Data for Dollar$$
Using Census Data in Grant Writing

Willamette Valley Development Officers
Portland, Oregon
June 26, 2013
Agenda

• Census data and grant proposals
• Census demographic programs
  - 2010 Census
  - American Community Survey
• Census geography
• Accessing the data
• Presenting the data
• Summary: Where to start
• Resources
Importance of Census Data

Census data are instrumental in determining the allocation of over $450 billion dollars annually through 140 Federal assistance programs.
Uses of Census Data . . .

Power, Justice, Money!

- **Political power**
  - Congressional reapportionment and legislative redistricting

- **Economic power**
  - Small business development
  - Labor market analysis

- **Advocacy**
  - Agencies can access community well being

- **Community development**
  - Data can identify needs for new schools and new roads

- **Funding**
  - Why we are here!
A Successful Grant Proposal Is . . .

- Well organized
- Thoughtfully planned
- Concisely packaged
- Backed with supportive data
Components of the Grant

- Activity plan and timeline
- Budget section
- References
- Needs statement
- Goals and objectives
- Project description

Use Supportive Data
The Needs Statement

• Typically sets tone for proposal
• Must be demonstrated through facts
• Use the most recent data

Census Bureau website: census.gov
American FactFinder: factfinder2.census.gov
The Needs Statement

• Describes the population that will benefit or the target population to be served.

• Defines the community problem to be addressed.

• Includes both quantitative and qualitative support materials.

• Describes the situation in factual terms.
Good Data . . .

• From a reliable source
• Relevant to the need you have identified
• Drawn from -- or closely related to -- your target population
• Presented clearly in two forms
  • Narrative
  • Graphics

Tell a good story
Funders are NOT going to make a grant to your organization because . . .

• You need money

• You have good intentions

• You want to provide service
Funders WILL make a grant because . . .

• Your problem is significant
• You have established your credibility as an organization
• You have a solid plan of action with realistic time-frames and expectations
• Your leadership has indicated a strong commitment to the project
Benefits of Census Bureau Data

• Comparable nationwide
• Collected regularly
• Uniform methodology
• Recognized as gold standard
• Available / accessible (free!)
Census Bureau Demographic Programs

What We Offer

- Censuses
- Surveys
- Estimates

What’s the difference?
Census Bureau Demographic Programs
Data Dissemination

- **Censuses (Decennial Census)**
  - 100% coverage of population and housing
  - Updated every ten years (quickly out of date)
  - Data released to block level (rich geographical detail)

- **Surveys (American Community Survey)**
  - About 2.5% of U.S. housing units contacted each year
  - Annual release of estimates with margins of error
    (currency of data vs. reliability of data)
  - Data released to block group level

- **Estimates (Population Estimates Program)**
  - Reliable estimates built on census benchmark
  - Lean geographical or topical detail
## Quick Reference Guide
### Comparing the Programs

<table>
<thead>
<tr>
<th>Comparison: Census Bureau Demographic Programs</th>
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<tbody>
<tr>
<td><strong>Decennial Census</strong></td>
</tr>
<tr>
<td>Purpose / Uses</td>
</tr>
<tr>
<td>Temporal frame</td>
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<tr>
<td>Reference date</td>
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<td>Periodicity</td>
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<td>Burden on respondent</td>
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<td>Authority</td>
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<td>Methodology</td>
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<td>Modes of Personal contact</td>
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<td>Management hub[s]</td>
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<td><strong>Data</strong></td>
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<tr>
<td>Topics</td>
</tr>
<tr>
<td>Lowest level of release</td>
</tr>
</tbody>
</table>
Census Bureau Demographic Programs
Differences

**Census**
- Every 10 Years
- 100 Percent Data
- Official Count

**ACS**
- Yearly
- Sample Data (3.54 million housing units per year, or 295,000 per month)
- Estimates (trends / comparisons)
Census Geography
Census Geography Hierarchy
(with 2010 Statistical Area Criteria)
Revised 02-19-13

