

Understanding Multiyear Estimates from the American Community Survey

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Overview

- What are multiyear estimates?
- When should you use multiyear estimates?
- What should you be aware of when using multiyear estimates?
- How can you use multiyear estimates to make comparisons?
- Example of using multiyear estimates

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What are multiyear estimates?

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What is a Period Estimate?

Definition

An estimate that describes the average characteristics of an area over a specific time period

Period for ACS 1-year estimates is the calendar year

Different from a point-in-time estimate

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What is a Multiyear Estimate?

Definition

A period estimate that encompasses more than one calendar year

Period for ACS multiyear estimates is either 3 or 5 calendar years

Population Thresholds for ACS Estimates

	1-year estimates	3-year estimates	5-year estimates
65,000 + people	X	X	X
20,000+ people		X	X
Less than 20,000 people			X

How to Label Multiyear Estimates

- ACS estimates based on data collected from 2005-2007 should not be labeled “2006” or “2007” estimates
- Multiyear estimates do not represent any one year or the midpoint of a period
- Correct labeling for multiyear estimate: “The child poverty rate for the 2005-2007 period was X percent.”

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Constructing Multiyear Estimates

- Data are pooled across 36 or 60 months
- Data are weighted to produce estimates
- Estimates are controlled for age, sex, race, and Hispanic origin
- Multiyear estimates are not an average of 1-year estimates

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When should I use multiyear estimates?

Use Multiyear Estimates When ...

- No 1-year estimate is available
- Margins of error for 1-year estimates are larger than required
- Analyzing data for small population groups

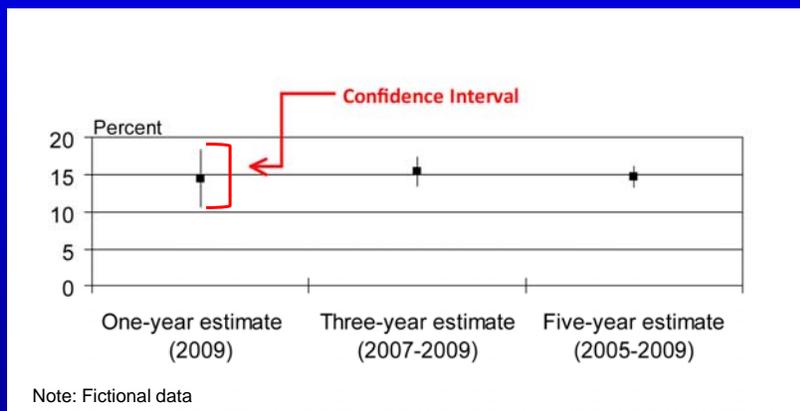
Currency vs. Reliability

Currency	Reliability
1-year estimates provide information based on the last year	Larger sample sizes produce estimates that are more statistically reliable
3-year estimates provide information based on the last year and the 2 years before that	3-year estimates are based on 3 times as many sample cases as 1-year estimates
5-year estimates provide information based on the last year and the 4 years before that	5-year estimates are based on 5 times as many sample cases as 1-year estimates

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Reliability



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What should I be aware of when using multiyear estimates?

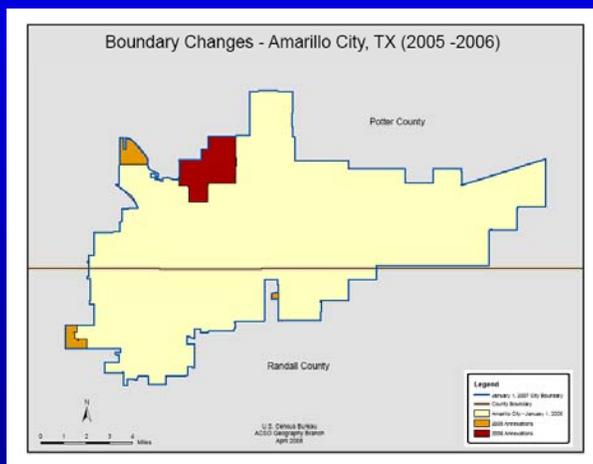
Inflation Adjustment

- Dollar-valued data items are inflation adjusted to the most recent year for the period
- Income, rent, home value, and energy costs
- Adjusted using inflation factors based on the Consumer Price Index (CPI)
- Adjustment designed to put the data into dollars with equal purchasing power

