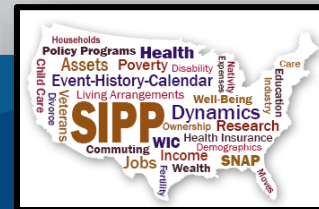


Designing a Multipurpose Longitudinal Incentive Experiment for the SIPP

Matthew Marlay, Jason Fields,
Ashley Westra, & Mahdi Sundukchi
U.S. Census Bureau

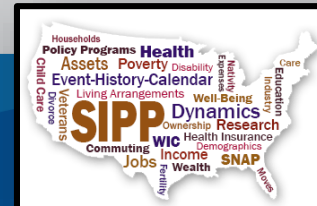
Presented at
IFD&TC
May 2015

This work is released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views or opinions expressed in the paper are the authors' own and do not necessarily reflect the views or opinions of the U.S. Census Bureau.



Outline

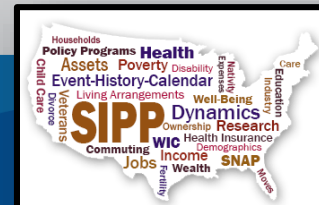
- Background
 - SIPP Overview and Design
 - Previous SIPP Incentive Experiments
- 2014 SIPP Experiment
 - Goals and Design
 - Wave 1 Results
 - Wave 2 Tests
 - Wave 3 Plans



The Survey of Income and Program Participation (SIPP)

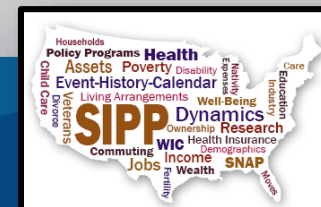
Longitudinal survey collecting data and measuring change for topics such as:

- Economic Well-being
- Family Dynamics
- Education
- Assets
- Health Insurance
- Childcare
- Food Security



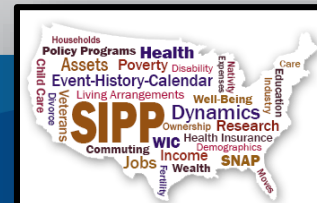
Survey Design: SIPP Classic (1984-2008)

- Sample is multi-stage, stratified sample of the noninstitutionalized, civilian U.S. population
- Sample size between 11,000 and 45,000 households
- Panels 2.5-5 years long
- Conducted in waves, each 4 months long
- 4 equally-sized rotation groups



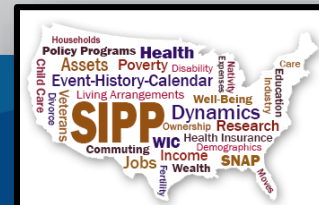
Survey Design: SIPP (2014-)

- Sample is multi-stage, stratified sample of the noninstitutionalized, civilian U.S. population
- Sample size ~53,000 households
- 4-year panel
- Conducted in waves, each 1 year long
- No rotation groups



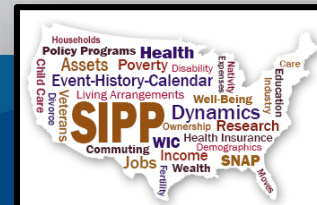
Previous Incentive Experiments

- Since the 1996 panel, SIPP has conducted several incentive tests of different types.
- Designed to test the effect of monetary incentives on overall **response rates**.



Previous Incentive Experiments

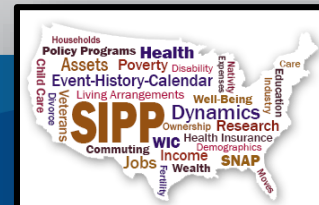
- Tested both conditional and unconditional incentives
- Tested both random assignment and discretionary incentives
- Experimented with the monetary amount of the incentive
 - \$10, \$20, and \$40 the typical amounts



Results of Previous Experiments

1996 Panel

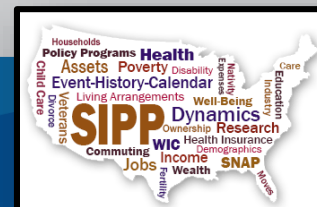
- \$20 unconditional incentives effective in reducing household nonresponse in Wave 1
 - This effect remained in later waves
 - \$10 incentives not effective



Results of Previous Experiments

2001 Panel

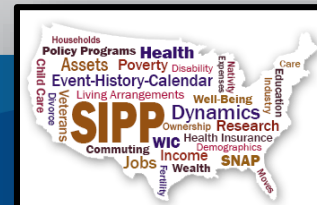
- For 7 out of 9 waves, \$40 conditional discretionary incentives increased response rates



Results of Previous Experiments

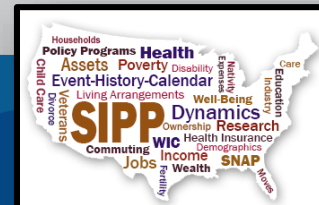
2008 Panel

- A \$20 unconditional incentive in Wave 1 improved response rates in Waves 1-3 by **1.1-1.4%**
- A \$40 discretionary, conditional incentive (in any wave) improved response rates in Waves 7-9 by **1.6-3.1%**



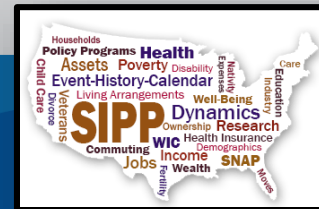
2014 Panel: Experiment Goals

- Develop research results to guide incentive implementation and efficacy
- Implement procedures for centralized distribution and monitoring of incentives
- Develop procedures for responsive propensity-based incentive model
 - Could be based on likelihood of response
 - Could be based on contribution to meeting expected sample distribution



2014 Panel: Experiment Goals

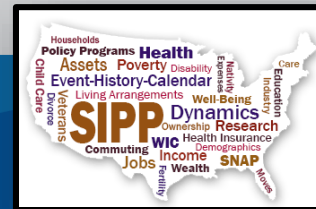
- Results from Waves 1-3 experiment will hopefully lead to full implementation for Wave 4
- Experimental results may differ from prior incentive experiments due to annual administration and centralized incentive group management



2014 Panel: Wave 1 Design

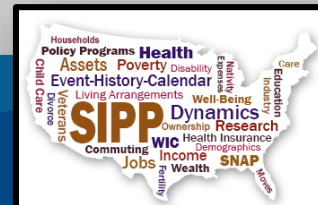
- Households randomly assigned to 1 of 4 equally sized groups (\approx 13,000 households).