Central axis describes a nesting relationship

### Types of Place
- **Cities and towns** -- incorporated
- **Census Designated Places (CDPs):**
  - Unincorporated; no size threshold
  - Separate and distinct from city/town
  - Redefined each census

### Block Groups
- 600 to 3,000 population
- 240 to 1,200 housing units

**Block not defined by population**
- Lowest geographic level for data

*Block level data only for Decennial Census*

### Census Tracts
- 1,200 to 8,000 population (optimum 4,000)
- 480 to 3,200 housing units
Small Area Geography Hierarchy

- **Block number**: Blocks have 4-digit numbers – their block group number (“3” in this illustration) is the first digit.
- **Block group number**: Always a single digit (1 to 9).
- **Census tract number**: A decimal indicates that a census tract has been split, usually because it has exceeded the optimum size (housing units or population). This enables comparability from census to census.
- **Decennial Census**: Lowest level of geography on American FactFinder (AFF) - - block.
- **American Community Survey**: Lowest level of geography on AFF - - census tract; on the FTP (download) site - - block group.
Maps & Data

Find geographic data and products such as the TIGER/Line Shapefiles, KMLs, TIGERweb, cartographic boundary files, geographic relationship files, and reference and thematic maps.

Maps

- Census Data Mapper
- Reference
- Thematic
- Maps Available for Purchase

Data

- TIGER Products
- Partnership Shapefiles
- Relationship Files
- Comparability Files
- Places
- County Subdivisions
- Gazetteer Files
- Block Assignment Files
- Name Lookup Tables
- Tallies
- LandView

Reference Maps

The Census Data Mapper is a web mapping application intended to provide users with a simple interface to view, save and print county-based demographic maps of the United States.

Geographic Data

TIGER Products

Geospatial Files and Applications from our MAF/TIGER database. Tools for use in GIS software, Web Mapping Services (WMS) to use in your applications, and browsers to view geographic data.

Partnership Shapefiles

The Partnership Shapefiles are used in our partner programs to share data with and capture data from our partners.

Relationship Files

Relationship files help users compare different vintages of geography, such as Census 2000 blocks to 2010 Census blocks in text format.
2010 Census (Madras city, OR)

Block Reference Maps

Homepage > Geography tab > Maps and Data > Reference Maps > Census Reference Maps > Block Maps (2010) > Place (select state) > GO > click hyperlink for place > open 000.pdf (index map) to determine map sheet number (or inset letter) > back out > select map sheet (or inset)
Race and Ethnicity
8. Is Person 1 of Hispanic, Latino, or Spanish origin?
   - No, not of Hispanic, Latino, or Spanish origin
   - Yes, Mexican, Mexican Am., Chicano
   - Yes, Puerto Rican
   - Yes, Cuban
   - Yes, another Hispanic, Latino, or Spanish origin — Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.

9. What is Person 1’s race? Mark X one or more boxes.
   - White
   - Black, African Am., or Negro
   - American Indian or Alaska Native — Print name of enrolled or principal tribe.
   - Asian Indian
   - Japanese
   - Native Hawaiian
   - Chinese
   - Korean
   - Guamanian or Chamorro
   - Filipino
   - Vietnamese
   - Samcan
   - Other Asian — Print race, for example, Hmong, Lao, Thai, Pakistani, Cambodian, and so on.
   - Other Pacific Islander — Print race, for example, Fijian, Tongan, and so on.
   - Some other race — Print race.
Decennial Census
2010 Census

Questionnaire Topics

- (Name)
- Sex
- Age
- Date of birth
- Ethnicity

- Race
- Relationship of people within household
- Rent / own house (tenure)
- (Coverage questions)
Population Estimates Program (PEP)
Population Estimates

Intercensal Year Releases

• Population counts
  – Nation - - age, sex, race, and Hispanic origin
  – States - - age, sex, race, and Hispanic origin
  – Counties - - age, sex, race, and Hispanic origin
  – Incorporated places - - total population only

