

Haven't We Met Before? Leveraging Existing Household Survey Data to Evaluate the Effect of Incentives

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MOTIVATION

Household survey response rates have been consistently falling for the last twenty years, particularly in the last ten years. Due to concerns about these falling response rates, the redesigned 2014 Survey of Income and Program Participation included an incentive experiment where sampled households were randomly assigned a \$0, \$20, or \$40 incentive.

The incentives proved modestly successful at increasing response rates. However, incentives do not possess uniform efficacy across subgroups and may not necessarily decrease nonresponse bias. Unfortunately, survey frames do not include demographic information and practitioners rarely know the characteristics of nonrespondent households. We examine the feasibility of linking the 2014 Survey of Income and Program Participation sample addresses to other Census Bureau datasets in order to identify the demographics of all sampled households (including nonrespondents).

MASTER DEMOGRAPHICS

The U.S. Census Bureau collects information from persons, households, and businesses in approximately 130 surveys every year. Once a decade, it gathers core demographic information on the entire U.S. population via the Decennial Census.

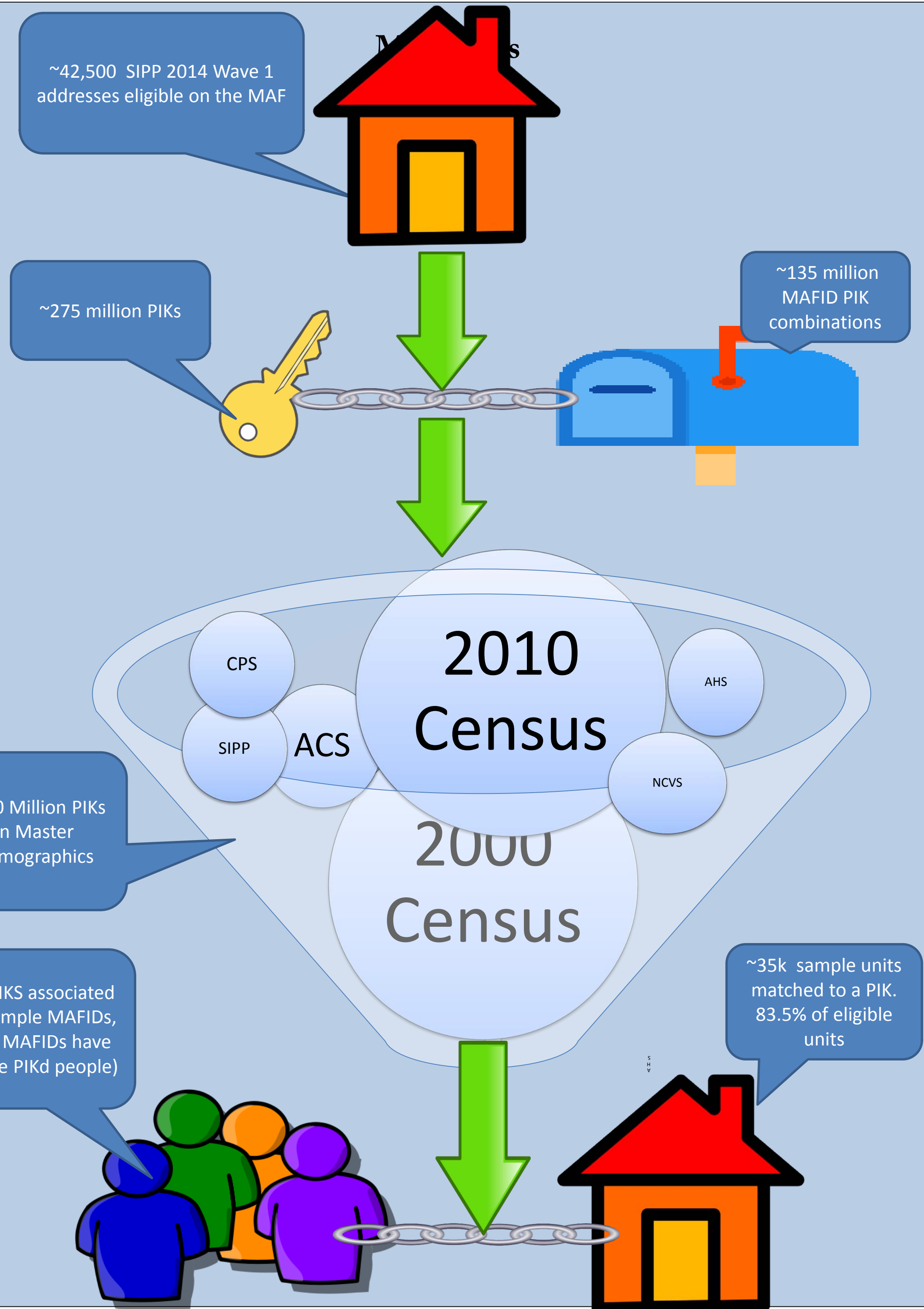
The Master Demographics (MD) project is a pilot to create a core set of high-quality demographics on any person who has ever been surveyed by the Census Bureau between 2000 and the present.

