Summary File:
Housing Mobility Research

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Intro

Over the past few months, Caitlin G., Ben K. and I have been exploring different datasets to better understand what we call the *"Housing Mismatch/Misallocation* problem. I.e., whether older Americans are causing a "disruption" in the U.S. housing market by occupying an increasingly large share of the houses available — prompting young workers to live in sub-optimal units, and preventing them from purchasing their own homes. We explore this using ACS ('05-'19), AHS ('00-'20), and SIPP ('08-'20).

1   American Community Survey

The ACS collects data on a variety of topics, including demographics, education, income, and housing. We use data from 2005 to 2019 during this exploration phase. And we begin by recreating the figure below from the Census[1] to check whether they match.
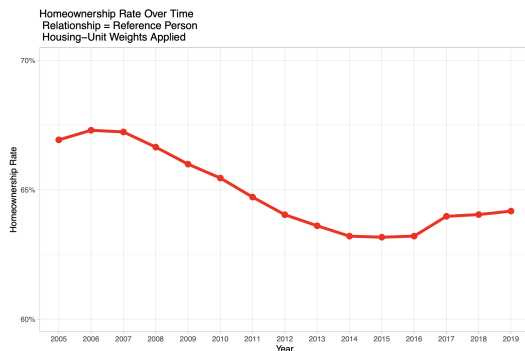

Fig. 1: Homeownership, HH Heads by Age

Notes: We managed to replicate the exact same figure from the Census. This means that we know how to use the data, especially the `person weights`, `housing unit weights`, Ref. Persons
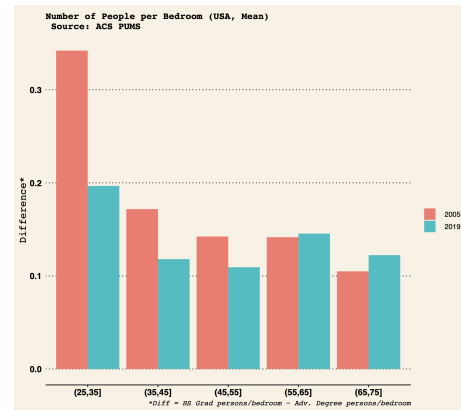

Fig. 2: Difference in Persons/Bedroom between HS- and Advanced-Degree Holders, by Age, by Year.

Notes: We observe a much higher difference for younger people, aged 25 to 35. The gap has been shrinking for most age groups. High-School graduates have been living with fewer roommates over time relative to advanced-degree holders.
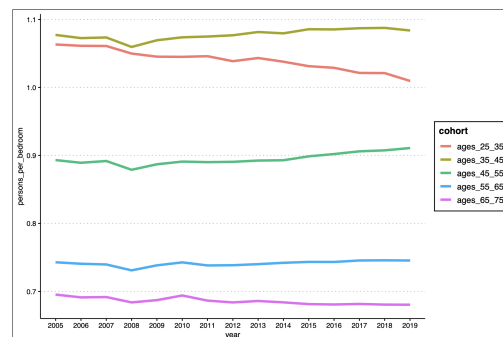

Fig. 3: Persons per Bedroom Over Time by Age.

Notes: Here, we see that `persons/bedroom` goes down by age as expected. What is interesting, though, is that the 35-45 group seems to be living with more people than the 25-35 group.
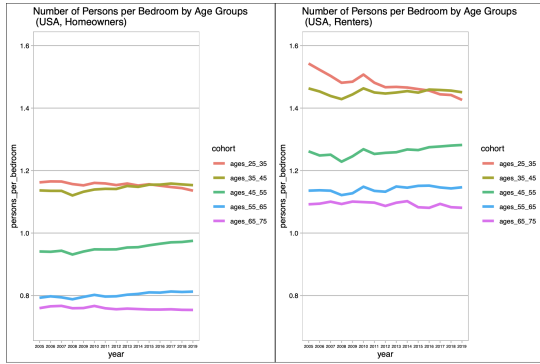
[1] https://www.census.gov/content/dam/Census/library/publications/2021/acs/acsbr-010.pdf

