

Cautionary Tales

Comparing the American Community Survey with Data from the Decennial Census

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Resources for accessing data in real time
<http://www.ca.uky.edu/snarl>

If you are looking to update detailed data that came from the 2000 Census, the new source is the American Community Survey.

Even though most of the questions in the American Community Survey are similar to what was in the 2000 Decennial Census Long Form, there are also important differences.

Because of these differences, comparing data between the two sources can be a challenge.

This publication provides assistance in comparing data from the American Community Survey with data from the Decennial Census.

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It used to be that, every 10 years, the Decennial Census gave us a detailed snapshot of our communities and counties. Today, we have a new source for that data: the American Community Survey.

The Decennial Census (ie. 2010 Census) is still the source for our official population counts, but data on social, economic, and housing characteristics now come from the American Community Survey (ACS).

If this is your first time using data from the ACS, see [New Kid in Town: Understanding Data from the American Community Survey](#). You can find it on the Kentucky: By The Numbers website at: <http://www.ca.uky.edu/snarl/>

Is the American Community Survey different from the Decennial Census?

Yes. Even though the American Community Survey uses questions similar to those that the Decennial Census Long Form did, there also are [important differences](#).

Decennial Census (ie. 1990, 2000, 2010)

The Decennial Census is the [official count](#) of the number of people who live in the United States.

It is required by the U.S. Constitution and a census has been conducted every decade since 1790.

The Decennial Census is conducted [once every 10 years](#).

Data from the Census Long Form provide a detailed snapshot only [once every decade](#).

American Community Survey (ACS)

The American Community Survey provides a portrait of our population's [characteristics](#).

It was developed to [replace the Census Long Form](#) as the mechanism to collect this data.

The American Community Survey is an [ongoing](#) survey with questionnaires sent out every month.

Data are released in [1-, 3-, and 5-year estimates](#).

Which estimates are available for your county depends on its population size

New estimates are released [each year](#).

Do the differences affect comparing data from the American Community Survey with the [2010 Decennial Census](#)?

Yes. The American Community Survey replaced the Long Form that used to be part of the Decennial Census. The Long Form was the way to collect detailed data on social, economic and housing characteristics. Because we now have the American Community Survey, this means that the most recent 2010 Census did not have a long form and the two data sources only have basic items that are similar.

This also means that the American Community Survey is the [only place](#) to find detailed data on social, economic, and housing characteristics for our counties and local communities.

Do numbers from the 2010 Census match the numbers from the ACS?

No. The numbers in the American Community Survey don't match those from the 2010 Census because the two sources collect data in differently.

One of the differences is that while data from the Census refer to a single point in time, data from the American Community Survey are combined to produce 1-, 3-, and 5-year estimates.

In addition, the American Community Survey counts people differently. The Decennial Census counts people where they live and sleep most of the time. This is called their "usual residence."

In the American Community Survey, people are counted based on their "current residence." In general, this means that *anyone who has lived at the residence for more than 2 months* at the time of the survey is counted as living there.

If you are looking for the official counts of your population, such as the number of people in your county, always use the Decennial Census (ie. 2010 Census) or data from the Census Bureau's Population Estimates Program.

Are data from the ACS as reliable as data from the 2000 Census Long Form?

No. Because the sample used by the American Community Survey is smaller than that used for the 2000 Census Long Form, this means that data produced by the ACS have a greater likelihood of error. This is why the ACS includes a "Margin of Error" for each estimate.

Why are there no "Margins of Error" in data from the Census?

All data that rely on samples have margins of error - even data from the 2000 Census Long Form. The difference is that for the Long Form, they were smaller and they were are not reported.

Remember, the margin of error for all estimates from the American Community Survey must always be reported.

To learn more about margins of error, see:
*And Now for the Grain of Salt:
Margins of Error and the American Community Survey.*

You can find a copy on the Kentucky: By The Numbers website"
<http://www.ca.uky.edu/snar/>

Can I use the American Community Survey to update detailed data from the 2000 Census?

Yes. But, there are several differences between the American Community Survey and the 2000 Decennial Census Long Form that affect our ability to make comparisons across the two sources.

One difference between the American Community Survey and the Decennial Census is that the ACS is an ongoing survey. This means that instead of once every 10 years, questionnaires are sent out every month.

Because it is an ongoing survey, new questions can be added to collect data on emerging issues.

As a result, the American Community Survey has questions that were not part of the 2000 Census Long Form.

Another difference is that the Decennial Census Long Form gave us a snapshot every 10 years. This means that the questions were worded to reflect this time frame.

For example, in order to collect data on migration, the Decennial Census Long Form asked if the person had lived in the same place 5 years ago.

Because the ACS sends out questionnaires every month and data are released every year, the wording was changed for some of the questions.

In the case of the migration question, it still asks if the person lives in the same place, but in the American Community Survey the time frame is only 1 year (instead of 5 years ago).

How can I find out if data from the ACS are comparable with the 2000 Census Long Form?

The Census Bureau examines every question in the American Community Survey and classifies the data from each question in three ways: Compare, Compare with Caution, and Do Not Compare.

To find a complete list of comparisons, go to:

http://www.census.gov/acs/www/guidance_for_data_users/comparing_data/

Because the ACS questions can change year to year, always double check the Census Bureau website. The lists below are based on the 2011 ACS.

Which data are available from the ACS, but were not part of the 2000 Census Long Form?

Since the American Community Survey can add new questions each year, there are several that were not part of the 2000 Census Long Form.