• Housing unit counts
  – States
  – Counties
American Community Survey (ACS)
American Community Survey

History

1940-2000
• Decennial Census: Short Form & Long Form

2005
• American Community Survey replaces Decennial Long Form

2010
• Decennial Census: Short Form only
# ACS Data Products / Thresholds

## The American Community Survey (ACS) Data Release Timetable

<table>
<thead>
<tr>
<th>Data Product (next release)</th>
<th>Population Threshold of Statistical Area</th>
<th>Year(s) of Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Year Estimates (09-13)</td>
<td>65,000 +</td>
<td>2005 - 2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2006 - 2008</td>
</tr>
<tr>
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<td>2007 - 2008</td>
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<td>2009 - 2010</td>
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<td>2010 - 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012 - 2013</td>
</tr>
<tr>
<td>3-Year Estimates (10-13)</td>
<td>20,000 +</td>
<td>2005 - 2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2006 - 2008</td>
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<td>2008 - 2010</td>
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<td>2009 - 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2010 - 2012</td>
</tr>
<tr>
<td>5-Year Estimates (12-13)</td>
<td>All Areas*</td>
<td>2005 - 2009</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2006 - 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2007 - 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2008 - 2012</td>
</tr>
</tbody>
</table>

*All areas include large metropolitan areas, small metropolitan areas, and rural areas.
## Topics

### American Community Survey

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Social</th>
<th>Economic</th>
<th>Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Families</td>
<td>Income</td>
<td>Tenure</td>
</tr>
<tr>
<td>Age</td>
<td>Education</td>
<td>Poverty</td>
<td>Occupancy</td>
</tr>
<tr>
<td>Race</td>
<td>Marital Status</td>
<td>Food Stamps / SNAP</td>
<td>Structure Housing</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Fertility</td>
<td>Employment Status</td>
<td>Value</td>
</tr>
<tr>
<td>Household Relationship</td>
<td>Grandparent Caregivers</td>
<td>Occupation</td>
<td>Taxes / Insurance</td>
</tr>
<tr>
<td>Group</td>
<td>Veterans</td>
<td>Industry</td>
<td>Utilities</td>
</tr>
<tr>
<td>Quarters</td>
<td>Disability Status</td>
<td>Journey to Work</td>
<td>Mortgage</td>
</tr>
<tr>
<td></td>
<td>Language at Home</td>
<td>Place of Work</td>
<td>Monthly Rent</td>
</tr>
<tr>
<td></td>
<td>Citizenship</td>
<td>Health Insurance</td>
<td>Vehicles</td>
</tr>
<tr>
<td></td>
<td>Migration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Items in brown were also collected on the 2010 Census*
American Community Survey

In a Nutshell

• Strengths
  – Data are current
  – Rich topical detail

• Challenges
  – Reliability issues due to sample size
    • Small areas
    • Small population groups
  – Data user must consider margin of error (MOE) when using ACS estimates
ACS Updates and Improvements

Sample Size Increase

- Sample expanded from 2.9 million to 3.54 million addresses per year
- Begun during 2011 data collection
  - Mail out -- June 2011
  - CATI (Computer-Assisted Telephone Interview) -- July 2011
  - CAPI (Computer-Assisted Personal Interview) -- August 2011
ACS Updates and Improvements

Reallocation of Sample

• Objective: Improve the reliability of the estimates for small areas

• Increased sampling rates for small tracts and governmental units

• Slightly decreased sampling rates in larger tracts

• Begun in January 2011
ACS Updates and Improvements: New Questions
Computer Ownership / Internet Usage

**9.** At this house, apartment, or mobile home – do you or any member of this household own or use any of the following computers?

