Using the Data You Have to Get the Data You Need: Propensity Modeling, Incentive Escalation, and Adaptive Design for the Survey of Consumer Finances

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SCF
Survey of Consumer Finances

NORC
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The analysis and conclusions set forth are those of the authors and do not indicate concurrence by colleagues, the Board of Governors of the Federal Reserve System, or NORC.

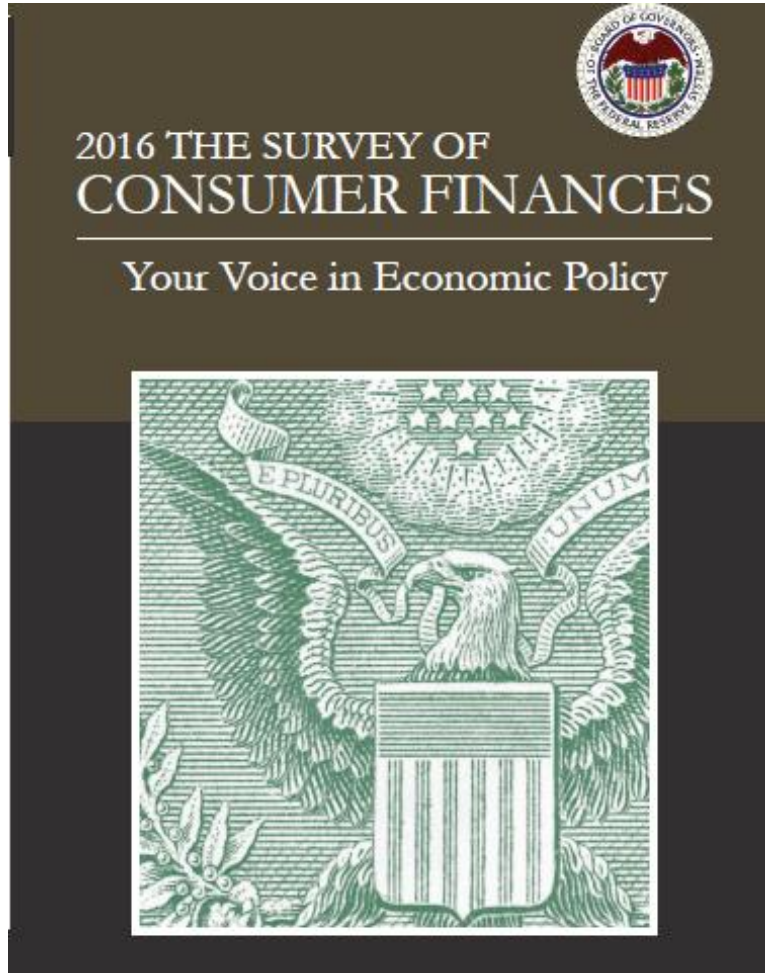# Getting people to provide complex financial data is hard!

- Why?

  - Response rates for U.S. household surveys are declining

  - Financial data seen as hyper-sensitive

  - Increasing concerns about data misuse/breach

Survey of Consumer Finances (SCF)
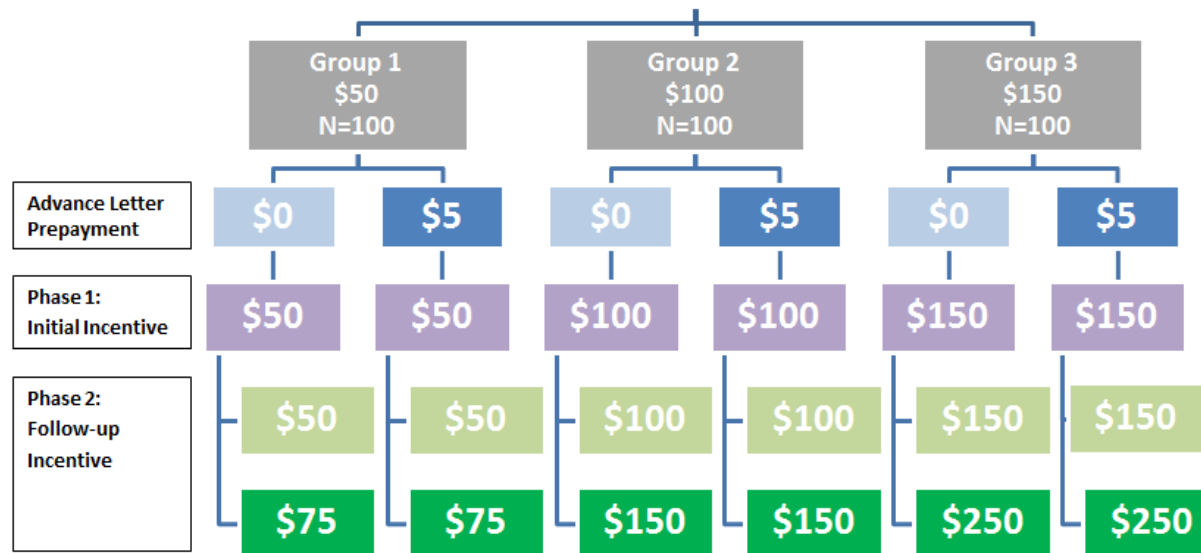
- Triennial survey
- Sponsored by the Board of Governors of the Federal Reserve System (FRB)
- Premier source of data on U.S. household finances
- Dual frame sample
- Public use datasets available through FRB website

