

Survey Fatigue and Declining Response Rates: Evidence from the 2020 Census and Household Surveys

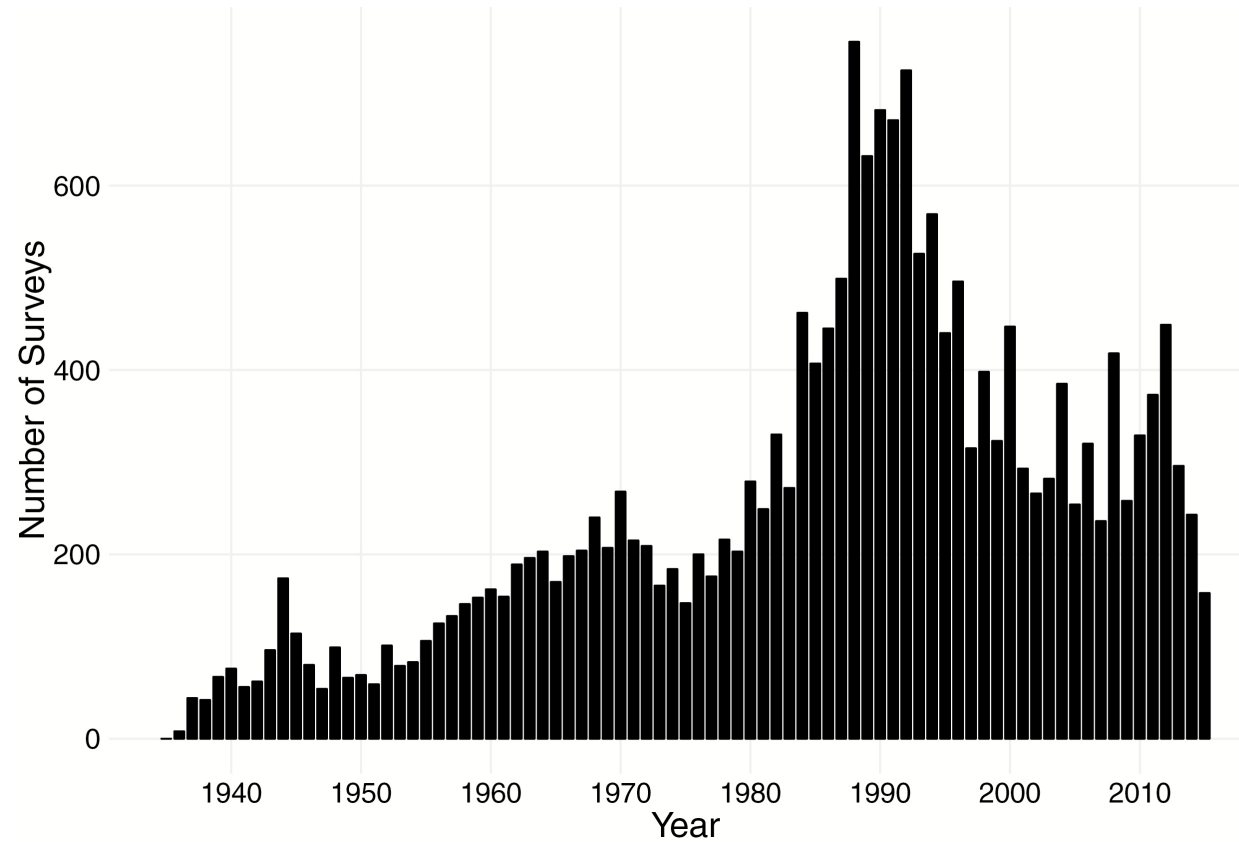
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Introduction

- Declining unit response rates → multiple proposed hypotheses
- One hypothesis: “Survey Fatigue”
 - Idea: People are now more likely to receive multiple survey requests, which leads them to be less likely to respond to additional surveys
 - Leeper (2019): Formalizes this with a tragedy of the commons model (i.e. survey respondents are like fish in the ocean)

Figure 1 from Leeper (2019). Surveys recorded in Roper Center Database, by year.