- EXCLUDE GPS devices, digital music players, and devices with only limited computing capabilities, for example: household appliances.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Desktop, laptop, netbook, or notebook computer</td>
<td>□ □</td>
</tr>
<tr>
<td>b. Handheld computer, smart mobile phone, or other handheld wireless computer</td>
<td>□ □</td>
</tr>
<tr>
<td>c. Some other type of computer</td>
<td>Specify</td>
</tr>
</tbody>
</table>

**10.** At this house, apartment, or mobile home – do you or any member of this household access the Internet?

- Yes, with a subscription to an Internet service
- Yes, without a subscription to an Internet service → **SKIP to question 12**
- No Internet access at this house, apartment, or mobile home → **SKIP to question 12**

**11.** At this house, apartment, or mobile home – do you or any member of this household subscribe to the Internet using –

<table>
<thead>
<tr>
<th>a. Dial-up service?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. DSL service?</td>
<td>□ □</td>
<td></td>
</tr>
<tr>
<td>c. Cable modem service?</td>
<td>□ □</td>
<td></td>
</tr>
<tr>
<td>d. Fiber-optic service?</td>
<td>□ □</td>
<td></td>
</tr>
<tr>
<td>e. Mobile broadband plan for a computer or a cell phone?</td>
<td>□ □</td>
<td></td>
</tr>
<tr>
<td>f. Satellite Internet service?</td>
<td>□ □</td>
<td></td>
</tr>
<tr>
<td>g. Some other service?</td>
<td>Specify service</td>
<td>□ □</td>
</tr>
</tbody>
</table>

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*United States Census Bureau*
ACS Updates and Improvements

Internet Response Option

• Ongoing digital transformation
  – 61st U.S. Census Bureau survey with Internet response option
    • Households in sample receive letter with login instructions to secure website
    • Participants have the ability to review responses
    • Assistance available to respondents
  – Advantages
    • More convenient for respondents
    • More cost-effective
  – Secure and confidential
Accessing the Data
Census Homepage: census.gov
Census.gov (left column): Quick Data Tools

- Quick Facts
- Interactive Map
- Population Finder
Census Homepage: census.gov

Data tab menu: American FactFinder and Easy Stats
Easy Stats

1. Select Geography

Optional:
Refine by
- County
- Place
- Congressional District

Spokane County, Washington

2. Choose a topic:

- Financial
- Jobs
- Housing
- People
- Education

Current Table: None

3. Get Results

Clear Choices

About Easy Stats

Easy Stats gives you quick and easy access to selected statistics collected by the U.S. Census Bureau through the American Community Survey. With the American Community Survey, detailed demographic and economic statistics are available every year for the nation's communities and their people.

This interactive tool provides the latest statistics about where you live. You can search different geographies including states, counties, incorporated places (towns/cities), census designated places (CDP) and even your congressional district. With Easy Stats, you can view detailed racial, age and sex breakdowns and much more.

Powered by
The American Community Survey
and Census API
factfinder2.census.gov

Click on Advanced Search tab
Advanced Search

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

To search for tables and other files in American FactFinder:

1. Enter search terms and an optional geography and click GO

2. Select one or more Search Results and click View

Search using the options below:
- Topics (age, income, year, dataset, ...)
- Geographies (states, counties, places, ...)
- Race and Ethnic Groups (race, ancestry, tribe)
- Industry Codes (NAICS industry, ...)
- EEO Occupation Codes (executives, analysts, ...)

Filter bars
Refine your search by making selections
Can be opened in any order
Drill down through available links – see next slide
Presenting the Data
Census Data Profiles

• Good place to start

• Provide fact sheets on the social, economic, demographic, and housing characteristics for different geographic areas

• About 450 different characteristics
Provide Comparisons

• Use current data: 2+ areas or groups (or both)
  – Geography(ies)
  – Population group(s)
  – Subset to larger area or group

• Track change over time (2000 to 2010, for example)
  – One geography (remember boundary changes)
  – One group (Latinos)
## Population Change