Expanding use of monetary incentives for SCF

- 2013: $50 post-incentive

- 2014: incentive experiment in three cities:

- 2016: $5 cash pre-incentive and $75 post-incentive

Incentive Escalation for 2016 SCF

What we have and what we need

	What we have:	What we need (from respondents):
Big Research Question: *How can we make more strategic use of monetary incentives for the 2016 SCF?*	Talented, experienced field interviewing staff Hearty incentive budget Heaps of contact history data from current and past SCF Census Planning Database data (namely, low_response_score)	Attention and trust Detailed reporting of household finances

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Figure 1. Incentive Escalation Plan for 2016 SCF

GROUP	Treatment		Control1[a]		Control2	
% OF SAMPLE AT PRE-SELECTION	80%		10%		10%	
SUB-SELECTION BY ESCALATION NEED SCORE	Top quartile		None		None	
SUB-SELECTION BY SAMPLE TYPE	Area probability and bottom four wealth strata of list sample		Area probability and bottom four wealth strata of list sample		Area probability and bottom four wealth strata of list sample[b]	
INSTRUCTION IN CASE MANAGEMENT SYSTEM	Increase incentive offer to $150		Do not increase incentive offer		Discuss incentive with your FM	
INCENTIVE ESCALATION BY INTERVIEWER	Offered	Not offered[c]	Offered[c]	Not offered	Offered	Not offered
INTERVIEW OUTCOME	Complete / Not complete	Complete / Not complete	Complete / Not complete	Complete / Not complete	Complete / Not complete	Complete / Not complete

Notes:

a. Control1, true control group, was eliminated for the second incentive escalation in 2016. All remaining pending cases were effectively allocated into the Treatment or Control2 group for the second escalation.

b. The step excluding list sample households in the top four wealth strata from subselection within the Control2 group was eliminated for the second incentive escalation in 2016.

c. A small number were expected due to human error and/or exceptional circumstances.

2016 Incentive Escalation Process

Step 1: Develop algorithm to identify cases with the highest "escalation need" using real-time 2016 SCF data

incr1_score =

(low_response_grp*4) + (num_refs*10) + (noluck*8) + (barrier*8) + (phase2*4) + (four_attempts*4) + (fi_transfer*-4) + (stagnant*4) + (fi_rpt_tough*8)

Step 2: Early escalation in 1st quarter of field period

- 1,010 HHs in Treatment 1 – escalate to $150
- 557 HHs in Control 1 – not eligible for escalation (stay at $75)
- 504 HHs in Control 2 – eligible for escalation up to $150, per FI/FM discretion

2016 Incentive Escalation Process (cont'd.)

Step 3: Revise 2016 algorithm as needed

Step 4: Subsequent escalation in 2nd quarter of field period

- 372 HHs in Treatment 1 – escalate to $150
- 0 HHs in Control 1 – not eligible for escalation (stay at $75)
- 6,178 HHs in Control 2 – eligible for escalation up to $150, per FI/FM discretion

Results from 2016 SCF

Figure 2. Incentive Payments for 2013 and 2016 SCF among Participating AP Households

Prevalence of incentive escalation (2x or higher) increased by 8 percentage points among AP cases.

