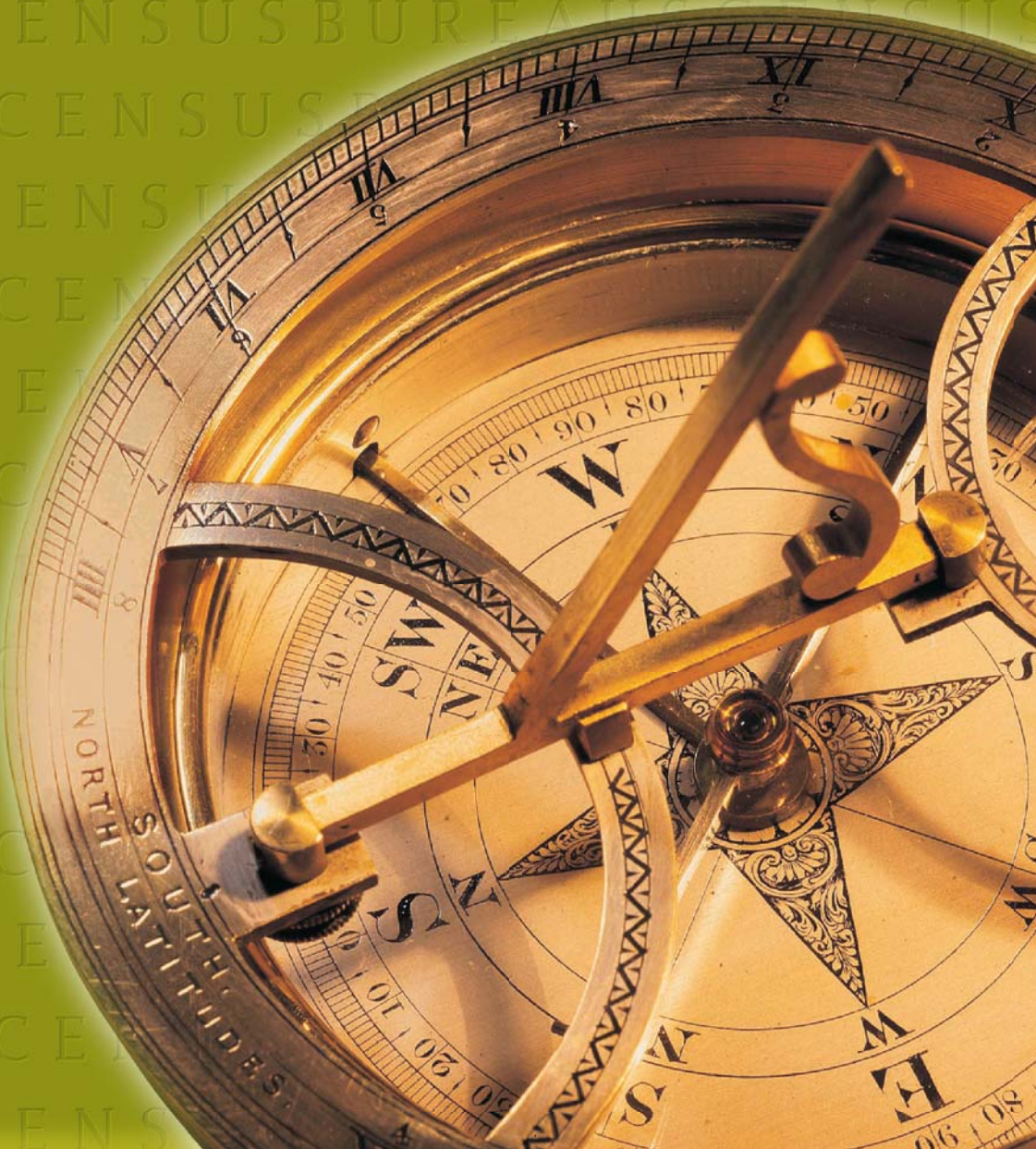


A Compass for Understanding and Using American Community Survey Data

*What Users of Data for American Indians and
Alaska Natives Need to Know*

Issued
October 2009



U S C E N S U S B U R E A U

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Foreword

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely demographic, social, economic, and housing data every year. The U.S. Census Bureau will release data from the ACS in the form of both single-year and multiyear estimates. These estimates represent concepts that are fundamentally different from those associated with sample data from the decennial census long form. In recognition of the need to provide guidance on these new concepts and the challenges they bring to users of ACS data, the Census Bureau has developed a set of educational handbooks as part of *The ACS Compass Products*.

We recognize that users of ACS data have varied backgrounds, educations, and experiences. They need different kinds of explanations and guidance to understand ACS data products. To address this diversity, the Census Bureau worked closely with a group of experts to develop a series of handbooks, each of which is designed to instruct and provide guidance to a particular audience. The audiences that we chose are not expected to cover every type of data user, but they cover major stakeholder groups familiar to the Census Bureau.

General data users	Congress
High school teachers	Puerto Rico Community Survey data users (in Spanish)
Business community	Public Use Microdata Sample (PUMS) data users
Researchers	Users of data for rural areas
Federal agencies	State and local governments
Media	Users of data for American Indians and Alaska Natives

The handbooks differ intentionally from each other in language and style. Some information, including a set of technical appendixes, is common to all of them. However, there are notable differences from one handbook to the next in the style of the presentation, as well as in some of the topics that are included. We hope that these differences allow each handbook to speak more directly to its target audience. The Census Bureau developed additional *ACS Compass Products* materials to complement these handbooks. These materials, like the handbooks, are posted on the Census Bureau's ACS Web site: <www.census.gov/acs/www>.

These handbooks are not expected to cover all aspects of the ACS or to provide direction on every issue. They do represent a starting point for an educational process in which we hope you will participate. We encourage you to review these handbooks and to suggest ways that they can be improved. The Census Bureau is committed to updating these handbooks to address emerging user interests as well as concerns and questions that will arise.

A compass can be an important tool for finding one's way. We hope *The ACS Compass Products* give direction and guidance to you in using ACS data and that you, in turn, will serve as a scout or pathfinder in leading others to share what you have learned.

Introduction

A tribal planner needs current information about his reservation to plan for future economic development. Some of the information he needs is available from tribal administrative records. But other information that would contribute to a broad picture of the reservation's characteristics must be obtained from other sources. Where can he turn?

A Commission for Indian Affairs in a southeastern state wants to improve access to health services for tribal members. What information resources exist to support that need?

Tribal college administrators launch a 5-year plan to improve the curriculum and accessibility to courses. What kinds of data are available to identify the characteristics of potential students?

A policy analyst at a federal agency wants to measure the effectiveness of programs that fund critical health care services to American Indian and Alaska Native populations nationwide. Where could she turn for assistance?

A national organization serving American Indians and Alaska Natives wants to advocate for programs that improve housing on reservations. What source of information could be important for the research needed to develop a legislative agenda?

Detailed information collected by the Census Bureau about the nation's population and housing has served as an important resource to answer these questions. Until recently, this information was collected once every 10 years through a survey of about one-sixth

of the U.S. population and housing. That survey was known as the decennial census long-form survey. It added complexity to census-taking and produced data that became increasingly outdated in the decade following each decennial census. To address these concerns, the Census Bureau proposed that the decennial census long-form survey be replaced by a continuous survey, called the American Community Survey (ACS), that produced more current information. After a period of testing and evaluation, the ACS was launched in 2005, and the first data products from the full-implementation ACS were released in 2006.

ACS data products, like the decennial census long-form data products of the past, are important to users of data for American Indian and Alaska Native populations (the abbreviation, "AIAN," is occasionally used in this handbook to refer to these populations). This handbook, one of a series of handbooks targeted to specific audiences, is designed to explain how ACS data differ from the Census 2000 long-form data and to provide information about how to access and use ACS data products. Key information is summarized in text boxes; charts and tables are used to supplement the text. A step-by-step guide to accessing examples of ACS data products is included. More detailed information about some topics is provided in a set of appendixes at the end of this handbook. A separate set of appendixes that appear at the end of *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know*, found at <http://www.census.gov/acs/www/Downloads/ACSGeneralHandbook.pdf>, provides in-depth coverage of technical topics.

What Is the American Community Survey and Why Are American Community Survey Data Important?

The American Community Survey (ACS) is a nationwide survey that produces detailed characteristics of population and housing. It is part of the 2010 Decennial Census Program.

Like the decennial census long-form survey that preceded it, the ACS produces data on the characteristics of American Indians and Alaska Natives and the areas where they live. ACS data are important to tribal government officials, such as planners, and to federal and state government agencies and nongovernment organizations that provide services to improve the well-being of tribal populations.

About the ACS

The collection of detailed information about the nation's population and housing has been part of the decennial census since 1790. The implementation of the ACS marks an important transition in collecting these data: the ACS design, methods, and data products have important differences from the decennial census long form that the ACS replaced. At the same time, the ACS embodies a data collection tradition that is familiar to data users. Like the decennial census long-form survey, the purpose of the ACS is to collect high-quality, current information. The content of the ACS questionnaire is similar to the content of decennial census long-form questionnaires of the past. Finally,

many aspects of data collection for the ACS are similar to those used for other surveys.

The ACS Questionnaire: Content

The ACS asks a broad range of questions on a variety of subjects. The questions are designed to collect information that is critical for managing federal programs. The decennial census long-form survey asked questions on the same kinds of subjects. The ACS includes questions on several new subjects that were not included on the decennial census long-form survey. Table 1 presents a list of the subjects that are included in the ACS.

Table 1. **Subjects Included in the American Community Survey**

Demographic Characteristics	Social Characteristics	Housing Characteristics
Age	Marital Status and Marital History*	Year Structure Built
Sex	Fertility	Units in Structure
Hispanic Origin	Grandparents as Caregivers	Year Moved Into Unit
Race	Ancestry	Rooms
Relationship to Householder (e.g., spouse)	Place of Birth, Citizenship, and Year of Entry	Bedrooms
	Language Spoken at Home	Kitchen Facilities
Economic Characteristics	Educational Attainment and School Enrollment	Plumbing Facilities
Income	Residence One Year Ago	House Heating Fuel
Food Stamps Benefit	Veteran Status, Period of Military Service, and VA Service-Connected Disability Rating*	Telephone Service Available
Labor Force Status	Disability	Farm Residence
Industry, Occupation, and Class of Worker		Financial Characteristics
Place of Work and Journey to Work		Tenure (Owner/Renter)
Work Status Last Year		Housing Value
Vehicles Available		Rent
Health Insurance Coverage*		Selected Monthly Owner Costs

*Marital History, VA Service-Connected Disability Rating, and Health Insurance Coverage were added in for 2008.
Source: U.S. Census Bureau.

ACS Data for American Indian and Alaska Native Populations

Figure 1 shows the race question that appears on the ACS questionnaire (the 2009 ACS questionnaire may be found at <http://www.census.gov/acs/www/SBasics/SQuest/SQuest1.htm>). A combined "American Indian or Alaska Native" category is designed to collect data on both American Indians and Alaska Natives. The responses to this question provide the information from which the estimates for American Indians and Alaska Natives are derived. The responses are based

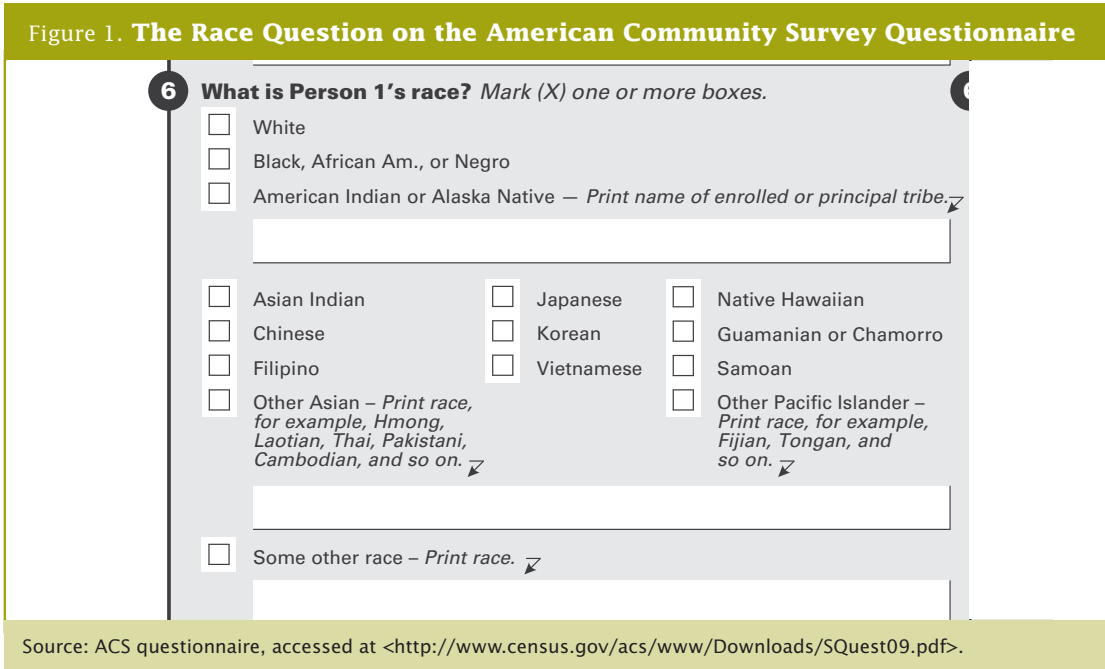
on self-identification. Respondents are asked to report one or more races for themselves and other members of their households. Respondents who identify themselves as American Indian or Alaska Native are asked to report their enrolled or principal tribe. People can report more than one tribe.

People who answer the question on race by marking only the "American Indian or Alaska Native" response box, and/or writing in one or more tribes, are referred to as the "American Indian and Alaska Native alone" population. People who answer the race question

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by marking the “American Indian or Alaska Native” response box and one or more other races, for example “American Indian or Alaska Native” and “White” or “American Indian or Alaska Native” and “Black,” are included in the “American Indian or Alaska Native in combination” population. Based on responses to the

race question, data on American Indians and Alaska Natives can be tabulated or shown on data tables in two broad minimum and maximum categories, namely, the American Indian and Alaska Native alone population and the American Indian and Alaska Native alone and in combination population.



What American Indian and Alaska Native Definition Is Used by the American Community Survey?

The racial classifications used by the Census Bureau adhere to the October 30, 1997, *Federal Register* Notice entitled, “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” issued by the Office of Management and Budget (OMB). These standards govern the categories federal agencies must use to collect and present federal data on race and ethnicity. The OMB standard requires five minimum race categories (White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander). A sixth category, “Some other race,” was added to the ACS with OMB approval. In addition to the five race groups, the OMB standard also states that respondents should be offered the option of selecting one or more races.

The OMB standard defines American Indian or Alaska Native as a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. Tabulated data for this category include people who (1) indicate their race as “American Indian” or “Alaska Native”; (2) report the name of an American Indian tribe (for example, Navajo or Blackfeet) or Alaska Native tribe (for example, Inupiat or Yup’ik); or (3) report entries such as Canadian Indian, French American Indian, or Spanish American Indian.

