Longitudinal Data from IPUMS: IPUMS CPS

Renae Rodgers
July 19, 2022
Linking CPS Data

Opportunities and Challenges
Opportunities

• Large sample sizes
• Good coverage of subpopulations
• Short-run changes in employment and families; reactions to births and losses (death, divorce)
• Combine rich sources of information about different topics
  • Work and volunteering; veterans and employment
Challenges

• Rotation pattern

• Linking keys

• Same variables with different codes

• Non-response
Challenges: Rotation Pattern

• CPS is NOT a longitudinal survey that follows one or several cohorts as they age
• CPS does have a panel component where individuals are observed up to 8 times over 16 months, but the way they move through the survey is in a 4-8-4 rotation
Defining Terms

- **Rotation Pattern**: The way households move through the CPS
- **Month in sample (MIS)**: The term CPS uses to index where a household is in the CPS rotation pattern
- **CPS Cohort or Rotation Group**: The term we use to describe a group of households that started the CPS at the same time and move through the CPS together
Challenges: Rotation Pattern

- **4-8-4**
  - In 4 months
    - MIS 1, 2, 3, 4
  - Out 8 months
    - No MIS values because not in survey
  - In 4 months
    - MIS 5, 6, 7, 8

**Month-in-sample – MIS**
The way CPS indexes where a household is in the CPS rotation pattern
Rotation Groups

- 8 rotation groups (cohorts) in the sample during every month
- In every month, 1/8 of sample is interviewed for the
  - First time
  - Second time
  - ... Eighth (last) time
- The 1/8 interviewed for the first time replaces the 1/8 interviewed for the last time in the previous month
- Rotation groups 4 & 8 are called “outgoing rotation groups” because they are exiting the survey
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Challenges: Rotation Pattern

• Enter IPUMS CPS RoPES

• Motivation
  • Easily see CPS rotation pattern
  • Explore what topical supplements can be examined together
CURRENT POPULATION SURVEY DATA FOR SOCIAL, ECONOMIC AND HEALTH RESEARCH

IPUMS CPS harmonizes microdata from the monthly U.S. labor force survey, the Current Population Survey (CPS), covering the period 1962 to the present. Data include demographic information, rich employment data, program participation and supplemental data on topics such as fertility, tobacco use, volunteer activities, voter registration, computer and internet use, food security, and more.

USE IT FOR GOOD -- NEVER FOR EVIL

CREATE AN EXTRACT — USE OUR ONLINE TOOL FOR ANALYSIS — EXPLORE CPS FILE LINKAGE

Get Data — Analyze Data Online — View RoPES
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<td>A7  75%</td>
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Challenges

• Rotation pattern

• Linking keys

• Same variables with different codes

• Non-response
Challenges: Linking Keys

• Changes in variables needed to link
  • Technical changes
  • Privacy protection changes

• Duplicate and recycled identifiers
  • Feng 2001
  • Flood et al. 2020
Challenges: Linking Keys

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Challenges: Linking Keys

• CPSID(P) – an IPUMS-created unique identifier
• Bridges changes in variable names as well as the technical aspects of how to link
• Available for 1976 forward
• [Drew, Flood, & Warren, 2014](#) Journal of Economic and Social Measurement
• [Flood et al., (forthcoming)](#) Journal of Economic and Social Measurement
CPSID(P) Limitations

• Mechanical
  • Created solely based on Census Bureau linking keys
  • Does NOT condition on AGE, SEX, RACE
• Not available for all respondents in ASEC
  • only those who are also in the March BMS
• Cannot overcome unlinkable files & unlinkable records
  • See Flood et al., 2020 for details
Challenges

- Rotation pattern
- Linking keys
- Same variables with different codes
- Non-response
Challenges:
Same variables, different codes

• IPUMS!
• Harmonized across time to deal with changes in codes
• Use it for good, never for evil!
  • (Also, please cite us!)
Challenges

- Rotation pattern ✔
- Linking keys ✔
- Same variables with different codes ✔
- Non-response
Challenges: Non-response

- Households that were eligible to participate in CPS but did not because of
  - Non-response (at any point in the rotation)
  - Death
  - Migration

- Imputation
Challenges

• Rotation pattern ✓
• Linking keys ✓
• Same variables with different codes ✓
• Non-response ✓
Future Linking Work & Further Resources
Future Linking Work

• Upcoming CPS linking features from IPUMS
  • Make ASEC oversamples linkable using CPSIDP
    • A version of CPSIDP that is validated on AGE, SEX, RACE matches
      • Coming very soon!
Further Resources


• [CPS Linking Workshop Materials](#)

• [CPS ASEC Longitudinal Extracts](#)
Questions?