Literature Review

- Limited evidence for survey fatigue hypothesis
 - Usually impossible to know about prior survey participation of nonrespondents
- Papers finding no effect (for the most part)
 - McCarthy, Beckler, and Qualey (2006): USDA survey respondents
 - Sinibaldi and Örn Karlsson (2016): Length of rest period in Icelandic surveys
- Negative effect
 - Porter, Whitcomb, and Weitzer (2004): Experiment on college students
 - Baumgardner (2013): American Community Survey response rates decreased after 2010 Census
- Existing evidence limited by small number of studies + small sample size in some papers

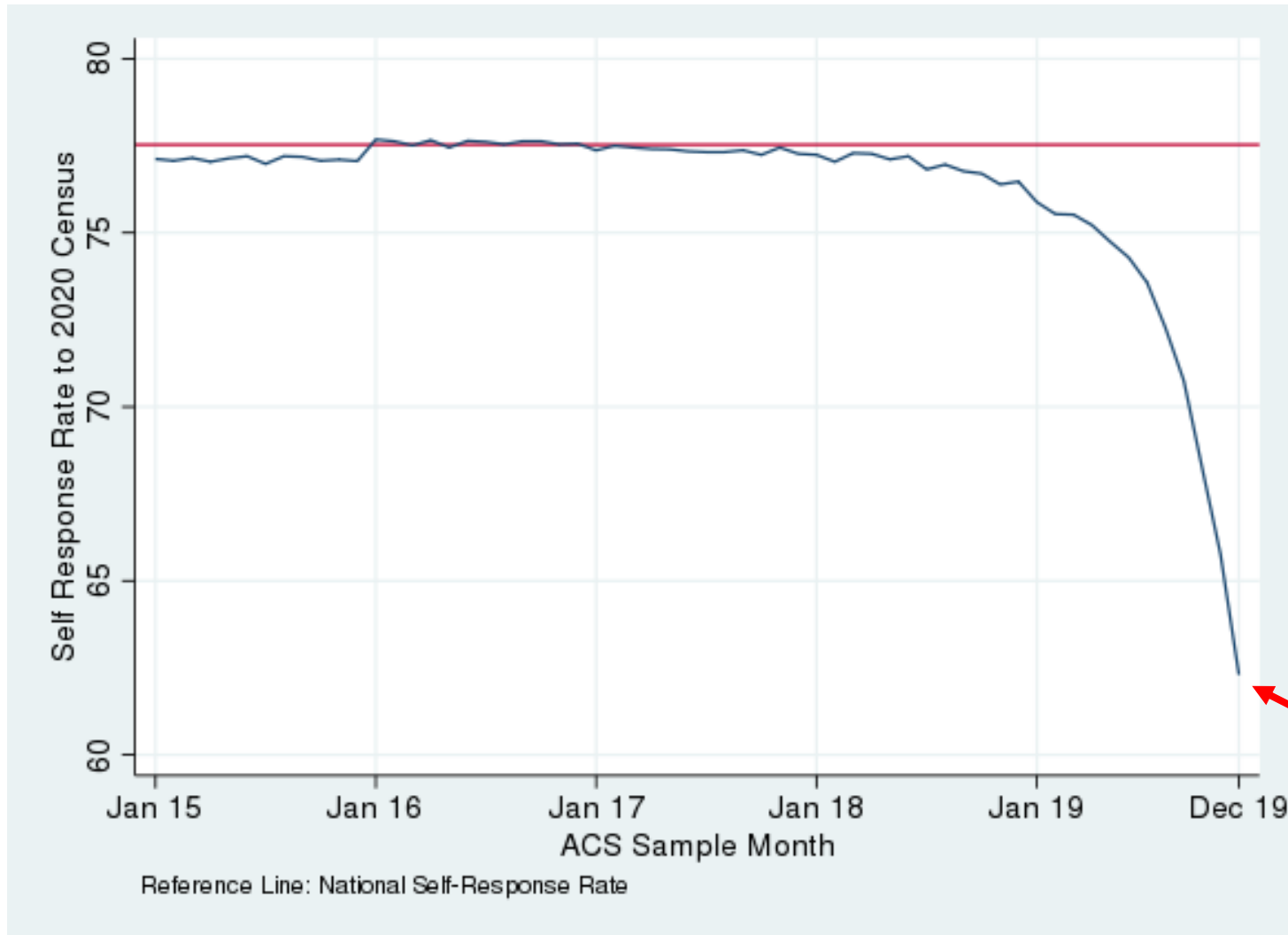
My Contribution

- Research Question: Were households who were recently sampled for the American Community Survey (ACS) or Current Population Survey (CPS) less likely to self respond to the 2020 Census?
- Benefits of research design
 - Large sample size: 127 million households in 2020 Census. ACS samples 3.5 million households annually
 - Can obtain precise estimates, including for how estimates vary by demographics
 - Minimize effects of confounding factors: Selection into ACS and CPS sample random within a geographic area

Setup for Initial Graph

- Outcome: Whether a household (that is, an occupied housing unit) self responded to the 2020 Census
- Key explanatory variable: Month a household was sampled for the ACS
 - ACS household have three months to respond after being sampled
 - Variable denotes being sampled for ACS (including both ACS respondents and nonrespondents)
- Decennial and ACS use the U.S. Census Bureau's Master Address File (MAF) as a frame: Dataset linked directly with on another by MAFID

Figure 1: Self-Response Rates By Year and Month Sampled for ACS



Addresses sampled in December 2019 for the ACS had a self-response rate of 62.3%

Regression Model

- Concern prior graph: Probability of being sampled for the ACS varies by both the population size and predicted self-response rates of a local area
- Solution: Fixed effects model controlling for the differing probabilities of being sampled in the ACS that are based on geography
 - Dependent variable: 2020 self-response indicator
 - Explanatory variables:
 - ACS sample month indicators
 - Block fixed effects
 - Unit of observation: Household

Figure 2: Self Response Fixed Effects Estimates By Year and Month Sampled for ACS