ACS Data Collection, Data Processing, and Data Tabulation

The ACS samples approximately 3 million housing unit addresses each year and collects information continuously, essentially every day of the year. Data are collected using three data collection methods or modes: mailout/mailback, Computer Assisted Telephone Interviewing, and Computer Assisted Personal Interviewing. ACS materials are mailed to city-style addresses, such as 123 Main Street, Anytown, XX 99987, and to non-city-style addresses such as Rural Route 1, Box 54 A, Anytown, XX 99987. Follow-up activities for households that do not respond by mail take place by telephone or in person. For areas that do not have addresses to which questionnaires can be mailed, the

Census Bureau contacts households in person to conduct the ACS. Such areas are common in AIAN areas.

The ACS is also conducted for group quarters, which include college dormitories, correctional facilities, and nursing facilities. Field representatives contact the selected facilities to arrange a visit to collect the required information from those residents.

Like its predecessor, the decennial census long form, the ACS is a mandatory survey. Response is required by law. Data confidentiality is protected by Title 13 of the U.S. Code (Title 13, U.S. Code, Sections 141, 193, and 221). For more information on how the Census Bureau protects the confidentiality of data for the ACS, see <http://www.census.gov/privacy/data_protection/how_we_protect_your_information.html>.

Who Is Selected to Participate in the American Community Survey and How Often Are They Contacted?

The ACS selects a sample of housing unit addresses and group quarters to participate in the ACS. In 2008, about 2.1 percent of all addresses in the United States were sampled. The size of the sampling rate varies based on the size of a governmental unit. Governmental units are legally defined entities that have elected officials and pay taxes. Examples of these entities are American Indian reservations, counties, and incorporated places.

For small areas, just a few addresses per month are selected for the survey; for other areas, many addresses per month are selected for the survey. In remote areas of Alaska, addresses are selected for the survey for some, but not all, months of the year because of the unique conditions and settlement patterns for those areas. The data collected for any area represent the characteristics of population in that area over the entire year. The ACS is designed to ensure that no address is selected more than once every 5 years.

The annual ACS sample is much smaller than that of the Census 2000 long-form sample, which included about one-sixth of the housing unit addresses in the United States, or about 18 million housing units. Because the overall sampling rate is smaller than that used for Census 2000 or previous censuses, the ACS needs to combine, or accumulate, population and housing data from multiple years to produce reliable estimates for small areas and population groups. The ACS sample is sufficient to produce data for large communities or population groups of 65,000 or greater based on 1 year of data collection. However, to produce data for smaller communities, multiple years of data collection must be used. For areas of 20,000 or greater, 3 years of data collection are combined to produce reliable estimates. For areas of less than 20,000, 5 years of data collection are needed.

Following the collection of response data, data preparation and processing takes place to produce ACS estimates. During data preparation, the coding of write-in responses occurs. Data processing involves editing and imputation, as well as weighting and the application of

disclosure avoidance techniques. Once edited files are fully reviewed, they are used to produce data products. ACS data products include tables, reports, files, and maps that are described later in this handbook.

The decennial census long-form data products were released over the course of several years following a census. The ACS data release schedule appears in Table 2. Note that ACS data are released according to a schedule that it is distinctly different from the data release schedule for decennial census long-form survey products. In 2006, the Census Bureau released 1-year estimates for 2005. In 2008, the first 3-year estimates were released based on data collected in 2005, 2006, and 2007. In 2010, the first 5-year ACS estimates will be released based on data collected in 2005, 2006, 2007, 2008, and 2009. Note that each new 3- or 5-year estimate represents a period of data collection that is updated by one year from the previous 3- or 5-year estimate. The 3-year estimate released in 2009 represents data collection for the period 2006–2008. The 3-year estimate released in 2010 represents data collection for the period 2007–2009.

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Table 2. **Release Schedule for ACS Data**

Data product	Population threshold	Year of Data Release							
		2006	2007	2008	2009	2010	2011	2012	2013
Year(s) of Data Collection									
1-year estimates	65,000+	2005	2006	2007	2008	2009	2010	2011	2012
3-year estimates	20,000+			2005– 2007	2006– 2008	2007– 2009	2008– 2010	2009– 2011	2010– 2012
5-year estimates	All areas*					2005– 2009	2006– 2010	2007– 2011	2008– 2012

*Five-year estimates will be available for areas as small as census tracts and block groups.
Source: U.S. Census Bureau.

As Table 2 shows, some areas will receive more than one kind of estimate. Note, for example, that for the 2008 data release, areas having population thresholds of 65,000 or greater received both 1-year estimates and 3-year estimates. Most AIAN areas are small, and as a result, they will receive only 5-year estimates.

The ACS and the Decennial Census Long-Form Survey Compared

The ACS and the decennial census long-form survey have many similarities, but there are distinct differences as well, as shown in Table 3.

Table 3. **Similarities and Differences Between the ACS and the Decennial Census Long-Form Survey**

	American Community Survey	Decennial Census Long-Form Survey
Questionnaire Topics	Cover numerous population and housing characteristics such as education, employment, disability, and veteran status.	Cover numerous population and housing characteristics such as education, employment, disability, and veteran status.
Data Collection	Continuous data collection takes place essentially every day of every year.	Data collection takes place over approximately 3–4 months during a census year.
Outreach and Promotion	Limited outreach is conducted to encourage participation, although information about the program is widely available through the Census Bureau.	Data collection takes place amidst the large promotion, advertising, and outreach campaign that accompanies the decennial census.
Residence Rule	Persons living at the sample address for more than 2 months are included.	Persons for whom the selected address represents their usual residence are included.
Mandatory Response	Response is required by law.	Response is required by law.
Uses of Data	Data are used to manage federal programs; state and local governments, nongovernment organizations, and the private sector also use the data.	Data are used to manage federal programs; state and local governments, nongovernment organizations, and the private sector also use the data.
Estimates	ACS estimates represent data collection over 12, 36, or 60 months. Data are known as “period estimates” because they correspond to a specific period of time.	Decennial census long-form sample estimates represent data collection over a few months around the time of the census. Data are known as “point in time” data because they are considered to represent a specific point in time, namely April 1, of a census year.
Data Products	New data products are released each year.	Data products are released following a census. New data are produced every 10 years.

Source: U.S. Census Bureau, American Community Survey Office.

ACS Data Products

ACS data products are available through the American FactFinder (AFF) on the Census Bureau's Web site: <<http://factfinder.census.gov>>. Data are organized in two ways: as summary or aggregate data and as microdata. ACS data products are listed below.

- **Data profiles** provide tables summarizing social, economic, demographic, and housing characteristics for different geographic areas, including American Indian and Alaska Native areas. Data profiles might be a good place to look for data if you were considering starting a local business and wanted to gain a broad picture of the sales potential for a particular kind of business, for example a bakery or sporting goods store, based on demographic, social, or economic information about households.
- **Comparison profiles** compare current-year estimates in the data profiles with estimates from the previous year and identify when differences in the estimates for two consecutive years are statistically different.
- **Ranking tables** allow users to rank states, the District of Columbia, and Puerto Rico on over 80 key characteristics, such as the percentage of the total population that are American Indian and Alaska Native alone. Ranking tables are available for single-year estimates.
- **Geographic comparison tables** compare ACS data for a specific year across a variety of geographic areas other than states. A geographic comparison table can show how American Indian and Alaska Native areas vary in the proportion of the population having a particular characteristic, for example, speaking a language other than English at home.
- **Subject tables** provide information about a wide set of subjects, such as education, poverty, and housing. Some of these tables are available separately for the American Indian and Alaska Native populations.
- **Selected population profiles** present detailed characteristics by race, ethnic, and tribal groups, as well as country of birth. This kind of ACS data product may be particularly useful to tribal governments because it provides information on many different characteristics for a specific population group.
- **Detailed tables** provide access to a wealth of specific information on detailed characteristics, for example, sex by educational attainment for populations living in different areas, including American Indian and Alaska Native areas. Many of the tables provide data iterated by race, for example, "sex by age by veteran status for the civilian population 18 years and older" for the population group "American Indian and Alaska Native Alone" and "geographical mobility in the past year by race" for the population "American Indian and Alaska Native Alone."
- **Thematic maps** provide graphic displays of the data available through the geographic comparison tables. Variations in data across geographic areas are displayed. For some geographic areas, data users can highlight areas with statistically different values from a selected area of interest.
- **Public Use Microdata Sample (PUMS)** files are samples of individual records of people and households included in the ACS. The records are stripped of all identifying information, including address. The PUMS files permit analysis of specific population groups and custom variables that are not available through AFF. Multiyear PUMS files (based on 3- and 5-year estimates) may be used to produce data for relatively small population subgroups. If you wanted detailed characteristics of American Indians and Alaska Natives by type of occupation (for example, scientists and engineers), PUMS files would be of interest to you.

ACS Data for Geographic Areas

ACS data are provided for nearly all areas for which decennial census long-form data are available. These areas include states, counties, and incorporated places, such as cities and towns, as well as American Indian and Alaska Native governmental and statistical areas, such as American Indian Reservations, Alaska Native

Village Statistical Areas, or Oklahoma Tribal Statistical Areas. The large majority of American Indian and Alaska Native areas have populations of less than 20,000 and will therefore receive only 5-year data products. Detailed information about American Indian and Alaska Native areas for which ACS data are (or

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will be) available is included in Appendix 1. Table 4 lists the American Indian and Alaska Native areas for which ACS data are currently available as 1-year and/or

3-year estimates. Alaska Native Regional Corporations, unique corporate entities established to conduct business with Alaska Natives, are listed separately.

Table 4. American Indian and Alaska Native Areas for Which 1-Year (2007) and 3-Year (2005–2007) ACS Estimates Have Been Released

American Indian Area/Alaska Native Area	2007 Estimates	2005–2007 Estimates
Calista Alaska Native Regional Corporation		x
Cook Inlet Alaska Native Regional Corporation	x	x
Doyon Alaska Native Regional Corporation	x	x
Sealaska Alaska Native Regional Corporation	x	x
Adais Caddo State Designated Tribal Statistical Area, LA		x
Agua Caliente Indian Reservation and Off-Reservation Trust Land, CA		x
Apache Choctaw State Designated Tribal Statistical Area, LA		x
Cherokee Oklahoma Tribal Statistical Area, OK	x	x
Cherokees of Southeast Alabama State Designated Tribal Statistical Area, AL	x	x
Cheyenne-Arapaho Oklahoma Tribal Statistical Area, OK	x	x
Chickaloon Alaska Native Village Statistical Area, AK		x
Chickasaw Oklahoma Tribal Statistical Area, OK	x	x
Choctaw Oklahoma Tribal Statistical Area, OK	x	x
Citizen Potawatomi Nation-Absentee Shawnee Oklahoma Tribal Statistical Area, OK	x	x
Coharie State Designated Tribal Statistical Area, NC	x	x
Creek Oklahoma Tribal Statistical Area, OK	x	x
Echota Cherokee State Designated Tribal Statistical Area, AL	x	x
Flathead Reservation, MT		x
Four Winds Cherokee State Designated Tribal Statistical Area, LA	x	x
Isabella Reservation, MI		x
Jena Band of Choctaw Tribal Designated Statistical Area, LA	x	x
Kaw/Ponca Joint-Use Oklahoma Tribal Statistical Area, OK		x
Kenaitze Alaska Native Village Statistical Area, AK		x
Kickapoo Oklahoma Tribal Statistical Area, OK		x
Kiowa-Comanche-Apache-Fort Sill Apache Oklahoma Tribal Statistical Area, OK	x	x
Knik Alaska Native Village Statistical Area, AK		x
Lumbee State Designated Tribal Statistical Area, NC	x	x
MaChis Lower Creek State Designated Tribal Statistical Area, AL		x
Nanticoke Indian Tribe State Designated Tribal Statistical Area, DE		x
Navajo Nation Reservation and Off-Reservation Trust Land, AZ–NM–UT	x	x
Oneida (WI) Reservation and Off-Reservation Trust Land, WI		x
Osage Reservation, OK		x
Puyallup Reservation and Off-Reservation Trust Land, WA		x
Sac and Fox Oklahoma Tribal Statistical Area, OK		x
Samish Tribal Designated Statistical Areas, WA		x
Seminole Oklahoma Tribal Statistical Areas, OK		x
Uintah and Ouray Reservation and Off-Reservation Trust Land, UT		x
United Houma Nation State Designated Tribal Statistical Areas, LA	x	x
Wind River Reservation and Off-Reservation Trust Land, WY		x
Yakama Nation Reservation and Off-Reservation Trust Land, WA		x

Source: U.S. Census Bureau, American Community Survey Office.

Understanding ACS Data: Before You Log On to American FactFinder

Many data users are familiar with a fixed 10-year cycle associated with decennial census data products. The ACS has a different data tabulation cycle, and the data products have a different look and feel from the long-form decennial census data products that they are replacing. Some preparation may be helpful before you take a look at ACS data by logging on to the AFF. Here are some tips to remember:

The long form provides a snapshot; the ACS provides a moving picture

The decennial census is considered a snapshot of the population taken once every 10 years. In contrast, ACS data are collected continuously, and the data products represent a period of time ranging from 12 to 60 months. The term “point-in-time” is frequently used to characterize decennial census data. Strictly speaking, of course, data collection for the decennial census takes place over a few months. But the data collected are associated with Census Day—April 1 of a census year. In contrast, the ACS “period estimates” cover 12, 36, or 60 months of data collection and describe the average characteristics over that time period.

Selected population profiles and detailed tables: popular data products

Among ACS data products, the selected population profiles and detailed tables may be of most interest to you. For many applications, such as developing a broad picture of the characteristics of a tribe, or identifying specific characteristics suitable for use in a grant application, the selected population profiles and detailed tables are particularly useful.

Margins of error are important

All estimates based on a sample include a range of uncertainty associated with them, and this range of uncertainty is described by the margin of error. If you have used data products from the decennial census long form in the past, you may have noticed that the information on margins of error did not appear on these tables. Instead, this information was provided separately from the tables, and data users had to calculate margins of errors for each estimate. Margins of error are important to consider when using data from the ACS, the decennial census long form, or any other survey. Margins of error that are too large may affect the usability of ACS data.

The size of a group or area determines ACS data product viability and the level of detail provided

The availability of data for a specific population group will depend on the size of that population group or the population size of the geographic area of interest. For many topics, only national- and state-level data for the American Indian and Alaska Native population will be available as 1-year estimates because of the small population size of many American Indian and Alaska Native population groups. In addition to population, disclosure rules and confidentiality thresholds can limit the availability of data for small groups and for areas with small populations. For example, for a selected population profile, if fewer than 50 weighted sample cases are available for the selected population group, then data may not be released for that population group. An alternative way to present data for small tribes is to present it for the tribal grouping that comprises one or more tribes (for example, the Iroquois tribal grouping represents the Mohawk, Oneida Nation of New York, Seneca Nation, and other tribes).

Fewer data are available for rare characteristics and small populations

The rarer and more detailed the characteristic, the less likely it is that data for that characteristic would be available for a small population group. There will be fewer data available for detailed characteristics, such as “households headed by females with children under 18” than for more general characteristics, such as “households headed by females.”

Some ACS questions are asked only of specific groups

ACS data products cover the population in households and group quarters. However, just as was the case with some decennial census long-form questions, some ACS questions are limited to a specific population subgroup, such as the household population. Questions on housing characteristics, for example, are only asked of the household population. However, other questions, for example the question on language spoken at home, which provides information on populations that speak languages other than English, such as Winnebago, are asked of both the household and group quarters populations.