Fig. 4: Persons/Bedroom by Age, Homeowners v. Renters

Notes: We observe that `persons/bedroom` is fairly constant for all groups, except for 35-45 which is increasing over time. Renters live with more people than homeowners in gereral — as expected.
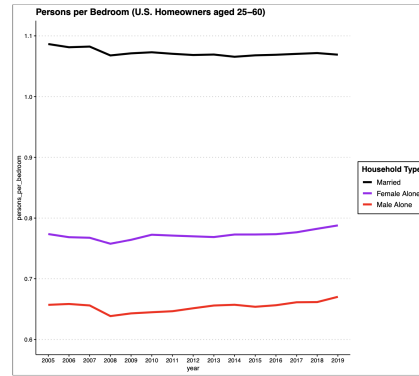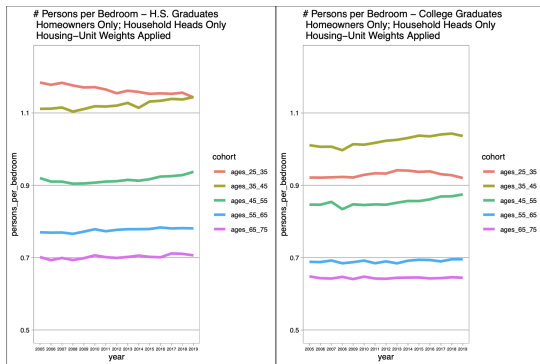

Fig. 5: Homeownership by Age, HH Heads by Ed

Notes: College graduates live with more people than HS graduates, as expected. That said, `persons/bedroom` increases over time for [35-45] and [45-55] in both education groups.
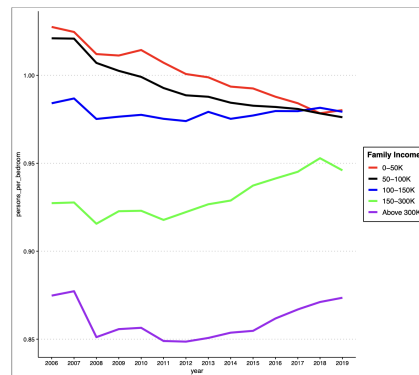

Fig. 6: Homeownership, HH Heads, 25-84 y/o, 2005 v. 2019

Notes: Homeownership rates used to be much higher in 2005 than in 2019. It is comparable only at the age of 75, where the rates in 2019 are similar to that of 2005.

Fig. 7: Persons per Bedroom, U.S. Homeowners Aged 25-66, by HH Marrital Status

Notes: Nothing particularly new or exciting here.

Fig. 8: Persons per Bedroom by Income Bracket

Notes: Looks like `persons/bedroom` has been increasing for the very wealthy ([150-300K], [>300K]); constant for the wealthy ([100-150K]); and decreasing for the less wealthy ([0-50K], [50-100K]). Seems counter-intuitive...
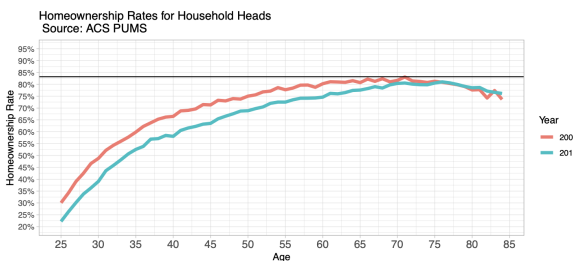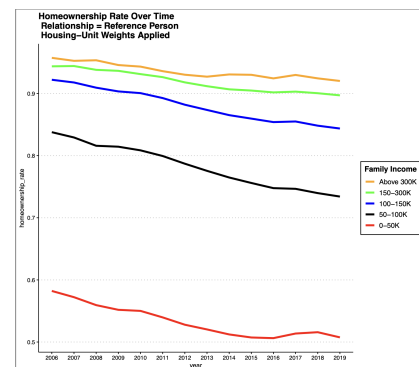

