

Agree to Disagree?

Comparing IRS, NCOA, and Census Bureau Survey Migration Measures

Brad Foster, *U.S. Census Bureau*

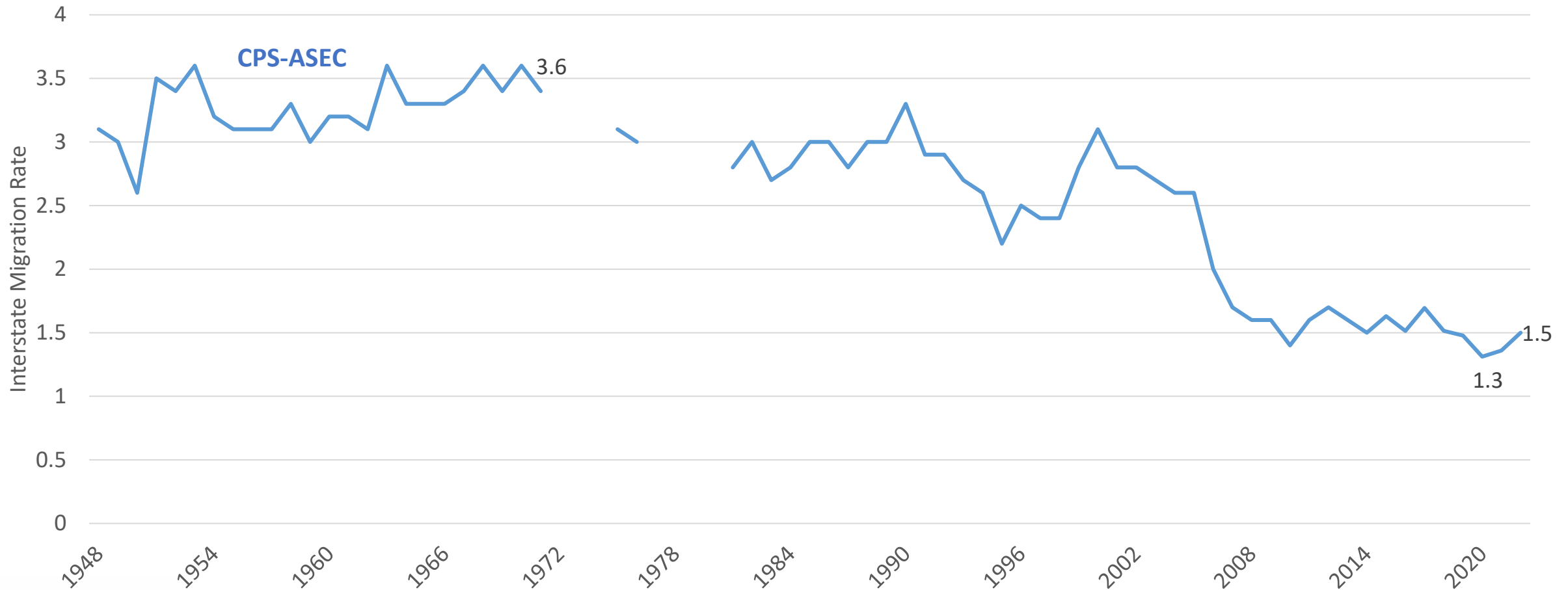
Mark Ellis & Lee Fiorio, *University of Washington*

October 25, 2023

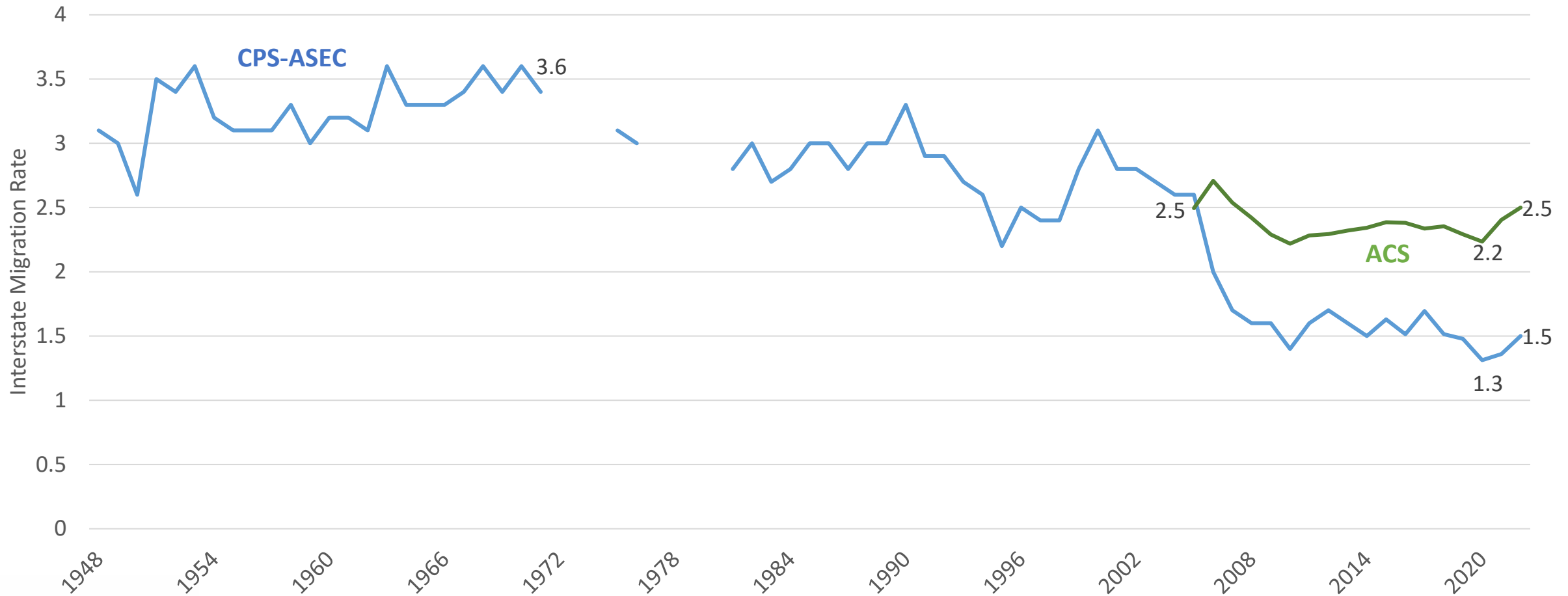
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Annual Interstate Migration, 1948 - 2022



