American Community Survey Data On the American Indian/Alaska Native Population: A Look behind the Numbers

Introduction

The year 2010 marked a major turning point in the collection of information on the American population. For the first time in over 70 years, the Census Bureau's once a decade headcount of the nation's people did not collect information on their detailed socio-economic characteristics.

In 2010, the Census was all about "ten questions, ten minutes to complete." Only basic information on age, sex, race, Hispanic origin and relationship to other members of the household was gathered. There were no questions on such aspects of the population's well-being as employment and income. All that detailed socio-economic characteristics information is now gathered through a separate operation, called the American Community Survey -- ACS for short.

The leaders of Indian tribal governments, tribal planners and others in Indian Country, along with leaders and staff in off-reservation Native organizations have a limited awareness of the change in how the Census Bureau gathers information on Native people. They may have even less awareness of its implications.

Although the data collected is basically the same as that formerly gathered in the decennial census, the ACS is a different activity in a number of important respects.

The decennial census attempts to enumerate every person in the US. It happens just once every ten years, with the count recorded as of one day -- Census Day. For the last several censuses, it has been accompanied by a major public relations campaign, designed to make every American aware of the census and the importance of responding to the census questionnaire.

The ACS is a completely separate survey. Every month of every year ACS questionnaires are mailed to a sample of households throughout the country. There is little publicity and little awareness of what it is or why a person should respond, particularly when the questionnaire asks for many details of a person's life. But unlike the decennial census that releases results only every ten years, the ACS releases population data every year.

In the past -- before 2010 -- the decennial census collected detailed socio-economic characteristics information on such matters as employment and income through the use of a "sample" or "long form" questionnaire, distributed to an average of one in every six households. In 2000, one in every two households was sampled in reservation areas, an attempt to make sure that the information collected was representative of the entire reservation population.

The ACS sample is smaller. Although the sample size was increased from roughly 3 million households to 3.5 million in mid-2011, it is small compared to the 17.6 million households sampled using the "long form" questionnaire in 2000. The ACS does oversample small communities, including reservation areas, but does not do so to the same extent that the decennial did.

One consequence of the smaller sample size is that the Census Bureau has to aggregate the information it collects over a five year period in order to get results it considers reliable for communities with populations of less than 20,000 -- a category that includes nearly every reservation. This produces a "period in time," rather than a "point in time" set of results -- data covering a five year time frame instead of one day (Census Day) as is the case with the decennial. One result is a blurring of the impact of year to year changes in the populations in smaller geographic areas.

Although the sample is smaller, producing data that is inherently less reliable for small populations and small areas, new ACS data is available every year, not just once a decade. The timeliness of the data, with results published annually, is considered to be a major advantage of the ACS.

The implications of the ACS on the Census Bureau data for the Native population -- more specifically the American Indian and Alaska Native (AI/AN) population -- have received little analysis. Many users will see no difference between ACS data and that derived from the former decennial "long form." But what's behind the numbers is critical in interpreting the results.

The Census Bureau maintains that the ACS data is as accurate as the decennial census "long form" data it replaced. A major Census Bureau guidebook for ACS data users puts it this way: "Census Bureau subject matter specialists . . . have determined that ACS estimates are similar to those obtained from past decennial census sample [long form] data **for most areas and characteristics**."[1] (Emphasis added.)

This paper is an attempt to look at this issue with respect to the data on the American Indian and Alaska Native population.

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[1] U.S. Department of Commerce. Bureau of the Census. *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know*. Washington, DC, October 2008, page A-20.

Key Terms

Although sometimes referred to in this paper as the "Native" population, the analysis is devoted strictly to what the Census Bureau calls the **"American Indian/Alaska Native" (AI/AN)** population. Since the 2000 decennial, all respondents are allowed to check more than one box in answering the question on race on a Census form. The Bureau defines the **AI/AN "alone"** population as persons who check only the box for American Indian or Alaska Native. Those who identify with another racial group, such as White or African-American, as well as AI/AN, are counted as "AI/AN in combination with one or more races." The sum of the AI/AN alone population and the **AI/AN "in combination" (multi-racial)** population is considered to be the count of the **"AI/AN alone or in combination"** population.

The term **"reservation"** refers to reservation and trust land areas associated with federally-recognized tribes.

"Counties" are areas designated as such by the state governments in which they are located. The term also includes what Census calls "county equivalents," which may otherwise be known as boroughs, independent cities or, in the case of Alaska, "census areas."