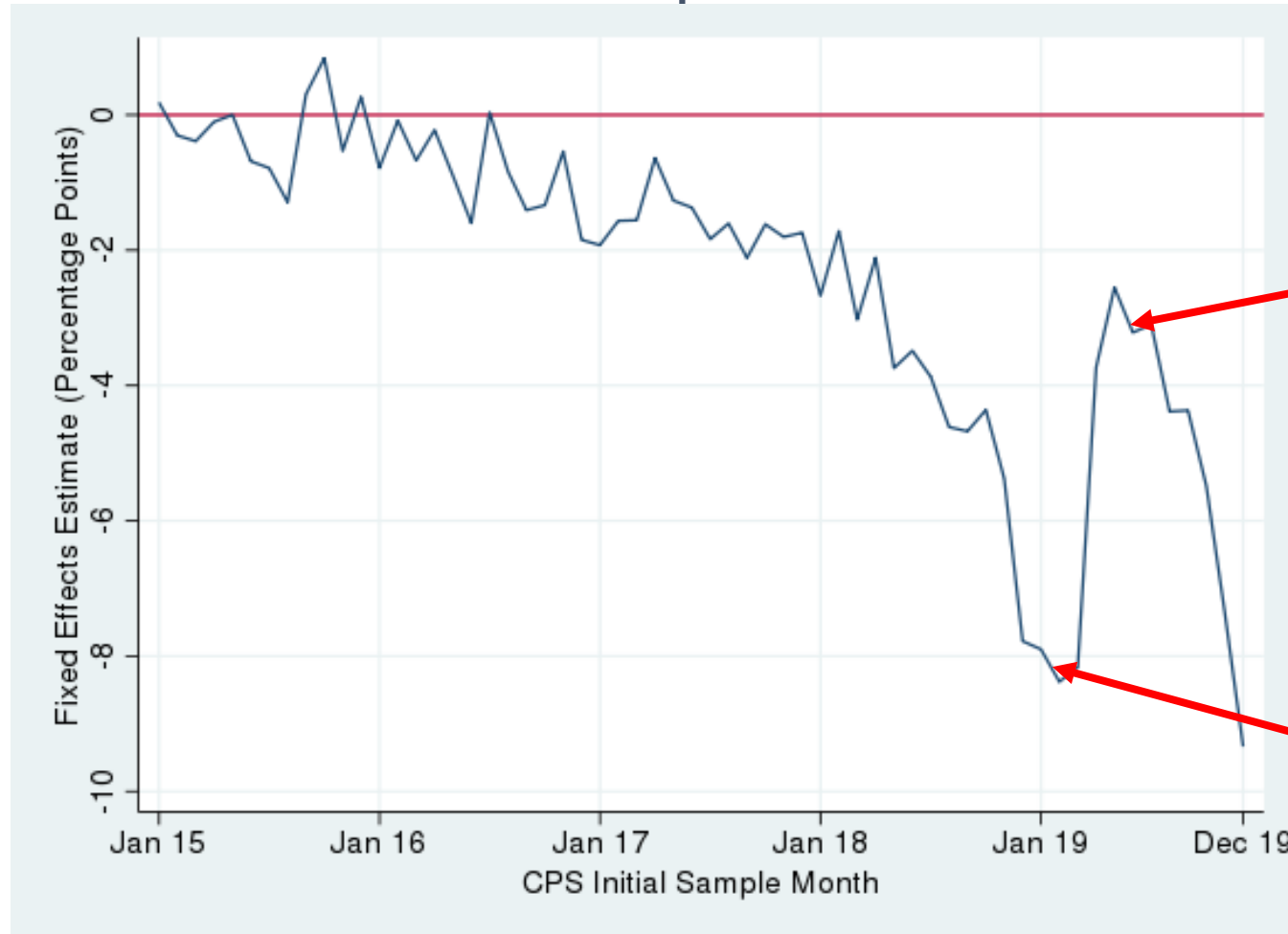


Addressed sampled
in December 2019
for the ACS had a
self-response rate
that was 15.1
percentage points
lower, compared to
addresses not
recently sampled for
the ACS

CPS Analysis

- Concern prior graph: Is this a unique effect given similarities of ACS and the decennial census?
- Solution: Run analysis on CPS
 - CPS has no self response option, so sampled households are contacted immediately by Census employees. Opposed to decennial and ACS, which have an initial push for self response
 - Nevertheless, the CPS is also fielded by the U.S. Census Bureau, so has some similarities
- Note on CPS design: Household interviewed for 4 months in a row, have 8-month rest period, then interviewed for another 4 months

Figure 3: Self Response Fixed Effects Estimates By Year and Month Sampled for CPS