Fig. 9: Homeownership Rate over Time by Income

Notes: Homeownership rates are descreasing for all income brackets, albeit at a slower rate for the very wealthy.
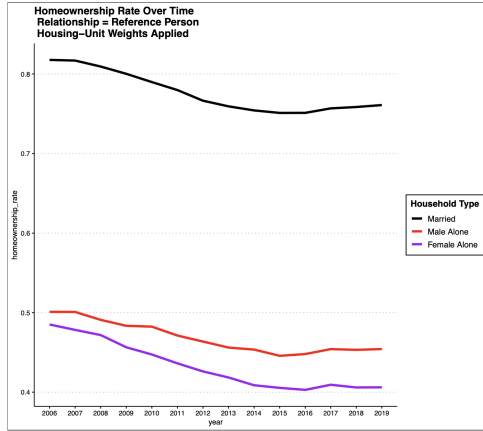
Fig. 10: Homeownership over Time, Marital Status.

Notes: Homeownership rates have been decreasing for all groups, especially for `females alone` which has been decreasing faster than `males alone`
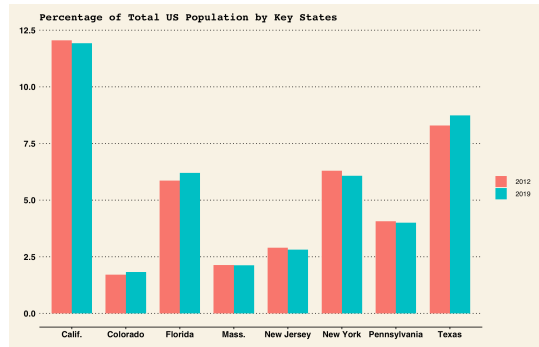

Fig. 11: Percentage of U.S. Population.

Notes: Nothing exciting, although it reassures us that the data makes sense. Calif. and NY State have been "losing" people, while FL and TX have been "gaining" people.
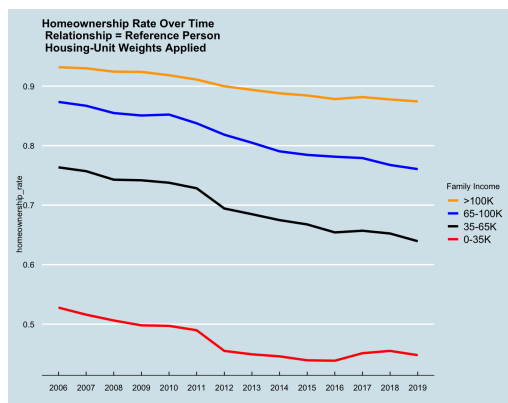

Fig. 12: Homeownership by Family Income.

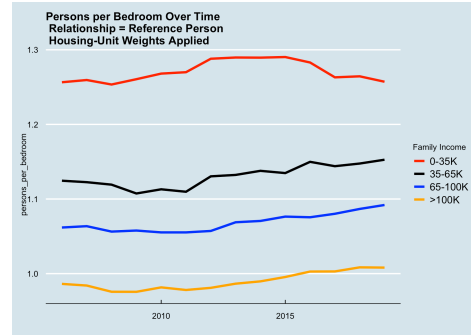**Notes:** A variation of Figure 9 above, but with different brackets; same comments apply.

Fig. 13: Persons per Bedroom by Family Income.

Notes: Interesting how `persons/bedroom` has been increasing for all groups over time, except for the very poor.
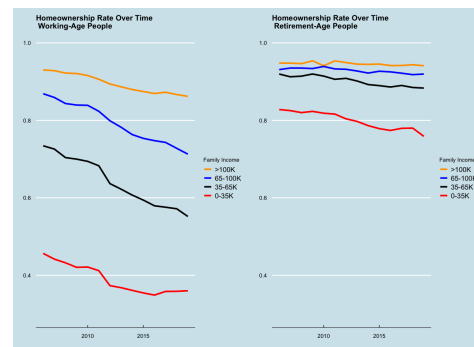

Fig. 14: Homeownership by Family Income; Working-Age v Retirement Age.