Annual Interstate Migration, 1948 - 2022



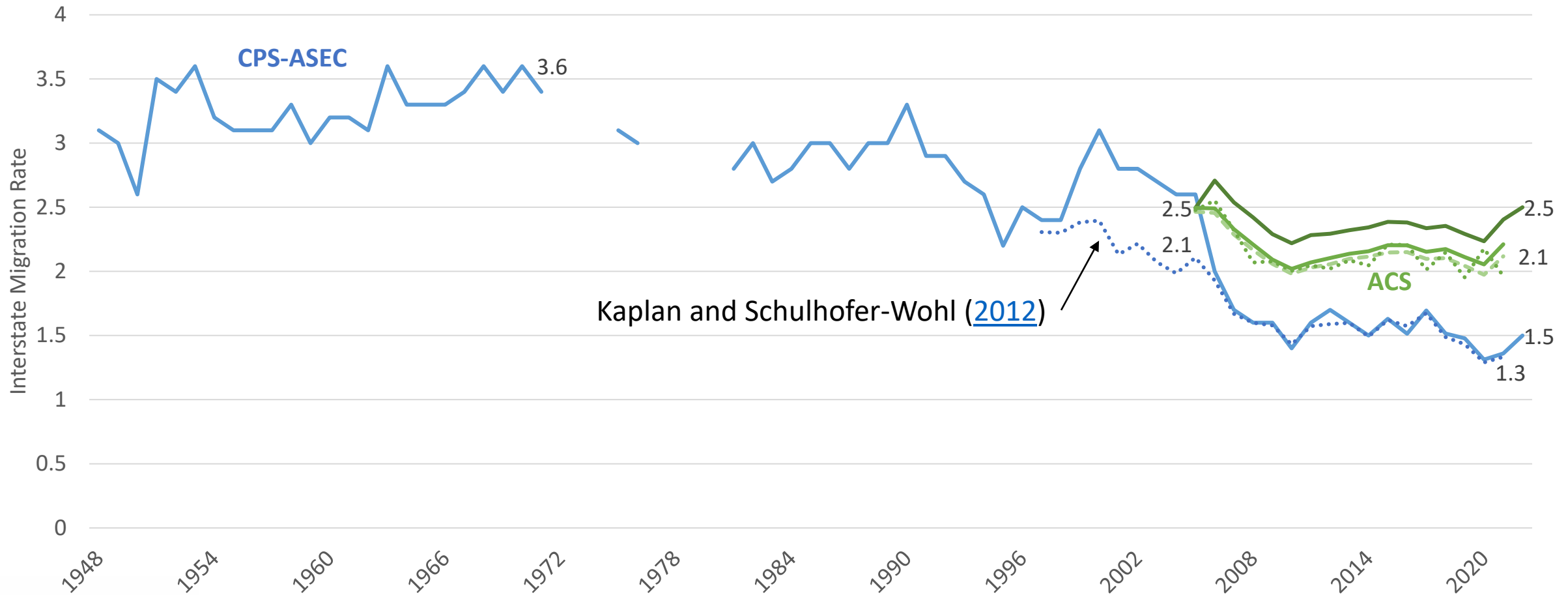
“Many little differences...”

- Ihrke, Koerber, and Fields ([2015](#)):

“The best conclusion we can provide is that there is not a simple, single answer explaining why mover rates do not match. The ACS and ASEC are two surveys with many little differences, all of which likely contribute to any observable difference.”

- Question wording, residency rules, **population universes**, modes of data collection, **reference periods**, **nonresponse and allocation rates**, sample design and county coverage, and sampling frames.

Annual Interstate Migration, 1948 - 2022

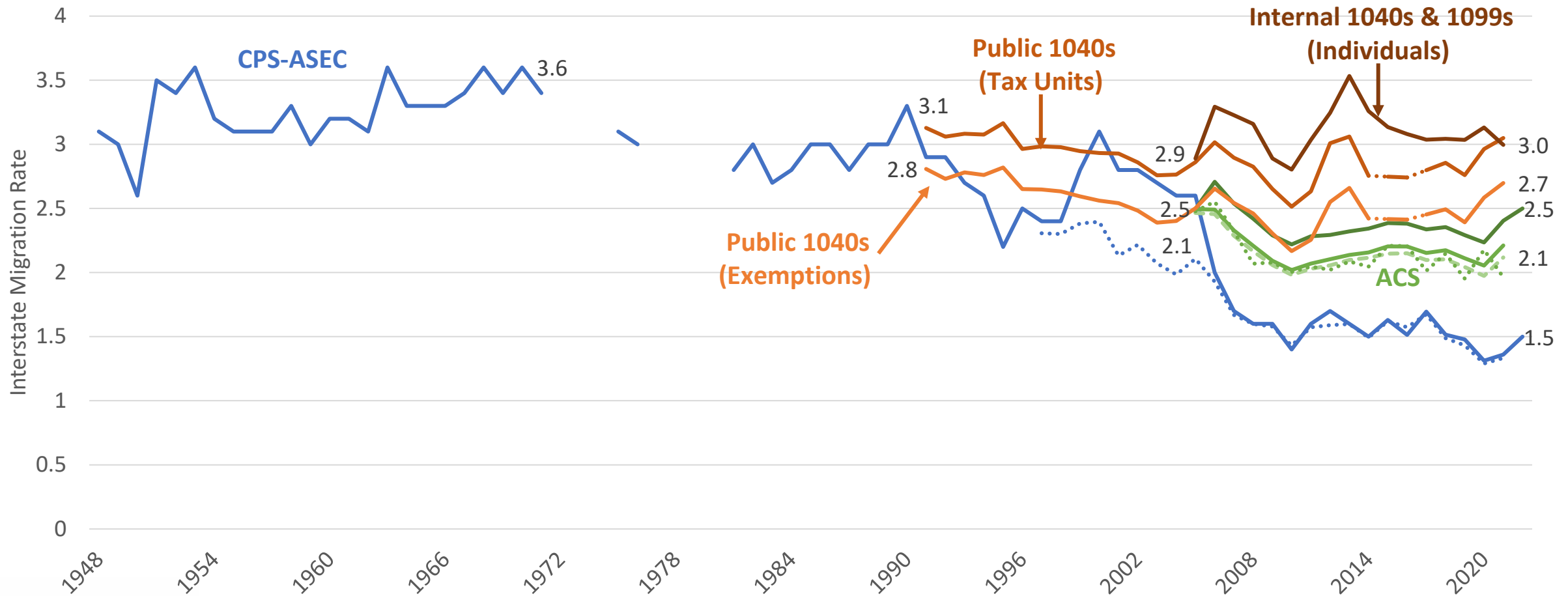


Sources: <https://www.census.gov/data/tables/time-series/demo/geographic-mobility/historic.html>; ACS table B074012; Author tabulations of weighted, unedited CPS-ASEC and weighted, unedited, non-GQ, and March ACS responses. CBDRB-FY24-CES010-001.

Yes, “many little differences”, but...