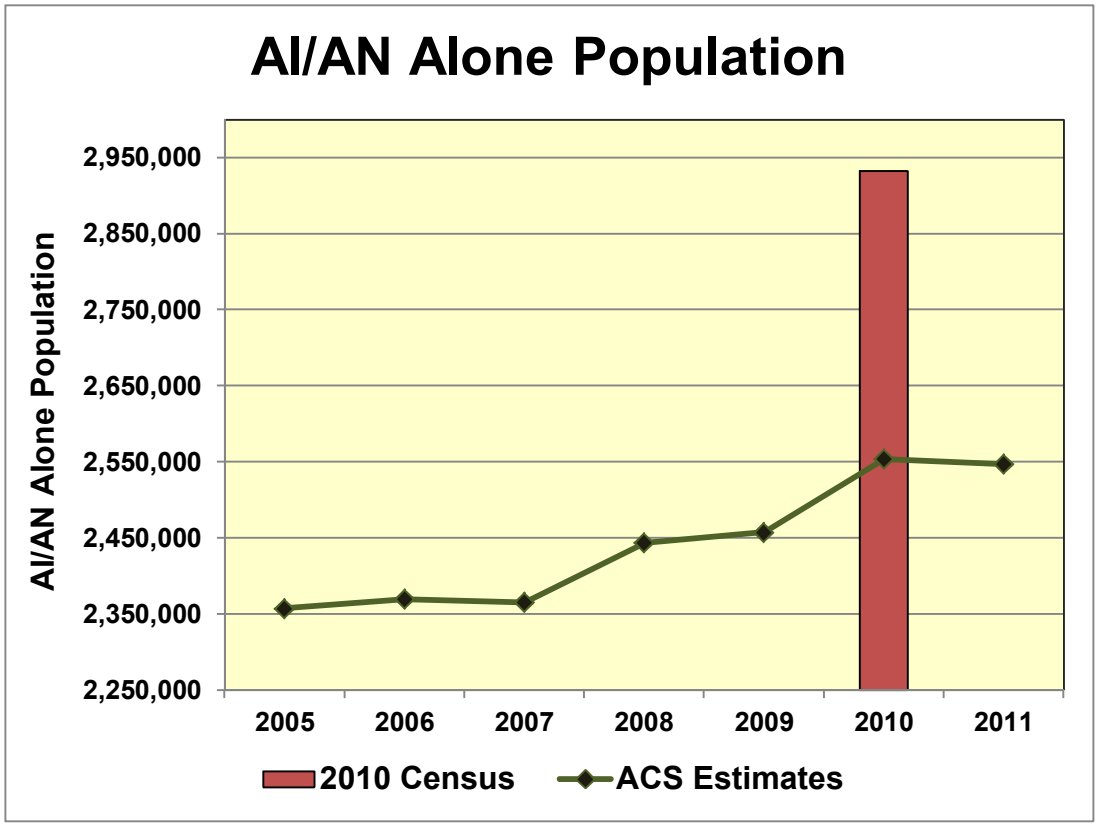
Unless otherwise specifically noted, the ACS data used in this analysis is drawn from the **ACS 5-year "estimates"** aggregated from questionnaires collected in the period from 2007 to 2011. This is the latest ACS release covering all local areas within the US.

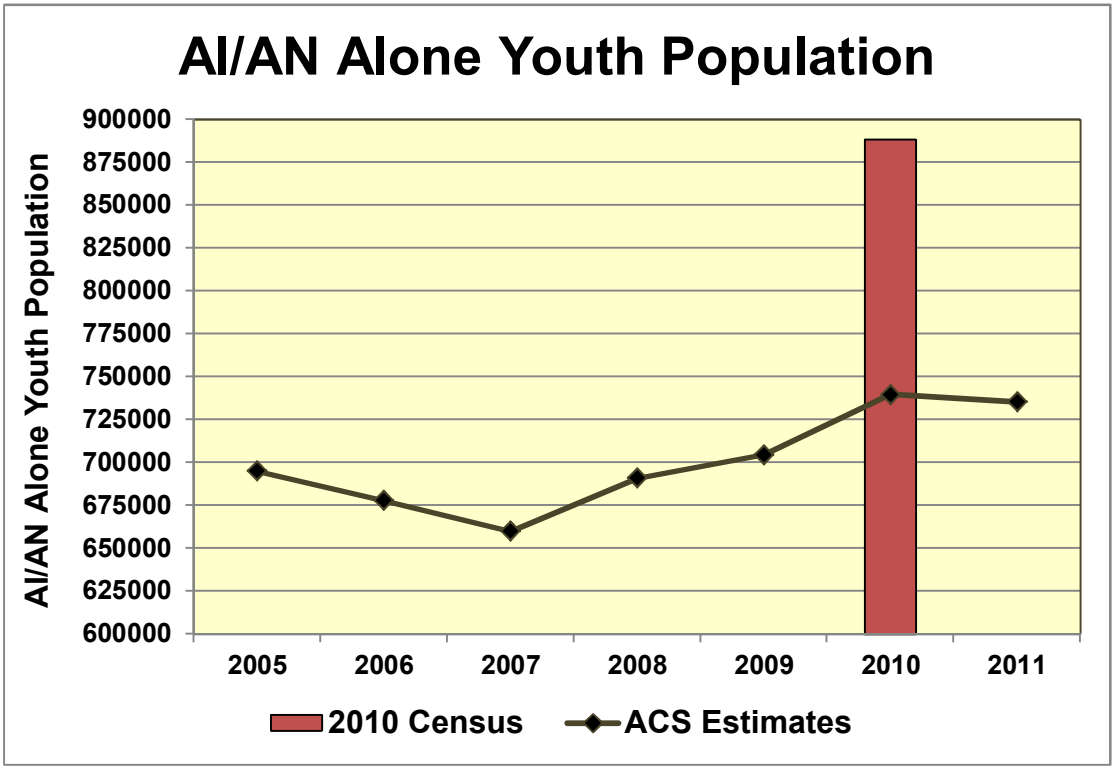
Is the ACS Counting the Entire Native Population?

