The Effect of Large Monetary Incentives on Survey Completion: Evidence From a Randomized Experiment

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The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors of the Federal Reserve System.

Objective

- Overall goal: determine optimal level of incentives for Survey of Consumer Finances 2016
  - Would use of pre-paid incentives and/or larger post-paid incentives get more people to cooperate sooner?
  - Would a quicker escalation strategy with escalated incentives get more people to participate sooner, thus shortening the field period?
- Experiment to analyze how response rates/interviewer effort are influenced by variation in:
  - Pre-paid incentives ($5 vs none)
  - Promised post-paid incentive levels ($50, $100, $150)
  - Escalation of post-paid incentives

Context: Survey of Consumer Finances

- Triennial survey sponsored by Federal Reserve Board, data collected by NORC
- Focus on finances of American families
  - Collects detailed information about assets, liabilities, income, employment and retirement benefits
- Administered by field interviewers either in-person or by telephone
- Dual frame sample: national area probability sample and list oversample of the wealthy

How do incentives influence completion?

- Main theoretic reasons for survey response:
  1. Altruistic (contribute to science/research),
  2. Egoistic (such as monetary incentives),
  3. Reasons associated with survey itself (interest in the topic, trust in the organization behind the survey).
- According to theories of economic and social exchange, incentives
  - Appeal to norms of reciprocity
  - Establish trust and legitimacy of organization
- Can complement efforts to appeal to non-egoistic motivation
- But do effects continue to increase when incentives are larger?

How do incentives influence completion? (2)

- Timing of incentives matter: prepaid typically works better than postpaid
- Amounts matter (but most studies use incentives much lower than the SCF)
- Effect on response of higher amounts may be non-linear?
  - Newer studies suggest non-linear response (Edwards 2005, Singer and Ye 2013, Mercer et al 2015), but older studies did not (Singer et al 1999, Jobber et al 2004)

“Current” SCF incentive structure (2013)

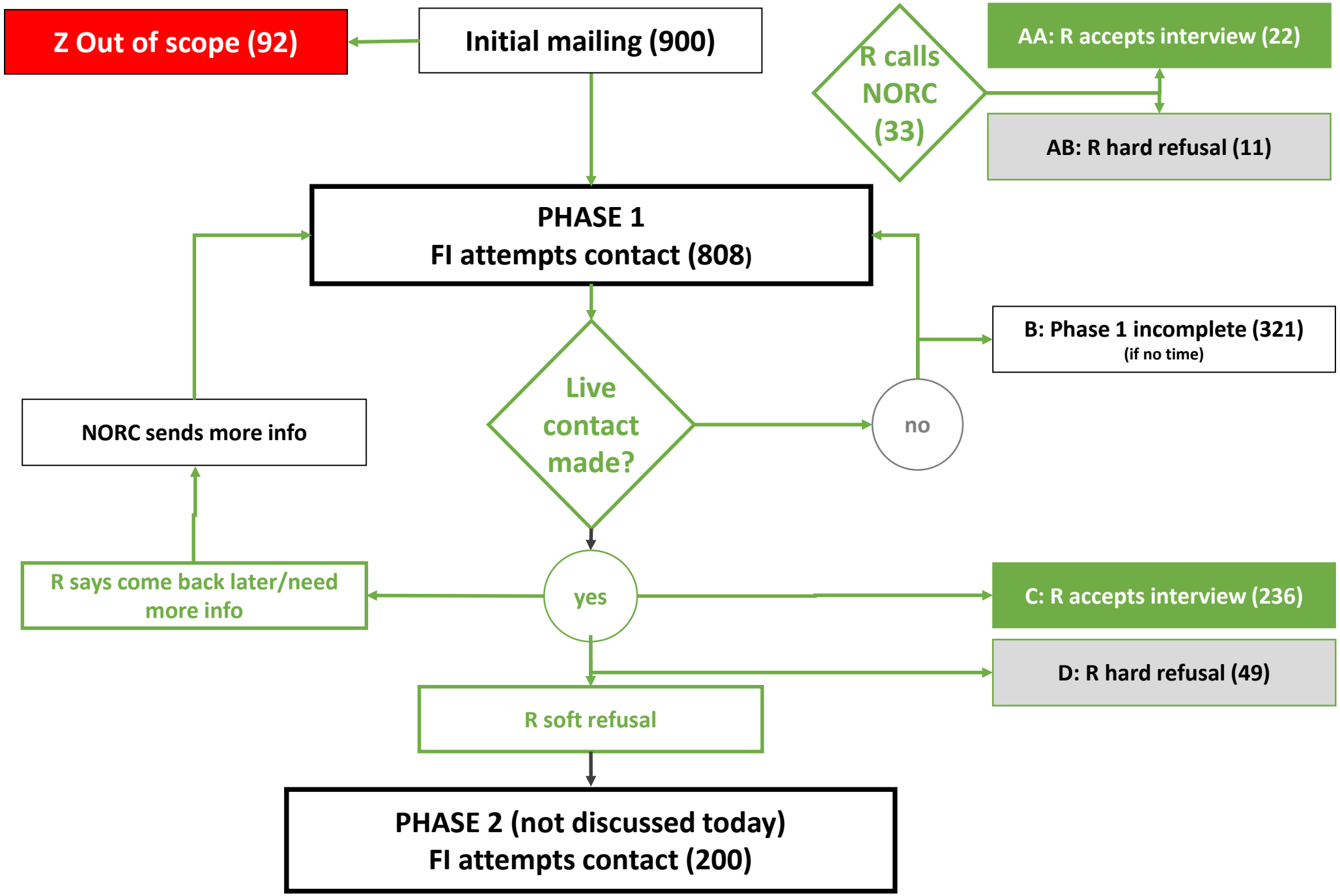
- $50 base incentive
- Escalations in stages: $75 - $100 in week 16, $150 - $200 in week 28, $300 in week 42.
- Still, substantial difficulties securing interviews from certain subgroups (especially higher income areas)
- Question: do prepaid incentives or higher base incentives decrease overall cost of achieving target response rate?