Geographic Boundaries

- Multiyear estimates are based on geographic boundaries as of January 1 of the last year in the multiyear period
- Boundary Annexation Survey collects boundary changes
- Boundaries of other statistical areas will be updated every decade in conjunction with the decennial census

Geographic Boundaries Amarillo city, Texas



Population Controls

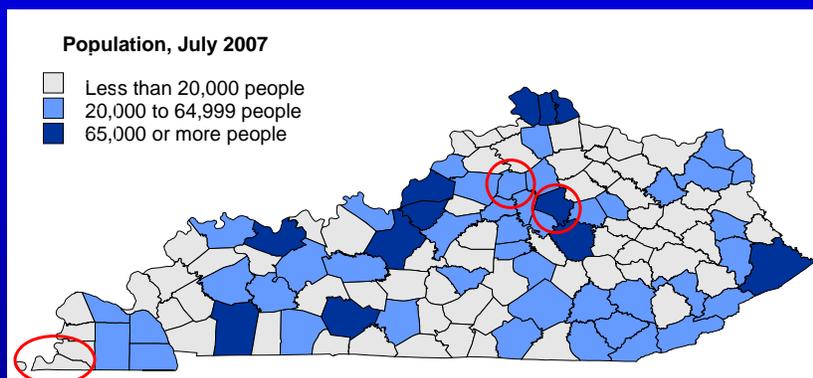
- Estimates of housing units and people are controlled to the population estimates derived from the Population Estimates Program
- Multiyear estimates are controlled to the average of the individual year's estimates for the period

How can I use multiyear estimates
to make comparisons?

Comparing Across Geographies

- Only compare the same type of estimate
 - 1-year estimates to other 1-year estimates
 - 3-year estimates to other 3-year estimates
 - 5-year estimates to other 5-year estimates
- Same time period

Counties in Kentucky, by Population Size



Source: U.S. Census Bureau, American Community Survey Handbook for General Audiences.

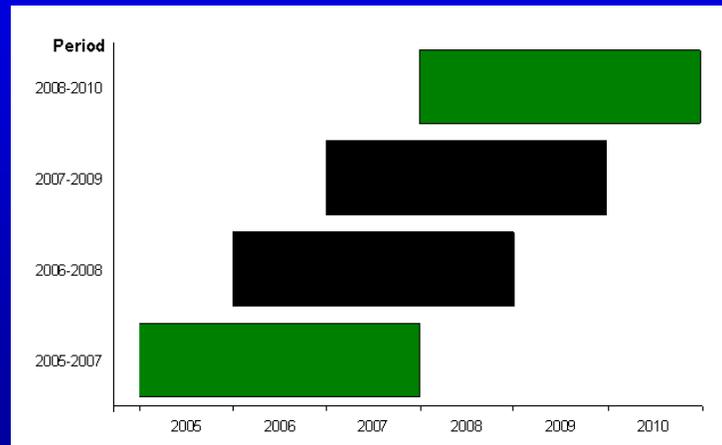
Comparing Data in 2010

	2009	2007-2009	2005-2009
Fayette County	X	X	X
Franklin County		X	X
Fulton County			X

Comparing Across Time Periods

- Same geographic area
 - Use caution if geographic boundaries have changed over time
 - Easier to compare non-overlapping periods
 - Make comparisons using the same length time period

Overlapping Periods



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Comparing ACS Data with Census 2000

- Global differences exist between ACS and Census 2000
- Comparisons can be made for most population and housing subjects

<http://www.census.gov/acs/www/UseData/compACS.htm>

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Example of using multiyear estimates