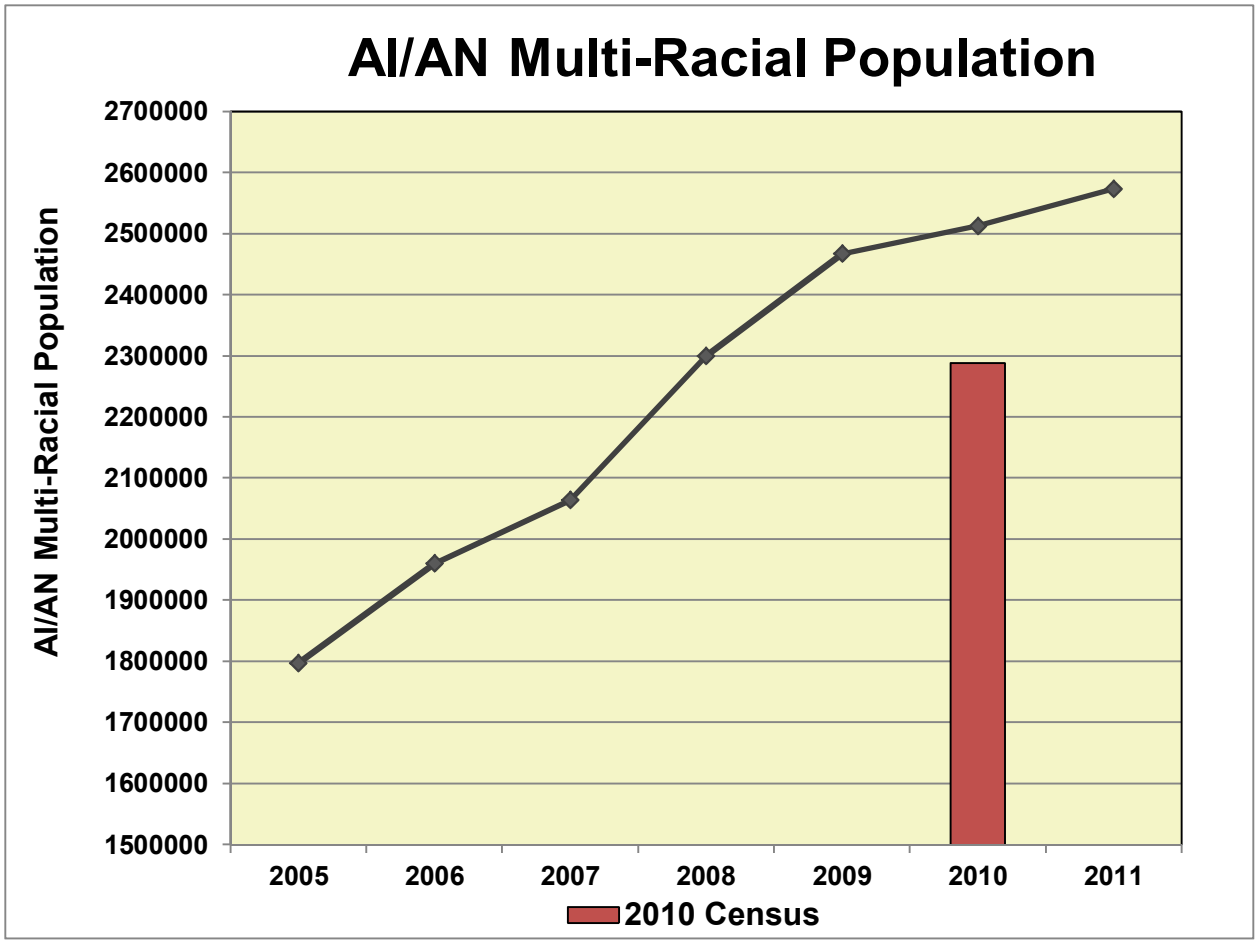
As far as the AI/AN alone population is concerned, the answer is simply no.

The 2010 Census reported that the total AI/AN alone population at the national level was 2,932,248. The ACS 1-year estimate for the year 2010 was 2,553,566, some 378,682 persons less than the decennial count. The 2010 Census reported that the AI/AN alone youth population, persons under age 18, was 888,372. That number was 148,716 less than the ACS 1-year estimate of 739,656.

In sharp contrast to the apparent ACS undercount of the AI/AN alone population, the ACS 2010 1-year estimate of the size of the AI/AN multi-racial ("in combination") population was 224,915 higher than the 2010 Census count. The data is displayed graphically on the following pages. The solid bar shows the 2010 number. The trend line shows the ACS 1-year estimates from 2005 through 2011.


AI/AN Alone Population
AI/AN Alone Population
2,950,000
2,850,000
2,750,000
2,650,000
2,550,000
2,450,000
2,350,000
2,250,000
2005
2006
2007
2008
2009
2010
2011
2010 Census
ACS Estimates


AI/AN Alone Youth Population
AI/AN Alone Youth Population
900000
875000
850000
825000
800000
775000
750000
725000
700000
675000
650000
625000
600000
2005
2006
2007
2008
2009
2010
2011
2010 Census
ACS Estimates



The ACS 1-year estimates show a consistent pattern. The numbers for the AI/AN alone and alone youth populations are substantially below what the decennial count in 2010 proved to be. Moreover, the ACS 1-year estimates for 2011 for both the AI/AN alone and alone youth populations are even **below** the estimates for 2010, which, in turn, were well below the 2010 Census counts.

At the same time, the ACS 1-year estimates for the AI/AN multi-racial population from 2008 through 2011 are considerably above the level of this population as counted in the 2010 Census.

Does this mean that the ACS does better at counting persons who identify with another race, like White or African-American, along with AI/AN, than it does at finding persons who say that AI/AN is their only race?

The discussion above is concerned with the AI/AN numbers at the national level. The picture at the local level is mixed.