- American Community Survey (ACS), 2001 through 2015
- American Housing Survey (AHS), 2004, 2011, 2013, 2015
- Current Population Survey (CPS), 2000 through 2013
- National Crime Victimization Survey (NCVS), 2012
- Survey of Income and Program Participation, 2001, 2004, 2008, 2014
- Decennial Census (DEC), 2000, 2010

Unique person links are created using the Census Bureau's Protected Identification Key (PIK) process.

MASTER ADDRESS FILE

The Census Bureau's Master Address File (MAF) is an annually updated inventory of all known living quarters in the United States, Puerto Rico, and associated island areas. The MAF Auxiliary Reference File (MAF-ARF) links person identifiers to address identifiers (MAFIDs) using Census survey data and federal administrative data.



MASTER DEMO DATA MATCHED TO 2014 SIPP, WAVE 1*

Table 1. Comparison of SIPP Households by PIK Status

	SIPP Sampled Households	95% CI, Lower Bound	95% CI, Upper Bound	PIK	95% CI, Lower Bound	95% CI, Upper Bound	No PIK	95% CI, Lower Bound	95% CI, Upper Bound
N=	42,500			35,500			7,000		
Share of SIPP Sampled Households	100.0%			83.5%			16.5%		
Response Rate	69.4%	69.0%	69.8%	70.5%	70.0%	70.9%	66.7%	65.6%	67.8%
Share with Incentive									
\$0	50.8%	50.3%	51.3%	50.9%	50.4%	51.4%	50.2%	49.1%	51.4%
\$20	25.2%	24.8%	25.6%	25.1%	24.7%	25.6%	25.7%	24.6%	26.7%
\$40	24.0%	23.6%	24.4%	24.0%	23.6%	24.5%	24.1%	23.1%	25.1%

- Approximately 83.5% of all SIPP households were matched to a PIK.
- Households with a PIK had higher response rates.
- PIKd households were no more likely to be offered incentives than non-PIKd households.
- Initial assignment of incentives was 50% of sample-\$0, 25% of sample-\$20, 25% of sample-\$40

Table 2. Demographic Characteristics of SIPP Households with PIK, Respondents and Nonrespondents