Notes: Another compelling graph. First, the difference of 40% between working-age [0-35K] and retirement-age [0-35K]... Second, retirement-age [0-35K] have been relatively worse-off overtime compared to other folks in the same age group. Third, rates are falling for almost everybody except for retirement-age [>65K].
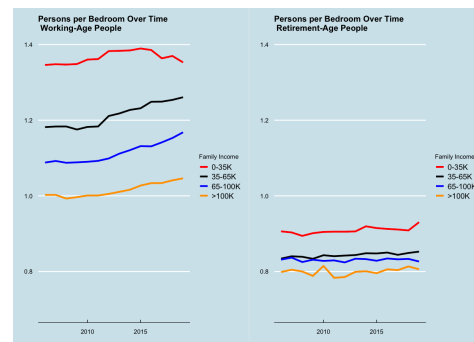

Fig. 15: Persons/Bedroom by Family Income; Working-Age v Retirement Age.

Notes: Here, `persons/bedroom` has been increasing for most working-age folks, and quite flat for all of retirement-age people. Makes sense. Also note that working-age [0-35K] has seen a decrease in `persons/bedroom` form '15 to '19.
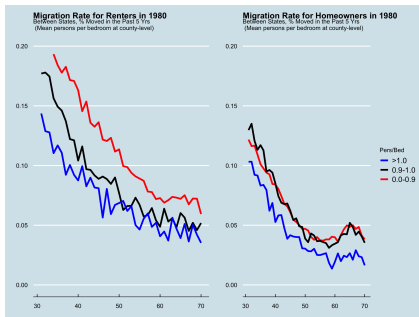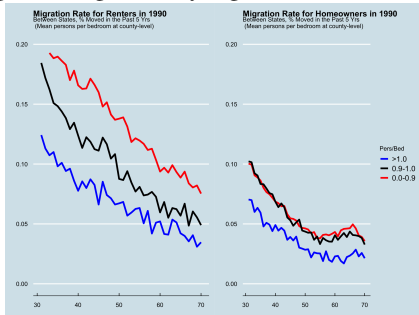
Fig. 16: Migration by Age, Persons/Bedroom.

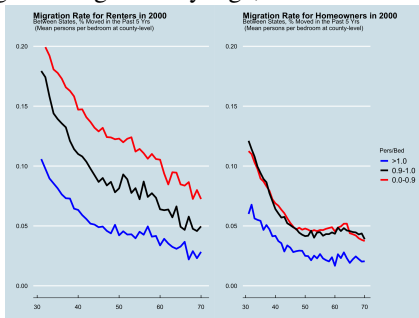Fig. 17: Migration by Age, Persons/Bedroom.

Fig. 18: Migration by Age, Persons/Bedroom.

Notes: Note the spike at around [65-70]... Probably when older people move into retirement homes.
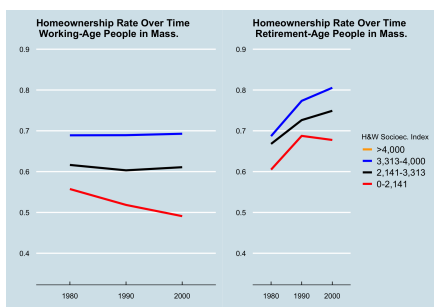

Fig. 19: Homeownership Over Time in Mass.

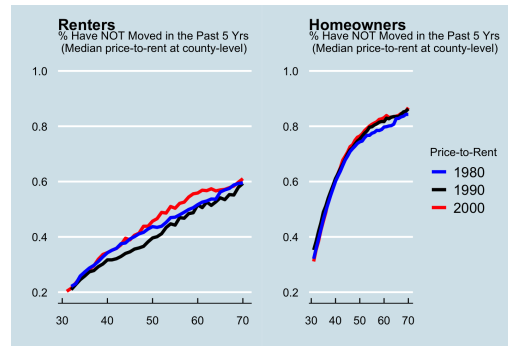**Notes:** Less wealthy people in Mass. have been getting worse off over time.