- Accounting as best we can for these little differences still leaves large gaps in ACS and CPS-ASEC interstate migration rates.
- Ihrke, Koerber, and Fields (2015) outline several directions for future research, including comparing survey measures to analogous administrative record measures
 - Hyatt, McEntarfer, Ueda, and Zhang ([2018](#)) – Compared CPS-ASEC to LEHD
 - Foster, Ellis, and Fiorio ([2018a](#), [2018b](#)) – Compared ACS to IRS
 - Foster, Ellis, and Fiorio (2022) – Compared ACS and CPS-ASEC to NCOA

Annual Interstate Migration, 1948 - 2022



Sources: <https://www.census.gov/data/tables/time-series/demo/geographic-mobility/historic.html>; ACS table B074012; Author tabulations of weighted, unedited CPS-ASEC, weighted, unedited, non-GQ, and March ACS responses, and IRS 1040s and 1099s; <https://www.irs.gov/statistics/soi-tax-stats-migration-data> (smoothed in 2015 and 2017); CBDRB-FY24-CES010-001.

We test three potential explanations:

1. Shifts in the tax universe in favor of migrants.
 - Hypothesis: True migration rate is falling, but tax universe is disproportionately and increasingly comprised of migrants.
2. Shifts among survey respondents in favor of non-migrants.
 - Hypothesis: True migration rate is stable, but survey respondents (CPS-ASEC, in particular) are disproportionately and increasingly comprised of non-migrants.
3. Decreased survey reporting of moves found in tax data.
 - Hypothesis: True migration rate is stable, but changes of address in tax data are increasingly less likely to be reported by survey respondents (CPS-ASEC respondents, in particular).

Data

Administrative Records

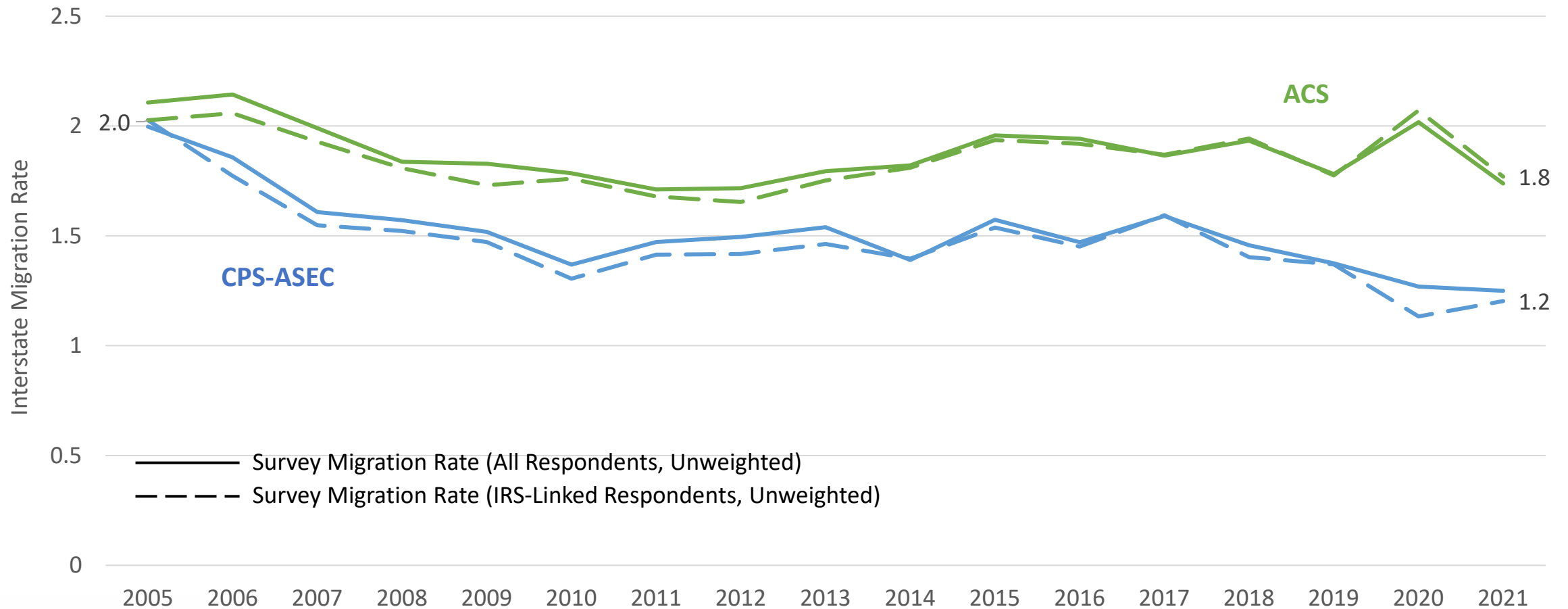
- IRS 1040s and information returns (W-2s/1099s) for filing years 2004 to 2021
 - Look for changes in state location between y-1 and y
 - Filing deadline approximates March supplement
- National Change of Address (NCOA) data for 2019 to 2021
- Link individuals within and across sources using Protected Identification Keys (PIKs) (Wagner and Layne [2014](#))
 - PIK and Match rates stable over time: IRS covers ~70% of ACS and ~62% of CPS-ASEC all respondents, or ~75% of ACS and ~70% of CPS-ASEC PIKed respondents

Census Bureau Surveys

- ACS and CPS-ASEC responses from 2005 – 2021
 - Residence 1 year ago responses to look for change in state
 - For comparability, restrict ACS to non-GQ March responses