### Power of Comparisons

<table>
<thead>
<tr>
<th>County</th>
<th>Old: 2000</th>
<th>New: 2010</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha County</td>
<td>255,602</td>
<td>262,382</td>
<td>6,780</td>
<td>2.7%</td>
</tr>
<tr>
<td>Bravo city</td>
<td>10,033</td>
<td>9,918</td>
<td>-115</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Charlie CDP</td>
<td>16,628</td>
<td>17,158</td>
<td>530</td>
<td>3.2%</td>
</tr>
<tr>
<td>Delta city</td>
<td>54,593</td>
<td>59,946</td>
<td>5,353</td>
<td>9.8%</td>
</tr>
<tr>
<td>Echo city</td>
<td>11,385</td>
<td>11,580</td>
<td>195</td>
<td>1.7%</td>
</tr>
<tr>
<td>Foxtrot city</td>
<td>44,265</td>
<td>51,199</td>
<td>6,934</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

Percent change equation: New minus Old divided by Old multiplied by 100

(fictitious geography)
Presenting the Data Tips

- Show both data and derived measures
  - Example: 3,000 families, or 15%, are living below the poverty level

- Note the “universe” for the table
  - Example: “Population for whom poverty status is determined”

- Two data points do not define a “trend”
Derived Measures*

*A unit that is determined by combining one or more measurements

- Mean = average
- Median
- Percent
- Rate

The ACS generally does a better job estimating percentages, rate, means, and medians than it does totals
Income Estimates

Mean = Average

Salaries of nine workers at the World Wide Widget Company:

The CEO makes $100,000 per year,
Two managers make $50,000 per year,
Four factory workers make $15,000 each per year, and
Two trainees make $9,000 each per year.

Add $100,000 + $50,000 + $50,000 + $15,000 + $15,000 + $15,000 + $15,000 + $9,000 + $9,000, which gives you $278,000.
Then you divide that total by 9 -- the number of values or workers in the set of data
This gives you the mean or average, which is $30,889

Be careful! Only three of the nine workers at WWW Co. make that much money, and the other six workers don’t even make half the average salary.

So what statistic should you use when you want to give some idea of what the average worker at WWW Co. is earning? Let’s look at the median.
When you speak about the average worker or average household, you really want a statistic that tells you something about the worker or the household in the **middle**. Again, this statistic is easy to determine because the median literally is the value in the middle. Just line up the values in your set of data, from largest to smallest. The one in the dead-center is your median. Below are the nine WWW Co. workers’ salaries:

- $100,000
- $50,000
- $50,000
- $15,000
- $15,000
- **$15,000**
- $15,000
- $15,000
- $9,000
- $9,000

The one halfway down the list, the fifth value, is $15,000. That’s the median. If you have an even number of values, split the difference between the two in the middle.

Comparing the mean ($30,889) to the median ($15,000) gives you an idea how widely the values in your dataset are spread apart.
Calculated Measures -- examples

• Poverty
  – A set of money income thresholds that vary by family size and composition -- updated annually

• Age dependency ratios
  – Measures the share of people in the total population who are not economically active (children under 18 years and seniors 65 and older)

• Gini index
  – Measures the degree of inequality in the distribution of family income in a country
Charts and Graphs

Good Data Visualization

• Reduces “cognitive load”
  – Enables reader to understand relationships quickly and clearly

• Is self-explanatory
  – Narrative can provide background

  • “The chart on the next page illustrates increases in the American Indian population over the past 30 years”
Quick Reference Guide

- Demographic Program Comparisons
- Decennial Census
  - Coverage, Table Prefix Codes/Product Types, Race/Ethnicity Suffix Codes
- Population Estimates Program (PEP)
  - Coverage, Product Types, Table ID Codes
- American Community Survey (ACS)
  - Timetable, Tips
  - Topics Covered / Table ID Codes, Wildcard Shortcut, 2013 Content Update, Reducing Margins of Error
  - Product Types, Table ID Numbers Deconstructed
- Census Geography
  - Hierarchy and 2010 Statistical Area Criteria
  - Small Area Geography Hierarchy
- American FactFinder (AFF) Downloading
U.S. Census Bureau History: The Emancipation Proclamation

On January 1, 1863, the Emancipation Proclamation went into effect, freeing all slaves in Confederate territory. After discussing the idea with his cabinet in July 1862, Lincoln waited for a strong Union victory in the Civil War before announcing his decision to free the slaves. In September 1862, Union troops prevented a Confederate invasion of Maryland at the Battle of Antietam, providing Lincoln the opportunity to issue the Preliminary Emancipation Proclamation.

