Individual Changes in Identification with Hispanic Ethnic Origins: Evidence from Linked 2000 and 2010 Census Data

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Population Association of America Meetings
Chicago, IL
April 27-29, 2017

This presentation is released to inform interested parties of ongoing research and encourage discussion of work in progress. The views expressed on technical, statistical, or methodological issues are the authors’ and not necessarily the U.S. Census Bureau’s.
Research Motivation

- Racial and ethnic identity is fluid, situational, and changes over life course
  (Alba and Islam 2009; Emeka and Agius Vallejo 2011; Fernandez et al. forthcoming; Lee and Bean 2010; Liebler et al. 2014; Roth 2012; Waters 1990)

- Few immigrant assimilation and mobility studies account for identification change
  (Duncan and Trejo 2011)
Research Questions

1. How much change in Hispanic identification?
   a) Hispanic <-> Non-Hispanic
   b) Hispanic <-> Hispanic

2. How much change due to data collection and measurement error?

3. Who changes their ethnic identification?
Highlights of Findings

- Substantial number of identification changes
  - Large proportion of Hispanic population
  - Proportion varies by specific Hispanic groups
- Large majority of changes observed are not related to data collection or measurement issues
- Characteristics associated with change consistent with literature
Data

- Individual responses to Census 2000 linked to 2010 Census
  - “Linked Hispanic universe” (23 million)

- Census 2000 linked to 2010 Alternative Questionnaire Experiment (AQE)

- “Linked Hispanic universe” linked to 2006-2010 American Community Survey (ACS)
Measuring Change in Hispanic Identification

2000:

2010:
Identification Changes

- 7.2 million observed identification changes
  - 42% non-Hispanic <-> Hispanic (3 million)
  - 58% Hispanic <-> Hispanic (4.1 million)

- 21% of Hispanic population in 2000 (35 million)
- 31% of “linked Hispanic universe” (23 million)
# Net Hispanic Population Change

<table>
<thead>
<tr>
<th>Hispanic Origin</th>
<th>Total Population</th>
<th>2000-2010 Linked Universe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net Change</td>
<td>Percent Change</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>12,151,856</td>
<td>4.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15,171,776</td>
<td>43.0</td>
</tr>
<tr>
<td>Mexican</td>
<td>11,155,720</td>
<td>54.0</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>1,217,292</td>
<td>35.7</td>
</tr>
<tr>
<td>Cuban</td>
<td>543,681</td>
<td>43.8</td>
</tr>
<tr>
<td>Dominican</td>
<td>650,105</td>
<td>85.0</td>
</tr>
<tr>
<td>Central American</td>
<td>2,312,136</td>
<td>137.1</td>
</tr>
<tr>
<td>South American</td>
<td>1,416,744</td>
<td>104.7</td>
</tr>
<tr>
<td>Spanish</td>
<td>258,458</td>
<td>29.8</td>
</tr>
<tr>
<td>Other Hispanic / Latino</td>
<td>-2,382,360</td>
<td>-44.6</td>
</tr>
</tbody>
</table>

Sources: 2000 and 2010 censuses
Identification Changes by Source of Response

- Changes related to data collection or linkage processes more prone to measurement error
  - 2010 Alternative Questionnaire Experiment
  - Group quarters
  - Proxy or imputed response for Hispanic origin
  - Potentially mismatched linked records
    - Imputed age or sex
    - Inconsistent age or sex
- 20% of linked records fall into at least one category
  - Rate of change in identification: 50%
Identification Changes Due to Change in Question

- 2010 AQE tested effect of question changes
  - **Control**: question changed (2000 and 2010 formats)
  - **Treatment**: question did not change (received 2000 format in both 2000 and 2010)

- Experiment studies: control group more likely to identify with specific groups
  (Stokes et al. 2012; Compton et al. 2013)
Identification Changes Due to Change in Question

Any Change in Hispanic Identification

- AQE Control: 2010 Question
- AQE Treatment: 2000 Question in 2010

Odds of change is 21% higher in Treatment, p<0.01

Percent Change

0 20 40 60 80 100
Identification Changes Due to Change in Question

Any Change in Hispanic Identification

Odds of change 21% higher in Treatment, p<0.01

Percent Change

- AQE Control: 2010 Question
- AQE Treatment: 2000 Question in 2010
- Total Linked Hispanic Population