ACS AI/AN Counts for Local Areas

This analysis looked at two kinds of local geographic areas: federal reservation areas and county areas. The purpose was to examine the ACS data separately for the AI/AN alone population residing in reservation areas and for the primarily off-reservation population in county areas.

Within each category of geographic areas, those areas with an AI/AN alone population of 1,000 or more, as counted in the 2010 Census, were subject to more detailed analysis. This was intended to exclude the variability in results, particularly results measured in percentage terms, that is characteristic of areas with relatively small Native populations.

Most of the Native people in some counties with 1,000 or more AI/AN alone persons are reservation residents, which results in an overlap with the data for reservations. To avoid this overlap, the counties selected for analysis were those with an AI/AN alone population of 1,000 or more in the 2010 Census and an AI/AN alone percentage of the total population of 10% or less. This focused attention on the larger urban counties that have no reservations or where the majority of the Native population lives in the off-reservation portions of the county involved.

The selected areas included 86 of the 324 federal reservations and 405 of the 3,134 counties in the US. For these areas, the ACS 5-year estimates for 2007 to 2011 period for the size of the AI/AN alone population were compared to the AI/AN alone population counts from the 2010 Census. The time frames don't match; the ACS data covers five years with 2009 as the mid-year, but the 2010 Census numbers are for one point in 2010. However, if the ACS is counting the approximate size of the AI/AN alone population correctly, the numbers from the ACS should be within 10%, plus or minus, of the 2010 Census figure.

These are the results for the reservation analysis.

The AI/AN alone population of all 324 reservations in the ACS 2007-2011 data totals just under 3% of the number in the 2010 Census -- remarkably close results between the two data sets. However, this overall match between the ACS and the decennial counts masks a considerable amount of variability at the individual reservation level.

Eighty-six of the 324 federal reservations for which the Census Bureau publishes data had AI/AN alone populations of 1,000 or more. These 86 reservations include a little over 90% of the total AI/AN alone on-reservation population.

Of the 86 reservations, 7 had estimates for their AI/AN alone populations in the 2007 to 2011 ACS data set that exceeded the 2010 AI/AN counts by more than 10% -- an apparent overcount. Twenty-five of the 86 had ACS 2007-2011 estimates for the size of

their AI/AN alone populations that were less the 2010 Census count by more than 10% -- an apparent undercount. The other 54 had ACS estimates that were within 10% of the 2010 count -- roughly matching the 2010 numbers. So while most of the larger reservations had ACS counts that approximated, in some cases exceeded, the actual 2010 number, nearly 30% of the 86 reservations experienced an apparent undercount.

The analysis for the counties with large, predominantly off-reservation AI/AN alone populations revealed a number of striking illustrations of undercounts in the ACS 2007 to 2011 estimates.

There are 405 counties where the AI/AN alone population counted in the 2010 census was 1,000 or more and the AI/AN alone percent of the total population of all races was 10% or less -- a criterion that eliminated nearly all of the counties where the majority of the AI/AN alone population lives within reservation borders. These 405 counties accounted for 57.6% of the total AI/AN alone population (on and off-reservation) in the 3,134 counties in the country.

Overall, the ACS estimate for the 2007-2011 period of the total size of the AI/AN alone population in these 405 counties was 18.8% less than the count in the 2010 Census, a substantial apparent undercount.

There was considerable variability at the individual county level.

Just 27 of the 405 counties with relatively large AI/AN alone off-reservation populations had an ACS 2007-2011 estimate for the size of the AI/AN alone population that represented an apparent overcount. The ACS number was greater than 10% of the 2010 Census number.

Another 117 of these counties had an ACS estimate that approximated, was within 10%, of the 2010 Census count.

However, 261 (64.4%) of the 405 counties had an ACS estimate that was more than 10% below the 2010 count -- an apparent undercount. A closer examination of the figures shows that the greatest discrepancies were in the largest of the metropolitan counties.

For example, the borough of the Bronx in New York City had an ACS 2007-2011 estimate for the size of the AI/AN alone population that was 61.0% less than the 2010 count. In Cook County, Illinois -- where the city of Chicago is located -- the apparent undercount was 48.9%. In Dallas County, Texas, the apparent undercount was 38.9%. In Los Angeles County, California, it was 32.3%.

Clearly the ACS is not accounting for large numbers of AI/AN alone persons in these major metropolitan areas.

Other Perspectives on the ACS AI/AN Counts

The ACS is based on a survey of a sample of the total population. Like all surveys, the size of the total population, extrapolated from the sample survey by a weighting scheme, is not expected to equal the number from a complete count of the population.

In 2000 the size of the AI/AN alone population extrapolated from the sample ("long form") data was 1.1% below the number in the 2000 complete count data. In 2010 the size of the AI/AN alone population extrapolated from the ACS 1-year survey results was 14.8% less than the number in the 2010 Census count.[2]

The Census Bureau has yet to publicly explain why the ACS figures at the national level and for many local areas fall so short of the counts in the 2010 Census. The position of Bureau staff appears to be that people who report as AI/AN alone on a decennial census questionnaire change their racial identification to AI/AN multi-racial when responding to an ACS questionnaire.