Multiple of Base Incentive

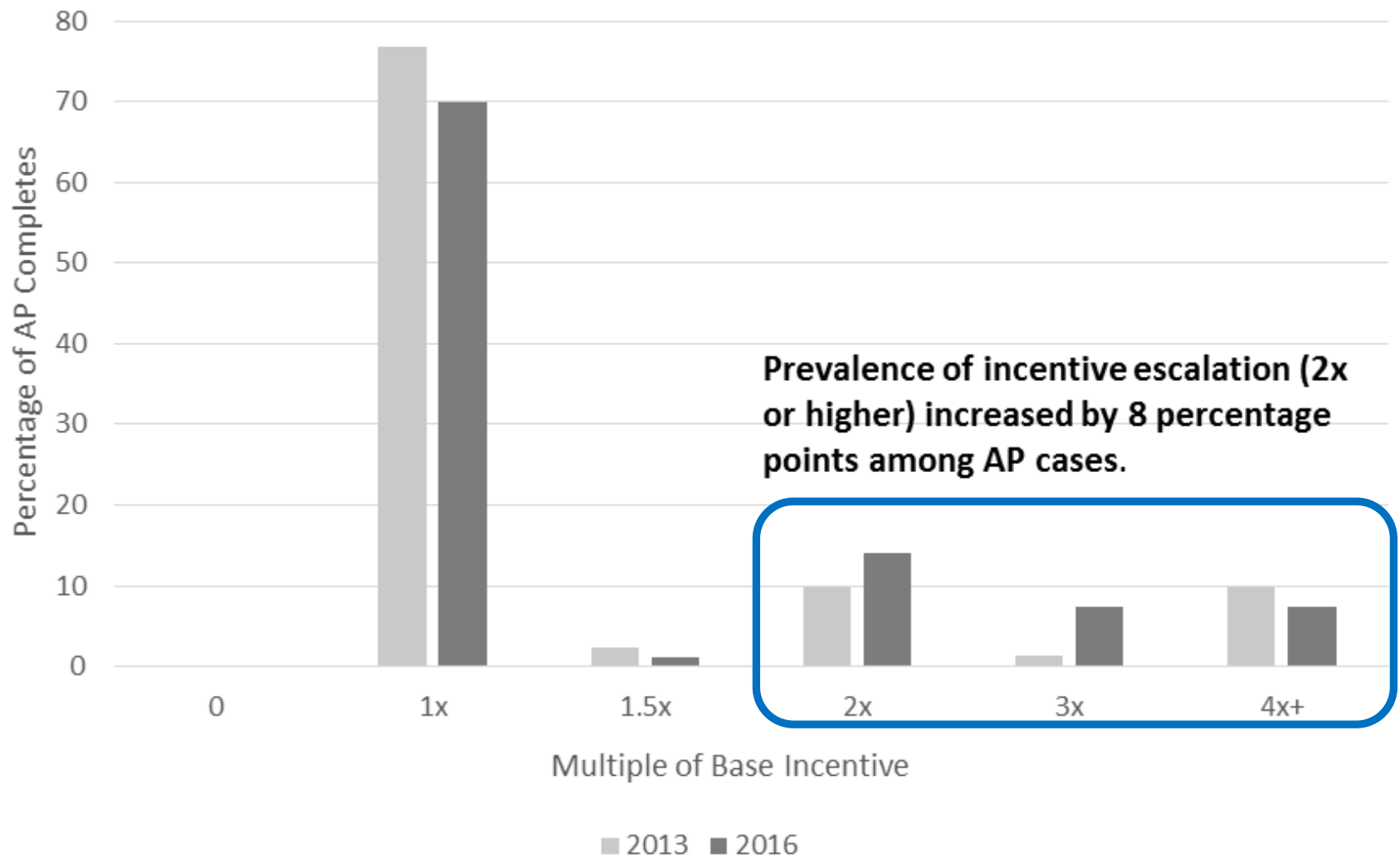Percentage of AP Completes

2013 2016

Table 1. Logistic Regression with Early Household Contact History Predicting Final 2016 SCF Survey Completion among AP Households (unweighted)

	Coefficient		Standard Error	Odds Ratio
Intercept	3.166		1.054	23.712
Block Group Characteristics				
Percent non-Hispanic white alone	-0.003	*	0.002	0.997
Percent college degree	-0.001		0.002	0.999
Median household income (log)	-0.239		0.087	0.788
Census Low Response Score	0.005		0.008	1.005
Household Contact History				
Four contact attempts	1.135	***	0.071	3.11
>50 days elapsed since last contact	0.710	***	0.064	2.034
Number of unsuccessful contact attempts	-0.099	***	0.011	0.906
Interviewer encountered barrier	-0.881	***	0.079	0.414
Number of refusals	-0.747	***	0.043	0.474
Contacted >1 interviewer	-0.394	***	0.063	0.675
Interviewer assessed as hard-to-reach	-1.143	***	0.071	0.319

N = 7,419

-2 Log Likelihood 7556.912

Table 2. Final Percent Completed Interview by Actual/Simulated Quasi-Experimental Group among AP Cases for the 2013 and 2016 SCF (unweighted)

	2013		2016		Binomial Test: 2016 vs. 2013	
	Percentage	Total n	Percentage	Total n	Std. Error	Sign.
Treatment	28.88	696	37.17	1,235	0.013	***
Control2	30.14	2,263	37.5	2,781	0.009	***
Ineligible	84.57	350	78.45	348	0.019	**
Total	35.63	3,309	40.07	4,364	n/a	

(See Notes for Table 3 in full paper)

Proposed plans for 2019 SCF

Proposed Plans for 2019 SCF

- **Adaptive Survey Design**
  - Early incentive escalation
  - Revised algorithm based on 2016 SCF findings
  - 25% increase in respondent incentives budget
  - R-indicators to evaluate sample representativeness

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Get the public-use SCF data at:

https://www.federalreserve.gov/econres/scfindex.htm

Learn more about NORC's involvement at:

http://www.norc.org/Research/Projects/Pages/survey-of-consumer-finances-SCF.aspx

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Thank You!

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