Although the importation of slaves into the United States had been banned in January 1808, slavery was not abolished until the 13th Amendment was ratified in December 1865. Below are a few facts from the U.S. Census Bureau concerning the Civil War and emancipation:

- The 1850 Census recorded 3.2 million slaves in the United States. By 1860, there were nearly 4 million slaves in the nation, 89 percent of whom lived in states that became part of the Confederacy.

- Between 1850 and 1860, 3,000 slaves were freed by slave owners. During the decade, the number of slaves gaining freedom decreased in Delaware and Florida but increased in seven states: Alabama, Georgia, Louisiana, Maryland, Mississippi, North Carolina, and Tennessee.

- The total number of people who escaped from slavery decreased between 1850 and 1860.

**Did You Know?**
The 1870 Census was the first to record all African Americans by name. Prior to emancipation, slaves were documented...
Questionnaires

Since the first census in 1790, the U.S. Census Bureau has collected data using a census “schedule,” also called a “questionnaire.” Between 1790 and 1820, U.S. Marshals conducting the census were responsible for supplying paper and writing-in headings related to the questions asked (i.e., name, age, sex, race, etc.). In 1830, Congress authorized the printing of uniform schedules for use throughout the United States.

The 1940 Census included separate questionnaires to count the population and collect housing data. The 1960 and later censuses combined population and housing questions onto a single questionnaire mailed to households or completed during a census taker’s visit.

Between 1970 and 2000, the U.S. Census Bureau used two questionnaires. Most households received a short-form questionnaire asking a minimum number of questions. A sample of households received a long-form questionnaire that included additional questions about the household. The 2010 Census had just one questionnaire consisting of ten questions.

President Obama completes his 2010 Census questionnaire.
Comparing ACS Estimates
The strength of the American Community Survey is in estimating characteristic distributions. We recommend users compare derived measures such as percents, means, medians, and rates rather than estimates of population totals.

Can I compare...?

American Community Survey 1-Year estimates with other data?

- ACS 1-year estimates with Census 2000
- ACS 1-year estimates from different years.

⚠️ Use Caution: Because ACS variables change over time, some areas and subjects must be compared with caution, or not compared at all.

Use the left navigation to get yearly guidance on specific topics/subjects.
Four Possible Recommendations

- Veteran Status (21)
- Food Stamps (22)
- Employment Status; Work Experience; Labor Force (23)
- Industry & Occupation; Class of Worker (24)

- Housing (25)

<table>
<thead>
<tr>
<th>Topic</th>
<th>2011 ACS with Census 2000</th>
<th>2011 ACS 1-Year with 2010 ACS 1-Year</th>
<th>2011 ACS with Census 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrooms</td>
<td>Compare with Caution (Details)</td>
<td>1</td>
<td>Compare</td>
</tr>
<tr>
<td>Contract and Gross Rent</td>
<td>Do Not Compare (Details)</td>
<td>2</td>
<td>Compare</td>
</tr>
<tr>
<td>Cost of Utilities</td>
<td>Compare</td>
<td></td>
<td>Compare</td>
</tr>
<tr>
<td>Gross Rent as a Percentage</td>
<td>Do Not Compare (Details)</td>
<td></td>
<td>Compare</td>
</tr>
</tbody>
</table>
Aggregating ACS Estimates

