Integrating Census Data and Public Policy

Sarah Ehresman
Research Coordinator
Kentucky State Data Center
March 27, 2014
A Quick History Lesson

• First Census in 1790

• In 1850 questions on social and economic issues added

• In 1940 Census incorporates statistical sampling
  • Short form – went to everyone
  • Long form – went to sample of the population

• Long form discontinued after 2000 and replaced with American Community Survey
American Community Survey

• Rolling annual survey produces ESTIMATES on characteristics of the population
  • 1 in 40 households annually
• Updates every year!
• Smaller sample size than Census long form
• Larger standard error
American Community Survey

• 1-year, 3-year, 5-year estimates
  • Average survey data to reduce margin of error
  • Data pertain to period of time, not specific point-in-time

<table>
<thead>
<tr>
<th>Data collected between...</th>
<th>Data pooled to produce</th>
<th>Data published for areas with</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1, 2012 and December 31, 2012</td>
<td>2012 ACS 1-year estimates</td>
<td>populations of 65,000+</td>
</tr>
<tr>
<td>January 1, 2010 and December 31, 2012</td>
<td>2010-2012 ACS 3-year estimates</td>
<td>populations of 20,000+</td>
</tr>
<tr>
<td>January 1, 2008 and December 31, 2012</td>
<td>2008-2012 ACS 5-year estimates</td>
<td>populations of almost any size</td>
</tr>
</tbody>
</table>
# American Community Survey

<table>
<thead>
<tr>
<th>1-year estimates</th>
<th>3-year estimates</th>
<th>5-year estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 months of collected data</td>
<td>36 months of collected data</td>
<td>60 months of collected data</td>
</tr>
<tr>
<td>Data for areas with populations of 65,000+</td>
<td>Data for areas with populations of 20,000+</td>
<td>Data for all areas</td>
</tr>
<tr>
<td>Smallest sample size</td>
<td>Larger sample size than 1-year</td>
<td>Largest sample size</td>
</tr>
<tr>
<td>Less reliable than 3-year or 5-year</td>
<td>More reliable than 1-year; less reliable than 5-year</td>
<td>Most reliable</td>
</tr>
<tr>
<td>Most current data</td>
<td>Less current than 1-year estimates; more current than 5-year</td>
<td>Least current</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Best used when</th>
<th>Best used when</th>
<th>Best used when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency is more important than precision</td>
<td>More precise than 1-year, more current than 5-year</td>
<td>Precision is more important than currency</td>
</tr>
<tr>
<td>Analyzing large populations</td>
<td>Analyzing smaller populations</td>
<td>Analyzing very small populations</td>
</tr>
<tr>
<td></td>
<td>Examining smaller geographies because 1-year estimates are not available</td>
<td>Examining tracts and other smaller geographies because 1-year estimates are not available</td>
</tr>
</tbody>
</table>
American Community Survey
# American Community Survey

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

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

*Marital History, VA Service-Connected Disability Rating, and Health Insurance Coverage are new for 2008.

Source: U.S. Census Bureau.
A Dynamic Survey

• 2008
  • Marital history
  • Health insurance coverage
  • Service connected disability status and rating
  • Disability

• 2009
  • Bachelor’s field of degree

• 2013
  • Computer ownership
  • Internet access
Decennial Census
Summary File 1 (SF1) 100%

- Demographics
  - Total population
  - Sex
  - Age
  - Race
  - Hispanic or Latino origin
  - Household relationship
  - Household type
  - Household size
  - Family type
  - Family size
  - Group quarters

- Housing
  - Number of housing units
  - Occupancy status
  - Vacancy status
  - Tenure
    - Owner-occupied
    - Renter-occupied
  - Urban/Rural designations
Geography
Zip Code Tabulation Areas (ZCTA) within Jefferson County
Accessing Data

• American Fact Finder [http://factfinder2.census.gov](http://factfinder2.census.gov)
• Guided search is useful for new users
• Advanced search for experienced users
• Download
  • CSV
  • Excel
  • PDF
  • RTF
Begin with the menus on the left

I would like to use the latest ACS 3-year estimates but am not sure which counties are available...

I need data for Adair County but am not sure of the most recent data available...
American Fact Finder
Pay Attention to the Universe!

- **B17001**
  - **POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE**
  - Universe: Population for whom poverty status is determined
  - 2012 American Community Survey 1-Year Estimates

- **B17019**
  - **POVERTY STATUS IN THE PAST 12 MONTHS OF FAMILIES BY HOUSEHOLD TYPE BY TENURE**
  - Universe: Families
  - 2012 American Community Survey 1-Year Estimates

- **B17017**
  - **POVERTY STATUS IN THE PAST 12 MONTHS BY HOUSEHOLD TYPE BY AGE OF HOUSEHOLDER**
  - Universe: Households
  - 2012 American Community Survey 1-Year Estimates

- **B17006**
  - **POVERTY STATUS IN THE PAST 12 MONTHS OF RELATED CHILDREN UNDER 18 YEARS BY FAMILY TYPE BY AGE OF RELATED CHILDREN UNDER 18 YEARS**
  - Universe: Related children under 18 years
  - 2012 American Community Survey 1-Year Estimates

- **P16**
  - **POPULATION IN HOUSEHOLDS BY AGE**
  - Universe: Population in households
  - 2010 Census Summary File 1

- **P22**
  - **HOUSEHOLD TYPE BY AGE OF HOUSEHOLDER**
  - Universe: Households
  - 2010 Census Summary File 1
Data Comparisons

- Only compare the same type of estimate
  - 5-year estimates to other 5-year estimates
- Non-overlapping periods
  - 2007-2009 estimate to 2010-2012 estimate
- 2000 SF3
  - Some differences in phrasing of questions
  - Period estimates vs. point in time
    - Income, Vacancy rate, college students
  - For most population and housing subjects, comparisons can be made

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

- American Community SURVEY
  - Sampling and Non-Sampling Error
- Margins of Error reported for 90% confidence levels
- Test for reliability
  - Standard Error = Margin of Error / 1.645
  - Coefficient of Variation = (Standard Error / Estimate) * 100
- Census says use caution when CV > 15%
Additional Data Sources

Kentucky State Data Center

http://ksdc.louisville.edu/

• Census Profiles
  • State, ADDs, County, Cities
  • 1980 – 2010
• Population Estimates
• Projections
• Vital Statistics
• Descriptions of all kinds of public databases
• Other useful links
  • Kids Count, Kentucky Health Facts
• Data Requests
Questions?