

# The Use and Effects of Incentives in Surveys

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# Introduction

- Not more than 20 years ago leading survey researchers agreed incentives should not be used in surveys shorter than about 45 minutes (COPAFS 1993)
- There was debate about whether response rates in some of the big household surveys used as sources of data by social scientists and economists were declining or not
- Today there is no doubt that response rate in even the best-managed and costliest surveys are declining, and incentives are used in most of them
- In the surveys with which this presentation is concerned, the largest portion of nonresponse is attributable to refusals rather than noncontacts
- Monetary incentives, especially prepaid incentives, are capable of reducing nonresponse, primarily by reducing refusals
- But very little is known about their effect on nonresponse bias

# Introduction (ctd)

- This talk is about “best practices” with respect to incentives, along with recommendations for research
- Can’t talk about “best practices” in abstract, so I’ll try to do three things:
  - Summarize what we know about the effect of incentives on various outcomes—response rates in different kinds of surveys, sample composition, response quality, and response distributions—as a result of experiments designed primarily to improve response rates
  - Suggest how we might think about using incentives to achieve additional kinds of research goals
  - Present a list of recommendations for research to accomplish these goals

# Introduction (ctd)

- What kind of surveys are we talking about?
  - Large, usually national surveys done for purposes related to social research
  - Often longitudinal
  - Usually sponsored by government statistical agencies or research organizations or supported with government research grants
  - Results intended to be generalizable to a defined population
  
- Market research, customer satisfaction surveys, polls with a field period of a week or less, and the like, are not included

# Why Do People Respond to Surveys?

- All theories of action (e.g., “rational choice” theories; exchange theory; the norm of reciprocity; leverage-salience theory) emphasize the role of incentives in motivating behavior, though these need not be monetary incentives
- Results from responses to open-ended questions suggest there are three main kinds of reasons for responding to surveys:
  - Altruistic reasons (e.g. wanting to be helpful to research, researchers, society)
  - Egoistic reasons (including monetary incentives)
  - Reasons associated with aspects of the survey (e.g. topic interest, trust in sponsor or research organization)
- In other words, both theory and observation confirm the importance of incentives (including but not limited to monetary incentives) for participation in surveys

# Effects of Incentives on Response Rates

## ■ Effects in Cross-Sectional Mail Surveys

- Church's meta analysis (1993) found:
  - g Prepaid incentives yielded significantly higher response rates than promised or no incentives
  - g Monetary incentives yielded higher response rates than gifts
  - g Response rates increased with increasing amounts of money, though not necessarily linearly
- Edwards et al. (2002) reported similar results in a subsequent meta analysis
- With very few exceptions, reports of more recent experiments are consistent with results reported by Church and Edwards et al.

# Effects on Response Rates (ctd)

## ■ Effects in Interviewer-Mediated Surveys

- Singer et al.'s meta analysis (1999) of 39 experiments found results similar to those in mail surveys, though effects of incentives were generally smaller
- Cantor, O'Hare, and O'Connor's analysis (2008) of 23 RDD experiments found:
  - g Prepayment of \$1 to \$5 increased response rates from 2-12 percentage points over no incentives
  - g Larger incentives led to higher response rates, but at a decreasing rate
  - g Effect of incentives has not declined over time, but baseline RR dropped substantially
  - g Prepaid incentives at refusal conversion had about the same effect as those sent at initial contact, but at a lower cost
  - g Promised incentives of \$5 and \$25 did not increase RR; larger incentives sometimes did
  - g These findings are generally consistent with other experiments involving interviewer-mediated surveys, including face-to-face surveys

## Effects on Response Rates (ctd)

- g For some types of surveys—e.g. large surveys involving screening interviews to select a small fraction of eligible respondents—most economical design may involve prepaid refusal conversion payments only plus subsampling of refusals (Brick et al., 2005)
- g A cell-phone experiment by Brick et al. (2007) found that a promised incentive of \$10 produced a higher screener response rate than a \$5 promised incentive as well as a higher cooperation rate to the survey; advance notification of survey + incentive had no effect

# Incentive Effects in Longitudinal Studies

- Incentives in longitudinal studies are usually part of a larger motivational package designed to recruit and retain respondents
- As in cross-sectional studies, incentives increase response rates, usually by reducing refusals but sometimes by reducing noncontacts (e.g. McGrath 2006)
- Some studies suggest initial payment may continue to motivate participation in subsequent waves (Singer and Kulka 2002; McGrath 2006; Creighton, King, and Martin 2007; Goldenberg et al. 2009)
- Prepaid incentives in longitudinal studies appear to increase response among those who have previously refused, but not among those who have previously cooperated (Zagorsky and Rhoton 2008) (may reflect a “ceiling effect”)
- Jäckle and Lynn (2008) found that payments at multiple waves (1) significantly reduced attrition in all waves; (2) they did so proportionately among subgroups and so did not reduce attrition bias; (3) the effect of the incentive decreased across waves; (4) incentives increased item nonresponse; (5) but authors conclude there was a net gain in information