Fig. 20: % of Renters and Owners Who Have NOT Moved in the Past 5 Years.

Notes: Interesting that people in the 2000s haven't been moving as frequently as people in the 1980s or 1990s.
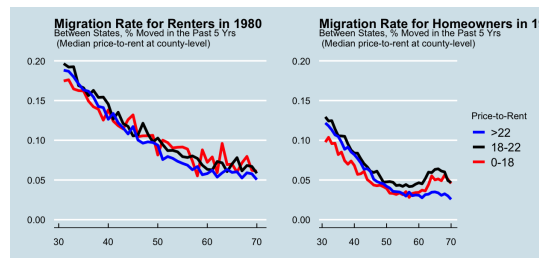

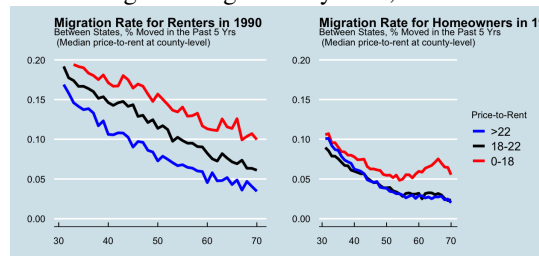Fig. 21: Mig. Rate by PTR, 1980
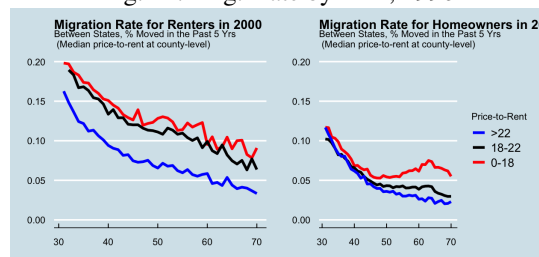

Fig. 22: Mig. Rate by PTR, 1990

Fig. 23: Mig. Rate by PTR, 2000

Notes: Interesting that the spike in migration around 65 years old is mostly for homeowners.

2 American Housing Survey

The American Housing Survey is a nationwide survey conducted by the U.S. Census Bureau to collect detailed information about the nation's housing. The survey collects information on a variety of topics, including the physical and financial characteristics of housing units, the characteristics of the people who live in them, and the location and neighborhood of the housing units. Data from the American Housing Survey can be found on the U.S. Census Bureau's website. Here, we are using data from the years 2000 to 2020. The graphs and scatter plots below were created by Caitlin Gorback.
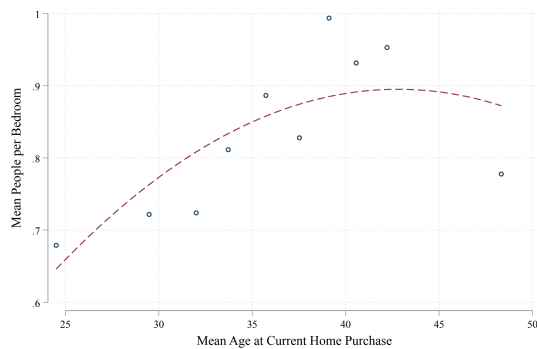

Fig. 26: Fraction Recent Movers by Year

Notes: I wouldn't expect this decline for the youngest group — maybe because more and more of them have been living with their parents?

Fig. 24: Persons/Bedroom by Age of Home Purchase

Notes: This is useful information to have, but probably doesn't tell much about mobility.

