ACS Content Review
Phases I, II, and III
Data Analysis Results
Gary Chappell
October 30, 2014
Background

The 2014 ACS Content Review builds upon earlier efforts begun during the comprehensive ACS Program Review to...

- Examine and confirm the value of each ACS question
- Confirm and update the legal basis for questions
- Gather input from federal agencies and other data users
- Analyze data using pre-specified criteria established by the ACS Subcommittee of the Interagency Council on Statistical Policy (ICSP)
- Develop recommendations for ACS content that will provide the most useful information with the least amount of burden to the public
Scope: All questions (and subparts) currently on the 2014 ACS Questionnaire

- **Phase I** – assess full survey content and identify questions for potential removal in 2016 survey year
- **Phase II** – assess availability of other sources
- **Phase III** – research modifications to existing questions
Facts about Content Review

Who provided us with information?  

What did we examine?  

• All 72 survey questions  
  • 24 Housing Questions  
  • 48 Person Questions  

• 126 Individual Survey Components

Growth in total known uses:  

• 175 to 300+

<table>
<thead>
<tr>
<th>Agency</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Agriculture</td>
<td>• Veterans Affairs</td>
</tr>
<tr>
<td>• Board of Governors of the Federal Reserve System</td>
<td>• Justice</td>
</tr>
<tr>
<td>• Bureau of Economic Analysis</td>
<td>• Environmental Protection Agency</td>
</tr>
<tr>
<td>• Census Bureau</td>
<td>• Transportation</td>
</tr>
<tr>
<td>• Centers for Disease Control and Prevention</td>
<td>• Labor</td>
</tr>
<tr>
<td>• Education</td>
<td>• Federal Communications Commission</td>
</tr>
<tr>
<td>• Energy</td>
<td>• National Institutes of Health</td>
</tr>
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<td>• Health and Human Services</td>
<td>• National Science Foundation</td>
</tr>
<tr>
<td>• Homeland Security</td>
<td>• Office of Management and Budget</td>
</tr>
<tr>
<td>• Housing and Urban Development</td>
<td>• Social Security Administration</td>
</tr>
<tr>
<td>• Interior</td>
<td>• Equal Employment Opportunity Commission</td>
</tr>
<tr>
<td>• Nat’l Telecom. &amp; Info. Administration</td>
<td></td>
</tr>
</tbody>
</table>
Phase 1 Process

- Initial Data Gathering
- Data Analysis
- Initial Recommendations
- Public Comment Period
- All Comments Considered
- Final Determination
“Problematic” Topics Scored Well

Based on pre-specified criteria determined by the ACS Subcommittee of the ICSP...

- **Flush Toilets** – High Benefit/Low Cost
- **Disability** – High Benefit/Low Cost
- **Journey to Work** – High Benefit/Low to High Cost
- **Income** – High Benefit/Low to High Cost (mostly High Cost)
In August 2012, the Office of Management and Budget and the Census Bureau chartered the Interagency Council of Statistical Policy (ICSP) Subcommittee for the ACS to “provide advice to the Director of the Census Bureau and the Chief Statistician at OMB on how the ACS can best fulfill its role in the portfolio of Federal household surveys and provide the most useful information with the least amount of burden.”

Members include:

- Census Bureau Director, John Thompson, and OMB Chief Statistician, Katherine Wallman, Co-Chairs
- Three heads of statistical agencies –
  - Erica Groshen, Bureau of Labor Statistics Commissioner
  - Joseph Reilly, Director of the National Agricultural Statistical Service
  - Charles Rothwell, Director of the National Center for Health Statistics
Weighting Approach

For each geographic level (Block Group/Tract, Place/County/MSA, State/Nation) we examined legal uses – Mandatory (M), Required (R), or Programmatic (P)

Legal Definitions

- **Mandatory** – a federal law explicitly calls for use of decennial census or ACS data on that question
- **Required** – a federal law (or implementing regulation) explicitly requires the use of data and the decennial or the ACS is the historical source; or the data are needed for case law requirements imposed by the U.S. federal court system
- **Programmatic** – the data are needed for program planning, implementation, or evaluation and there is no explicit mandate or requirement
## Notional Weighting Example

<table>
<thead>
<tr>
<th>Lowest Geographic Level</th>
<th>Mandatory Uses</th>
<th>Required Uses</th>
<th>Programmatic Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Group or Tract</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Place, County or MSA</td>
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<td>1</td>
<td>0</td>
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<tr>
<td>State or Nation</td>
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<td>0</td>
<td>1</td>
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</tbody>
</table>
Design Criteria - Benefits Extract

<table>
<thead>
<tr>
<th>ACS Topic</th>
<th>Q#</th>
<th>Block Group/Tract Level</th>
<th>Place/County/MSA Level</th>
<th>State/Natl. Level</th>
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</thead>
<tbody>
<tr>
<td>Building/Structure Type and Units</td>
<td>H1</td>
<td>5 5 5</td>
<td>0 5 5</td>
<td>0 5 5</td>
</tr>
<tr>
<td>Year Built</td>
<td>H2</td>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 0 5</td>
</tr>
<tr>
<td>Year Moved In</td>
<td>H3</td>
<td>5 0 5</td>
<td>5 0 5</td>
<td>0 0 5</td>
</tr>
<tr>
<td>Acreage</td>
<td>H4</td>
<td>0 5 5</td>
<td>0 5 5</td>
<td>0 0 5</td>
</tr>
<tr>
<td>Agriculture Sales</td>
<td>H5</td>
<td>0 0 5</td>
<td>0 0 5</td>
<td>5 0 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Data Source</th>
<th>CV</th>
<th>IQR</th>
<th>Frame</th>
<th>Total Benefits</th>
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<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>78.45 H</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>80.60 H</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>57.99 H</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>52.17 H</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>37.78 L</td>
</tr>
</tbody>
</table>