Geographic boundaries are based on the latest information available

ACS data products for legal entities such as reservations and incorporated places reflect the Census Bureau's information about the legal boundaries for those entities as of January 1 of the year of data collection (or, as of January 1 of the last year of data collection for a multiyear data product). ACS data products for statistical areas such as State Designated Tribal Statistical Areas (SDTSAs) are based on the latest criteria and guidelines, usually reflecting the last decennial census. Appendix 1 provides more information on the geography of ACS data products.

The Population Estimates Program, not the ACS, is the official source of demographic estimates

Estimates of the American Indian and Alaska Native population for the nation, states, and counties are produced by the Census Bureau's Population Estimates Program—the official source of demographic estimates for these entities. ACS estimates for race and other key demographic variables are controlled to these estimates. The Population Estimates Program does not produce estimates by race for American Indian and Alaska Native areas. However, this program serves as a critical source of information for producing such estimates.

Accessing ACS Data Products

Getting started

Finding ACS data products starts with accessing AFF. If you are unfamiliar with AFF, use the AFF Site Tour to familiarize yourself with its features and options; the site tour is available at <http://factfinder.census.gov/home/en/epss/sitetour/topics.html>.

- Log on to www.census.gov and click on “American FactFinder” (on the left side of the page). You will be directed to the “AFF Data Sets” page (see Figure 2).
- Under the section titled “Getting Detailed Data,” select “American Community Survey—get data” (circled). This will direct you to the “ACS Data Sets” page, shown in Figure 3.

Figure 2. The American FactFinder Data Sets Page

U.S. Census Bureau

American FactFinder

Main Search Feedback FAQs Glossary Site Map Help

Your source for population, housing, economic, and geographic data

POPULATION FINDER
FACT SHEET
PEOPLE
HOUSING
BUSINESS AND GOVERNMENT
ABOUT THE DATA
DATA SETS
DOWNLOAD CENTER
MAPS
TOOLS AND REFERENCES

Fast Access to Information

Get a Fact Sheet for your community...

city/town, county, or zip

state -- select a state --

or select a state using a map >

Getting Detailed Data

Decennial Census - taken every 10 years to collect information about the people and housing of the United States
[learn more](#) | [get data](#)

See the [Count Question Resolution Program](#) for information on Census 2000 count corrections.

American Community Survey - an ongoing survey that provides data about your community every year
[learn more](#) | [get data](#)

Puerto Rico Community Survey - the equivalent of the American Community Survey for Puerto Rico
[learn more](#) | [get data](#) | [en español](#)

Population Estimates Program - population numbers between censuses
[learn more](#) | [get data](#)

Economic Census - profiles the U.S. economy every 5 years
[learn more](#) | [get data](#)

Annual Economic Surveys - data from the Annual Survey of Manufactures, County Business Patterns and Nonemployer Statistics

Population Data

Population Finder

Use the [Population Finder](#) to view population trends for your community.

U.S. Population Clock

20:46 GMT (EST+5) Jun 09, 2009

306,628,254

[more population clocks >](#)

What's New

2008 Population Estimates are expanded to include the demographic characteristics of age, race, sex and Hispanic Origin.
[more >](#)

2008 Population Estimates for counties and Puerto Rico municipios are now available from the [Data Sets page](#).

2007 Advanced Report data are now available from the Economic Census [Data Sets page](#).

2007 Island Areas - Northern Mariana Islands data are now available from the Economic Census [Data Sets page](#).

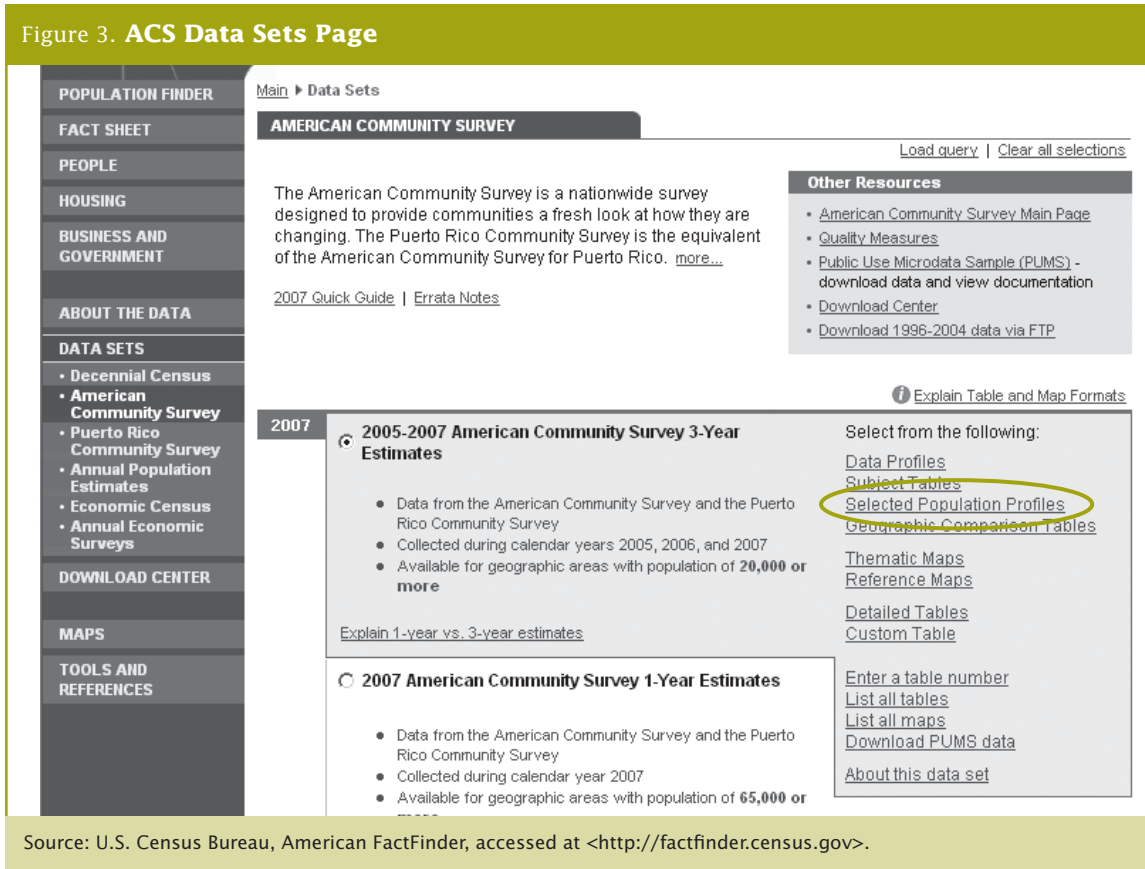
Address Search...

Enter a [street address](#) to find Census 2000 data

- [Browser Notes](#)
- [Confidentiality](#)

Source: U.S. Census Bureau, American FactFinder, accessed at <http://factfinder.census.gov>.

- The “ACS Data Sets” page contains a description of the different data sets that are available from the ACS. Note that several different data sets are available; the first data set listed is the 2005–2007 ACS 3-year estimates. The most recently released ACS data set is considered the default ACS data set selection. In 2010, 2005–2009 ACS 5-year estimates will be available. Data users can choose a different data set by simply clicking on the radio button for that data set.
- On the right column, you will see a list of data products from which to choose and will have the option to create a list of all tables and maps that are available, identify a table by its table number, and download PUMS data. To access a specific data product, you must select one of these options.



Data Product Examples

Example 1—Selected Population Profiles

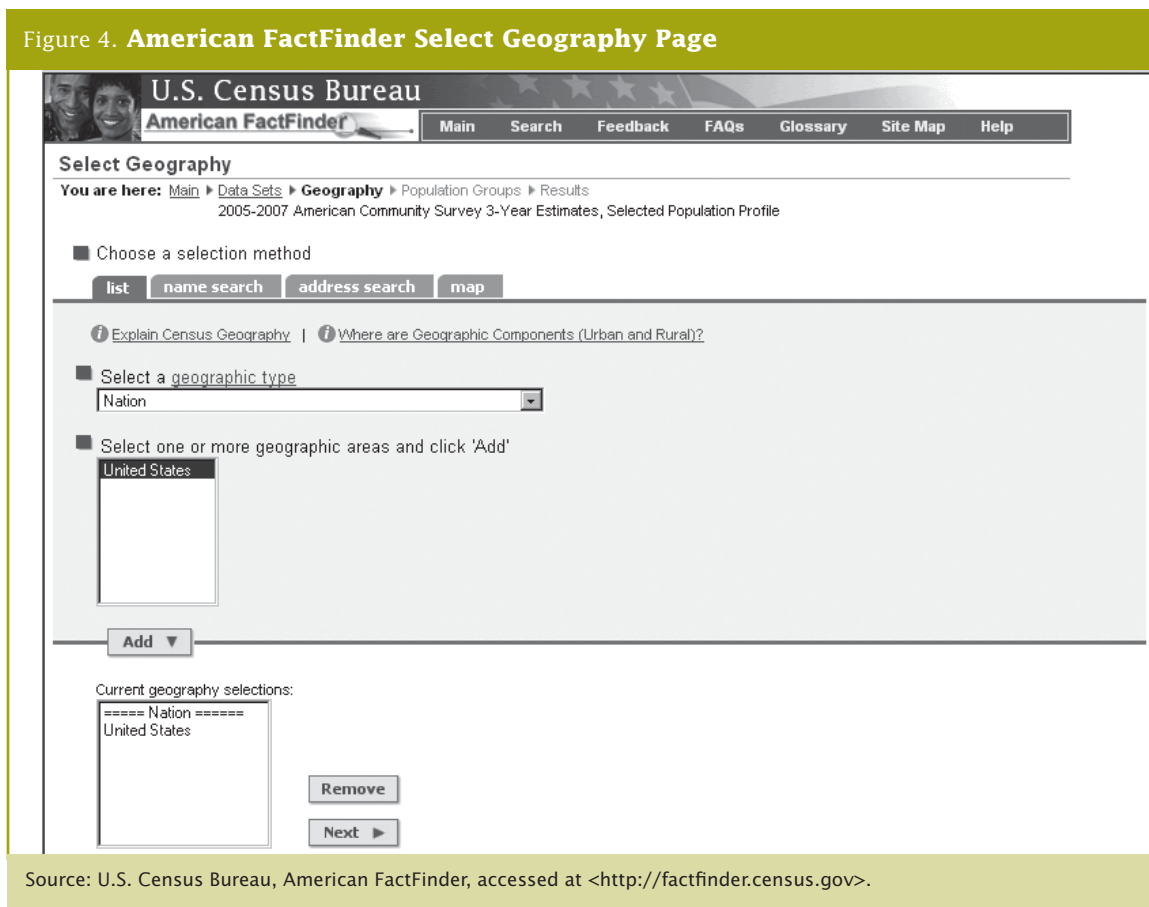
For the first exercise, we will identify a selected population profile for a tribe, the Lumbee, for the nation. Persons identifying themselves as Lumbee live throughout the United States, and in relatively significant numbers in North Carolina, where they have defined a State Designated Tribal Statistical Area (SDTSA) to represent an area of historic settlement. First, we will identify a national profile of this tribe's characteristics. That means that we will capture not only the characteristics of the Lumbee tribe living in this SDTSA, and throughout the state of North

Carolina, but, additionally those of the Lumbee tribe living across the nation, whether in another American Indian or Alaska Native area, such as a reservation, or in a non-American Indian or Alaska Native area, such as a city or metropolitan or micropolitan statistical area. Once we have a national profile, we will proceed to identify state profiles for this tribe.

Resuming the data access exercise started earlier:

- From the list of data products, highlight “Selected Population Profiles,” circled in Figure 3.

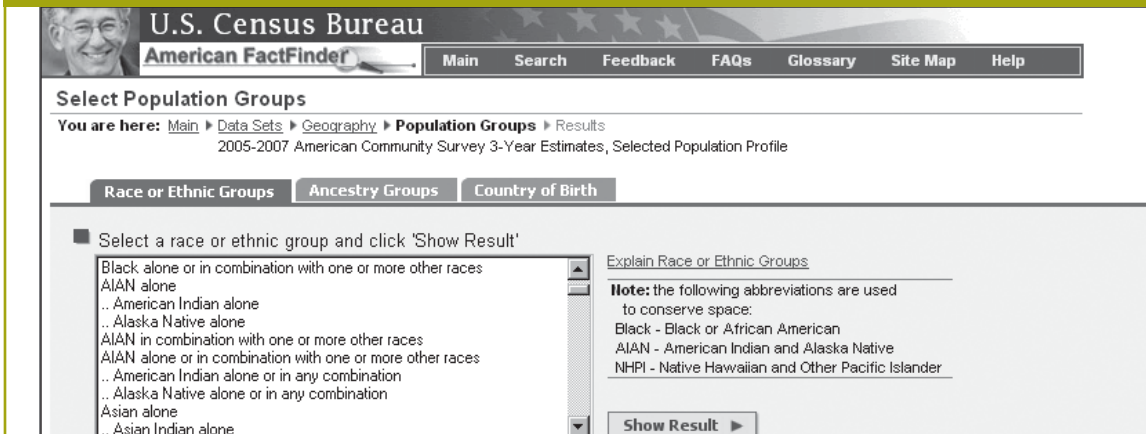
Figure 4. American FactFinder Select Geography Page



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

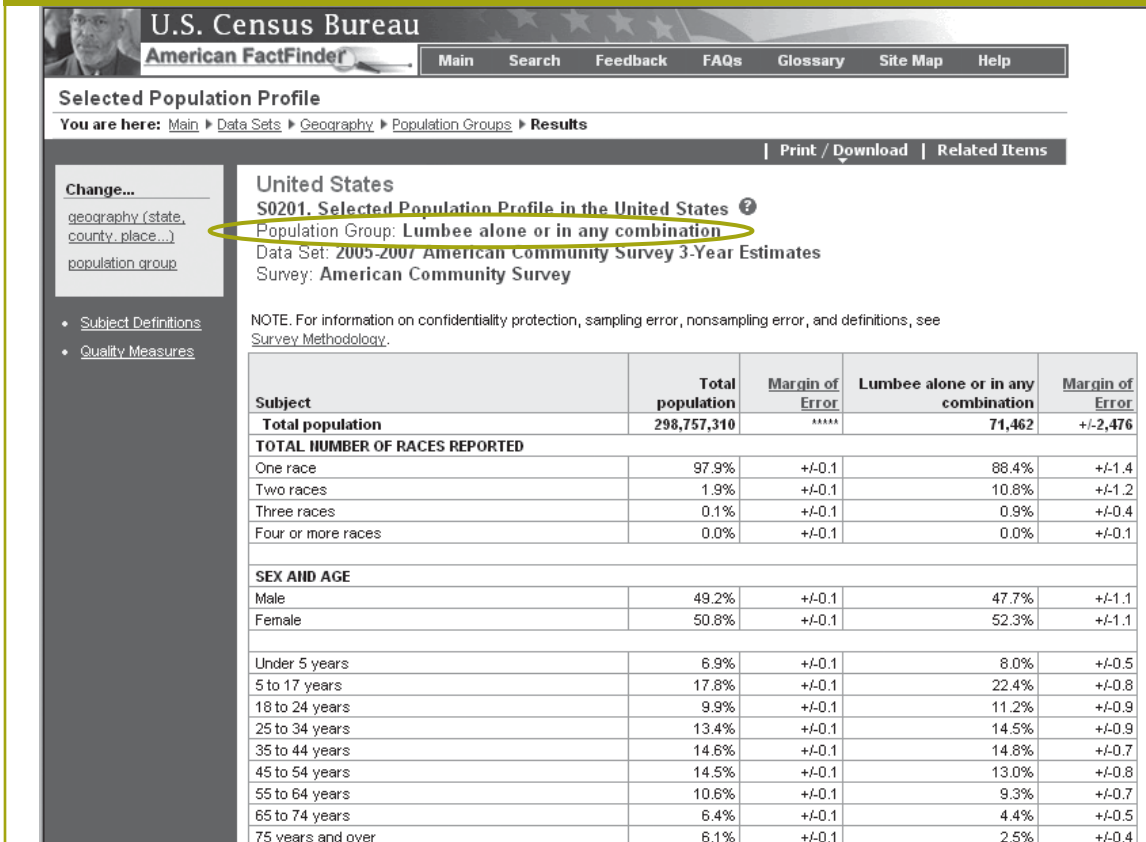
- You are directed to the “Select Geography” page and asked to select a geographic type and one or more geographic areas (see Figure 4).
 - Using the default selection method, “List,” select a geographic type using the drop-down menu. For this exercise, select “Nation,” the default selection.
 - “United States” appears in the geographic area box.
 - Click “Add,” so that “United States” then appears in the box of current geography selections. Figure 4 illustrates the choices you just made on the “Select Geography” page.
 - Select “Next” to arrive at the “Select Population Groups” page, shown in Figure 5.
 - The “Select Population Groups” page includes three tab selections, “Race or Ethnic Groups,” “Ancestry Groups,” and “Country of Birth.” Select “Race or Ethnic Groups,” then scroll down the list of choices. Note that two broad choices are offered.
- You can select data for a single race or ethnic group, such as “American Indian and Alaska Native alone” or “Lumbee alone.”
 - Or you can select data for a race or ethnic group in combination with one or more other race and ethnic groups, such as “Navajo alone or in any combination.”
- For this exercise:
- Scroll down the list and select, “Lumbee alone or in any combination.”
 - Click, “Show Result.” Figure 6 displays your selected population profile.
- The particular population or housing group covered by each data product is known as the universe. The universe for which the table in Figure 6 provides data is “Lumbee alone or in any combination” (circled).