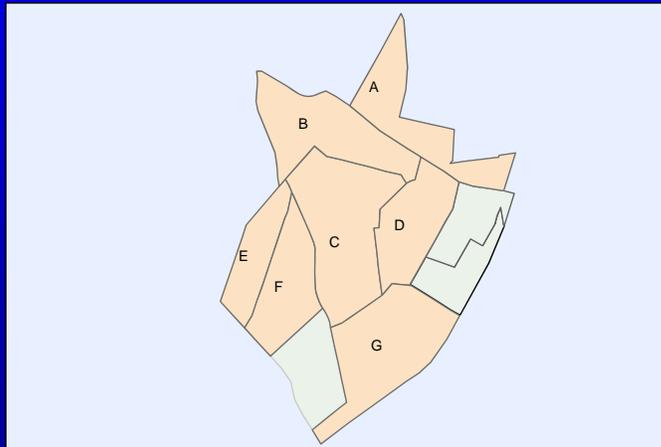
Tracking Social Change

- 7 school districts in the county of Centerville, USA
- Question to be answered:
 - Has there been a change in the population with a high school diploma in these school districts?

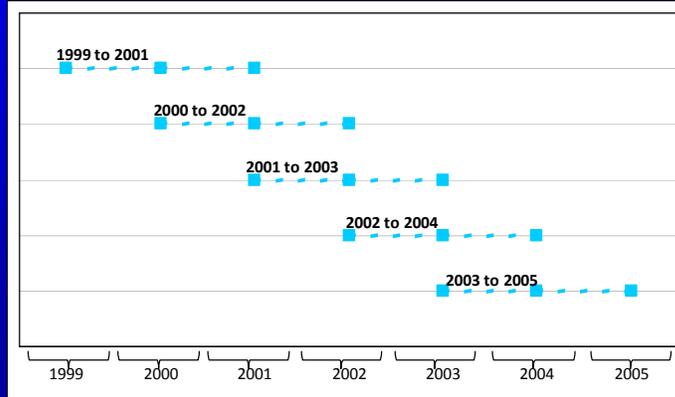
Determining Which Data To Use

- Since the data must be “current,” decennial census long form data for 1990 and 2000 are not adequate
- A data analyst turns to the ACS data for a look at trends since 2000
- Only data available are three-year ACS estimates for 7 school districts

Centerville County, USA



3-Year Estimates Available for the School Districts, 1999-2005



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Choosing the Estimates

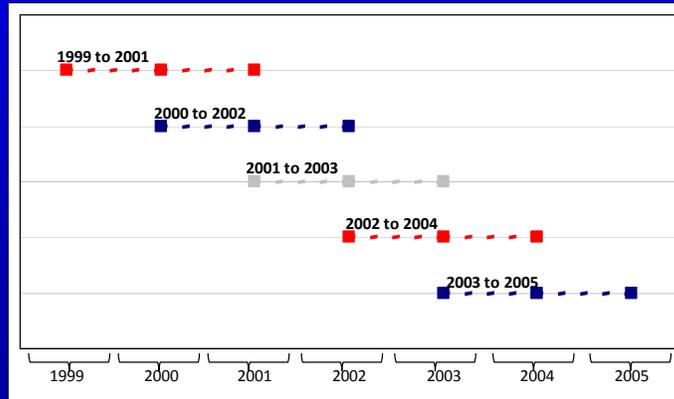
These estimates allow for ten comparisons:

- 1999-2001 vs. 2000-2002
- 1999-2001 vs. 2001-2003
- 1999-2001 vs. 2002-2004
- 1999-2001 vs. 2003-2005
- 2000-2002 vs. 2001-2003
- 2000-2002 vs. 2002-2004
- 2000-2002 vs. 2003-2005
- 2001-2003 vs. 2002-2004
- 2001-2003 vs. 2003-2005
- 2002-2004 vs. 2003-2005

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Determining Which Estimates to Use



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Summary: What Have We Learned?

- Multiyear estimates are period estimates
- Multiyear estimates should be interpreted and labeled as period estimates
- Data users should consider the tradeoffs of currency versus reliability

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Summary: What Have We Learned?

- Comparisons between estimates of different geographies should be based on ACS data from the same time periods
- It is easier to compare estimates from non-overlapping periods

For more information

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Contact by telephone:

1-800-923-8282

Contact by email:

acso.users.support@census.gov