This point of view is reflected in a recent Census report evaluating the response to the ACS by race and ethnicity. The report found that the "inclusion rate" for the non-Hispanic AI/AN alone population was much lower than it was for any other racial or ethnic group, suggesting a potential serious undercount of this population. The report concluded that the low rate was likely to be explained "by the differences in classification of one race -- the alone population versus two or more races."[3]

However, the Census Bureau has produced no research to substantiate this speculation that the count of AI/AN alone persons in the ACS results from people switching their response to the race question from AI/AN alone on the decennial questionnaire to AI/AN multi-racial on the ACS questionnaire. One could just as easily speculate that the increase in the AI/AN multi-racial population in the ACS is a result of persons whose primary identity is White or another race deciding to reflect the "family lore" of an Indian ancestor and check the AI/AN box as well as the box for the person's primary race.

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[2] Although this analysis uses the complete count data on the AI/AN population as the standard of comparison for the ACS counts, it should be noted that the Census Bureau has estimated that the undercount of the non-Hispanic AI/AN alone population in reservation areas in the 2010 decennial Census was nearly 5%. The Census Bureau also estimated a net overcount of the AI/AN alone population in off-reservation areas of close to 2%.

[3] Griffin, Deborah H., American Community Survey Office, United States Census Bureau, "Evaluating Response in the American Community Survey by Race and Ethnicity: Final Report," November 29, 2012, page 3.

The Census Bureau points out that the ACS is not about estimating the total size of the AI/AN or any other population. The purpose of the ACS is to produce data on the socio-economic characteristics of the population, such as the number of unemployed or persons in poverty grouped by race, sex, age or other factors. The Bureau asks users to look at these socio-economic characteristics in percentage terms rather than as absolute numbers.

Nonetheless, the absolute numbers are important. They provide the numerators and denominators in all the percentage calculations. More importantly, if the ACS is missing a significant portion of a population, such as the AI/AN alone population, what are the characteristics of those that are missed? Are the persons that are missed more likely to be out of work or in poverty than those that are counted? If this is the case, then the ACS results are skewed.

A independent analysis by Jonathan Ong and Paul Ong at UCLA looked at the issue of the accuracy of the ACS counts for the AI/AN population at the national and substate levels, focusing primarily on Los Angeles and other major metropolitan areas in California. Examining the published ACS 3-year estimates covering the period from 2009 to 2011, the Ong analysis[4] concluded that there was a serious undercount of the AI/AN alone population, while the AI/AN multi-racial population was overcounted.

The Ong analysis considered the possible causes of the discrepancies between the ACS counts and the 2010 decennial counts. Such discrepancies can result from a combination of two factors: an unrepresentative sample and the weighting applied to extrapolate the survey data to the entire AI/AN population.

The Ongs described evidence that the AI/AN population was undersampled, a problem they showed to be compounded by "systematic differences in the weights used to translate the ACS sample into population estimates."

What Are the Socio-Economic Characteristics of the AI/AN Alone Population?

As noted earlier, the Census Bureau emphasizes that the ACS is not about counting the total size of the AI/AN or any other population. Instead, it is intended to provide up-to-date figures on the various socio-economic characteristics of the population from the national level to that in small geographic areas.

How good a job is the ACS doing in this respect?

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[4] Ong, Jonathan and Paul Ong, Los Angeles American Indian and Alaska Native Project, Technical Memo 3, "AIAN Underrepresentation in the ACS," November 19, 2012 and available at: http://www.aisc.ucla.edu/research/pb1_memo3.asp.

The analysis focuses on two key socio-economic characteristics: unemployment and poverty. They are two very important measures of well-being, as well as two of the most frequently cited data points in discussions of the status of Native people relative to others in the country.

There is no source of data that is closely comparable to the ACS data on the socio-economic characteristics of the AI/AN population. However, there are other sources that do produce annual, national level statistics on unemployment and poverty by race.

The Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS) is one such source. Also conducted by the Census Bureau, the ASEC is a much smaller, national only survey and differs in several other respects from the ACS.

The ACS 1-year estimate for 2010 for the unemployment rate of the AI/AN alone population was 17.9%. The 2010 AI/AN alone unemployment rate in the ASEC was 16.0%. Both were considerably higher than the 2000 decennial census "long form" data figure of 12.4%. The 2010 figures in the ACS and ASEC each reflect the impact of the recession in the latter part of the decade on the Native workforce.

The ACS 1-year estimate for 2010 for the poverty rate of the AI/AN alone population was 28.4%. The ASEC figure for the AI/AN alone poverty rate in 2010 was 27.4%. Both represent an increase over the 2000 decennial "long form" rate of 25.7%.

The ACS to ASEC comparison for 2010 shows differing, but roughly comparable figures for the unemployment and poverty rates for the AI/AN alone population at the national level. The numbers from both are higher than the Census 2000 decennial figures, as might be expected.

As to local level data, comparisons between other sources and the ACS are not possible. There is no other data source that produces uniform socio-economic characteristics information for the US population in all local areas of the country. That is one of the major claims of the ACS; it has a monopoly in this field.

However, there is one way of testing the reliability of the data that is internal to the ACS itself. This involves computing the relative level of sampling error in the numbers, a process that uses a standard statistical technique.

That technique is described in an appendix to a Census Bureau guidebook on the use of ACS data. Appendix 3 of the version of the Bureau's "Compass for Understanding and Using American Community Survey Data" intended for general data users discusses measures of sampling error. The measure that allows a comparison of the levels of sampling error across multiple estimates is the coefficient of variation (abbreviated in

this paper as "CV.") It is derived by a simple calculation using the "Margin of Error" published by the Census Bureau for every single estimate provided in the ACS.

The closer a CV for a particular estimated value is to zero, the more reliable the estimate is believed to be in terms of the potential for sampling error. The higher the CV, the less reliable the estimate.