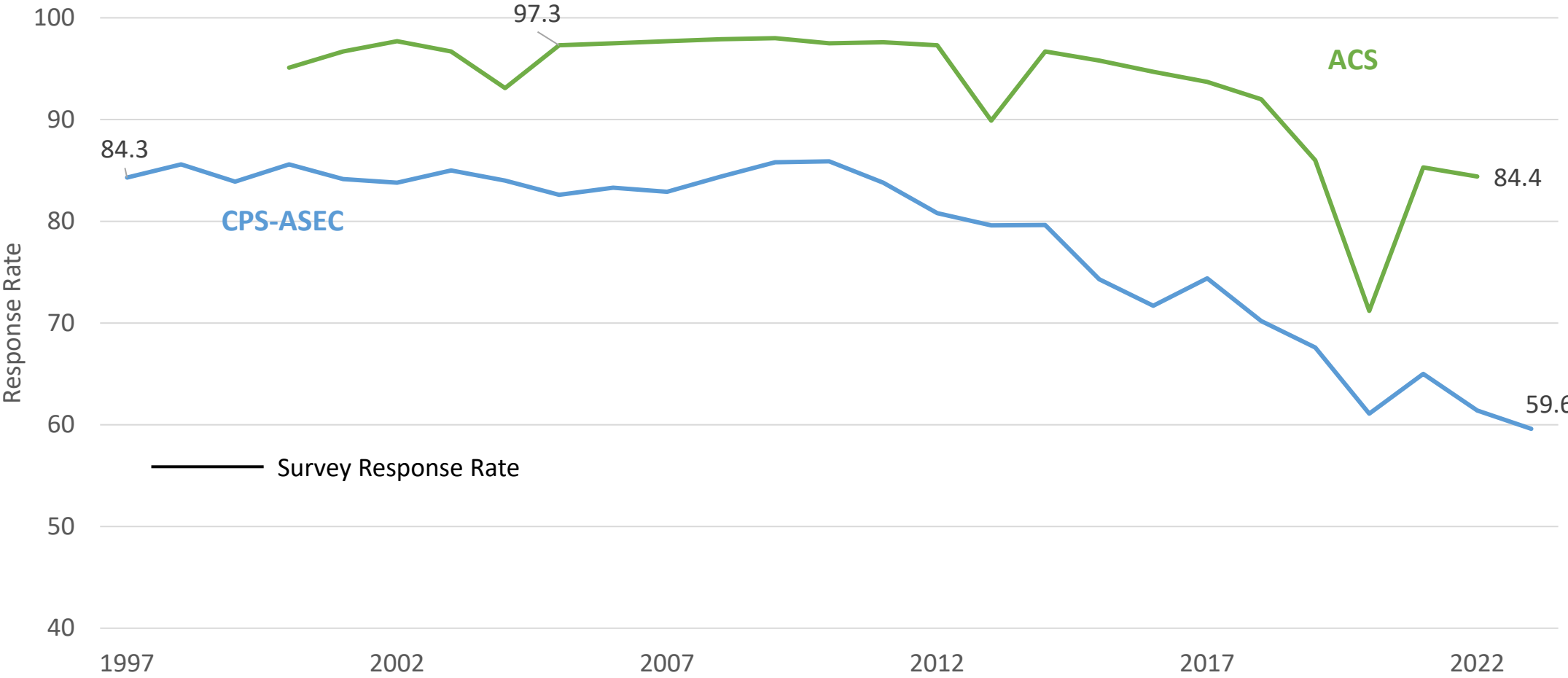
Shift in tax universe in favor of migrants?

No evidence of changes in the composition of the tax universe in favor of migrants.



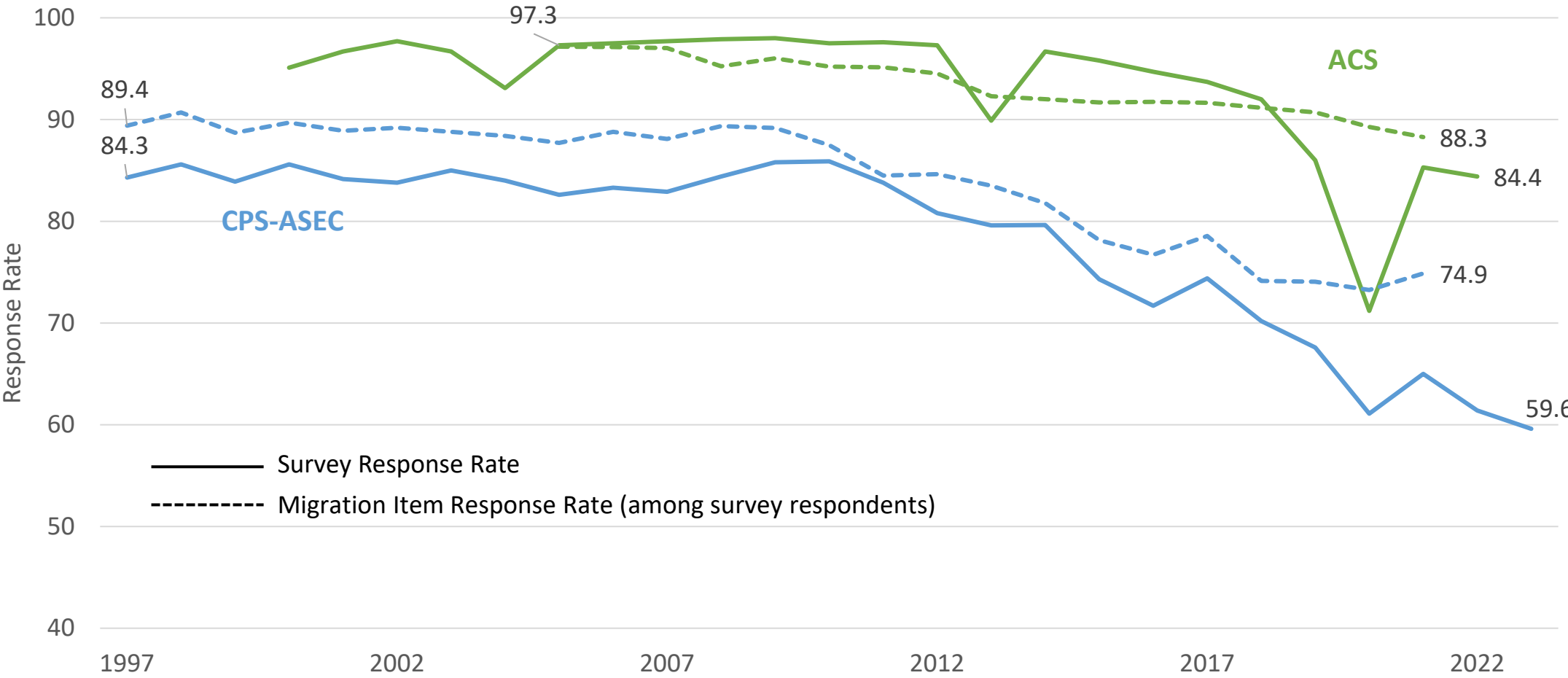
Shift among survey respondents
in favor of non-migrants?

