Hard-To-Survey Populations and the U.S. Decennial Census

26th Annual Morris Hansen Lecture

Washington, DC

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Overview

- Challenges for the 2020 Census
  - Changes in family formation and living arrangements
  - Changes in who is hard-to-survey
  - Multiple response modes will complicate messaging

- Options to Consider
Changes in Family Formation

FIGURE 1
Families Are Formed Via Marriage, Cohabitation, or Childbearing.

Family Formation Pathways

- Marry
- Have a Child
- Cohabit
- Repartner
- Break Up
- Repartner

Key Trends in Family Formation

- A majority of women (65%) ages 19-44 has cohabited
  - 76% - less than high school
  - 67% - high school
  - 58% - Bachelor’s degree or more

- Cohabiting unions last 2-3 years on average

- Most marriages preceded by cohabitation
  - 1970s: 10 percent
  - 2010s: 70 percent
Key Trends in Family Formation

- Increase in nonmarital births
  - 1980-84: 21 percent: 6% to cohabiting mother
  - 2009-13: 43 percent: 25% to cohabiting mother

- Nonmarital births are higher among racial/ethnic minorities
  - Blacks
    - 2009-13: 75% nonmarital: 29% to cohabiting mothers
  - Hispanics
    - 2009-13: 60% nonmarital: 40% to cohabiting mothers

- Increase in multi-partner fertility
Changes in Living Arrangements

Why Do These Changes Matter?

- Living arrangements are more fluid and transitory
  - Children are more likely to split time between multiple households
  - More confusing for respondents to understand who should be counted

- Household structure is more complex
  - Can’t determine if other adult in cohabiting household is a resident child’s parent
  - In cohabiting households, whether a child is counted as “own” or “unrelated” is arbitrary based on which unmarried partner is Person 1
Classification of Cohabiting Couple Households with Children

- **Person 1**
  - Own child, Family HH, with unmarried partner (Don’t know that F1 is child’s father)

- **Person 1**
  - Own child, Family HH, with unmarried partner (Don’t know that F2 is not child’s father)

- **Person 1**
  - Unrelated child, Nonfamily HH, with unmarried partner (Don’t know that M3 is child’s mother)
Why Do These Changes Matter?

- They are more concentrated among racial and ethnic minorities and those with less education and lower incomes (HTS)
- They are contributing to an increase in the net undercount of young children (0-4) in the Census
  - 1980: 1.8 percent
  - 2010: 4.6 percent
- Research shows that unrelated children and children who are “other relatives” are more likely to be missed (Konicki, 2016; Fernandez, 2016)
Options to Consider

- Add questions or pointers to identify relationship of children to adults other than Person 1

- Continue research to identify causes of undercount of young children
  - Conduct studies to ask respondents why children were not included, especially unrelated and other relatives

- Evolve our concepts of residency and instructions for respondents
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Changes In Who Is Hard-To-Survey

- Internet response option and Internet push for 80 percent of households may change self-response rates for some groups.
  - Those with high mail self-response rates (older adults) may be less likely to respond online.
  - Those with low mail self-response rates (young, mobile, renters) may have much higher internet self-response rates.

- Internet response option had negative effect on groups with low self-response rates in ACS even when paper form mailed later.
Changes In Who Is Hard-To-Survey

- Hard-to-survey households less likely to have internet subscriptions at home (2013)
  - Non-Hispanic blacks: 61%
  - Hispanics: 67%
  - Ages 65+: 58%
  - Less than high school: 44%

- Changes may make LRS less accurate for 2020 planning until 5-year ACS data are available for 2013-2017
Low Response Score (LRS) by Census Tract

Source: U.S. Census Bureau, Planning Database with 2010 Census and 2010-2014 ACS data.
Low Response Score (LRS) by Census Tract

District of Columbia (West) PUMA
- 57.4%

District of Columbia (North) PUMA
- 35.7%

District of Columbia (Northeast) PUMA
- 43.2%

District of Columbia (East) PUMA
- 17.2%

District of Columbia (Central) PUMA
- 54.4%

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Predicted Mail Non-Response Rate (Percent)
Low-Response Score (LRS)
- 29.0 and above
- 25.0 to 28.9
- 22.0 to 24.9
- 18.0 to 21.9
- Less than 18.0
### Low Response Score (LRS) by Census Tract

#### Percent of Households Who Responded by CATI/CAPI, 2015 ACS

<table>
<thead>
<tr>
<th>PUMA Description</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia (West) PUMA</td>
<td>24.5</td>
</tr>
<tr>
<td>District of Columbia (North) PUMA</td>
<td>45.1</td>
</tr>
<tr>
<td>District of Columbia (Northeast) PUMA</td>
<td>36.1</td>
</tr>
<tr>
<td>District of Columbia (East) PUMA</td>
<td>64.1</td>
</tr>
<tr>
<td>District of Columbia (Central) PUMA</td>
<td>33.1</td>
</tr>
</tbody>
</table>

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**Predicted Mail Non-Response Rate (Percent)**

**Low-Response Score (LRS)**
- 29.0 and above
- 25.0 to 28.9
- 22.0 to 24.9
- 18.0 to 21.9
- Less than 18.0
Low Response Score (LRS) by Census Tract

District of Columbia (West) PUMA: 2.7
District of Columbia (North) PUMA: 13.7
District of Columbia (Northeast) PUMA: 11.3
District of Columbia (East) PUMA: 20.7
District of Columbia (Central) PUMA: 5.6

Percent of Households Without a Computer, 2015 ACS
Low Response Score (LRS) by Census Tract

Percent of Households With a Computer, But Without an Internet Subscription, 2015 ACS

<table>
<thead>
<tr>
<th>PUMA</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia (West) PUMA</td>
<td>3.6</td>
</tr>
<tr>
<td>District of Columbia (North) PUMA</td>
<td>11.2</td>
</tr>
<tr>
<td>District of Columbia (Northeast) PUMA</td>
<td>9.7</td>
</tr>
<tr>
<td>District of Columbia (East) PUMA</td>
<td>27.4</td>
</tr>
<tr>
<td>District of Columbia (Central) PUMA</td>
<td>9.3</td>
</tr>
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</table>

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Options to Consider

- Continue to mine ACS results and data
  - Provides self-response propensity by mode in the absence of social marketing
  - Tracks device ownership and internet access and impact on internet self-response
- Overlay/compare ACS response rates by mode with LRS prior to 2018
- Develop Low Internet Response Score (LIRS) to support targeting for initial paper forms and site location for internet outreach
Options to Consider

- ACS Caveats
  - Technology and internet access change rapidly
  - 5-year ACS estimates smooth out change and may not provide accurate measures of device/internet access for 2020 planning
  - May need to use 1-year ACS supplemental data in 2019 and 2020 (for areas with at least 20,000 residents) to get more up-to-date estimates
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- Challenges for the 2020 Census
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  - **Multiple response modes will complicate messaging**
- Options to Consider
Multiple Response Modes Will Complicate Messaging

- Some households will receive a paper form in the mail while some will receive only internet push
  - No mass ads like “March to the Mailbox” or messages like “Fill it out and mail it back”

- ACS will be in the field at the same time with different operations
  - Initial mailing is internet push only
  - No online response without unique ID
Conclusions

- Census Bureau continues to innovate in social marketing for the decennial

- Risk that undercount of young children will increase in 2020 Census
  - Window to understand causes and make changes is closing rapidly

- Changes in family formation and living arrangements will continue and survey questions need to evolve more rapidly to keep pace with social change
Thank You

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