There is no exact level at which a CV indicates that an estimate is unreliable. Opinion varies. One Census publication asserts that a CV of 5% or less is a sign of a "very reliable" estimate.[5] In a presentation for a workshop at a Population Association of America meeting in April of 2009, one of the Bureau's principal ACS evaluators suggested that "Estimates with CVs that are less than 15% are generally considered reliable, while estimates with CVs that are greater than 30% are generally considered unreliable."[6]

This analysis adopts that approach, terming estimates with CVs of 15% or less as "reliable," those between 15% and 30% as of questionable reliability ("potentially unreliable" in the text that follows) and estimates over 30% as "unreliable."

The reservation analysis looked at the CVs for the number of AI/AN alone persons between the ages of 16 and 64 counted as unemployed in the larger reservation areas, those with 1,000 or more AI/AN alone persons as counted in the 2010 Census.

The county analysis examined the data for the larger counties, those with 1,000 or more AI/AN alone persons as counted in the 2010 Census and where the percentage of AI/AN alone persons to the total population was 10% or less, a criterion applied to eliminate counties with predominantly on-reservation AI/AN alone populations.

The results are shown in the two tables below.

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[5] U.S. Census Bureau, "A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know," US Government Printing Office, 2008. Appendix 3. Measures of Sampling Error, page A-13.

[6] Griffin, Deborah, U.S. Census Bureau, Presentation to ACS Workshop, 2009 Population Association of America, April 29, 2009 available at:
http://www.census.gov/acs/www/Downloads/library/2009/2009_Griffin_01.pdf.

Summary Statistics for Sampling Error
CV for Number of AI/AN Alone Unemployed Persons Age 16 to 64
Reservations in US with an AI/AN Alone Population 1,000 or More

CV Range	Number of Reservations	Percent of Reservations in Universe
0% to 15.0%	14	16.3%
15.1% to 30%	49	57.0%
Over 30%	23	26.7%
Total Reservations	86	100.0%

The table shows that the CVs for the number of AI/AN alone unemployed between the ages of 16 and 64 were in the "reliable" range for just 16% of the larger reservation areas. On the other hand, 27% of the reservations had CVs for this unemployment indicator in the "unreliable" range.

Summary Statistics for Sampling Error
CV for Number of AI/AN Alone Unemployed Persons Age 16 to 64

Counties in US with an AI/AN Alone Population of 1,000 or More
and AI/AN Percent of Total Population of 10.0% or Less

CV Range	Number of Counties	Percent of Counties in Universe
0% to 15.0%	21	5.2%
15.1% to 30%	104	25.7%
Over 30%	280	69.1%
Total Counties	405	100.0%

The table shows that the picture for the large counties with predominantly off-reservation AI/AN alone populations was considerably worse. Over 69% of these counties had relative levels of sampling error in the "unreliable" range.

In the case of both reservations and counties, the areas with smaller AI/AN alone populations have considerably larger CVs. This result is to be expected. Small samples generally produce less reliable results with respect to small populations and small geographic areas. None of the smaller reservation or county areas have a CV for the unemployment indicator in the "reliable" range. A very small number have CVs in the "potentially unreliable" range. The great majority have a CV in the "unreliable" range.

The situation with respect to the poverty indicator is somewhat better. The population universe includes AI/AN alone persons of all ages, whereas the universe for the number of unemployed includes only persons 16 and older.

The results of the analysis for the poverty factor are shown in the two tables that follow.

Summary Statistics for Sampling Error
CV for Number of AI/AN Alone Persons in Poverty
Reservations in US with an AI/AN Alone Population 1,000 or More

CV Range	Number of Reservations	Percent of Reservations in Universe
0% to 15.0%	31	36.0%
15.1% to 30%	51	59.3%
Over 30%	4	4.7%
Total Reservations	86	100.0%

The table shows that 36% of the larger reservations had CVs for the number of AI/AN alone persons in poverty in the "reliable" range. A majority of these areas were in the "potentially unreliable" range, and 5% were in the "unreliable" range.

Summary Statistics for Sampling Error
CV for Number of AI/AN Alone Persons in Poverty

Counties in US with an AI/AN Alone Population of 1,000 or More
and AI/AN Percent of Total Population of 10.0% or Less

CV Range	Number of Counties	Percent of Counties in Universe
0% to 15.0%	44	10.9%
15.1% to 30%	175	43.2%
Over 30%	186	45.9%
Total Counties	405	100.0%

The CV analysis for the poverty factor in counties with relatively large AI/AN alone, predominantly off-reservation populations showed the ACS data to be less reliable than was the case with the reservation numbers. About 11% of these larger counties had CVs that indicated that the estimates were "reliable." Some 43% had CVs in the "potentially unreliable" range, and 46% had CVs in the "unreliable" range.

This analysis raises questions about the usability of the ACS numbers for unemployment and poverty for planning at the local community level and for use in the formulas that allocate funds for federal employment and training programs to individual tribes and off-reservation grantees under the special Indian provisions of the Workforce Investment Act.

The use of coefficients of variation (CVs) to measure relative levels of sampling error is one way of testing the reliability of the ACS data for the socio-economic characteristics of the AI/AN alone population in local areas. It uses a standard statistical technique, and the Census Bureau provides the necessary figures for its use.

However, a low CV, even one in the "very reliable" range, does not prove that the ACS estimates are accurate.

The case of the estimates for the size of the AI/AN alone population in the larger metropolitan counties illustrates the point.