Fig. 27: Where People Have Been Moving to

Notes: Younger people are still more likely to move, so this makes sense.
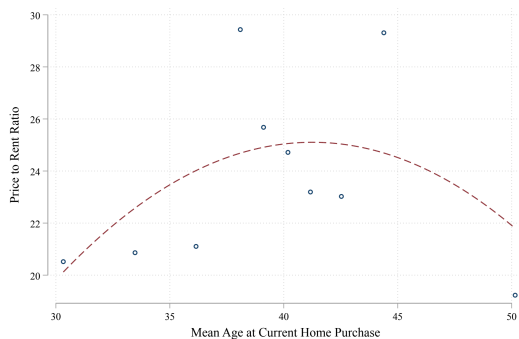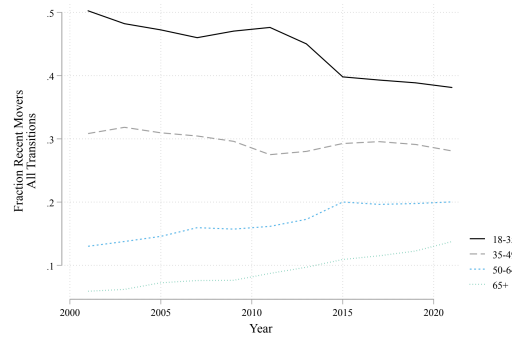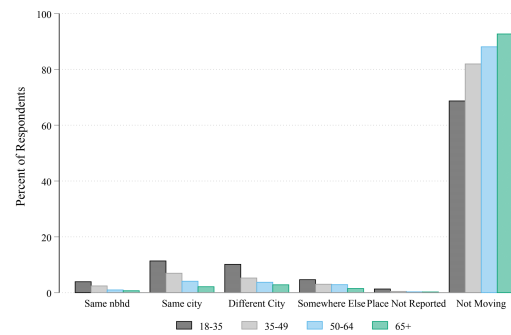

Fig. 25: PTR Ratio by Age of Home Purchase

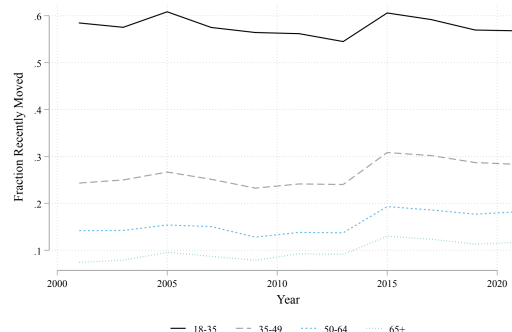**Notes:** Seems like people in their 40s are more likely to buy homes in expensive areas.

Fig. 28: Fraction of People that have Recently Moved

Notes: Pretty flat... Would have expected the fraction of younger people here to be decreasing, based on Fig. 21.
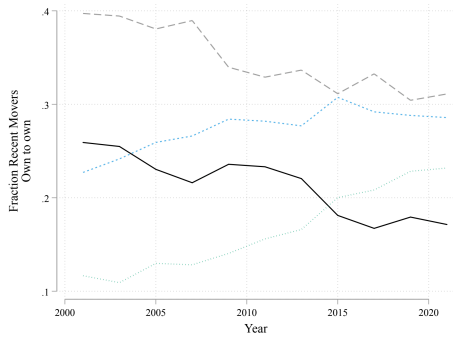
Fig. 29: Fraction of Recent Movers (Own to Own)

Notes: The fact that people over 65 have been increasingly moving – between houses that they own – is something that could be explored in this study.
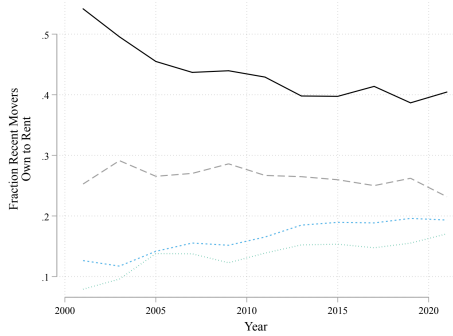

Fig. 32: Fraction of Recent Movers (Rent to Own)

Notes: Maybe the most compelling figure from the AHS... I'm curious to understand why, especially after 2012, younger people have been taking up a smaller fraction of rent-to-own recent-movers, while people over 50 saw a spike... Did something happen in 2012-2013 to cause this?