How to Calculate the New MOE

<table>
<thead>
<tr>
<th>Geography</th>
<th>Estimate</th>
<th>Margin of Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tract 1</td>
<td>5,264</td>
<td>+/- 1,624</td>
</tr>
<tr>
<td>Tract 2</td>
<td>6,508</td>
<td>+/- 1,395</td>
</tr>
<tr>
<td>Tract 3</td>
<td>4,364</td>
<td>+/- 1,026</td>
</tr>
<tr>
<td>Tract 4</td>
<td>6,865</td>
<td>+/- 1,909</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23,001</td>
<td>+/- 5,954</td>
</tr>
</tbody>
</table>

Apply the formula: \[ MOE_{agg} = \pm \sqrt{\sum_{c} MOE_c^2} \]

New Estimate = 23,001
New MOE = +/- 3,046

Equal to the sum of the estimates
Less than the sum of the MOEs

The estimates in this example are fictitious.
Note the ACS easy calculator next slide.
Help for data users on a variety of subjects
Intended Audiences

ACS Compass Handbooks

- General Data Users
- Businesses
- High School Teachers
- Congress
- Federal Agencies
- Media
- PUMS Users
- Researchers

- Rural Areas
- State and Local Governments
- American Indian and Alaska Native Populations
- Puerto Rico Community Survey
Excellent information on margins of error

ACS Compass Training Presentations with speaker notes

An Overview of the American Community Survey [PPT 5.0MB]
Speaker Notes [PDF 52KB]
Basics of the American Community Survey program and website, with information on content, survey methodology, and data products. How the ACS supplements the 10-year census with continuous social, economic, housing, and demographic data.

Data Products from the American Community Survey [PPT 2.4MB]
Speaker Notes [PDF 53KB]
Examples and suggestions for using data profiles, tables, and Public Use Microdata Sample (PUMS) Files. How period estimates and sampling error measures could affect your results.

Things that May Affect the Estimates from the American Community Survey [PPT 215KB]
Speaker Notes [PDF 60KB]
Because the American Community Survey is a sample survey, sampling error is inevitable. How 4 different measures of sampling error are calculated, what they mean, and how you can use them to draw appropriate conclusions. Plus a brief look at non-sampling error and population controls.

Understanding Multiyear Estimates from the American Community Survey [PPT 592KB]
Speaker Notes [PDF 49KB]
Explains 1-year, 3-year, and 5-year period estimates and when to use each one. Introduction to interpreting the data and making comparisons using multiyear estimates.

Geographic Areas and Concepts for the American Community Survey [PPT 2.3MB]
Speaker Notes [PDF 45KB]
Get the most out of ACS data by knowing how geographic areas are defined in different ways and different estimates. The difference between legal and administrative areas is important.

Introduction to the Public Use Microdata Sample (PUMS) File from the American Community Survey [PPT 612KB]
Speaker Notes [PDF 44KB]
Reasons to access PUMS data for small or unique population groups and housing characteristics.
Homepage Footer
Programs and Special Interest Pages
SAIPE provides poverty estimates of children by school district
Summary

Where Do You Start?

- What are your topics?
- For what geographical area(s)?
- What year(s) are you interested in?
- Is there a race/ethnicity iteration available for the dataset you are selecting?
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The Oregon State Data Center (SDC) and Business and Industry Data Center (BIDC) represent federal-state cooperative programs sponsored by the U.S. Department of Commerce, Bureau of the Census. The Population Research Center (PRC) is the lead agency responsible for administering these programs in Oregon. The Data Center program operates through four "Coordinating" agencies and twenty-five state, local, and university "Affiliates" across Oregon. The Oregon SDC also participates in teaching and training, and holds an annual meeting to keep the coordinating agencies and affiliates informed. For more in-depth studies that require applied research, consulting services, and customized tabulations, the Population Research Center research faculty offer extensive experience and knowledge. Our custom demographic portraits have helped many local and regional communities and state agencies with their fiscal planning, grant applications, and expansion decisions. Contact the Center at 503-725-3922 for more information.
Workshop Information
and
Data Questions

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