Set-up of experiment

- Miami, LA, NYC: 300 cases in each city
  - Focus on census tracts with above average income (~80th percentile)
- Respondents approached for an “SCF 2014”
  - Pre-notification letters in the mail
  - Field Interviewer (FI) visits
  - If R consents to interview, FI will ask a short interview on demographics/income/motivation for responding to interview
- Shortened field period (about one quarter)

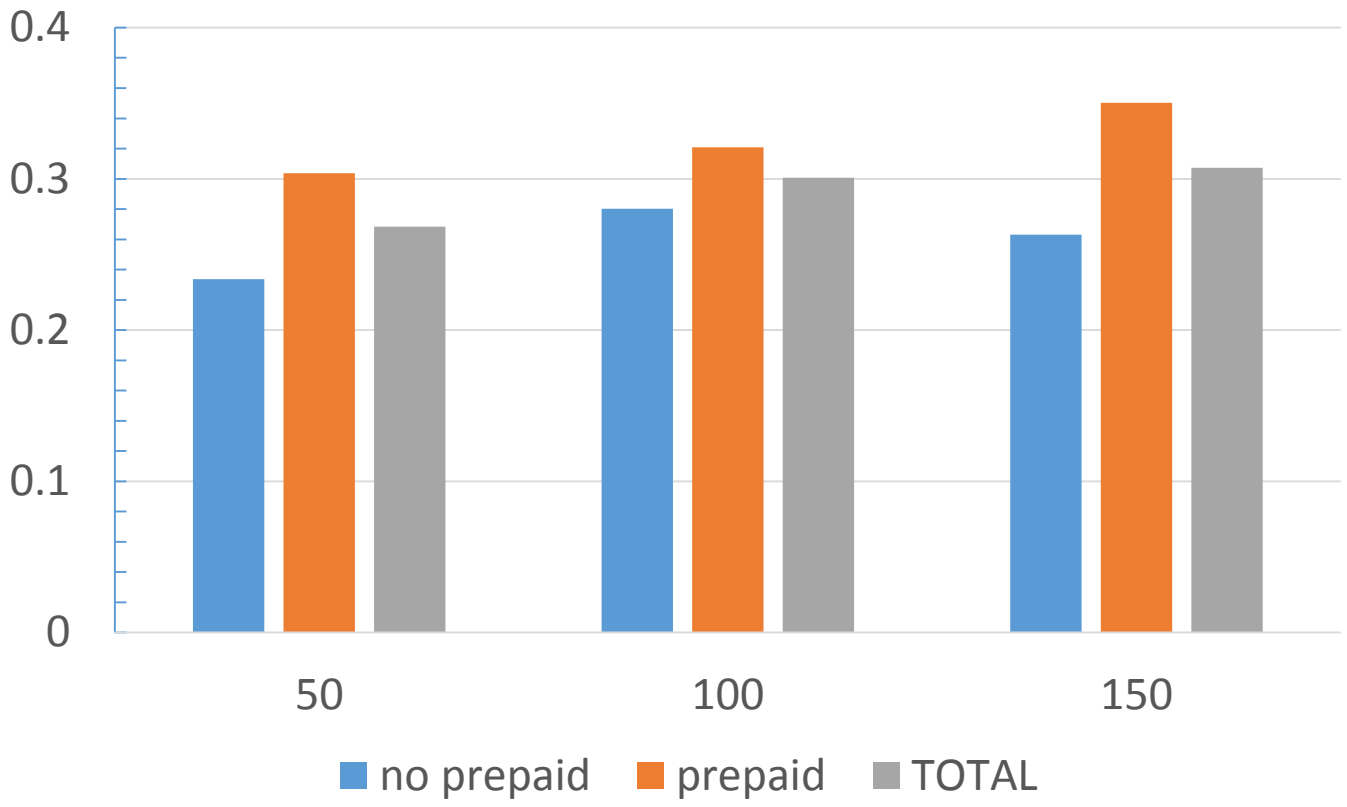
Experimental groups

- Prepaid included with invitation letter: $5; no pre-paid
  - Pre-paid group received a pre-invitation postcard
- Postpaid incentive listed on invitation: $50; $100; $150
  - Phase 1: FI works case based on initial offer; phase ends when R makes soft refusal
  - Phase 2: Half of cases eligible for escalated incentive, other half receives same initial incentive (will not discuss today)
  - Interviewer does not know escalation eligibility until after the first soft refusal


Z Out of scope (92)
Initial mailing (900)
R calls NORC (33)
AA: R accepts interview (22)
AB: R hard refusal (11)
PHASE 1
FI attempts contact (808)
B: Phase 1 incomplete (321)
(if no time)
Live contact made?
no
NORC sends more info
R says come back later/need more info
yes
C: R accepts interview (236)
D: R hard refusal (49)
R soft refusal
PHASE 2 (not discussed today)
FI attempts contact (200)

Response rates

Phase 1 response rates, by incentive levels



Overall results of phase 1

- 29% completed a survey
- 6% hard refusal
- 40% no live contact (phase 1 incomplete)
- ➔ 25% moved to phase 2 (soft refusal 200 cases, but little time to complete)

LPM Regression results: Completion

Mean dependent variable	0.292
Prepaid (relative to no prepaid)	0.0611 **
	(0.0289)
$100 (relative to $50)	0.0196
	(0.0353)
$150	0.0697 **
	(0.0352)
N	808
R2	0.202

* p < 0.1, ** p < 0.05, *** p < 0.01

- Prepaid and larger postpaid incentives both increased response
- No evidence of adverse effects at $150
  - Effect of $150 more than triple the effect of $100
- Similar results for probit, logits

Other controls: number of attempts made to contact the respondent, an indicator for respondents living in a locked building or gated community, indicators for FL and NY, the Census tract median income, and whether the respondent was ever reached by an interviewer

Interaction between prepaid and postpaid