“DO NOT COMPARE”

(Questions were not asked on the 2000 Census Long Form)

- Marital History
- Fertility
- Education: Field of Degree
- Veteran Status: Service-Connected Disability Status
- Veteran Status: Service-Connected Disability Ratings
- Food Stamp Benefit
- Health Insurance

While data from these questions can be found in the American Community Survey estimates, they are not comparable because there are no corresponding data from the 2000 Decennial Census Long Form.

Which are the data that I cannot compare?

While many of the questions in the American Community Survey are the same as what was in the 2000 Census Long Form, some of them had to be changed so much that the data are not comparable.

“DO NOT COMPARE”

(Questions differ too much)

- Residence 1 Year Ago (Migration)
- Relationship to Householder
- Household/Family Type
- Subfamilies
- Disability: Hearing / Vision difficulty
- Ambulatory / Self-Care difficulty
- Independent Living difficulty
- Real Estate Taxes
- Gross Rent as a Percentage of Household Income
- Contract and Gross Rent
- Occupants per room
- Vacancy Status of Housing

Which are the data that I can compare?

There are data from two kinds of questions that the Census Bureau says can be compared between the American Community Survey and the 2000 Decennial Census Long Form. The first kind are when the questions are the same.

“Compare”

(No additional information is needed)

- Foreign Born; Citizenship; Year of Entry; Nativity
- Citizenship Status
- Nativity
- Place of Birth
- Place of Birth
- Journey to Work; Workers; Commuting
- Place of Work
- Private Vehicle Occupancy
- Time Leaving Home
- Travel Time to Work
- Grandparents; Grandchildren
- Grandparents as Caregivers
- Language Spoken at Home and Ability to Speak English
- Ability to Speak English
- Language Spoken at Home
- Housing
- Cost of Utilities
- House Heating Fuel
- Monthly Rent
- Tenure
- Units in Structure
- Vehicles Available
- Year Moved In
- Year Structure Built

The second kind of comparison that can be made is when the questions were changed, but the differences generally do not affect the data.

For example, starting with the 2008 American Community Survey the formatting for the question on sex was changed. However, since the wording of the question remained the same, the data are still comparable.

Another example of how questions in the two data sources can differ is when the number of possible responses to a question were changed.

This is the case for educational attainment and marital status. In the American Community Survey, both of these questions have options that the 2000 Census Long Form did not.

While the American Community Survey has more options, since the additional categories can be combined to match the 2000 Decennial Census, comparing the data is still possible.

“Compare”*(BUT, additional information is needed)*

Age
Sex
Ancestry
Ancestry
Foreign Born; Citizenship; Year of Entry; Nativity.
Year of Entry
Journey to Work; Workers; Commuting
Means of Transportation to Work
Marital Status and History
Marital Status
School Enrollment
Type of School
School Enrollment
Educational Attainment
Educational Attainment
Veteran Status
Period of Military Service
Veteran Status
Employment Status; Work Experience; Labor Force
Hours Worked
Weeks Worked
Housing
Mortgage Status

If you would like to compare these data, read the “details” link for each one at:

http://www.census.gov/acs/www/guidance_for_data_users/comparing_data/

Do all of the data fit the categories of Compare and Do Not Compare?

No. While many of the items in the American Community Survey and the 2000 Census Long Form are comparable, there were also some changes that were so great that the Census Bureau recommends that comparisons should only be made with Caution.

“Compare with Caution”*(Differences can affect comparisons)*

Age and Sex
Age
Race
Race
Hispanic Origin
Hispanic or Latino Origin
Poverty
Poverty Status of Families and People in Families
Poverty Status of All People in the Poverty Universe

“Compare with Caution”*(CONTINUED)**(Differences can affect comparisons)*

Income (Households and Families)
Household and Family Incomes
Sources of Income (households)
Earnings and Income (Individuals)
Per Capita Income
Earnings (people)
Income (people)
Employment Status
Industry & Occupation
Class of Worker
Industry
Occupation
Housing
Value of Property
Telephone Service
Selected Monthly Owner Costs
Rooms
Plumbing Facilities
Owner Costs as a Percentage of Household Income
Kitchen Facilities
Bedrooms
Group Quarters
Group Quarters Population

If you want to compare any of these, read the “details” link for each one at:

http://www.census.gov/acs/www/guidance_for_data_users/comparing_data/

My county has 1-, 3-, and 5-year estimates from the ACS. Which do I use to compare with the 2000 Census?

You can use any of them, just remember:

1. Data from the Decennial Census are a snapshot while estimates from the American Community Survey cover the full 12, 36, or 60 months (depending on the estimate’s time frame).
2. If you have all 3 types of estimates, the 1-year estimates have the largest margin of error and so are the least reliable.
3. The only estimates from the American Community Survey that are available for all geographies (including counties) are the 5-year estimates.

The American Community Survey can change year to year. For the most up-to-date information on comparing data, always check the Census Bureau’s website on the American Community Survey.

This publication synthesizes information drawn primarily from U.S. Census Bureau publications and websites, and is an updated and revised version of “Cautionary Tales...” by Julie N. Zimmerman and Sarah Frank Bowker (April 2011).

Kentucky: By the Numbers is a program of the Kentucky Cooperative Extension Service in the Department of Community and Leadership Development at the University of Kentucky. Primarily known for the data series by the same name, the program also provides publications and other resources for those interested in finding data on their county. Data and resources are available on the Kentucky: By the Numbers section of the SNARL (<http://www.ca.uky.edu/snarl>) website. For more information contact your local Cooperative Extension office or Julie N. Zimmerman, Department of Community and Leadership Development, 500 Garrigus Building, University of Kentucky, Lexington, KY 40546-0215. Email: jzimm@email.uky.edu.