Fig. 30: Fraction of Recent Movers (Own to Rent)

Notes: So, relative to all recent movers, older people have been moving from their own places to a rental at a growing/faster rate... Maybe because they're more likely to own a home in the first place?
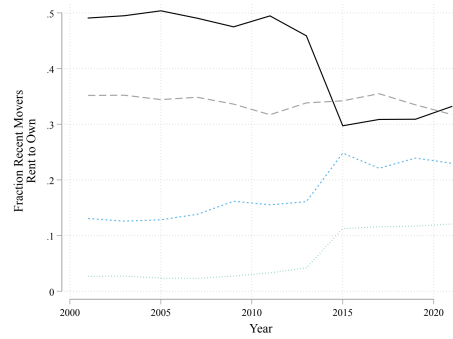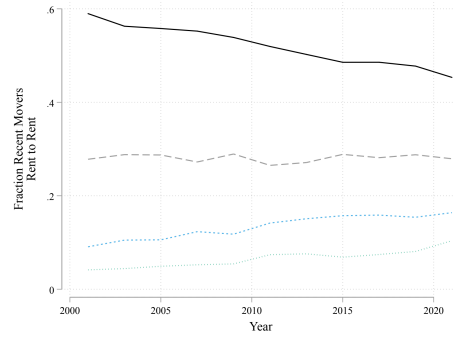

Fig. 33: Fraction of Recent Movers (Rent to Rent)

Notes: Is this also because younger people have been living with their parents more frequently nowadays?
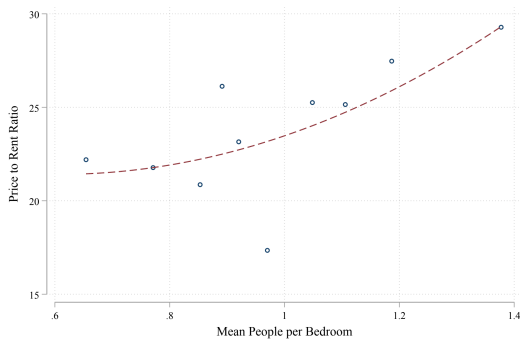

Fig. 31: People per Bedroom and Price-to-Rent Ratio

Notes: Makes sense... People have more roommates in more expensive areas.

3 SIPP

The Survey of Income and Program Participation is a nationwide survey conducted by the U.S. Census Bureau to collect detailed information about the income and program participation of individuals and households in the United States. The survey collects information on a variety of topics, including sources of income, participation in government assistance programs, and demographics. The SIPP is a longitudinal survey, meaning that it follows the same individuals over time to track changes in their income and program participation. This allows researchers to analyze the effectiveness of government assistance programs and other social policies. Although the survey goes back to 1964, we use data from 2008 to 2020.
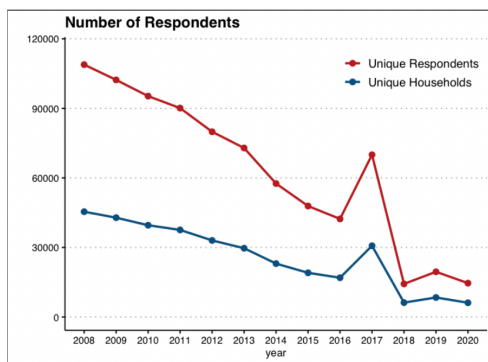

Fig. 34: Outreach / Number of Respondents

Notes: The number of people the SIPP has been reaching keeps getting smaller. It seems that they just couldn't keep up with the initial pace. This makes it hard to use it in recent years.
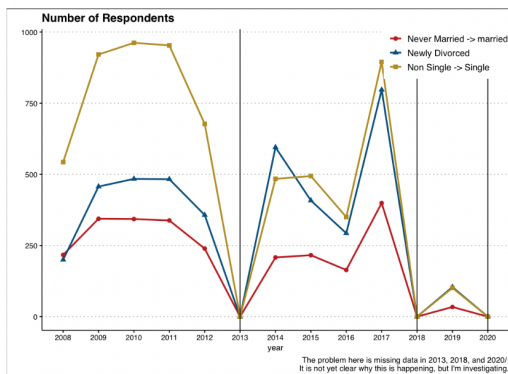