Group	Sampled Households	Wave 1
1	13,549	\$0
2	13,471	\$0
3	13,470	\$20
4	12,580	\$40
Total	53,070	



2014 Panel: Wave 1 Results

- \$20 incentive increased the response rate by **1.2%**
- \$40 incentive increased the response rate by **3.5%**

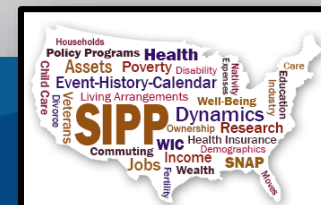


2014 Panel: Wave 1 Results

Incentive Group	Response Rate	
	Poverty Stratum	Non-Poverty Stratum
\$0	71%	66%
\$20	73%	67%
\$40	76%	68%
ALL	72%	67%

Incentive Group	Distribution	
	Poverty Stratum	Non-Poverty Stratum
\$0	38%	62%
\$20	39%	61%
\$40	39%	61%
ALL	39%	61%

While incentives affected **response rates**, they did not affect the **distribution** of the interviewed households.



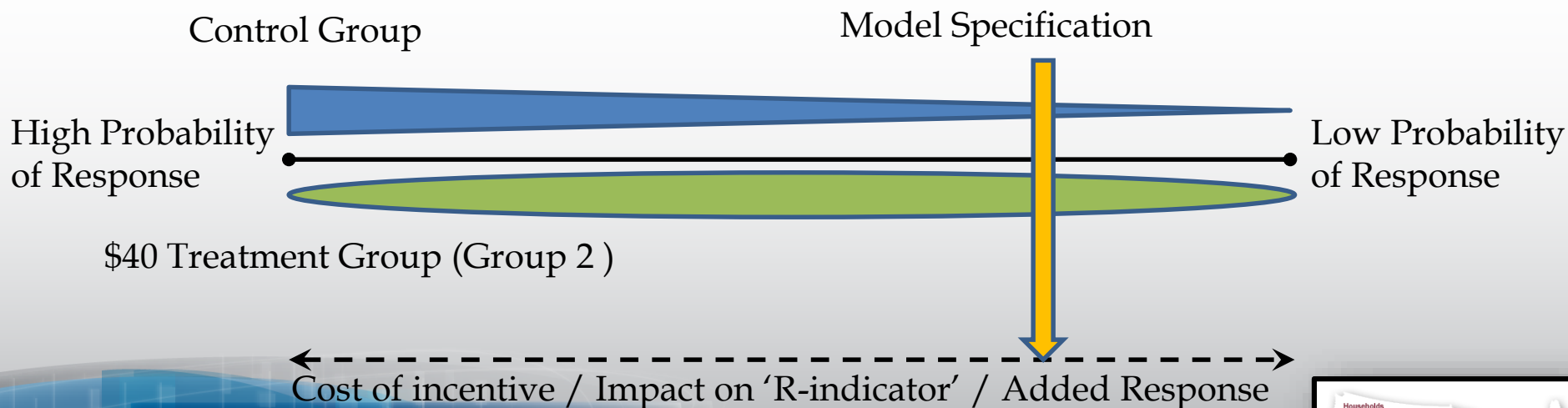
2014 Panel: Wave 2 Tests

Group	Wave 1	Interviewed Wave 1 Sample Eligible for Incentive	Wave 2
1	\$0	7,452	\$0
2	\$0	7,434	\$40
3	\$20	7,511	\$0
4	\$40	7,392	(a) \$40
			(b) \$0
Total		29,789	

- Continued non-receipt – Control (Group 1)
- Adding receipt/propensity model (Group 2)
- Removal of receipt (Group 3, 1/2 of Group 4)
- Continued receipt/propensity model (1/2 of Group 4)

2014 Panel: Wave 3 Plans

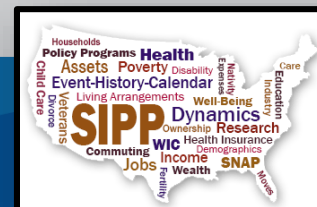
- Probabilities of response are defined according to incentive treatment and control variables.
- Using the Wave 2 response indicator as the dependent variable, we will fit a logistic regression model on the sample using auxiliary and explanatory variables.
- Based on the predicted probabilities of response from the fitted model, we will assign Wave 3 incentives.



2014 Panel: Wave 3 Model

- Create a logistic regression model predicting the probability of response given certain household characteristics
- Assign incentives to those with the lowest likelihood of response or largest contribution to R-indicator

Group	Wave 1	Wave 2	Wave 3 Possible Treatments
1	\$0	\$0	\$0
			Model-based \$40
2	\$0	\$40	\$40
			Model-based \$40
3	\$20	\$0	\$0
			Model-based \$40
4	\$40	(a) \$40	(a) \$40
		(b) \$0	(b) \$0



THANK YOU!



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