Figure 5. American FactFinder Select Population Groups Page



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Figure 6. Selected Population Profile for the Lumbee Alone or in Any Combination for the United States, 2005–2007 ACS 3-Year Estimates



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

The selected population profile shows data for the total U.S. population and for the population group of interest side by side. This allows a data user to make a direct comparison between the population group of interest and the total population for a specific charac-

teristic. For example, for the U.S. total population, 6.9 percent of the population are under 5 and 6.4 percent of the population are ages 65–74. For the Lumbee, 8.0 percent of the population are under 5 and 4.4 percent of the population are ages 65–74.

Note that Figure 6 includes columns with information on margins of error. As described earlier, the margin of error around an estimate describes the precision of the estimate at a given level of confidence. ACS estimates are associated with a 90-percent confidence level. You should conduct statistical significance tests with the information provided in the margin of error columns if you want to make comparisons. An example of how to conduct statistical testing is provided in Appendix 2; a comprehensive explanation of statistical testing is provided in Appendixes 3 and 4 of *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know*, accessible at <http://www.census.gov/acs/www/Downloads/ACSGeneralHandbook.pdf>.

Let's reconsider this example and attempt to identify a selected population profile for the population group "Lumbee alone or in any combination" for a state instead of the nation.

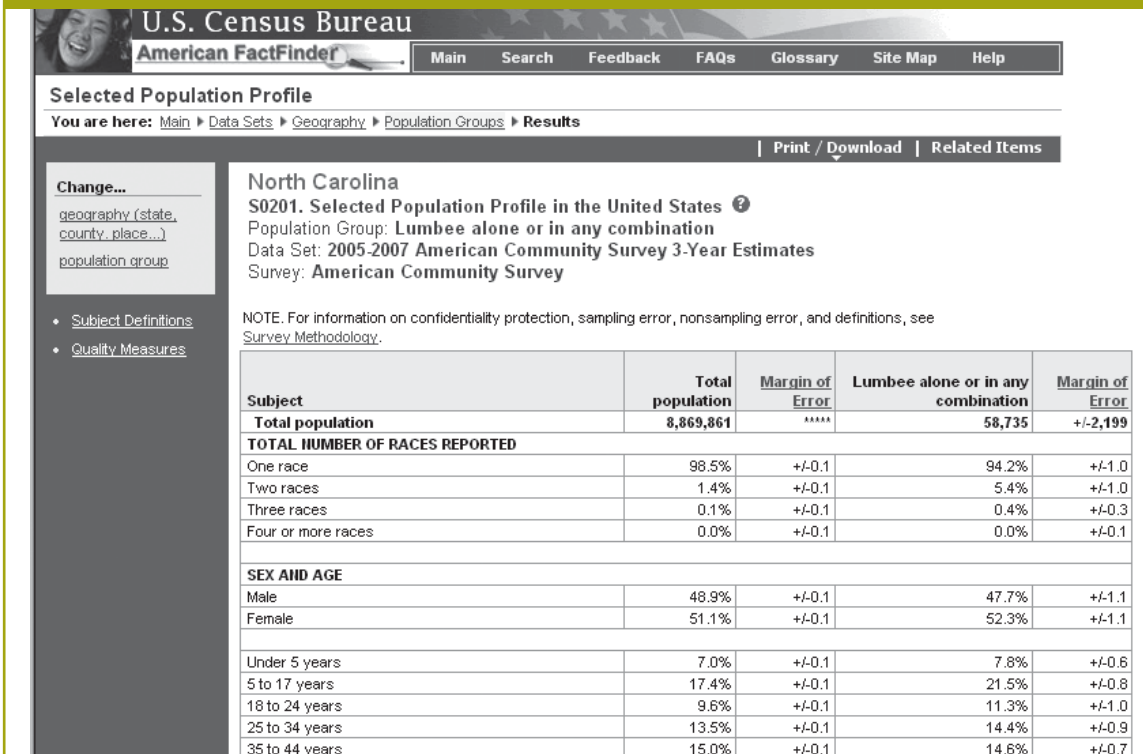
- From the national selected population profile for the "Lumbee alone or in any combination," select a different geography using the "Change" box in the left sidebar. Click on "Change geography." You are directed to the "Select Geography" page.

Why Is Information on Margins of Error Important?

If you have used data products from the decennial census long form in the past, you may have noticed that margins of error do not appear on data product tables. Instead, information about sampling error was provided separate from the tables, and data users had to calculate margins of errors themselves. Users of Census 2000 long-form data products were often unaware of the importance of margins of error. As a result, they often used decennial census long-form data as if these data represented a count or enumeration of persons with specific characteristics, rather than an estimate based on a sample. Margins of error are provided for every ACS estimate with 90 percent certainty (this is the 90-percent confidence level).

- Using the drop-down menu, select "State," then "North Carolina."

Figure 7. Selected Population Profile for the Lumbee Alone or in Any Combination for North Carolina, 2005–2007 ACS 3-Year Estimates



Source: U.S. Census Bureau, American FactFinder, accessed at <http://factfinder.census.gov>.

- Click “Add.” The current geography selections box should now contain two choices, “United States” and “North Carolina.”
- Next, click “Show Result” to obtain the table shown in Figure 7 (scroll down through the first table for the United States to see the table for North Carolina).
- If you want to see the table for North Carolina alone, without the table for the United States, then remove the choice “United States” from the current geography selections box before selecting “Show Result.” Figure 4 illustrates the “Remove” option that is used to limit the choice of current geography selections. By removing United States as a choice, the resulting table will only provide data for North Carolina. Experiment with some of the options described in this and other sets of instructions to become familiar with their use. Also, you may wish to try printing a few of the tables to understand the usability of AFF selections as hard-copy handouts for conferences or similar events. It may not be cost-effective or appropriate to print large quantities of such documents because of their size. For example, when printed without modifying the font size or other features and using 8.5 x 11-inch paper, a selected population profile is seven pages in length.

Comparing Figures 6 and 7, we can identify how the Lumbee population in North Carolina differs from the Lumbee population nationally and from the total population, nationally, for North Carolina and for the United States.

Let’s try to identify a comparable profile for the Lumbee for another state:

- Using the same procedure described to obtain a selected population profile for North Carolina, use the “Change” box in the left sidebar and click “Change geography.” You are directed to the “Select Geography” page.
- From the drop-down menus, select “State,” then select “South Carolina.”
- Click “Add.” Remove “North Carolina” from the current geography selections box.
- Next, click “Show Result” to obtain the information shown in Figure 8.

You expect to see a selected population profile for “Lumbee population alone or in any combination” for South Carolina. However, instead of a table, AFF provides a title for the table you expected to see, followed by a note stating that data are not available for the selected geography. You are directed to change your selection to a larger geography to view a table for the selected population group.

This note appears when the available data do not make it possible for AFF to provide a particular table of choice. In this case, the 20,000-population threshold required for ACS 3-year estimates is met by both the national and the North Carolina profiles for the “Lumbee alone or in any combination” population, but not for a comparable profile for South Carolina. As a result, AFF did not provide a table showing a selected population profile for the “Lumbee alone or in any combination” for South Carolina based on 2005–2007 ACS 3-year estimates.

Figure 8. **Results of Attempting to Obtain a Selected Population Profile for the Lumbee Alone or in Any Combination for South Carolina Based on 2005–2007 ACS 3-Year Estimates**

The screenshot shows the American FactFinder interface. On the left, there is a sidebar with a "Change..." section containing dropdown menus for "geography (state, county, place...)" and "population group". Below these are links for "Subject Definitions" and "Quality Measures". The main content area displays the following information:

- South Carolina
- S0201. Selected Population Profile in the United States ?
- Population Group: Lumbee alone or in any combination
- Data Set: 2005-2007 American Community Survey 3-Year Estimates
- Survey: American Community Survey

Below this information is a note: "NOTE: Data are not available for the selected geography because the population for the selected race, ethnic or ancestry group falls below a population threshold of 20,000. To view a table for the selected geography, choose a more broadly defined population group. To view a table for the selected population group, change your selection to a larger geography." The "Geography:" field is set to "South Carolina". At the bottom, there are "Census Bureau Links" and the "U.S. CENSUS BUREAU" logo with the tagline "Helping You Make Informed Decisions".

Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Example Two—Subject Tables

Subject tables summarize information on a range of characteristics that pertain to a particular subject, for example, disability, education, employment, aging, and children. In this example, we will find data on modes of transportation for the American Indian and Alaska Native population in an Oklahoma Tribal Statistical Area (OTSA). The Department of Transportation uses ACS data on modes of transportation to identify needs for public transportation and new roads and to identify needs for transportation funding to support goals such as new transit services for elderly and disabled populations.

If you are navigating from one example to the next in this document by using the back arrow at the top left corner, you should click “Clear all selections” (circled) on the “ACS Data Sets” page before proceeding to a new example (see Figure 9).

- From the “ACS Data Sets” page, select 2005–2007 American Community Survey 3-Year Estimates, and “Subject Tables” from the list of ACS data products. You are then directed to the “Select Geography” page.

- Use the default selection method, “List,” and then, from the geographic type drop-down menu, select “American Indian Area/Alaska Native Area/Hawaiian Home Land.”
- Scroll down the list of specific geographies and select “Chickasaw OTSA, OK.” Click “Next.”

You will be directed to a page to select one or more tables associated with a specific subject (see Figure 10).

- Use the drop-down menu for “List tables by subject,” (identified by a circle) to view a list of tables by subject.
- Select “Transportation,” then “Go.” Three subject tables are identified, as shown in Figure 11.
- Select “Means of Transportation to Work by Selected Characteristics.”
- Figure 12 displays your requested subject table for Chickasaw OTSA, OK.

Figure 9. Clearing Selections in American FactFinder

The screenshot shows the American FactFinder interface. At the top, there is a navigation bar with links for Main, Search, Feedback, FAQs, Glossary, Site Map, and Help. Below this is a sidebar with various categories like POPULATION FINDER, FACT SHEET, PEOPLE, HOUSING, BUSINESS AND GOVERNMENT, ABOUT THE DATA, DATA SETS, DOWNLOAD CENTER, and MAPS. The main content area displays information for the '2005-2007 American Community Survey 3-Year Estimates'. A button labeled 'Clear all selections' is circled in yellow. Other resources and data profiles are also visible on the page.

Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

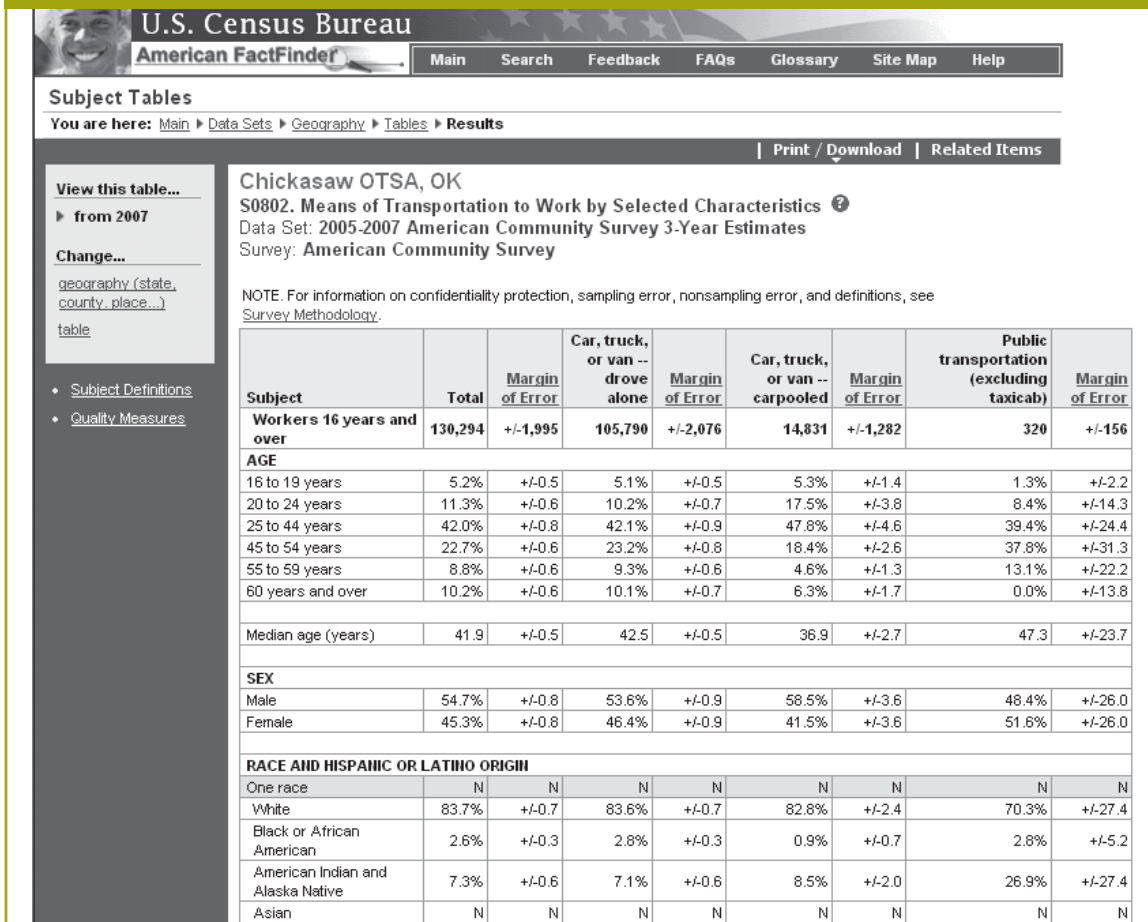
Figure 10. American FactFinder Subject Tables Page

Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Figure 11. Using the Subject Tables Menu in American FactFinder

Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Figure 12. Means of Transportation to Work by Selected Characteristics for Chickasaw Oklahoma Tribal Statistical Area, OK, 2005–2007 ACS 3-Year Estimates



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

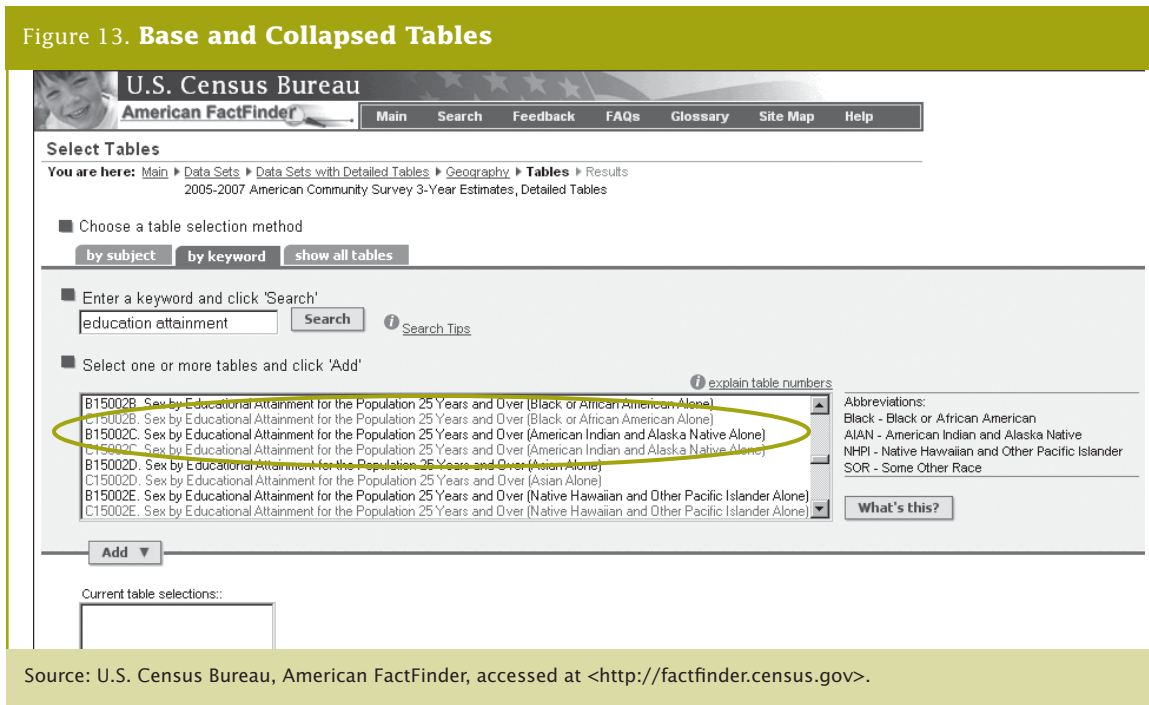
Figure 12 provides information on means of transportation, including the proportion of workers using cars, trucks, or vans driving alone, in carpools, or by public transportation. Note that data are available for the race category “American Indian and Alaska Native.” The margins of error for several characteristics for the race “American Indian and Alaska Native” are relatively large because the estimate of the population for this race for the Chickasaw OTSA is relatively small and because the number of persons estimated to have any particular characteristic for this population group is relatively small. When 5-year estimates are available, the margins of error will be smaller, and the data will be more useful as a result.

Example 3—Detailed Tables

Another example of an ACS data product is the detailed table. For this example we want to find information about educational attainment for the Navajo Nation Reservation and Off-Reservation Trust Land, AZ-NM-UT.

- From the AFF “ACS Data Sets” page, clear all selections, then select 2005–2007 ACS 3-year estimates.
- Select “Detailed Tables” from the list of ACS data product options.
- On the “Select Geography” page, use the “name search” option since you know the name of the geographic area of interest. Select the geographic type, “American Indian Area/Alaska Native Area/Hawaiian Home Land,” and enter “Navajo Reservation” in the “Enter name to search for” box.
- Select “Search” and a list of specific geographic areas will appear. For this example, the only geographic area corresponding to a “name search” entry of “Navajo Reservation” is “Navajo Nation Reservation and Off-Reservation Trust Land, AZ-NM-UT.”
- Click “Add,” then “Next.”

Figure 13. **Base and Collapsed Tables**



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

- Identify the specific detailed table of interest. If you select the “by keyword” tab, enter “educational attainment” and click “Search.” You will get a shorter list of tables from which to choose.
- For this exercise, select “Sex by Educational Attainment for the Population 25 Years and Over” for the population group, “American Indian and Alaska Native Alone.” Note that two versions of the table are available, one with a prefix of B, and the other with prefix of C (see Figure 13, where the two versions of the same table are circled).

If you don’t know the significance of those prefixes, you should select the link “explain table numbers” to find out. The leading “B” designates basic or base tables that provide the most detailed estimates. The leading “C” means that the table will represent a collapsed version of the B table. By collapsing categories, detailed groups are combined into fewer categories, and the Census Bureau can present information that is less detailed and therefore more reliable. Sometimes it is a good idea to select “B” and “C” versions so you can review both to see which is better for your needs.

- Once you have identified one or more tables, add them to the selection box, then select “Show Result.”
- Figure 14 shows a portion of a basic, or “B” table, meaning that it reflects the most detail that is possible to present for this table.

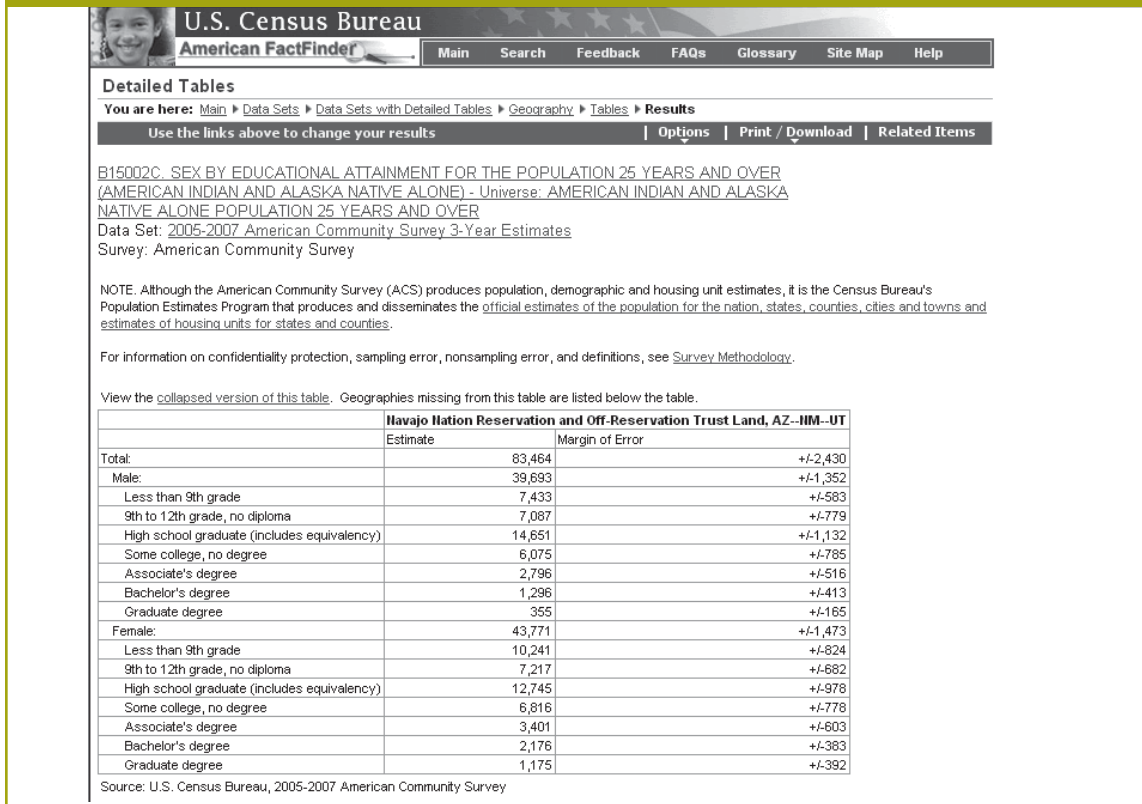
Detailed tables are useful for providing estimates for a particular variable by one or more demographic characteristics, in this case, educational attainment by age and sex. This kind of information can be used to identify a target population for which the characteristics could have important implications for tribal planning. For example, educational attainment levels less than “high school graduate” may attest to a need for adult education. Conversely, a population for which a large percentage has completed high school may prove attractive to businesses or to tribal planners interested in attracting economic development.

Example 4—Working With AFF Features

Using AFF involves navigating data sets with a variety of features and options that are displayed in pull down menus and links. In this example, we will illustrate one of those features, the “geographic components” option, to find information for different geographic components of the American Indian and Alaska Native population.

- From the AFF “ACS Data Sets” page, clear all selections, then select 2005–2007 ACS 3-Year Estimates.
- Select “Detailed Tables” from the list of ACS data product options.
- On the “Select Geography” page, use the default selection method, “List.” Once the geographic area “United States” appears, click “Add,” then “Next.”

Figure 14. Sex by Educational Attainment for the Population 25 Years and Over (American Indian and Alaska Native Alone) for the Navajo Nation Reservation and Off-Reservation Trust Land, AZ-NM-UT, 2005–2007 ACS 3-Year Estimates



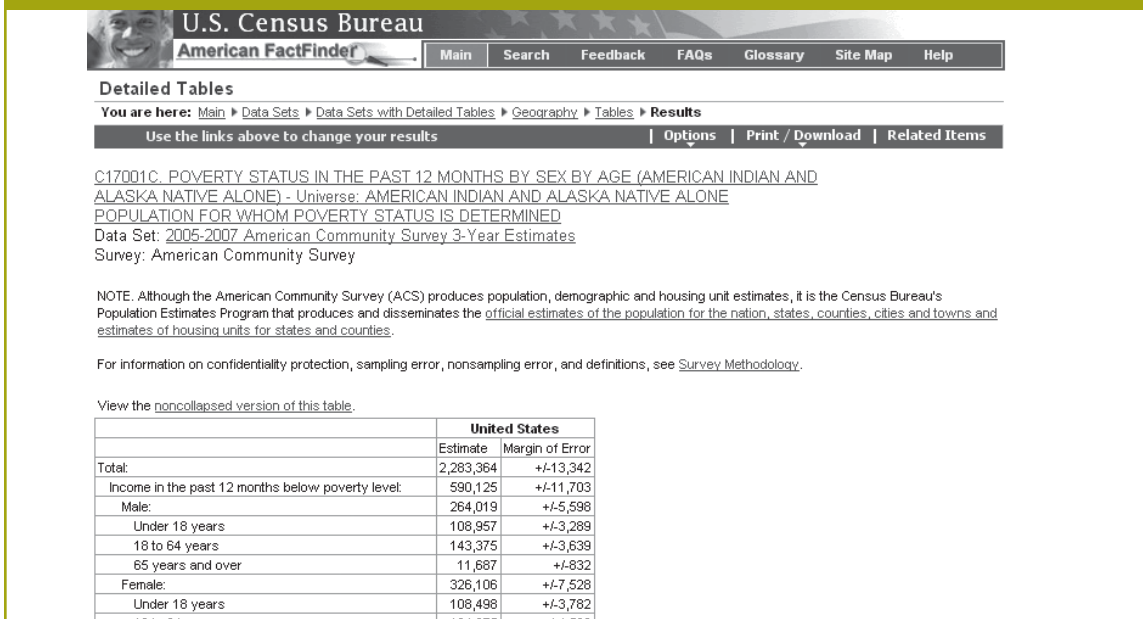
Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

- Using the default selection method “show all tables,” scroll through the list of tables and select Table C17001C, “Poverty Status in the Past 12 Months by Sex by Age (American Indian and Alaska Native Alone)” to obtain the collapsed version of the table.
- Click “Add,” then “Show Result,” to obtain the table shown in Figure 15. This table provides estimates of the number of males and females who reported a race of “American Indian and Alaska Native alone” by broad age groups, with income in the past 12 months below the poverty level.
- Urban
- Rural
- In metropolitan or micropolitan statistical area
- Not in metropolitan or micropolitan statistical area
 - In metropolitan statistical area
 - In metropolitan statistical area—in principal city
 - In metropolitan area—not in principal city
 - Not in metropolitan statistical area
 - In micropolitan statistical area
 - In micropolitan area—in principal city
 - In micropolitan area—not in principal city

Suppose we would like to see this table for one of a number of broad geographic components of the United States so we can distinguish characteristics of the urban American Indian and Alaska Native population. Point to the “Options” link near the top of the page, then scroll down to select “Geo Components.” You are then directed to another series of choices in a drop-down menu that includes the following broad geographic categories:

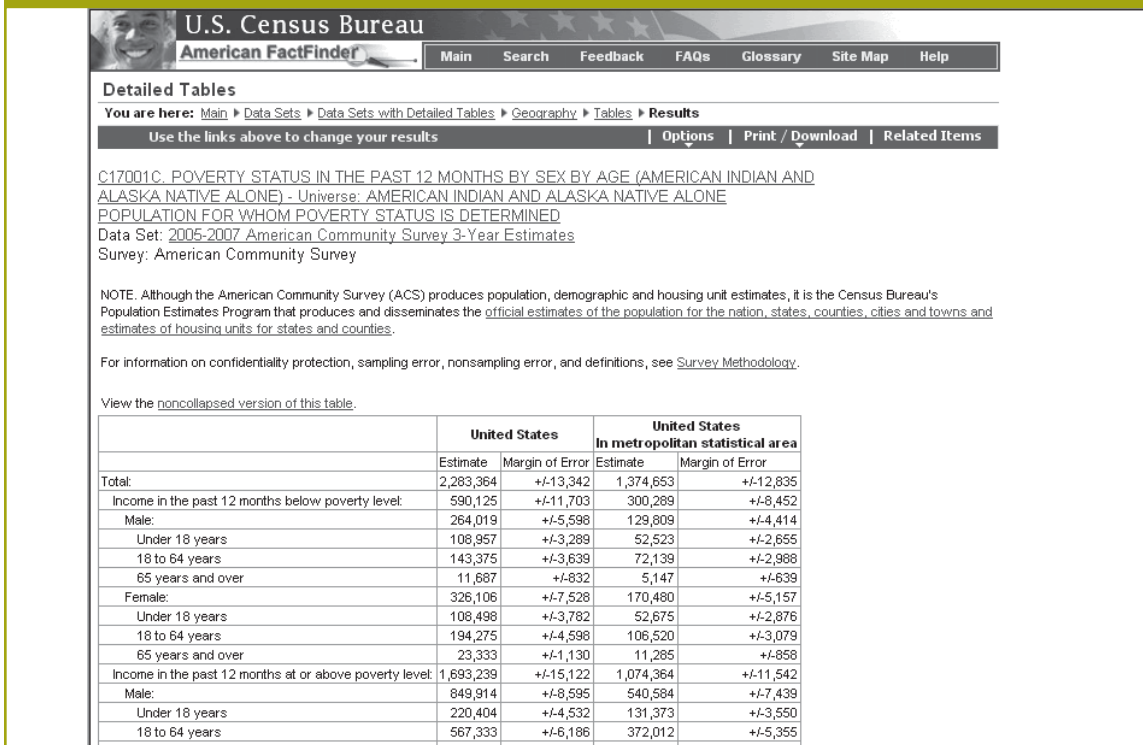
Which geographic component(s) should you choose? At first glance, it might seem that choosing to see a data product for the “Urban” population would meet your needs. However, for many data users, “In metropolitan statistical area” or “In metropolitan or micropolitan statistical area” may be more useful geographic units of analysis. A metropolitan statistical area contains a core urban area of 50,000 or more population, and a micropolitan area contains an urban core of at least 10,000 (but less than 50,000) population. Each metropolitan or micropolitan statistical area consists of

Figure 15. **Poverty Status in the Past 12 Months by Sex and by Age (American Indian and Alaska Native Alone) for the United States, 2005–2007 ACS 3-Year Estimates**



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Figure 16. **Poverty Status in the Past 12 Months by Sex and by Age (American Indian and Alaska Native Alone) for the United States and for Metropolitan Statistical Areas in the United States, 2005–2007 ACS 3-Year Estimates**



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

one or more counties and includes the counties containing the core urban area, as well as adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core. The Census Bureau's current urban/rural definitions are block and block group based. In contrast, metropolitan and micropolitan areas are defined on the basis of a larger geographic area (county) for which there is a greater availability of data and for which data tabulations are easier to use. Metropolitan and micropolitan statistical areas are not proxies for the urban population; many counties included in metropolitan and micropolitan areas, and many other counties, contain both urban and rural territory and populations. However, depending on the requirements of the data user, metropolitan statistical areas or metropolitan and micropolitan statistical areas may be the units of analysis that meet the data user's needs. In considering which geographic component to use,

consider your needs, or the preferences or requirements of the program or application for which you are providing data. For this example, we will distinguish urban characteristics for the American Indian and Alaska Native alone population by choosing the geographic component "In metropolitan statistical area."