The borough of the Bronx in New York City had a CV for the total number of AI/AN alone persons in the ACS 2007-2011 data set of 8.6%, well within the "reliable" range. Yet the ACS number was 61% below the 2010 Census count of that population. Los Angeles County had a CV of 3.4%, within the "very reliable" range. At the same time, the ACS 2007-2011 data missed the number for the AI/AN alone population counted in the 2010 Census by 32%. A total of 189 of the 261 large counties with ACS counts for the AI/AN alone population that were 10% or more below the 2010 Census counts had CVs for this data item in the "reliable" range.

CVs don't tell the full story when it comes to the reliability of the ACS data.

This conclusion is supported by what limited evidence is available with respect to the AI/AN alone unemployment and poverty rates on several reservations.

The Navajo reservation is the largest in the US, both in terms of land area and in the size of its AI/AN alone population. The rural reservation spreads across three states and is far beyond commuting distance to any large metropolitan labor market. Press accounts often describe the reservation's unemployment rate as being 50%, a figure that reflects a report by the Bureau of Indian Affairs for 2005.

According to the ACS data for 2007 to 2011, the unemployment rate for AI/AN alone persons on the Navajo reservation was 19.4%, far below the commonly cited 50% level. It should be noted, however, that methodological differences in the measurement of unemployment between the Census Bureau and the Bureau of Indian Affairs account for a portion of this difference.

A more direct comparison matches the 19.4% rate in the most recent ACS data to the 26.4% rate recorded in the "long form" data from the 2000 Census. Although nine years have passed between the time of the 2000 Census and the mid-point of the ACS data series, there have been few major changes in the employment opportunities at Navajo over the intervening years. Some mining jobs were eliminated when a power plant

closed. Employment in the gaming industry has just begun with the recent opening of several casinos.

Is it reasonable to assume that the unemployment rate from has been cut by one-quarter from 2000 to the 2007 to 2011 period, even if the relative amount of sampling error for the ACS figure of the number of AI/AN alone unemployed between the ages of 16 and 64 is well within the "very reliable" range with a CV of 3.7%?

The poverty statistics for the Wind River reservation in central Wyoming present another situation where local observers may well question the ACS data. The poverty rate among the AI/AN alone population in the ACS 2007-2011 data is 20.9%. The rate reported in the 2000 "long form" data was 42.3%. Local observers believe the rate to be over 50%.

In the Wind River case, the CV for the number of AI/AN alone persons in poverty in the ACS data is 19.0%, slightly above the "reliable" threshold level of 15%.

These two cases certainly do not prove that the ACS data is inaccurate for all reservations, or all county areas. Still, they add another note of caution regarding the use of the ACS as an accurate source of information on the conditions of the AI/AN population within reservation areas.

Census Bureau Efforts to Improve the ACS

In 2011 the Census Bureau announced a number of operational changes in the ACS.[7] A number were specifically designed to improve coverage of the ACS in reservation and remote Alaska Native village areas. Others involved coverage improvements for the general population that will also benefit Native areas. Some of the changes were implemented in January of that year, others in June.

In-person follow-up visits are now conducted for every address selected for the initial ACS sample in the communities Census designates as "remote Alaska." Personal follow-up visits are now made to every household that does not respond to the mail questionnaire or in cases where there is no mailable address on those reservations where the estimated AI/AN population is greater than 10% of the total population, along with all Alaska Native villages.

The most significant improvement for the survey overall was an increase in the sample size from a little under 3 million households to 3.54 million households nationally.

[7] The announcement is available at: http://www.census.gov/acs/www/about_the_survey/2011_acs_improvements/.

All the improvements were intended to reduce the amount of sampling error, particularly for smaller geographic areas. While the improvements are reflected in the results collected from questionnaires distributed in 2011 and incorporated in the ACS data for 2007 to 2011 used in this paper, the full impact of the changes won't be felt in the 5-year estimates until these become available late in 2016 in the 2011-2015 data set.

Whether the Census Bureau is able to continue to improve the coverage of the ACS for small areas and small populations and research the apparent problems in the ACS data for the AI/AN alone population is dependent in large part on the level of Congressional appropriations it receives for these tasks.

Continued Congressional support for the ACS is far from certain. In the last Congress a majority of members of the US House of Representatives voted to completely defund the ACS. A broad coalition of governments, businesses and nonprofit organizations, including the National Congress of American Indians, is fighting to preserve and strengthen the ACS, not abolish it.

What's the Alternative to the ACS?

There really is no comparable nationwide data set on the socio-economic characteristics of the population at the local level.

However, at the local level there are other data sets that can reveal a great deal about the well-being of the AI/AN alone population. Every tribe and most urban Indian nonprofit organizations have quantities of data available, generally data produced to satisfy the reporting requirements imposed by the federal agencies that fund their program services.

Unfortunately, there is no coordination among these federal agencies to make the required data more uniform and relevant to the tribe or urban Indian nonprofit. Each federal agency looks only to its own internal needs. There has been no study on the overlaps and inconsistencies from one set of program reporting requirements to the next or on the money that is wasted by forcing program grantees to collect information that is inconsistent from one program to another.

This leaves the burden on the tribes and organizations themselves to augment what they collect from their programs' clients and make sense of the totality of the data they have. Increasing the capacity of tribes and urban Indian nonprofits to make better use of what's already in their possession, enhance it and analyze it for their own planning purposes is a critical need.

Several tribes and other Native organizations have, on their own initiative, taken steps to build this capacity, through surveys and other means, sometimes partnering with institutions of higher education.