Declining ACS and CPS-ASEC Response Rates



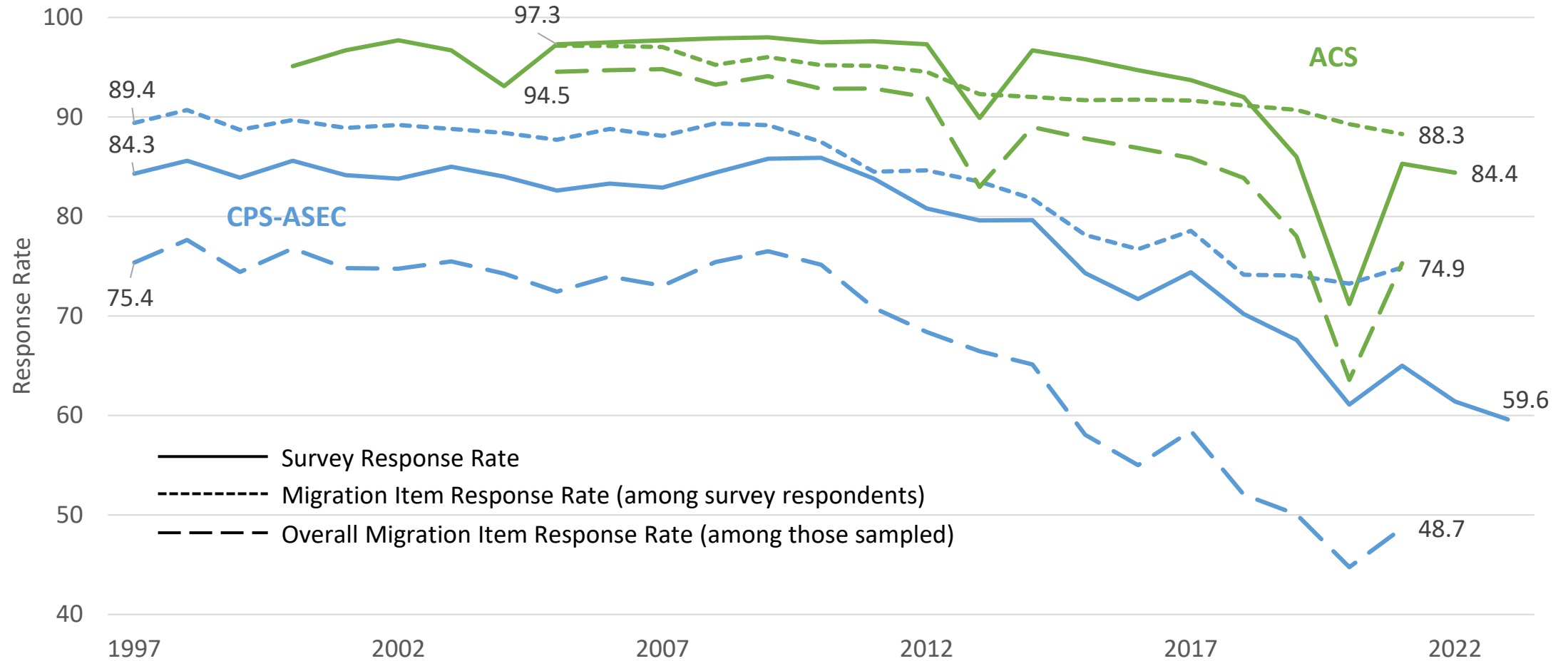
Sources: Author tabulations of ACS and CPS-ASEC responses. CBDRB-FY24-CES010-001.

Declining Migration Item Response Rates

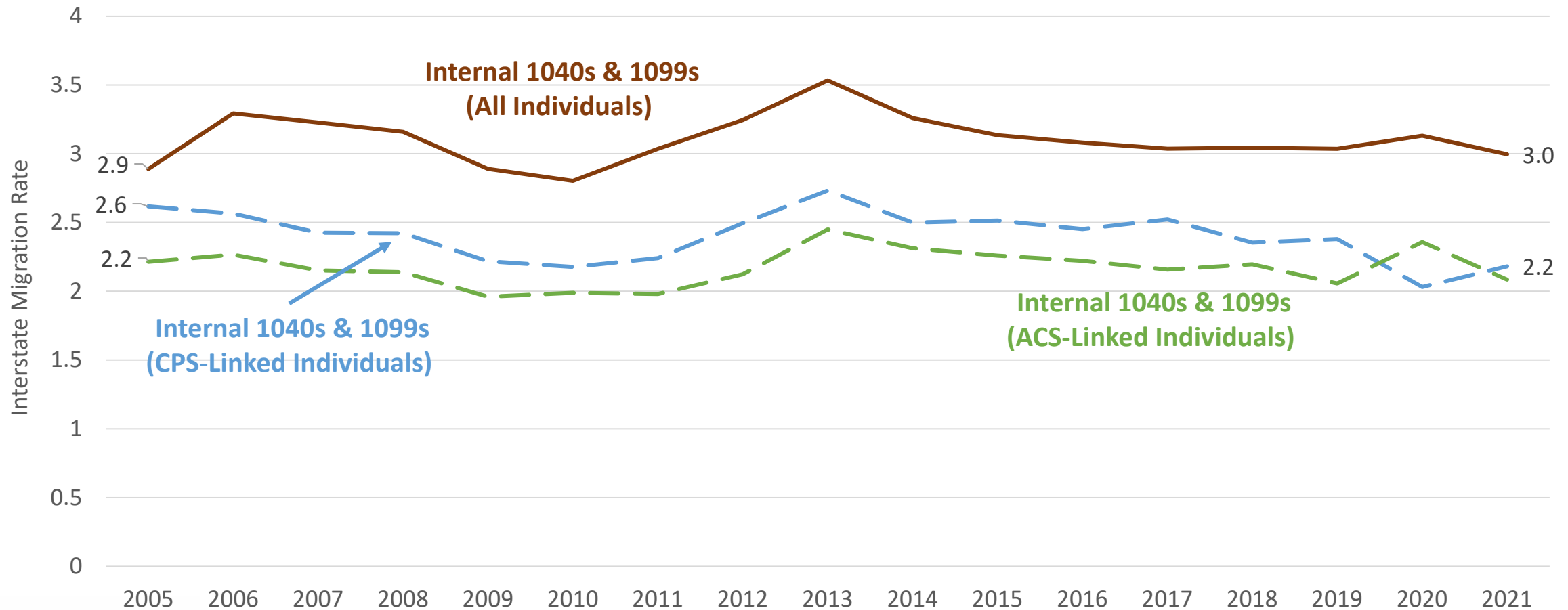


Sources: Author tabulations of ACS and CPS-ASEC responses. CBDRB-FY24-CES010-001.

Less than half of CPS-ASEC sample responded to the migration item in 2021...