- Select "In metropolitan statistical area" from among the geographic components listed.
- Select "Add," then "OK," to be directed to a new table, a portion of which is shown in Figure 16.

By comparing statistics for the American Indian and Alaska Native alone population in the United States to those for the population in metropolitan statistical areas in the United States, one can identify more specifically which characteristics are different. The differences in characteristics may point to different needs for services based on the differences in the characteristics for the two populations.

Using ACS Data

You will usually need a combination of data resources that may include ACS data to identify needs for services, apply for grants, or make the case for changes in public policy. ACS data alone may not be sufficient; other sources of information are needed to supplement the ACS. For example, a tribal government planner might take advantage of the following information resources to come up with an economic development plan:

- ACS data on characteristics of the population (a selected population profile) to identify a potential workforce and customer base from among those living on or near the reservation.
- The Census Bureau's County Business Patterns data to identify unmet needs for new services or retail establishments.
- The Census Bureau's Census Information Center to learn more about how to use all of the Census Bureau's information resources.
- Local Chamber of Commerce information on the history of business establishments in the area.
- Information on business loan opportunities from local or regional banks or the Small Business Administration.
- Information from national advocacy organizations on grant programs providing funding for child care services.
- Information on business products or services from the private sector.
- Courses on business skills offered through a tribal college or other institution of higher learning.

Federal agencies will use ACS data for a variety of programs that currently rely on data from the decennial census long form. These programs provide services such as health care, education, and job training.

How Will Federal Agencies Use ACS Data to Benefit American Indians and Alaska Natives?

Federal agencies will use ACS data to manage programs providing services such as education, health care, transportation, and housing to American Indians and Alaska Natives. For example, the Office of Native American Programs at the Department of Housing and Urban Development (HUD) will use ACS data on population, income, and the physical characteristics of housing to implement the Indian Housing Block Grant Program. That program provides low-income American Indian and Alaska Native households with housing-related services such as new construction and housing rehabilitation. HUD will use ACS data on rent to determine fair market rents that serve as benchmarks for HUD's evaluation of rental costs and the basis for providing rent assistance. ACS data on persons per housing unit will be used to identify overcrowding and potential needs for new housing, water, and sewer facilities.

Rules of the Road

It may take some time to become familiar with ACS data. Here are some rules of the road.

Use the right terminology

ACS 3-year estimates based on data collected from 2005–2007 should not be called “2006” or “2007” estimates. Nor should 2005–2009 ACS 5-year estimates be labeled “2007” estimates, even though that is the mid-point of the 5-year period. Multiyear estimates should be labeled to indicate clearly the full period of time they represent (for example, “The rate of homeownership in 2005–2007 was X percent.”)

Consider your needs if you have a choice of estimates to use

As a general rule, unless you have a compelling need for the most current data, choose multiyear estimates over single-year estimates. Single-year estimates (also called 1-year estimates) provide more current information. However, multiyear estimates are based on larger sample sizes and will therefore be more reliable, particularly for smaller geographic areas and small population subgroups. If we compare the estimates in Figures 17 and 18, it is clear that the margins of error are larger for the 1-year estimates. You might conclude that using the 3-year estimates would be the right choice, even though you have a preference for

the more current information reflected by the 1-year estimates. What other information could you consider in making a decision about which estimate to use?

If you want to weigh the benefits of using multiyear estimates over single-year estimates, or using 5-year estimates over 3-year estimates, consider information about the magnitude of the coefficient of variation (CV) in making your decision. CVs are measures that can be used to judge the level of reliability of an estimate. These measures are constructed using information on the margin of error (MOE) for the estimate, and the value 1.645, which represents the factor corresponding to the 90-percent confidence level associated with ACS estimates. Calculate the CV using the steps below.

- First, calculate the standard error (SE) for the estimate: $SE = MOE/1.645$.
- Next, calculate the coefficient of variation (CV) for the estimate: $CV = SE/Estimate \times 100\%$.

We want to determine the benefit of using a 3-year estimate for renter-occupied units for the American Indian and Alaska Native population on the Navajo Nation Reservation and Off-Reservation Trust Land (shown in Figure 17) over a 1-year estimate for this characteristic for the same population in the same geographic area (shown in Figure 18).

Figure 17. **Tenure for the American Indian and Alaska Native Alone Householder, Navajo Nation Reservation and Off-Reservation Trust Land, AZ-NM-UT, 2005–2007 ACS 3-Year Estimates**

U.S. Census Bureau
American FactFinder

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B25003C. TENURE (AMERICAN INDIAN AND ALASKA NATIVE ALONE HOUSEHOLDER) - Universe: OCCUPIED HOUSING UNITS WITH A HOUSEHOLDER WHO IS AMERICAN INDIAN AND ALASKA NATIVE ALONE
Data Set: 2005-2007 American Community Survey 3-Year Estimates
Survey: American Community Survey

NOTE: Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

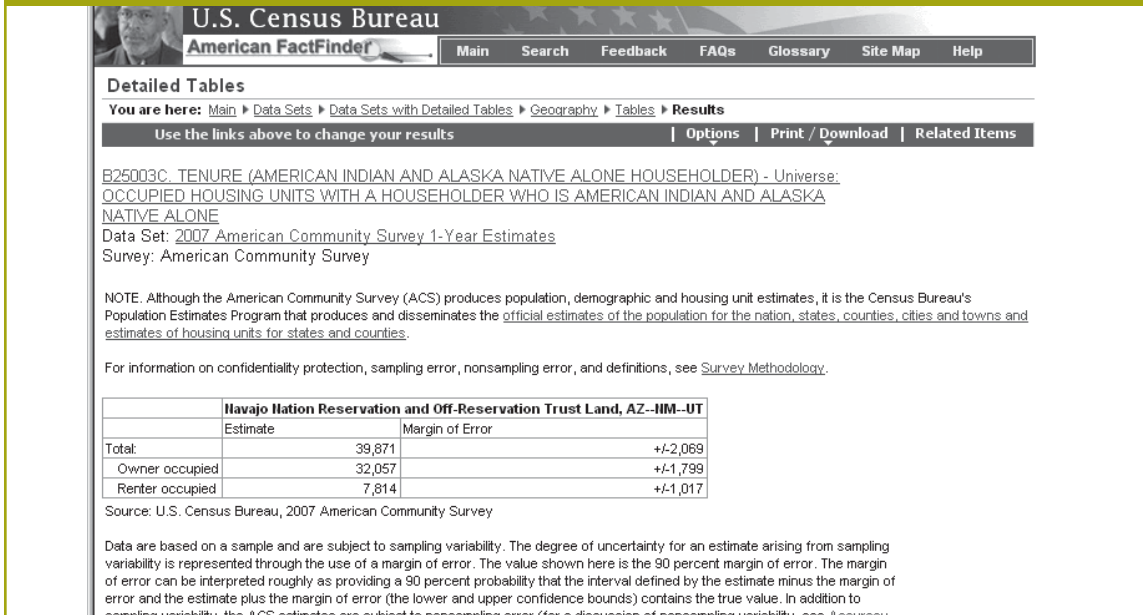
Navajo Nation Reservation and Off-Reservation Trust Land, AZ--NM--UT		
	Estimate	Margin of Error
Total:	40,537	+/-1,356
Owner occupied	32,444	+/-1,246
Renter occupied	8,093	+/-626

Source: U.S. Census Bureau, 2005-2007 American Community Survey

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see [Accuracy of the Data](#)). The effect of nonsampling error is not represented in these tables.

Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Figure 18. **Tenure for the American Indian and Alaska Native Alone Householder, Navajo Nation Reservation and Off-Reservation Trust Land, AZ-NM-UT, 2007 ACS 1-Year Estimates**



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

- For the 3-year estimate, SE = 626/1.645, or 380.5, and the CV = 380.5/8093 x 100, or 4.7 percent.
- For the 1-year estimate, SE = 1017/1.645, or 618.2, and the CV = 618.2/7814 x 100, or 7.9 percent.

There are no hard and fast rules about when a CV is considered “too high.” This will be driven by the specific application. Some data users have suggested that estimates with CVs of 15 percent or more should be viewed with caution. For this example, both the 1-year and 3-year estimates for renter-occupied units have CVs that are well under 15 percent, so either estimate can be used with confidence. If the 1-year estimate had exceeded 15 percent, then using the 3-year estimate might have been the better choice. For this example, there seems to be little advantage in using the 3-year estimate over the 1-year estimate, so, in the interest of using the more current data, the choice would be to use the 1-year estimate.

This example illustrates that while statistically reliable 3-year estimates might seem preferable, currency of data may outweigh that benefit in special situations. For example, currency of data is often very important in marketing. Even slight evidence of change in a community might provide a competitive advantage in marketing a new product or service. On the other hand, it might be risky to implement a costly new government policy or program based on current estimates having

high CVs. What is needed instead is the most credible and statistically reliable data, so using ACS estimates with the lower CVs would be the right choice.

Using ACS estimates to measure change

One of the important uses of ACS data will be to identify change in communities and populations. Be aware that annual fluctuations in data for 1-year estimates do not necessarily constitute change. Use the information on margins of error to perform tests of statistical significance before drawing conclusions about differences between two estimates. When using multiyear estimates to identify change, as a general rule, it is better to compare estimates that do not overlap. Consider a comparison of two 3-year estimates, one representing the period 2005–2007 and the other representing the period 2006–2008. The two sets of estimates are unlikely to differ because 2 of the 3 years overlap (both sets of estimates include the same data collected in 2006 and 2007). The overlap is even greater for two consecutive 5-year estimates; for example, 4 of the 5 years overlap when you are comparing estimates from the 2005 to 2009 ACS to estimates from the 2006 to 2010 ACS. The Census Bureau generally suggests comparing estimates for periods that do not overlap—comparing 2005–2007 estimates with 2008–2010 estimates, for example. Comparisons of overlapping 5-year estimates can be useful but need to be undertaken with caution. Specific information about dealing with overlapping estimates can be found in Appendix 4

of *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know* at <<http://www.census.gov/acs/www/Downloads/ACSGeneralHandbook.pdf>>. Data users also need to use caution in looking at trends involving income or other measures that are adjusted for inflation, such as rental costs, home values, and energy costs. Appendix 5 of the *General Data Users handbook* provides information on the adjustment of single-year and multiyear ACS estimates for inflation.

Comparing ACS data with other data sets

Some ACS data items are comparable with Census 2000 long-form data items, while others are not, and still others are comparable under certain conditions or restrictions. Compare ACS data to Census 2000 long-form data based on guidance provided at <<http://www.census.gov/acs/www/UseData/compACS.htm>>. ACS data will differ from many kinds of administrative data maintained by tribal governments, such as tribal enrollment records. Differences in reference periods, question wording, sample design, and data collection can all account for differences in data collected for two different surveys, differences between data collected for a survey and data collected for a census, or differences in data collected for a survey and data from administrative records.

Use the right universe

To distinguish the characteristics of the population by race, one needs to use an ACS table for which the universe (population group of interest) is limited to the American Indian and Alaska Native alone population

(for example, American Indian and Alaska Native alone or American Indian and Alaska Native in combination with one or more other races) or limited to a particular tribe (for example, Sioux alone, or Sioux alone or in combination). When you are making comparisons, be certain you are comparing equivalent universes.

When comparing, use estimates for the same data collection period

Suppose you are responsible for developing and administering a grant program. How would you instruct potential grant applicants regarding what kind of data are acceptable? You should require that all potential applicants use the same kind of estimate (for example, requiring everyone to submit data based on a 5-year estimate, rather than allowing some applicants to use single-year estimates and others to use 3- or 5-year estimates). In addition, applicants should be required to use estimates representing the same period of time (e.g., requiring that all applicants use the 5-year estimate for a specific period, for example, 2008–2012, rather than allowing applicants to submit data representing any 5-year period estimate). The same approach should be used in comparing estimates for one area to those for another area. Suppose you wanted to compare characteristics for one reservation, for which both 3-year and 5-year estimates are available, to those for a smaller reservation, for which only 5-year estimates are available. You should compare 2005–2009 ACS 5-year estimates for the smaller reservation with 2005–2009 ACS 5-year estimates for the larger reservation, even though more recent 3-year estimates are available for the larger reservation.

Interpreting ACS Data for American Indian and Alaska Native Areas

ACS data users need to be especially cautious when interpreting ACS data for American Indian areas and Alaska Native areas. Many such areas have substantial populations that are neither American Indian nor Alaska Native. Socioeconomic or other characteristics for non-American Indian and non-Alaska Native populations may differ, and markedly so, from those for American Indian and Alaska Native populations. When ACS tables are iterated by race, such as in the case of the subject table portrayed in Figure 12, differences can be easily noted for these two populations. However, many ACS tables for American Indian areas and Alaska Native areas do not provide iterations by race for the characteristics for which the table provides data. For example, 2005–2007 ACS data profiles for Flathead Reservation, Montana, or Chickaloon Alaska Native Village Statistical Area, Alaska, do not provide characteristics data iterated by race. The universe for the tables is the total population. It would be incorrect to interpret an economic indicator such as poverty rate or a social indicator such as school enrollment rate for an American Indian or Alaska Native area as describing the characteristics of the American Indian or Alaska Native population.