23.8
27.4
26.0
Identification Changes Due to Change in Question

Change in Mexican Origin Identification

- No statistical difference in odds of joining
- Odds of leaving is 2x greater in Treatment than in Control

<table>
<thead>
<tr>
<th>Percent Change</th>
<th>AQE Control: 2010 Question</th>
<th>AQE Treatment: 2000 Question in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join</td>
<td>14.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Leave</td>
<td>6.1</td>
<td>13.1</td>
</tr>
</tbody>
</table>
## Patterns of Joining and Leaving Hispanic Origin Groups

<table>
<thead>
<tr>
<th></th>
<th>Leavers</th>
<th>Joiners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Leavers</td>
<td>Percent of Joiners</td>
</tr>
<tr>
<td></td>
<td>To Specific Hispanic</td>
<td>To Other Hispanic</td>
</tr>
<tr>
<td></td>
<td>Origin</td>
<td>Latino</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>1,217,890</td>
<td>817,427</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>876,547</td>
<td>41.9</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>140,477</td>
<td>54.0</td>
</tr>
<tr>
<td>Cuban</td>
<td>48,832</td>
<td>59.7</td>
</tr>
<tr>
<td>Dominican</td>
<td>39,021</td>
<td>18.3</td>
</tr>
<tr>
<td>Central American</td>
<td>113,495</td>
<td>21.6</td>
</tr>
<tr>
<td>South American</td>
<td>74,825</td>
<td>38.2</td>
</tr>
<tr>
<td>Spanish</td>
<td>299,045</td>
<td>26.5</td>
</tr>
<tr>
<td>Other Hispanic / Latino</td>
<td>2,123,996</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Sources: Linked 2000 and 2010 census data
Models of Identification Change

General Findings

Percent Changed Identification

Percent of Origin Group

- Mexican
- Puerto Rican
- Cuban
- Dominican
- Central American
- South American
- Spanish
- Other Hispanic / Latino
Models of Identification Change
General Findings

- For all Hispanic groups, identification change associated with:
  - Mixed Origins
  - Native born
  - Inter-state migration
  - Not householder or spouse of householder
  - Age in 2000 < 17
  - Non-white race in 2000 and no change in race
  - Region

- Not strongly associated with change:
  - Sex, marital status, education, English language ability
Models of Identification Change
Group Differences
(net of all other factors)

Ancestry
(Ref: Consistent Ancestry and Hispanic Origin)
Models of Identification Change
Group Differences
(net of all other factors)

Race in 2000: White Alone
(Ref: Other Races, Alone or in Combination)
Models of Identification Change

Group Differences

(net of all other factors)

Foreign Born
(Ref: Native Born)

<table>
<thead>
<tr>
<th>Group</th>
<th>Odds Ratio of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican</td>
<td>0.4</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>1.8</td>
</tr>
<tr>
<td>Cuban</td>
<td>0.1</td>
</tr>
<tr>
<td>Dominican</td>
<td>0.6</td>
</tr>
<tr>
<td>Central American</td>
<td>0.5</td>
</tr>
<tr>
<td>South American</td>
<td>0.5</td>
</tr>
</tbody>
</table>

- Blue: Foreign Born, In U.S. 10+ Years
- Red: Foreign Born, In U.S. 5-9 Years
- Green: Foreign Born, In U.S. 0-4 Years
Models of Identification Change
Group Differences
(net of all other factors)

Age
(Ref: 45+)

Odds Ratio of Change

0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0 - 9
10 - 17
18 - 25
26 - 35
36 - 45

Mexican
Puerto Rican
Cuban
Dominican
Central American
South American
Summary

- Linked data show substantial numbers and proportions of change in Hispanic identification
- Data collection issues and change in question format does not appear to have caused more change
- Group differences are consistent with our understanding of contextual and life-course factors in change
Contact

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Previous Research:
Estimates of Identification Change
(slide 7)

- Eschbach and Gomez (1998)
- del Pinal and Schmidley (2000, 2005)
- Alba and Islam (2009)
- Emeka and Agius
- Studies limited
  - Small, specific samples or
  - Analysis of cohort population change
- Focus on Hispanic/non-Hispanic change