In Wyoming, the Eastern Shoshone and Northern Arapaho Tribes on the Wind River reservation have a collaborative relationship with the University of Wyoming. Their joint effort is called "WINDS," an acronym for the Wind River Indian Needs Determination Survey. The first WINDS survey was conducted in 1987, and a second completed in 1998. The most recent, WINDS III, collected data in 2010.

WINDS involves a survey of households in all but the major, predominantly non-Indian communities on the reservation. There is a promotional campaign to encourage responses. The information is collected by tribal interviewers using survey instruments designed by the University in cooperation with the tribes and specifically intended to meet tribal needs. It is funded by the tribes, the University and several state agencies.

The latest survey collected data on a wide variety of subjects: general population characteristics, labor force status, poverty, transportation and the availability of health care and other services.

The results help the tribes assess needs of their members and plan appropriate services. The data is the property of the tribes and can be released only with formal tribal consent.

On the Nez Perce reservation in Idaho, a number of tribal agencies, including the tribal workforce program, have joined together to conduct a survey that now covers both tribal members and Indians enrolled in other tribes living on that reservation. A major focus of the survey is to gather data on employment conditions.

The Nez Perce Tribe orients its data collection and tabulates results using commercial software designed by a firm in northern California a number of years ago with the assistance of the California Indian Manpower Consortium. Faculty and students at Washington State University provide technical assistance and help to validate the results.

In Los Angeles a collaboration involving a number or urban Indian nonprofits, including the Southern California Indian Center, the Los Angeles City County Indian Commission and other Indian-serving groups, has partnered with researchers associated with the American Indian Studies Center at UCLA.

Rather than attempt direct survey work, this joint effort analyzes information gleaned from a number of sources, including the Census Bureau and local agencies such as various school districts. It has produced a number of studies, including the recently

published report on the ACS undercount of the AI/AN alone population in Los Angeles and other metropolitan areas in California, cited earlier in this paper.

In Alaska, the Alaska Native Policy Center at the First Alaskans Institute has an approach uniquely sensitive to the needs of Alaska Natives in both urban and remote rural communities. It has conducted its own surveys, analyzed data obtained from others and has the ability to partner with the state's major research institute, located at the University of Alaska, Anchorage. In 2007, when ACS data was still largely unknown, the Alaska Native Policy Center published a paper urging participation in the survey, but caution in interpreting the results.[8]

All of these tribes and organizations have taken the initiative to develop a more accurate, focused and holistic view of conditions among local AI/AN populations than what can be obtained solely by reliance on the ACS.

Conclusions

- **ACS data should be used with caution.**

Although the ACS data provided by the Census Bureau may look the same as that collected using the previous decennial census "long form" questionnaire, the ACS is a different operation. It is a smaller survey of the population, a factor which has an effect on the reliability of the data, particularly for smaller areas and smaller populations.

There is evidence of a substantial undercount of the AI/AN alone population at the national level and in many reservation areas. There is a particularly pronounced undercount in a number of the larger metropolitan counties.

All users of ACS information on the AI/AN alone population, whether at the local level or among federal agencies that may use ACS for fund allocation purposes, should become aware of the limitations of the ACS before incorporating this data into their decision-making. Whenever feasible they should compare ACS results with local information from other sources.

- **The Census Bureau has an obligation to work with AI/AN data users in researching the apparent undercounts and other issues with ACS data.**

Although prodded by the National Congress of American Indians, the Census Bureau appears to have done little on its own to conduct research on the inadequacies of data on the AI/AN population. In its recent report on the response to the ACS by race and

[8] Anderson, Ashley, "The American Community Survey & Alaska Natives," Alaska Native Policy Center, 2007 available at: www.firstalaskans.org/documents_fai/ACS%20Census%20Briefing%20Paper1.pdf.

ethnicity, the Bureau said it produced this evaluation "at the request of the Race and Ethnic Advisory Committee[s]." (Those Committees have now been disbanded and replaced by a single advisory group with a broader focus.)

As the leadership of the Census Bureau is aware, the Bureau, along with every other federal agency, has a special trust responsibility to Indian tribes. Research to insure maximum accuracy of the data on the AI/AN population falls within the scope of that trust responsibility.

- **Census Bureau efforts to improve coverage of the AI/AN population in the ACS should be continued and expanded.**

These efforts require appropriate levels and the targeting of funding from the Congress, along with a commitment by Bureau management from the Director on down.

- **Federal agency officials that have used decennial census data in the past to allocate program funds and that are now likely to turn to ACS data should be aware of the issues with the ACS and take steps to prevent the inequitable allocation of funding that can result from the use of potentially inaccurate ACS data.**

Three major federal programs use Census data in the allocation of funding by formula to tribes and other Native organizations: the Indian Housing Block Grant program administered by the Department of Housing and Urban Development; the Tribal Transportation Program, formerly the Indian Reservation Roads program, administered by the Bureau of Indian Affairs; and the special Native American workforce programs, administered by the Department of Labor.

- **Efforts should be undertaken to strengthen the capacity of tribes and Indian-controlled nonprofits in urban areas to collect, tabulate and analyze data on the populations they serve.**

There has been limited attention in the past to such capacity-building. The work that has been done by tribes, urban Indian nonprofits and Alaska Native organizations can serve as models for different approaches. Federal, state and local agencies, as well as corporations and philanthropic organizations all have a role to play in supporting this effort.

Norm DeWeaver
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