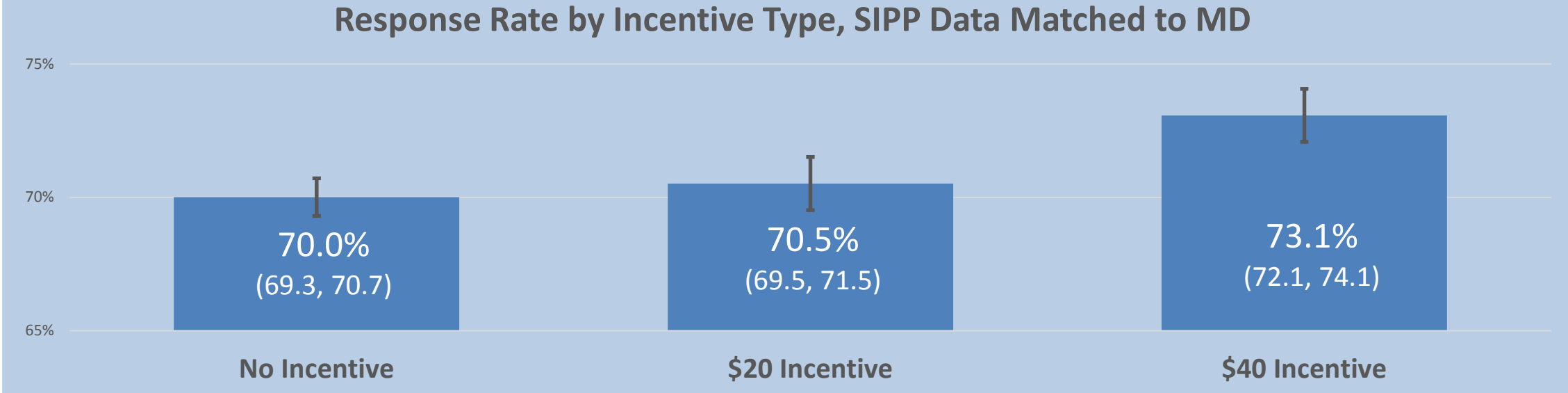
	SIPP Respondent with PIK	95% CI, Lower Bound	95% CI, Upper Bound	SIPP Nonrespondent, (data from MD)	95% CI, Lower Bound	95% CI, Upper Bound
N=	25,000			10,000		
Share with Incentive						
\$0	50.9%	50.3%	51.5%	52.8%	51.9%	53.8%
\$20	25.1%	24.6%	25.6%	25.2%	24.4%	26.1%
\$40	24.0%	23.5%	24.5%	22.2%	21.4%	23.0%
Avg Age of eldest person	54.1	53.9	54.3	50.1	49.7	50.4
Gender (f)	45.3%	44.7%	46.0%	51.5%	50.5%	52.5%
Hispanic	11.7%	11.3%	12.1%	10.9%	10.3%	11.6%
Race						
White, alone	79.4%	78.9%	79.9%	77.9%	77.1%	78.8%
Black, alone	14.6%	14.2%	15.1%	13.3%	12.6%	13.9%
Asian or NHOPI	3.6%	3.4%	3.8%	3.8%	3.5%	4.2%
AIAN or two or more races	2.4%	2.2%	2.6%	5.0%	4.5%	5.4%

- SIPP respondent data comes from 2014 SIPP, Wave 1. Nonrespondent data comes from Master Demo project data (sources listed at far left in panel).
- Nonrespondents were more likely to not be offered an incentive, 52.8% vs 50.9%.
- Nonrespondents were more likely to be female than respondents, and were more likely to be younger than respondents.
- By race, nonrespondents were less likely to be White or Black alone, but were more likely to be American Indian, Alaskan Native or two or more races.