Mean dependent variable	0.292
$100 alone	0.0494
	(0.0499)
$150 alone	0.0491
	(0.0498)
Prepaid + $50	0.0670
	(0.0497)
Prepaid + $100	0.0569
	(0.0498)
Prepaid + $150	0.1570 **
	(0.0497)
N	808
R2	0.204

- Holding postpaid constant, prepaid still increases response
- Holding prepaid constant, large postpaid increases response

Examining intermediate outcomes

- Goal is not just to achieve completion, but to measure if surveys can be completed with less cost/interviewer effort
- R can pre-emptively call NORC and complete interview
  - Substantial savings of money and time

Regression results: R calls NORC to complete

Mean dependent variable	0.030
Prepaid (relative to no prepaid)	0.0313***
	(0.0118)
$100 (relative to $50)	0.0068
	(0.0145)
$150	0.0168
	(0.0145)
N	808
R2	0.035

* p < 0.1, ** p < 0.05, *** p < 0.01

- Prepaid doubles the call-in rate

Other controls: number of attempts made to contact the respondent, an indicator for respondents living in a locked building or gated community, indicators for FL and NY, the Census tract median income, and whether the respondent was ever reached by an interviewer

Interaction between prepaid and postpaid: R calls NORC

Mean dependent variable	0.030
$100 alone	0.0077
	(0.0204)
$150 alone	0.0095
	(0.0204)
Prepaid + $50	0.0149
	(0.0203)
Prepaid + $100	0.0351 *
	(0.0204)
Prepaid + $150	0.0413 **
	(0.0203)
N	808
R2	0.204

- Prepaid increases R calling to complete, particularly at higher levels of postpaid incentives

Other intermediate outcomes

- Analysis did not yield any measurable effect of larger incentives on:
  - FI successfully making a “live contact” with R (sensitive to what we define as a “live contact”)
    - No improvement in hard-to-reach areas, like locked/gated communities in Florida
  - Conditional on live contact, R completing the survey

Conclusion

- Prepaid (plus postcard) provides a lot of “bang for the buck”
- No evidence of adverse effects at $150
- Potentially different effects of incentives for live contact, completion
  - Larger incentives do not appear to improve contact with cases in locked/gated communities in Florida (implications for overall target response rates)
- Experiment targeted higher-income census tracts; effects likely a lower bound
- Average case takes approximately 16 hours, so higher incentives could be easily offset by even a small reduction in FI hours/case