Other Resources for Working With ACS Data

Data users can find additional information about the ACS on the Census Bureau's ACS Web site, <<http://www.census.gov/acs/www/>>. Guidance on the latest data products is available at <<http://www.census.gov/acs/www/Products/index.html>>. AFF help is available at <<http://factfinder.census.gov/home/en/epss/main.html>>. Finally, the ACS Compass Products include a series of handbooks (including this handbook) that provide information on understanding and using ACS data targeted to specific audiences. They can be found at <http://www.census.gov/acs/www/UseData/Compass/compass_series.html>.

From time to time, the Census Bureau develops special reports or files based on data collected in surveys and censuses, including the ACS. One file that is planned will focus on information on population and housing data for American Indians and Alaska Natives collected on a sample basis by the ACS. This file is designed to be similar to *Census 2000 American Indian and Alaska Native Summary File (AIANSF)—Sample Data*, a Census 2000 file that iterates data for the total population, the total American Indian and Alaska Native population, the total American Indian population, the total Alaska Native population, and for additional specified American Indian and Alaska Native tribes.

The Census Bureau's American Indian and Alaska Native Web Portal

You will find information about ACS as well as other Census Bureau products focusing on data for American Indians and Alaska Natives on <<http://factfinder.census.gov/home/aian/index.html>>, the general portal for all information of interest to users of census data on American Indians and Alaska

Natives. You may wish to bookmark this site. In addition to information on data products, the site includes information on the Census Bureau's Advisory Committee for American Indians and Alaska Natives and other federal sources of information on American Indians and Alaska Natives.

Conclusion

Readers of this handbook will find that it is important to learn how to use and interpret ACS data. For many, the focus of interest will be the 5-year estimates, which will not be available until late 2010. The Census Bureau is offering a great deal of information on data products to ACS data users. In addition, the Census Bureau is seeking to help data users learn more about data products such as PUMS files that may be unfamiliar to them but that offer great potential for expanding the use of ACS data for American Indians and Alaska Natives.

The Census Bureau has embarked on a bold mission in developing the ACS. An understanding of the ACS data products is critical to take full advantage of the availability of these important data. The Census Bureau's Regional Offices and Census Bureau headquarters staff, as well as our partners in the State Data Centers and the Census Information Centers, are ready to help users of ACS data for American Indians and Alaska Natives embrace the learning process.

Glossary

Accuracy. One of four key dimensions of survey quality. Accuracy refers to the difference between the survey estimate and the true (unknown) value. Attributes are measured in terms of sources of error (for example, coverage, sampling, nonresponse, measurement, and processing).

American Community Survey Alert. This periodic electronic newsletter informs data users and other interested parties about news, events, data releases, congressional actions, and other developments associated with the ACS. See <<http://www.census.gov/acs/www/Special/Alerts/Latest.htm>>.

American FactFinder (AFF). An electronic system for access to and dissemination of Census Bureau data on the Internet. AFF offers prepackaged data products and user-selected data tables and maps from Census 2000, the 1990 Census of Population and Housing, the 1997 and 2002 Economic Censuses, the Population Estimates Program, annual economic surveys, and the ACS.

Block group. A subdivision of a census tract (or, prior to 2000, a block numbering area), a block group is a cluster of blocks having the same first digit of their four-digit identifying number within a census tract.

Census geography. A collective term referring to the types of geographic areas used by the Census Bureau in its data collection and tabulation operations, including their structure, designations, and relationships to one another. See <<http://www.census.gov/geo/www/index.html>>.

Census tract. A small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other nonvisible features; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment, census tracts average about 4,000 inhabitants.

Coefficient of variation (CV). The ratio of the standard error (square root of the variance) to the value being estimated, usually expressed in terms of a percentage (also known as the relative standard

deviation). The lower the CV, the higher the relative reliability of the estimate.

Comparison profile. Comparison profiles are available from the American Community Survey for 1-year estimates beginning in 2007. These tables are available for the U.S., the 50 states, the District of Columbia, and geographic areas with a population of more than 65,000.

Confidence interval. The sample estimate and its standard error permit the construction of a confidence interval that represents the degree of uncertainty about the estimate. A 90-percent confidence interval can be interpreted roughly as providing 90 percent certainty that the interval defined by the upper and lower bounds contains the true value of the characteristic.

Confidentiality. The guarantee made by law (Title 13, United States Code) to individuals who provide census information, regarding nondisclosure of that information to others.

Consumer Price Index (CPI). The CPI program of the Bureau of Labor Statistics produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services.

Controlled. During the ACS weighting process, the intercensal population and housing estimates are used as survey controls. Weights are adjusted so that ACS estimates conform to these controls.

Current Population Survey (CPS). The CPS is a monthly survey of about 50,000 households conducted by the Census Bureau for the Bureau of Labor Statistics. The CPS is the primary source of information on the labor force characteristics of the U.S. population.

Current residence. The concept used in the ACS to determine who should be considered a resident of a sample address. Everyone who is currently living or staying at a sample address is considered a resident of that address, except people staying there for 2 months or less. People who have established residence at the sample unit and are away for only a short period of time are also considered to be current residents.

Custom tabulations. The Census Bureau offers a wide variety of general purpose data products from the ACS. These products are designed to meet the needs of the majority of data users and contain predefined

sets of data for standard census geographic areas, including both political and statistical geography. These products are available on the American FactFinder and the ACS Web site.

For users with data needs not met through the general purpose products, the Census Bureau offers “custom” tabulations on a cost-reimbursable basis, with the American Community Survey Custom Tabulation program. Custom tabulations are created by tabulating data from ACS microdata files. They vary in size, complexity, and cost depending on the needs of the sponsoring client.

Data profiles. Detailed tables that provide summaries by social, economic, and housing characteristics. There is a new ACS demographic and housing units profile that should be used if official estimates from the Population Estimates Program are not available.

Detailed tables. Approximately 1,200 different tables that contain basic distributions of characteristics. These tables provide the most detailed data and are the basis for other ACS products.

Disclosure avoidance (DA). Statistical methods used in the tabulation of data prior to releasing data products to ensure the confidentiality of responses. See Confidentiality.

Estimates. Numerical values obtained from a statistical sample and assigned to a population parameter. Data produced from the ACS interviews are collected from samples of housing units. These data are used to produce estimates of the actual figures that would have been obtained by interviewing the entire population using the same methodology.

File Transfer Protocol (FTP) site. A Web site that allows data files to be downloaded from the Census Bureau Web site.

Five-year estimates. Estimates based on 5 years of ACS data. These estimates reflect the characteristics of a geographic area over the entire 5-year period and will be published for all geographic areas down to the census block group level.

Geographic comparison tables. More than 80 single-variable tables comparing key indicators for geographies other than states.

Geographic summary level. A geographic summary level specifies the content and the hierarchical relationships of the geographic elements that are

required to tabulate and summarize data. For example, the county summary level specifies the state-county hierarchy. Thus, both the state code and the county code are required to uniquely identify a county in the United States or Puerto Rico.

Group quarters (GQ) facilities. A GQ facility is a place where people live or stay that is normally owned or managed by an entity or organization providing housing and/or services for the residents. These services may include custodial or medical care, as well as other types of assistance. Residency is commonly restricted to those receiving these services. People living in GQ facilities are usually not related to each other. The ACS collects data from people living in both housing units and GQ facilities.

Group quarters (GQ) population. The number of persons residing in GQ facilities.

Item allocation rates. Allocation is a method of imputation used when values for missing or inconsistent items cannot be derived from the existing response record. In these cases, the imputation must be based on other techniques such as using answers from other people in the household, other responding housing units, or people believed to have similar characteristics. Such donors are reflected in a table referred to as an allocation matrix. The rate is percentage of times this method is used.

Margin of error (MOE). Some ACS products provide an MOE instead of confidence intervals. An MOE is the difference between an estimate and its upper or lower confidence bounds. Confidence bounds can be created by adding the margin of error to the estimate (for the upper bound) and subtracting the margin of error from the estimate (for the lower bound). All published ACS margins of error are based on a 90-percent confidence level.

Multiyear estimates. Three- and five-year estimates based on multiple years of ACS data. Three-year estimates will be published for geographic areas with a population of 20,000 or more. Five-year estimates will be published for all geographic areas down to the census block group level.

Narrative profile. A data product that includes easy-to-read descriptions for a particular geography.

Nonsampling error. Total survey error can be classified into two categories—sampling error and nonsampling error. Nonsampling error includes measurement errors due to interviewers, respondents, instruments, and mode; nonresponse error; coverage error; and processing error.

Period estimates. An estimate based on information collected over a period of time. For ACS the period is either 1 year, 3 years, or 5 years.

Point-in-time estimates. An estimate based on one point in time. The decennial census long-form estimates for Census 2000 were based on information collected as of April 1, 2000.

Population Estimates Program. Official Census Bureau estimates of the population of the United States, states, metropolitan areas, cities and towns, and counties; also official Census Bureau estimates of housing units (HUs).

Public Use Microdata Area (PUMA). An area that defines the extent of territory for which the Census Bureau releases Public Use Microdata Sample (PUMS) records.

Public Use Microdata Sample (PUMS) files. Computerized files that contain a sample of individual records, with identifying information removed, showing the population and housing characteristics of the units, and people included on those forms.

Puerto Rico Community Survey (PRCS). The counterpart to the ACS that is conducted in Puerto Rico.

Quality measures. Statistics that provide information about the quality of the ACS data. The ACS releases four different quality measures with the annual data release: 1) initial sample size and final interviews; 2) coverage rates; 3) response rates, and; 4) item allocation rates for all collected variables. The ACS Quality Measures Web site provides these statistics each year. In addition, the coverage rates are also available for males and females separately.

Reference period. Time interval to which survey responses refer. For example, many ACS questions refer to the day of the interview; others refer to “the past 12 months” or “last week.”

Residence rules. The series of rules that define who (if anyone) is considered to be a resident of a sample address for purposes of the survey or census.

Sampling error. Errors that occur because only part of the population is directly contacted. With any sample, differences are likely to exist between the characteristics of the sampled population and the larger group from which the sample was chosen.

Sampling variability. Variation that occurs by chance because a sample is surveyed rather than the entire population.

Selected population profiles. An ACS data product that provides certain characteristics for a specific race or ethnic group (for example, Alaska Natives) or other population subgroup (for example, people aged 60 years and over). This data product is produced directly from the sample microdata (that is, not a derived product).

Single-year estimates. Estimates based on the set of ACS interviews conducted from January through December of a given calendar year. These estimates are published each year for geographic areas with a population of 65,000 or more.

Standard error. The standard error is a measure of the deviation of a sample estimate from the average of all possible samples.

Statistical significance. The determination of whether the difference between two estimates is not likely to be from random chance (sampling error) alone. This determination is based on both the estimates themselves and their standard errors. For ACS data, two estimates are “significantly different at the 90 percent level” if their difference is large enough to infer that there was a less than 10 percent chance that the difference came entirely from random variation.

Subject tables. Data products organized by subject area that present an overview of the information that analysts most often receive requests for from data users.

Summary files. Consist of detailed tables of Census 2000 social, economic, and housing characteristics compiled from a sample of approximately 19 million housing units (about 1 in 6 households) that received the Census 2000 long-form questionnaire.

Thematic maps. Display geographic variation in map format from the geographic ranking tables.

Three-year estimates. Estimates based on 3 years of ACS data. These estimates are meant to reflect the characteristics of a geographic area over the entire 3-year period. These estimates will be published for geographic areas with a population of 20,000 or more.

Appendix 1.

The Geography of American Indian and Alaska Native Areas

The ACS provides information for many different geographic areas. American Indian and Alaska Native areas for which there are currently ACS data (1-year and 3-year estimates) are listed in Table 5 of the handbook. A detailed description of these areas, and others for which ACS data will be available in the future, is provided below.

ACS estimates reflect geographic area boundaries for legal entities (such as American Indian Reservations) as of January 1 of the year of data collection, or the last year of data collection in the case of a multiyear estimate. For statistical areas, such as tribal tracts, Alaska Native Villages Statistical Areas, or Oklahoma Tribal Statistical Areas, ACS estimates reflect the most current definitions of statistical areas available at the time ACS data products are ready for release.

Statistical areas are defined anew for each decennial census. Participant statistical areas—census block groups, census tracts, census county divisions, and Census Designated Places—are delineated by local planners through a Participant Statistical Areas Program. A comparable program for tribal governments, the Tribal Statistical Areas Program provides for the delineation of tribal statistical areas, such as tribal census tracts, by the Census Bureau in conjunction with tribes. As 2010 Census statistical areas and tribal statistical areas are delineated, approved, and validated, they will be reflected in ACS data products. This will take place on a flow basis; some areas will be reflected in ACS data products earlier than other areas. For example, 2010 Census tribal block groups, tribal tracts, and Census Designated Places defined by tribal governments will be reflected in the 2010 1-year ACS estimates, 2008–2010 3-year ACS estimates, and the 2006–2010 5-year ACS estimates, all of which will be released in 2011. For the most current information on the programs for these areas, including links for the *Federal Register* notices that describe the 2010 Census criteria and guidelines for recognizing and delineating these areas, see <<http://www.census.gov/geo/www/reference.html>> and <<http://www.census.gov/geo/www/tsap2010/tsap2010.html>>.

American Indian and Alaska Native Areas

American Indian Reservations (AIRs) are governmental entities for which the Census Bureau provides ACS data. Federal American Indian Reservations

(federal AIRs) are areas that have been set aside by the United States for the use of tribes, the exterior boundaries of which are defined in final tribal treaties, agreements, executive orders, federal statutes, secretarial orders, or judicial determinations. The Census Bureau recognizes federal reservations as territory over which American Indian tribes have primary governmental authority. Federal reservations can be called colonies, communities, pueblos, rancherias, ranches, reservations, reserves, villages, Indian communities, and Indian villages. ACS data are also provided for State American Indian Reservations (SAIRs). The names of these reservations are followed by “State” in ACS data presentations. ACS data for entire federal AIRs and SAIRs are presented. Federal AIRs may cross state boundaries; federal AIRs and SAIRs may cross county, county, subdivision, and place boundaries; only the portions of the reservations in a given state are shown in the data products for that state. Lands that are administered jointly or claimed by two tribes, whether federally or state recognized, are called “joint use areas” and are treated as if they were separate American Indian reservations for data presentation purposes.

American Indian Off-Reservation Trust Lands

(ORTLs) are areas for which the United States holds title in trust for the benefit of a tribe or individual Indian. Trust lands may be located on or off of a reservation. The Census Bureau recognizes and tabulates data for off-reservation trust lands, which are always associated with a specific federally recognized reservation and/or tribal government. Off-reservation trust lands associated with tribes that do not have a reservation appear in ACS data tabulations by tribal name, interspersed alphabetically among reservation names.

Oklahoma Tribal Statistical Areas (OTSAs) are statistical entities identified and delineated by the Census Bureau in consultation with federally recognized American Indian tribes in Oklahoma that do not currently have a reservation, but once had a reservation in that state. OTSAs primarily represent the former reservation boundaries and are not required to conform to any other geographic entity for which the Census Bureau tabulates data. Lands that are administered jointly or claimed by two OTSAs are called “joint use areas” and are treated as if they were separate OTSAs for data presentation purposes.

American Indian Tribal Subdivisions are legal subdivisions of federally recognized American Indian reservations, off-reservation trust lands, or OTSAs. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for American Indians living on a reservation, off-reservation trust land, or OTSA.