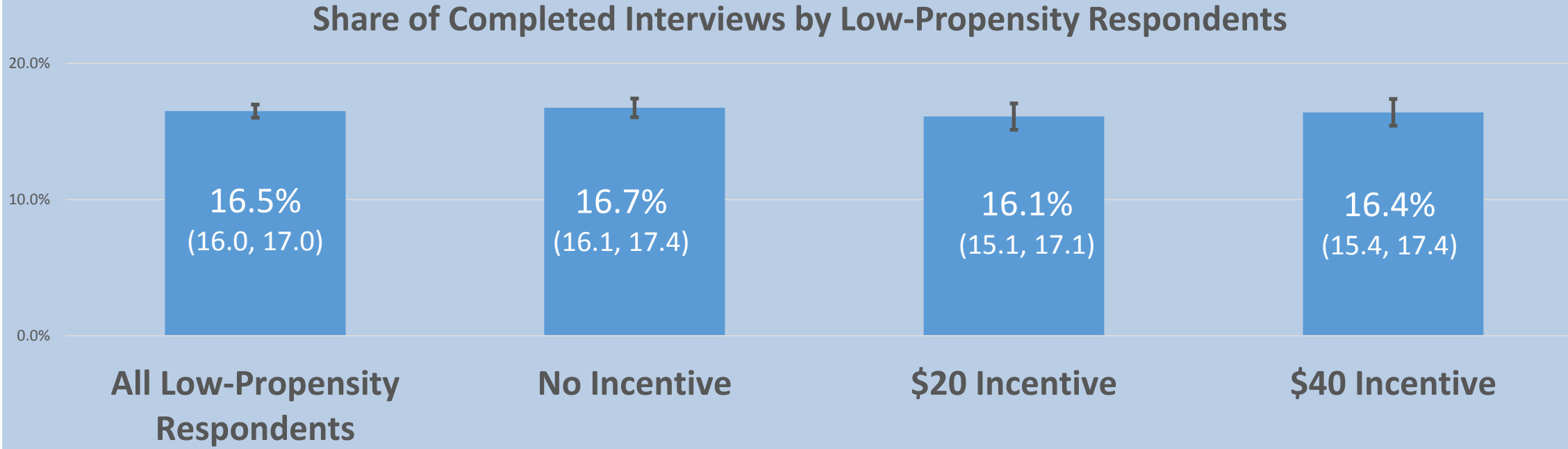
*Columns may not sum due to rounding.

EVALUATING EFFECT OF INCENTIVES USING MD DATA

Using data on SIPP nonrespondents available via the MD project it is possible to evaluate the effect of the incentive experiment in the 2014 SIPP on response. We were able to identify 32,000 persons with complete data on age, sex, race, and Hispanic origin. Like previous researchers, we found that the \$40 incentives had a statistically significant impact on response rates.

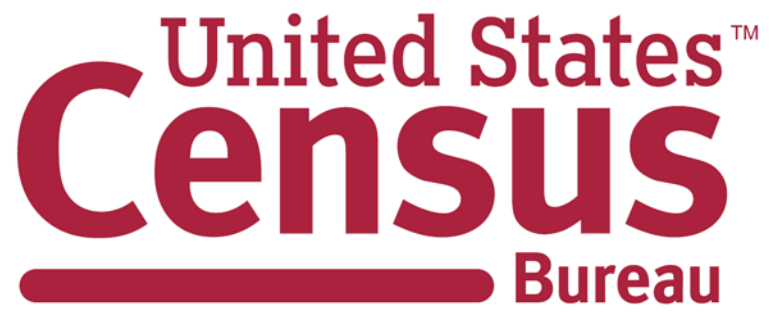


A model for response propensity was developed, using MD demographic data available for non-respondent SIPP-sampled households. This allows us to see if households that have a low propensity to respond to the SIPP (modeled propensity score in first quintile) are more likely to complete an interview when offered an incentive. By looking within each incentive group at the share of interviews completed with low-propensity respondents, we can compare those percentages across the incentive conditions. This lets us to see if the incentives disproportionately affected those respondents. The following table shows that incentives did not change the share of low-propensity respondents.



NEXT STEPS

- Repeat analysis with different decision rules to choose source of data from MD data in cases where more than one source (Decennial, ACS, CPS, etc) is available.
- Conduct a similar analysis with the 2014 SIPP, Wave 2 data.
- Introduce more surveys into Master Demographics to widen the scale of recorded persons.
- Use the MAFID and PIK matching process to identify household members *before* approaching a household with a survey to improve operational efficiency.
- Evaluate survey interviewer-generated paradata for noncontact households by comparing it to available MD data, for SIPP and other Census surveys.



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