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International Forum on Migration Statistics (Session 3.E.)
“Methodological innovations for estimating hard-to-count migrant populations”
Monday, January 15th, 2018: 17:00-18:30
OECD Conference Centre, Room CC18
Paris, France
I. Motivations

- Two decades of research assigning legal status to individual foreign-born U.S. residents enumerated in public-use datasets to estimate the characteristics, integration, and effects of unauthorized migrants …

  

- Scant research directly comparing results of these (two) or other legal status estimation methods for three decades …

II. Pew Estimation/Assignment Methodology (Outline)

- Estimate unauthorized in survey
  - Residual = survey minus lawful immigrants (LPRs)
  - Demographic estimate of LPRs from admin records

- Assign “definite” legal immigrants
  - Temporary lawful (e.g. students) using characteristics
  - Refugees based on date of arrival & country of birth
  - Naturalized citizens (except Mexico, Central America)
  - Screen others on characteristics

- Assign unauthorized in microdata
  - Probabilistic “multiple imputation”
  - \( P(\text{unauthorized}) = \frac{\text{Residual}}{\text{“Potential” unauthorized}} \)
  - Edit families for consistency & iterate to targets

- Tabulate microdata
  - Adjust weights for omissions
II. Pew Estimation/Assignment Methodology (Lawful Status)

- Definite lawful immigrants
  - Naturalized citizens, refugees & lawful temps (previous)
  - Entered US before 1982
  - Occupations/employers →
    - Government workers, veterans & military
    - Law enforcement and related
    - Court and legal
    - Licensed occupations (e.g., Medical)
    - Security occupations (esp. with licensing; e.g. police, ATC)
    - Assorted other minor occupations
  - Program participation (SSI, TANF, Medicaid*, Medicare)
  - Family members (most) of lawful residents

- Others are “Potentially Unauthorized” →
II. Pew Estimation/Assignment Methodology (Unauthorized Status)

- **Targets**
  - 6 States (CA, FL, IL, NJ, NY, TX) and balance of US
  - Total, Under 18 (i.e., children)
  - Mexico, Latin America, Asia, Other

- **Random assignments of Potentials**
  - Initial $p$’s = Target / Potential Unauthorized
    - Parents & non-parents done separately
    - Assignments for parents use targets for children
    - Initial modification using surveys (LPS, potentially EM, SIPP)
  - Edit for consistency (parents, children, relatives)
  - Iterate $p$’s to hit targets

- **Adjust weights for omissions**
III. The Community-Based Sample Survey Assignment Method

- Randomly collected migrant legal status & health data
  - 2001 & 2012 Los Angeles County Mexican Immigrant Health & Legal Status Surveys (LAC-MIHLLSS)
  - 2007 Boston Metro Brazilian & Dominican Immigrant Health & Legal Status Surveys (BM-IHLSS)

- **Sample Selection**: U.S. Census tracts → blocks → households → individual adult foreign-born migrants interviewed by 24-30 trained adult compatriots about household members’ migration, socioeconomic status, social capital & health.

- **Questionnaire Development**: Researchers and CBO staff …
III. The Community-Based Sample Survey Assignment Method

- Seven-step legal status assignment
  - Use community-based sample survey data to generate coefficients
  - Compute probabilities of being unauthorized in public use data
  - Compute target number of unauthorized adults = sum of probabilities.
  - Rank probabilities in decreasing order
  - Tag each adult as unauthorized until running sum = target
  - Assign unauthorized legal status to children
  - Apply survey omission-adjusted sample weights

- Two limitations of direct sample survey data/method
  - Legal status predictors ONLY available for foreign-born Mexican, Brazilian and Dominican residents of the USA … to date.
  - Legal status predictors ONLY available from Los Angeles County and the Boston-Cambridge metropolitan area, to date.
III. The Community-Based Sample Survey Assignment Method

Change in Probability of Being Unauthorized among Foreign-born Brazilian Adults, 2007:
Age (-), Male (+), Educational Attainment (-) & Years Residing in the USA (-)

Data: 2007 Boston-Cambridge-Quincy Brazilian Immigrant Health & Legal Status Survey (Adults)
IV. Results

Estimated Number of Unauthorized Brazilian, Mexican and Other Immigrants, USA

- Brazil
- Mexico
- Other

- Marcelli
- Passel
IV. Results

Distribution of Unauthorized Immigrants by County, CA, 2011-15 ACS

2,400,000 (6.1%)  
Passel Estimates

2,415,000 (6.2%)  
Marcelli Estimates

Percent of unauthorized immigrant population

- 0.1% - 0.5%
- 0.6% - 1%
- 1.1% - 2%
- 2.1% - 10%
- 10.1% - 34%

0 37.5 75 150 Miles
IV. Results

Share of Unauthorized Immigrants Under 18 Years Old by County, CA

105,000 (4.4%)
Passel Estimates

130,000 (5.4%)
Marcelli Estimates

Data Source: ACS 2011-2015
IV. Results

Share of Unauthorized Immigrants from Mexico by County, CA

1,650,000 (68%)  
Passel Estimates

1,680,000 (70%)  
Marcelli Estimates

Data Source: ACS 2011-2015
IV. Results

Share of Unauthorized Immigrants who Own a Home, by County, CA

695,000 (29%)

Passel Estimates

575,000 (24%)

Marcelli Estimates

Data Source: ACS 2011-2015
IV. Results

Share of Unauthorized Immigrants with Health Insurance by County, CA

- **Passel Estimates**
  - 1,000,000 (42%)

- **Marcelli Estimates**
  - 1,200,000 (50%)

![Map of California counties with unauthorized immigrant health insurance data](image)

**Percent**
- 29.4% - 32.5%
- 32.6% - 37.5%
- 37.6% - 40%
- 40.1% - 50%
- 50.1% - 70.1%

Data Source: ACS 2011-2015
V. Next steps and discussion

- Use dissimilarity indexes
- Compare individual-level legal status assignments
- What components of the two methods explain observed differences?
- From which (if any) immigrant populations do we need sample survey-based legal status data?