Fig. 35: Seam Problem

Notes: Something else to keep in mind when using this data is the "seam problem," which makes it hard to track people as they roll in and out of the survey.
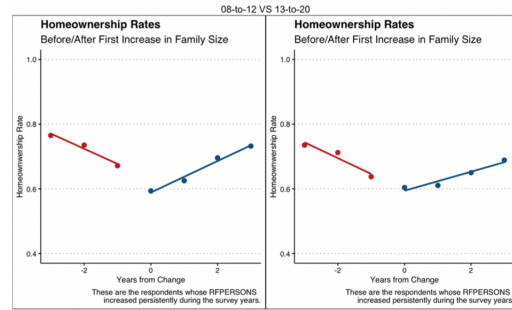

Fig. 36: Homeownership Before/After a Persistent Increase in Family Size: 2008-2012 v. 2013-2020.

Notes: Ben and I were confused as to why homeownership seems to be going down before an increase in family size. Also, it is likely that the second group does not contain data from 2018-2020.
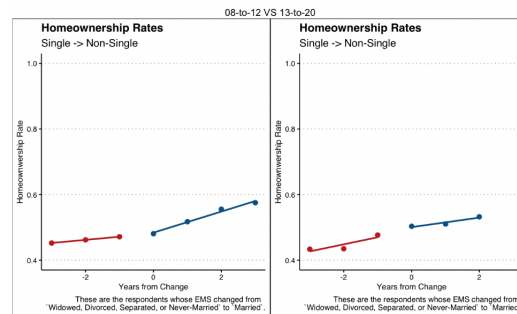

Fig. 37: Homeownership Single to Non-Single: 2008-2012 v. 2013-2020.

Notes: It's interesting to see that the post-change growth used to be higher. It would be good to look at the previous waves.
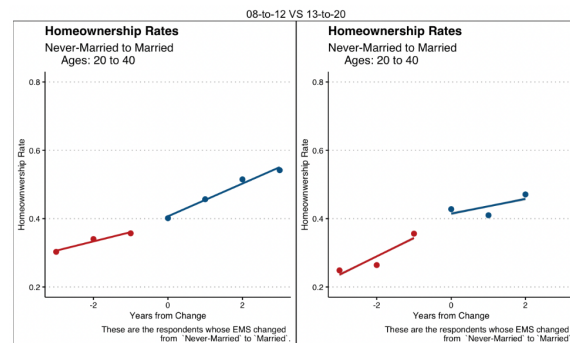

Fig. 38: Homeowneship, Never-Married to Married, 20-40

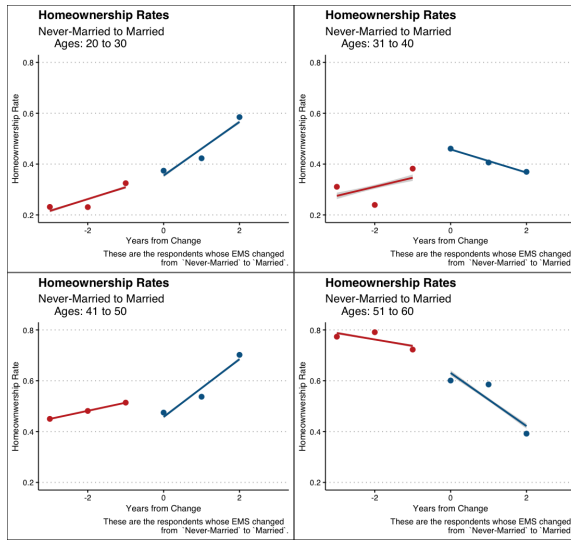**Notes:** Are recently-married people less likely to become homeowners now when compared to a few years ago?.

Fig. 39: Homeowneship by Age, Never-Married to Married

Notes: Ben and I were confused as to why homeonwerships seem to be falling for the latter group.