+ = Total Benefits
<table>
<thead>
<tr>
<th>ACS Topic</th>
<th>Int. Survey Cognitive Burden (Clusters)</th>
<th>Int. Survey Sensitivity (Clusters)</th>
<th>Int. Survey Overall Difficulty (Clusters)</th>
<th>Adjusted Median Seconds to Answer (Clusters)</th>
<th>Allocation Rates (Clusters)</th>
<th>Complaints (Clusters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building/Structure Type and Units</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Year Built</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Year Moved In</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
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<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agriculture Sales</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Costs**

- 37.00
- 60.40
- 37.00
- 33.00
- 33.00
Driving Factors for Benefits and Costs

Mandatory Uses at all Geographic Levels
Required Uses at Sub-State Level
No Other Data Sources Available

Cognitive Burden, Sensitivity, and Difficulty

Cost

Benefit
Quadrant Analysis

1. High Benefit / Low Cost
   54% of survey questions

2. High Benefit / High Cost
   26% of survey questions

3. Low Benefit / Low Cost
   17% of survey questions

4. Low Benefit / High Cost
   3% of survey questions
Quadrants 3 & 4 Analysis

- Begin with full array of M, R, P, and X (no uses)
- Exclude M from consideration for removal
- Exclude R with Sub-state Uses from consideration for removal
Quadrants 3 & 4 Analysis

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Quadrants 3 & 4 Analysis

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- Exclude R with Sub-state Uses from consideration for removal
### Attributes of Candidates for Removal

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Agency Impacted/Comments</th>
<th>Other Agencies with Programmatic Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Uses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• H6 – Business/Medical Office on Property (X)</td>
<td>No current agency uses; supports comparative estimates</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>No M and No R Uses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• P12 – Undergraduate Field of Degree (P)</td>
<td>NSF – used to target sampling frame for National Survey of College Graduates (NSCG); also supports STEM migration analyses</td>
<td>EPA, NTIA, HHS, DOL, DOT, EEOC</td>
</tr>
<tr>
<td><strong>No M and No R Uses at Block Group/Tract Level or Place/County/MSA Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• P21a – Get Married (R)</td>
<td>SSA – State-level actuarial targeting</td>
<td>FCC, NSF, HHS, EEOC</td>
</tr>
<tr>
<td>• P21b – Get Widowed (R)</td>
<td></td>
<td>FCC, NSF, HHS, EEOC</td>
</tr>
<tr>
<td>• P21c – Get Divorced (R)</td>
<td></td>
<td>FCC, NSF, HHS, EEOC</td>
</tr>
<tr>
<td>• P22 – Times Married (R)</td>
<td></td>
<td>FCC, NSF, HHS, EEOC</td>
</tr>
<tr>
<td>• P23 – Year Last Married (R)</td>
<td></td>
<td>FCC, NSF, HHS</td>
</tr>
<tr>
<td><strong>No M and No R Uses at Block Group/Tract Level or Place/County/MSA Level</strong></td>
<td></td>
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Contact Us

- **View the ACS Content Review Web Page:**
  
  http://www.census.gov/acs/www/about_the_survey/acs_content_review/

- **Sign up for GovDelivery ACS Subscriber Notices:**
  
  https://public.govdelivery.com/accounts/USCENSUS/subscriber/new

- **Review *Federal Register* Notice**
  
  - 60-day notice will be published, October 31—December 31
  - Link will be available on Content Review Web Page
Next Steps

- **What Do We Need You To Do...?**
  - Help us get the word out on *Federal Register* 60-day notice

- **Tools we have developed to assist you** –
  - Content Review Web Page
  - GovDelivery ACS Subscriber Notices (please see previous slide)

- **Let’s keep dialog going**
Questions?
Background
Pre-Specified Criteria – Benefits

1. Uses at Block Group/Tract Level-Mandatory
2. Uses at Place/County/MSA Level-Mandatory
3. Uses at State/Nation Level-Mandatory
4. Uses at Block Group/Tract Level-Required
5. Uses at Place/County/MSA Level-Required
6. Uses at State/Nation Level-Required
7. Uses at Block Group/Tract Level-Programmatic
8. Uses at Place/County/MSA Level-Programmatic
9. Uses at State/Nation Level-Programmatic
10. County-Level Interquartile Range in Values
11. Used to Select Frame for a Federal Survey
12. Other Data Sources Exist
13. Median County-Level Coefficients of Variation
Pre-Specified Criteria – Costs

1. Cognitive Burden Score
2. Sensitivity Score
3. Overall Difficulty Score
4. Number of Complaints to Census Bureau HQ
5. Median Seconds to Answer
6. Median County-Level item Response Rate

Interviewer Survey