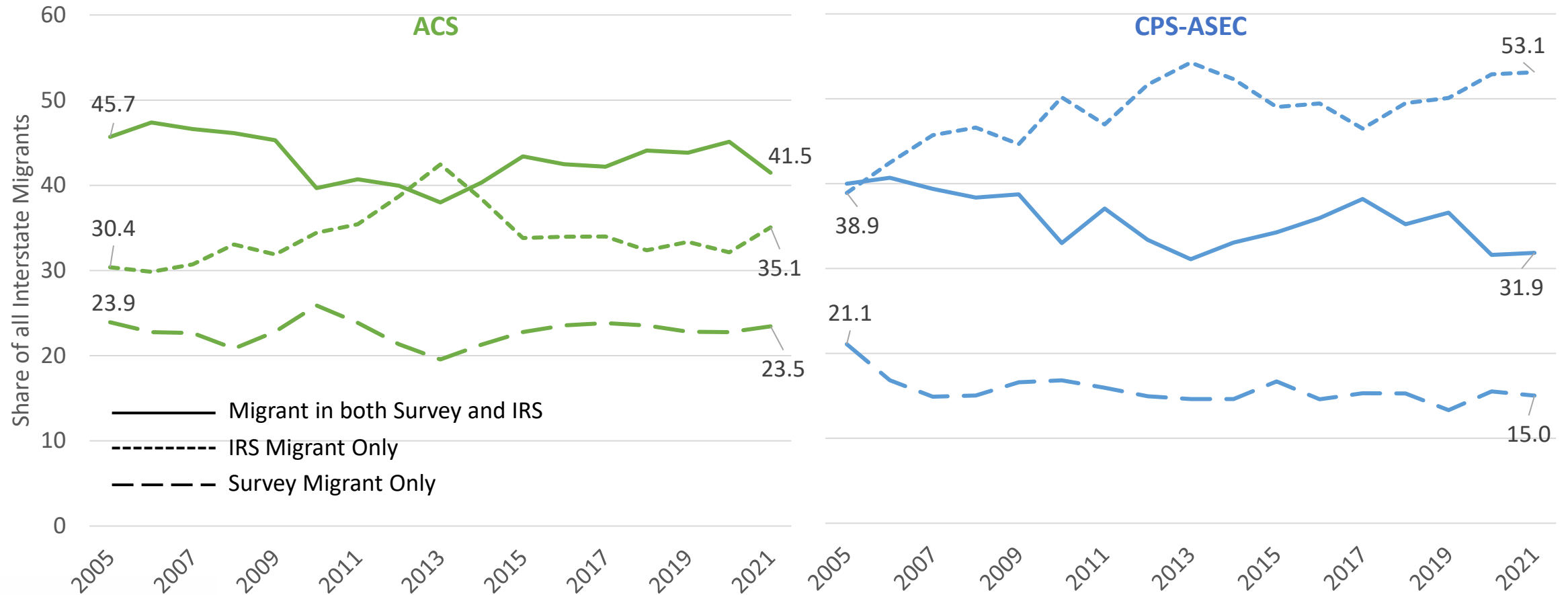


However, no evidence of a shift among survey respondents in favor of non-migrants...

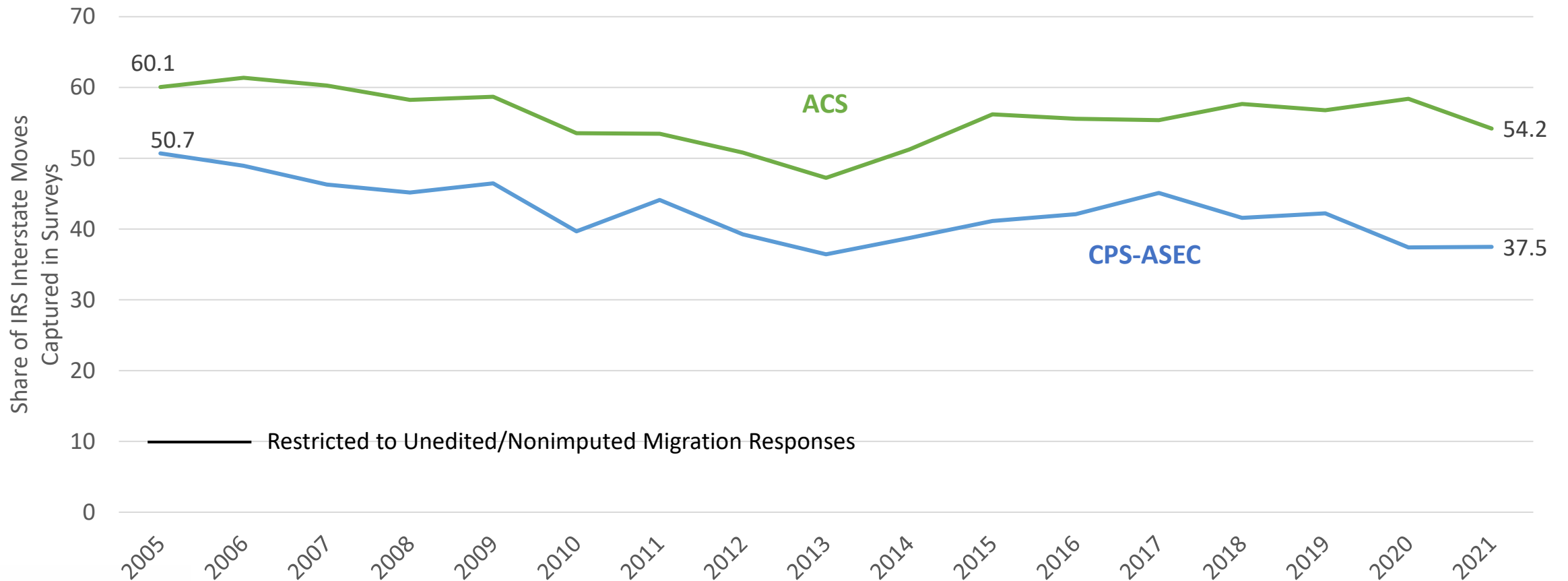


Decreased survey reporting of
moves found in tax data?

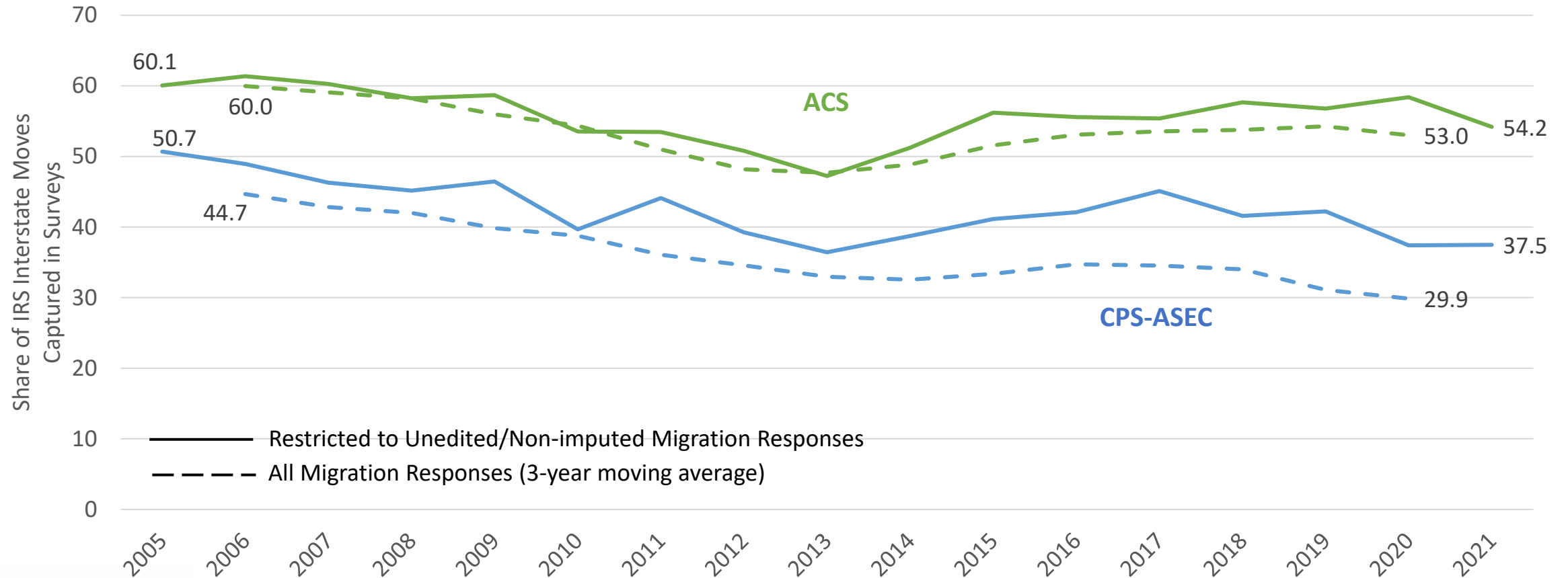
Increasingly, moves are captured only in the IRS data (particularly in the CPS-ASEC linked sample)