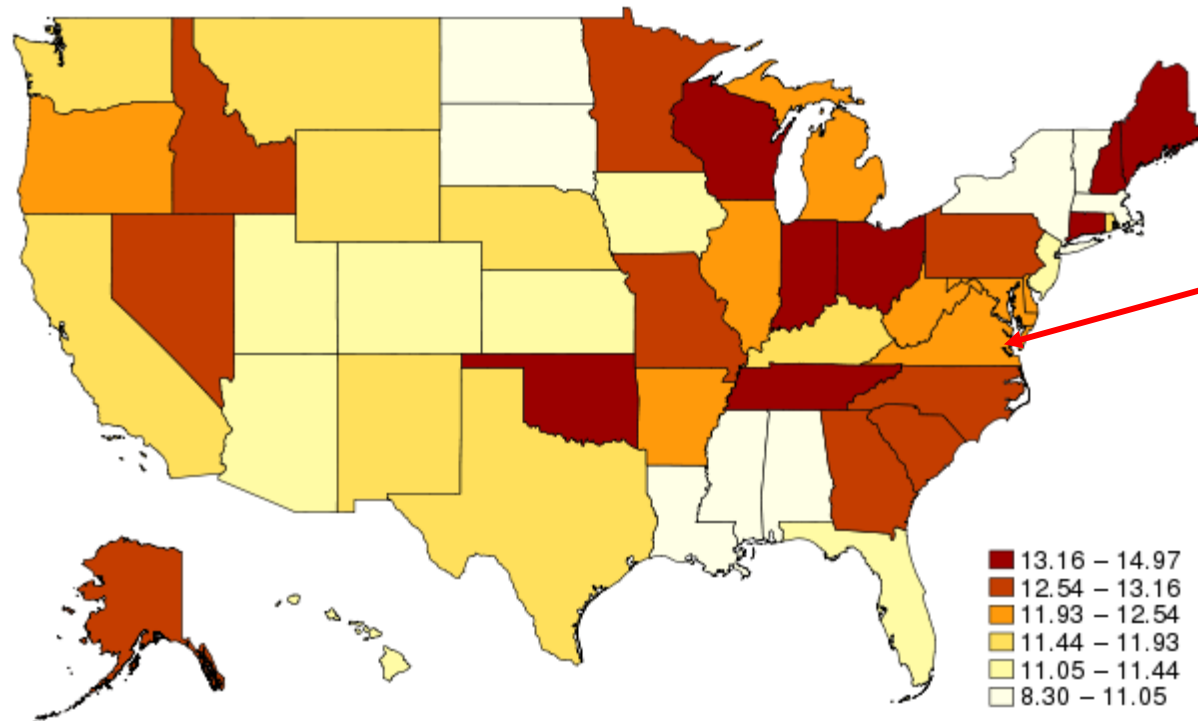
2) These household were not interviewed again until mid-2020, after the initial self-response period for the 2020 Census

1) These household interviewed again in early 2020, around the time of the 2020 Census

By Demographics and State-ACS Only

- Next, run fixed effects model separately by
 - State
 - Demographics
- Pool the October, November and December 2019 ACS panel indicators together in one parameter to improve precision for smaller states and demographic groups

Figure 4: Self Response Fixed Effects Estimates By State



For addresses in Virginia...

Addresses sampled in October, November, or December 2019 for the ACS had a self-response rate that was 12 percentage points lower, compared to addresses in Virginia not recently sampled for the ACS

Table 1: Self Response Fixed Effects Estimates By Demographics

Pending Disclosure Review.

Conclusion

- Being recently sampled for a Census household survey results in a lower self-response rate to the decennial census
- Key Question: Does this effect generalize to other non-governmental surveys? Depends on the mechanism:
 - If it is survey fatigue, then potential yes
 - If it is due to “survey confusion:” respondents not knowing the difference between 2020 Census and CPS/ACS or not looking at invitation letters carefully, then less likely
 - Stein et al. (2021): Only about half of respondents remembered the 2020 ACS mail materials differentiating between the ACS and the 2020 Census
- More research needed to understand why respondents would be less likely to respond to multiple survey requests from the same sponsor

My Contact Information

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Appendix

Regression Model

$$Y_{ib} = \sum_{t=2015}^{2019} \sum_{m=1}^{12} \beta_{tm} S_{ibtm} + \alpha_b + u_{ib}$$

- Y_{ib} : =1 if household i in block b self responds to the 2020 Census
- S_{ibtm} : = 1 if household was sampled for the ACS in year t and month m
- α_b : Block fixed effects

Additional Technical Details of Sample

- Housing unit **occupied** in 2020 Census
- MAFID is a **housing unit** on 2020 MAF and in the enumeration universe
 - This excludes ACS sampled addresses marked as deletes earlier in the 2010s.
- MAFID is on the 2020 enumeration MAF (so excludes MAFIDS added during 2020 collection)
- In type of enumeration area #1 (TEA 1-self-response areas)