Tribal Designated Statistical Areas (TDSAs) are statistical entities identified and delineated for the Census Bureau by federally recognized American Indian tribes that do not currently have a federally recognized land base (that is, a reservation or off-reservation trust land). A TDSA generally encompasses a compact and contiguous area that contains a concentration of people who identify with a federally recognized American Indian tribe and in which there is structured or organized tribal activity. A TDSA may be located in more than one state, and it may not include area within an American Indian reservation, off-reservation trust land, Alaska Native Village Statistical Area, state designated American Indian statistical area, or OTSA. The intent of the TDSA program is to collect and tabulate data analogous to the data provided to tribes with a reservation and/or off-reservation trust land.

State Designated Tribal Statistical Areas (SDTSAs) are designed to provide recognized tribes without a reservation and/or off-reservation trust land with meaningful statistical data for a geographic area relevant to their current data needs and present-day location. SDTSAs are delineated by a state liaison identified by the governor's office in each state. Like the TDSA, the SDTSA generally encompasses a compact and contiguous area that contains a concentration of people who identify with a state-recognized Indian tribe and in which there is structured or organized tribal activity. Also, like the TDSA, the SDTSA may not include area within an American Indian reservation, off-reservation trust land, Alaska Native Village Statistical Area, TDSA, or OTSA. However, unlike the TDSA, a SDTSA may not be located in more than one state unless the tribe for which it is associated is recognized by these states. The intent of the SDTSA program is to collect and tabulate data analogous to the data provided to tribes with a reservation and/or off-reservation trust land.

Tribal Tracts and Tribal Block Groups are defined by the Census Bureau in cooperation with tribal officials to provide meaningful and relevant data for small geographic areas within the boundaries of federally recognized reservations and off-reservation trust lands. In the past, census tracts and block groups defined by state and county officials have sometimes had the effect of separating American Indian populations located within a single reservation and/or

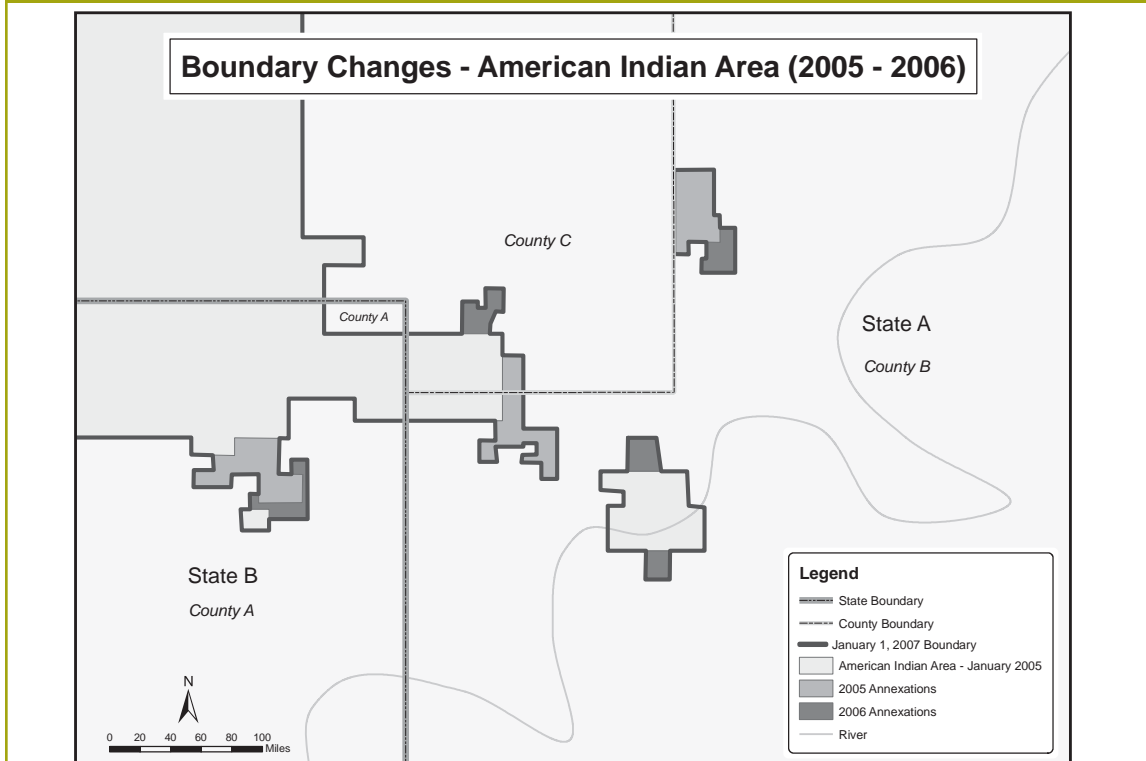
off-reservation trust land such that statistics for these populations were adversely affected. To address this situation, and provide a more effective program for identifying small-area geography on reservations, the Census Bureau provides tribal officials for federal reservations and off-reservation trust lands the opportunity to define tribal tracts and block groups for federal reservations and off-reservation trust lands. Tribal tracts and tribal block groups are conceptually similar to census tracts and block groups defined within the standard state-county-tract-block group geographic hierarchy used for tabulating and publishing statistical data. Also, just as in the case with standard census tracts and block groups, the Census Bureau emphasizes in its guidelines for defining tribal tracts and block groups the need for consistent boundaries to enhance the comparisons of ACS and other data across time.

Census Designated Places (CDPs) represent locally known, unincorporated communities that contain a mix of residential, commercial, cultural, and/or retail uses similar to that of an incorporated place of similar size in a similar geographic setting. CDP boundaries are updated and revised periodically to reflect changes to the geographic extent of a place, for example, the annexation of part of a CDP by an adjacent incorporated place, such as a city. In ACS data products, CDPs on federal reservations are not included in separate lists of entities that are American Indian. Instead, these entities appear interspersed alphabetically among lists of places by state.

Alaska Native Village Statistical Areas (ANVSAs) represent the residents, permanent and/or seasonal, for Alaska Native members of the defining Alaska Native Village (ANV). ANVSAs are located within the ANV's historic/traditional region and are designed to represent the most densely populated portion of each ANV where Alaska Natives represent a majority of the population during at least one season of the year.

Alaska Native Regional Corporations (ANRCs) are corporate entities established to conduct both business (for profit) and nonprofit affairs of Alaska Natives pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92-203). Twelve ANRCs are geographic entities that cover most of the state of Alaska. The Annette Island Reserve—an American Indian reservation—is excluded from any ANRC; a thirteenth ANRC represents Alaska Natives who do not live in Alaska and do not identify with any of the 12 corporations. The Census Bureau does not provide data for this ANRC because it has no geographic extent. The boundaries of ANRCs have been legally established; the Census Bureau updates those boundaries with assistance from the 12 nonprofit ANRCs. In AFF, ANRCs are listed separately from American Indian and Alaska Native Areas.

Figure 1. **Effect of Boundary Changes for a Hypothetical American Indian Area on 3-Year Estimates**



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Boundaries for Geographic Entities

ACS data products reflect the Census Bureau's latest information on boundaries (for governmental entities, such as American Indian Reservations), and criteria and guidelines (for statistical areas). Information on boundaries for governmental entities is updated through the Boundary and Annexation Survey (BAS). As previously stated, boundary updates and corrections are collected and processed through the BAS and the information available as of January 1 of the last year of data collection is applied to data products. For example, for 1-year estimates released in 2008 that represent data collected in 2007, the estimates reflect the boundary updates as of January 1, 2007. For 3-year estimates released in 2008 that reflect data collected in

2005–2007, the estimates reflect the boundary updates as of January 1, 2007. In the future, the Census Bureau plans to provide documentation indicating the geographic areas affected by boundary changes during a data collection period.

Figure 1 depicts a hypothetical American Indian area (we'll call this area a reservation for the purposes of this example). The area most lightly shaded depicts the boundaries of this reservation in 2004. Other shaded areas were added by boundary changes that took place in 2005 and 2006. The January 1, 2007, boundary is used to tabulate data for this reservation. Sample data collected from the entire shaded area are reflected in the 3-year estimates that were released for this reservation in 2008.

Appendix 2. Conducting a Test of Statistical Significance

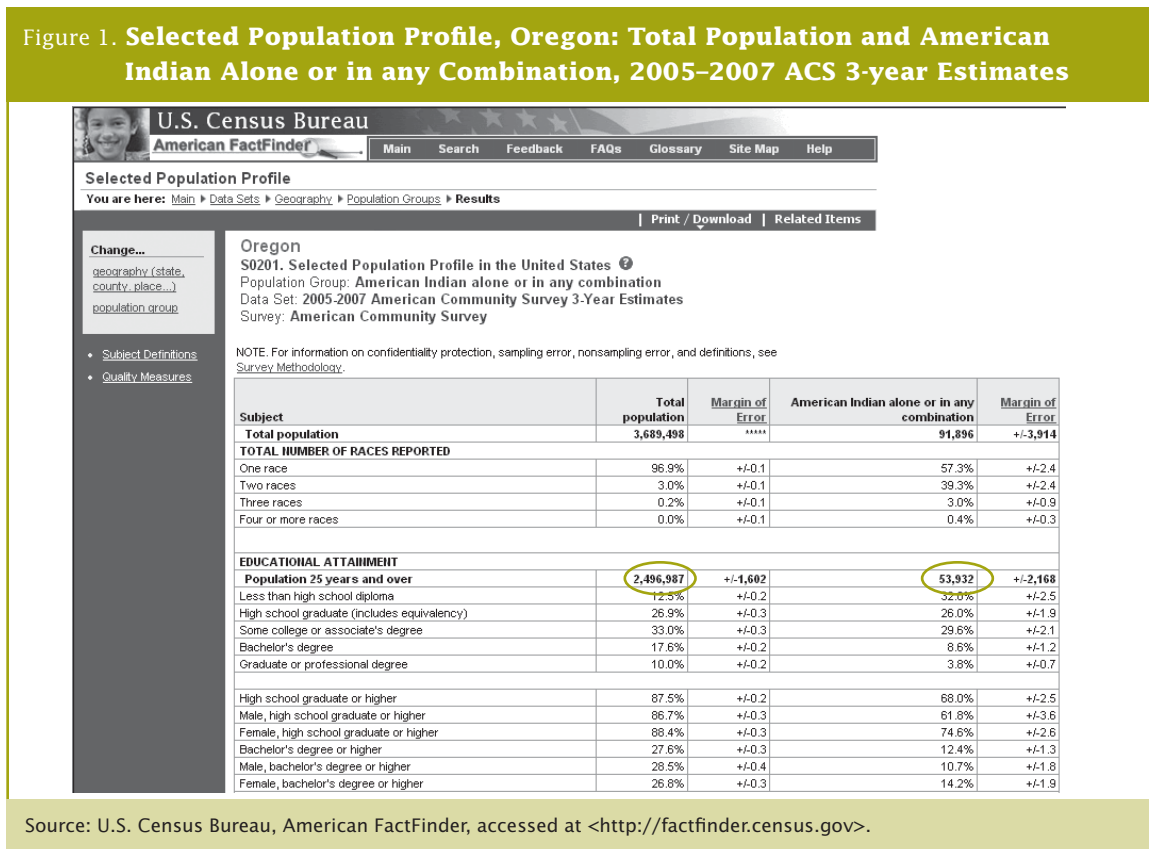
Comparing Two Estimates in a Selected Population Profile

A set of technical appendixes included with *A Compass for Understanding and Using American Community Survey Data: What General Data Users Need to Know* is designed to provide data users with interest in technical details with the information they need. For example, Appendixes 3 and 4 provide information on sampling error and detailed instructions on how to work with margins of error. One of the most important sets of instructions relates to tests of statistical significance. Tests of statistical significance should be performed to compare two estimates, for example for different populations, geographic areas, or time periods. Tests of statistical significance will help you determine whether two estimates that might appear to be different are, in fact, statistically different. By conducting such tests, you can strengthen your analysis of data and report differences in estimates that are true differences and worthy of note.

Here's how you should conduct such a test to determine if the difference between two estimates for different populations is statistically significant.

Figure 1 presents a portion of a selected population profile for Oregon showing data for educational attainment for the total population and the population group, "American Indian Alone or in Any Combination." The data show the highest level of educational attainment for each group. Suppose you are conducting research designed to inform education policy of the American Indian population for the state of Oregon. You want to compare characteristics for the American Indian alone or in any combination population with the characteristics of the total population and want to focus on data for the percent of the population that has completed high school or completed a high school equivalency program. Note that the estimate for the total population is 26.9 percent and the estimate for the American Indian alone or in any combination population is 26.0 percent. Can you draw the conclusion that the percent of the population that has completed high school or the equivalent is lower for the "American Indian alone or in any combination" population? You might be inclined to do so, but a better approach would be to perform a test of statistical significance for these estimates. The next section shows you how to proceed.

Figure 1. Selected Population Profile, Oregon: Total Population and American Indian Alone or in any Combination, 2005–2007 ACS 3-year Estimates



Source: U.S. Census Bureau, American FactFinder, accessed at <<http://factfinder.census.gov>>.

Conducting a Test of Statistical Significance

1. Calculate the standard error, SE , associated with each of the two estimates:

$$SE = \frac{MOE_{ACS}}{1.645}$$

Where MOE_{ACS} is the published margin of error for the ACS estimate.

The estimate for the total population is 26.9 percent. The standard error of this estimate is

$$SE_1 = \frac{0.3}{1.645} = 0.18$$

The estimate for the American Indian alone or in any combination population is 26.0 percent. The standard error of this estimate is

$$SE_2 = \frac{1.9}{1.645} = 1.16$$

2. Test whether the difference between the two estimates is significant at the 90-percent confidence interval using the formula:

$$\left| \frac{\hat{X}_1 - \hat{X}_2}{\sqrt{SE_1^2 + SE_2^2}} \right| > Z_{CL}$$

Where \hat{X}_1 is the estimate for the total population, \hat{X}_2 is the estimate for the American Indian alone or in any combination population, SE_1 is the standard error for the total population, and SE_2 is the standard error for the American Indian alone or in any combination population.

$$\text{If } \left| \frac{26.9 - 26.0}{\sqrt{(0.18)^2 + (1.16)^2}} \right| > 1.645, \text{ the difference}$$

between the two estimates is statistically significant at the 90-percent confidence level.

3. Perform the required calculations.

$$\left| \frac{26.9 - 26.0}{\sqrt{(0.18)^2 + (1.16)^2}} \right| = 0.77$$

Because 0.77 is less than 1.65, you cannot conclude that the two estimates are statistically different.¹ The percentage of the population completing high school or a high school equivalency program are not statistically different for the two population groups (the total population and the population representing American Indian alone or in any combination).

This information could be helpful in demonstrating that both populations have relatively comparable estimates regarding the percentage of the population for whom high school or a high school equivalency program is the highest level of educational attainment. The finding that these estimates are not statistically different for the two populations might be important in an assessment of programs to improve educational achievement among the American Indian population.

¹ In this example we compared an estimate of a portion of the total population ("American Indian alone or in any combination") with an estimate of the total population. Because the "American Indian alone or in any combination" population is included in the total population, the two estimates are considered to be correlated. When such comparisons are made, usually an adjustment is needed to account for this correlation. However, in this example, the correlation is expected to be small because the "American Indian alone or in any combination" population is such a small fraction of the total population. Therefore the simple test for statistical significance that we used is reasonable.