IRS moves are increasingly unlikely to be captured in ACS and CPS-ASEC responses...

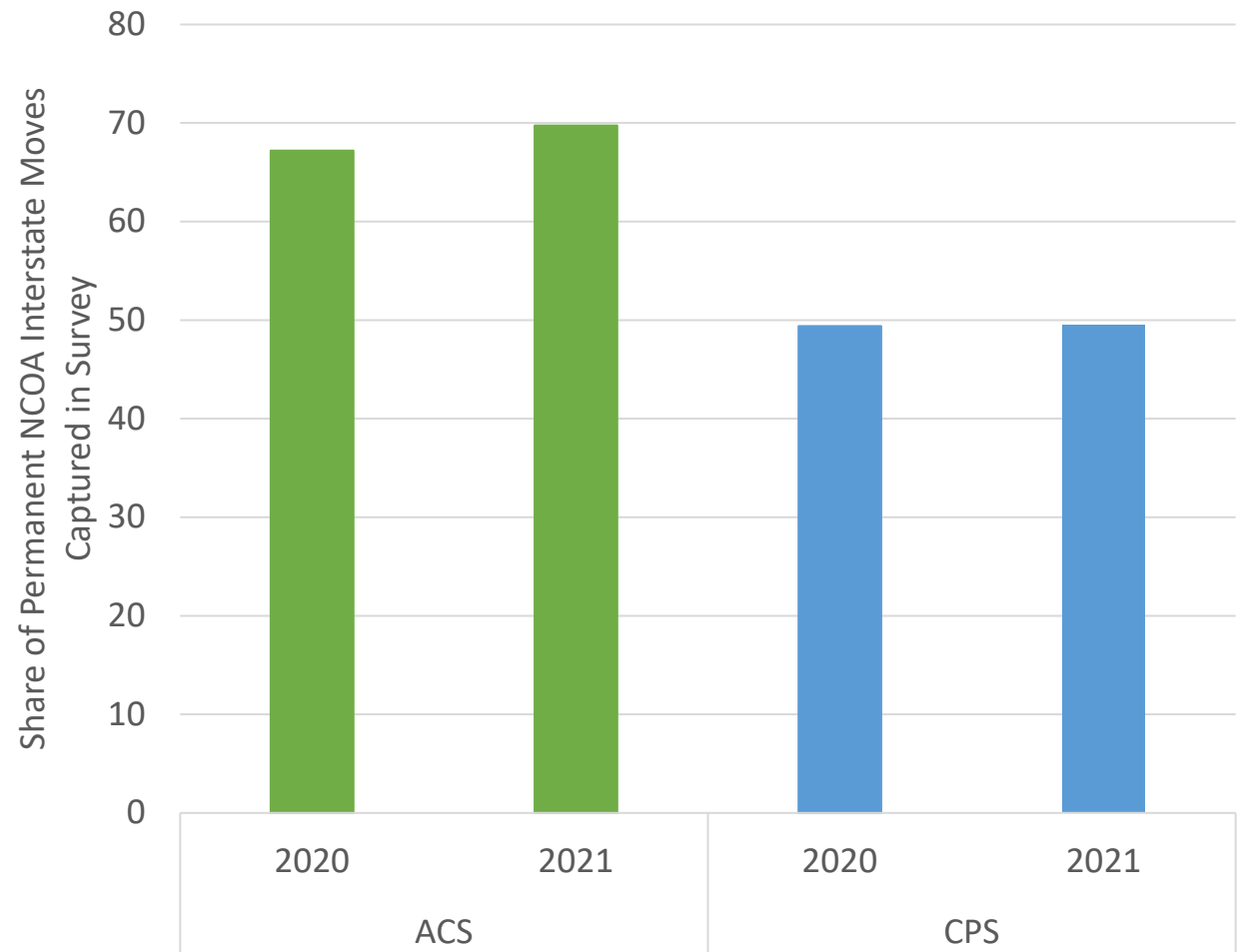


Including edited and imputed migration responses highlights item nonresponse effects:



(Dis)Agreement between NCOA address changes and survey responses

- ACS and CPS-ASEC **householders** with **unedited migration responses**
- Look for **permanent NCOA filings** in the 1-year period referenced in survey responses



Discussion

- Growing gap between ACS and CPS-ASEC interstate migration rates rooted in:
 - “Little differences”: ACS GQ population, in particular
 - Declining share of administrative record moves reported by ACS and, to a greater extent, CPS-ASEC respondents
 - Effect magnified in the CPS-ASEC by rising item non-response and allocation/imputation
- Contributes to a broader literature leveraging administrative records to assess survey misreporting
 - Bee and Mitchell ([2017](#)): underreporting of retirement income in CPS-ASEC
 - Meyer and Mittag ([2015](#)): underreporting of SNAP and TANF in CPS-ASEC
 - Rothbaum ([2015](#)): *increased* underreporting of income in ACS and CPS-ASEC

Discussion (continued)

