and counties (i.e., all of a district if it does not cross county boundaries and each county part separately for districts that do). If a school district has territory in two counties, for example, we make estimates for the two parts separately and then combine them.

CONSTRUCTING THE SAIPE PROGRAM ESTIMATES

The first part in making school district poverty estimates is to compute the school district piece tax-based child poverty rate, using federal tax information obtained from the IRS. The tax-based poverty rate for a school district piece is estimated by the product of the county related children ages 5-17 poverty rate and the ratio of school district piece to county share of "child tax-poor exemptions" over the share of total "child tax exemptions".

²² Because of overlapping districts, the sum of the total populations of the districts will exceed the total population of the nation.

For the 2009 school district estimates, the number of child tax exemptions and their corresponding poverty status are taken from the prior tax year (i.e. 2008) IRS income tax data. "Poor Child Exemptions" are defined as the number of child tax exemptions on returns whose adjusted gross income falls below the official poverty threshold for a family of the size implied by the number of exemptions on the form tabulated for each school district piece.

Not all tax returns can be geocoded down to a specific school district piece. However, the total number of exemptions in a county is known. These exemptions will be called the non-geocoded exemptions. The tabulated child tax exemptions and child tax-poor exemption counts are adjusted to reflect the appropriate grade range of the school district piece because age of child is not included on the income tax form.

The next step in calculating the tax-based shares is to estimate the school district piece to county share of relevant children age 5-17 and relevant children age 5-17 in poverty from Census 2000. These shares are based on the methodology used prior to 2005 for school district poverty estimation. The non-geocoded exemptions are also adjusted to reflect the target 5-17 year old population, then allocated to the school district pieces to minimize the difference between the tax-based shares and the corresponding census-based shares using the Minimum Change algorithm indicating the non-geocoded exemptions, the tax-based poverty rate for a school district piece can be computed.

The second part in creating the school district poverty estimates is to multiply the school district piece poverty rate to the official estimate of relevant child population for the school district piece. These estimates are then raked (ratio adjusted) to agree with the county estimates for number of children age 5-17 in poverty. Finally, the raked school district piece estimates are adjusted using "controlled rounding" to get results with the following properties.

The number of children in poverty in the pieces in a county adds up to the SAIPE program's model-based estimate of the number of children in poverty in their counties for the relevant income year. The number of children in poverty in the school district pieces are integers.

The final step is to reassemble the school district pieces into the school districts, simply by adding their controlled-rounded numbers of children in poverty together.

This monograph is an update of the information previously presented in the Technical Paper #08-02, "**2005 Poverty Estimates**" prepared by the Southern Tier East Regional Planning Development Board and published in January 2008