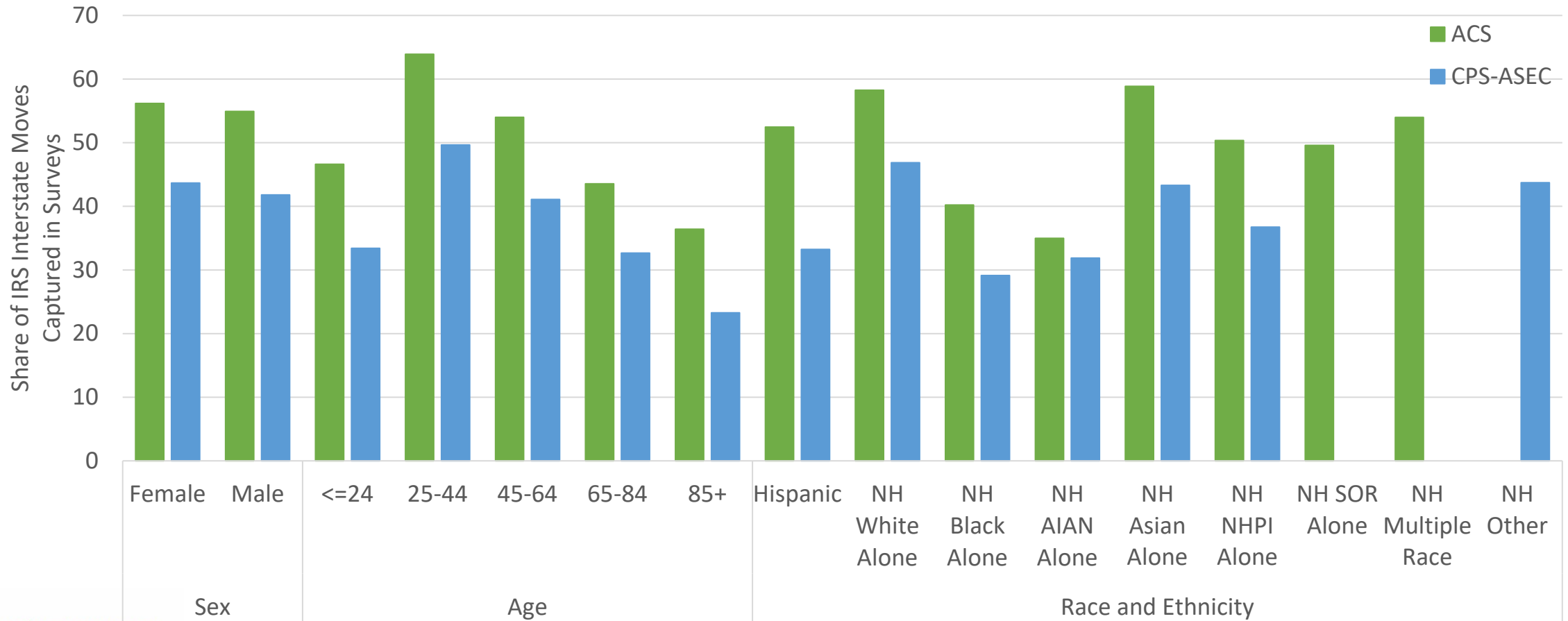
- What does this mean for migration research?
- Hyatt and colleagues ([2018](#)):
 - “...researchers should use caution when using the CPS for studying how migration has changed in recent decades (pg. 2177).”
 - Encourage use of IRS migration statistics in future work
- Keller and colleagues ([2022](#)):
 - Curated Data Enterprise (CDE)
 - Integrated survey and IRS records provide “an engine for better migration and mobility data”

Thank you!

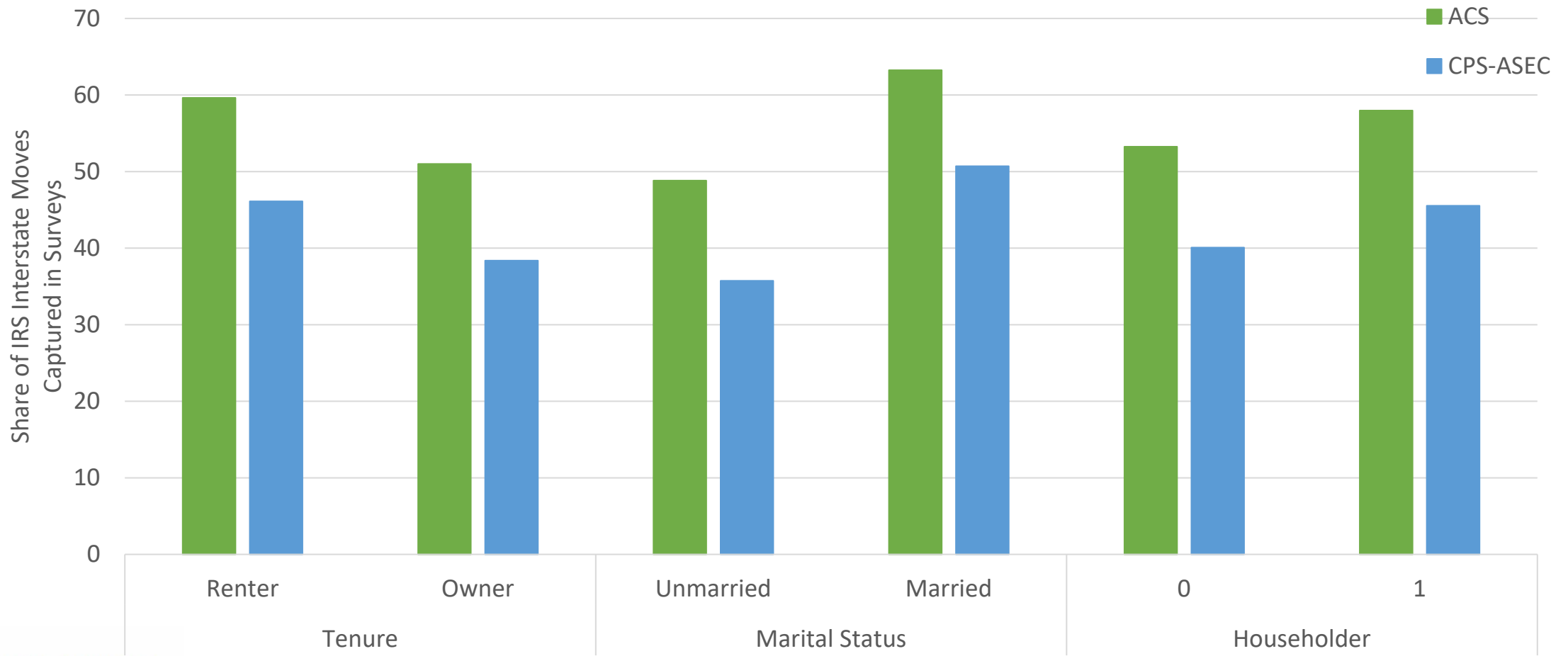
Thomas.b.foster@census.gov

Supplemental Slides

IRS-Survey agreement by demographics



IRS-Survey agreement by household characteristics



IRS-Survey agreement by migration item edits

- ACS unedited migration responses more likely to capture IRS interstate moves
- As a result, ACS responses allocated from others in the household are more likely to accurately capture IRS moves
- Imputed migration responses capture IRS migration around 4% of the time