# The Effect of Incentives on Response Quality

- Response quality most often measured by item nonresponse and length of answers to open-ended questions; other measures would be desirable (e.g. accuracy, reliability)
- Two alternative hypotheses about such effects
- Singer and Kulka (2002) found no support for decline in quality, and modest support for alternative
- Since then, the small number of studies (mail, RDD, and face-to-face) that have examined incentive effects on data quality have, with one exception, found no effects. The exception is Jäckle and Lynn (2008), who found incentives increased item nonresponse in a panel study but decreased unit nonresponse, resulting in a net gain of information
- Cantor, O'Hare, and O'Connor (2008) argue that the two hypotheses need to be tested controlling for factors such as survey topic, size and type of incentive (e.g. prepaid, promised, refusal conversion), and whether studies are cross-sectional or longitudinal. For this, a much larger pool of studies would be required

# Effect on Response Quality (ctd)

- Medway (2012) has recently examined this question using a much larger pool of measures of effort (e.g. item nonresponse, length of open-ended responses, straightlining, interview length, underreporting to filter questions, lack of attention to question wording, use of round numbers, order effects, etc.) as well as the potential interaction of a number of demographic characteristics with receipt of an incentive
- Vehicle: Experiment embedded in JPSM Practicum survey; N=1700; RR~16%: half received \$5 prepaid incentive, half none
- Results:
  - RR: 22% with incentive, 11% without
  - Cost to complete/case: \$57.68 with incentive, \$63.76 without
  - Significant differences on only 2 effort indicators—reduced item nonresponse and less time to complete; neither was significant once cognitive ability and conscientiousness were controlled
  - No significant interaction effects between demographics and incentives on an index of satisficing
- Questions for research:
  - Would these results be found in a self-administered survey? Jäckle and Lynn (2008) found greater effects of incentives on unit and item nonresponse in mail than in phone administration of same survey

# Effects on Sample Composition

- Cantor, O'Hare, and O'Connor (2008), in their review of 23 RDD experiments, conclude that incentives, whether prepaid or promised, have little effect on sample composition
- Nevertheless, a number of studies have demonstrated such effects on specific characteristics—e.g. Berlin et al. (1992) (education); Merkle et al. (1998) (party membership); Mack et al. (1998) (SES); Martin et al. (2001) (SES); Groves et al. (2000) (civic duty); Petrolia and Bhattacharjee (2009) (education). However, all but Groves et al. (2000) are ex post facto explanations.
- Specific attempts to use incentives to bring into the sample groups less disposed to respond because of lower topic interest have received only qualified support (Groves et al. 2004; Groves et al. 2006)

## Effects on Sample Composition (ctd)

- None of these studies have looked at the effect of incentives targeted to refusals. Theoretically, one would expect such targeted incentives to be more successful in changing the composition of the sample, thereby potentially reducing nonresponse bias.
  - Juster and Suzman (1995), e.g., found that offering very large payments (\$100 per individual or \$200 per couple) to nonrespondents in the HRS who had refused normal conversion efforts brought into the sample people with higher incomes and more net worth than those who had never refused or had been converted using other efforts
- However, assuring proper demographic representation by adjustment methods does not necessarily eliminate or reduce nonresponse bias with respect to variables that are only loosely related to demographic characteristics

# Effects on Response Distributions

- Indirectly, as result of effects on sample composition or by putting respondents in more optimistic mood
  - E.g., Berlin et al. 1992 (sample composition)
  - Schwarz and Clore (1996), James and Bolstein (1990) and Brehm (1994) have found results consistent with mood hypothesis, and Curtin, Singer, and Presser (2007) found an interaction between race and receipt of incentive
  - Groves, Presser & Dipko (2004) and Groves et al. (2006) reduced nonresponse due to lack of topic interest by offering incentives, but the reduction in *nonresponse bias* due to increased participation of those with less topic interest was not statistically significant
- Directly, through their effect on attitudes
  - Only one study appears to have tested this experimentally. Drimaier et al. (2007) specifically tested such a hypothesis and found no support
  - If it exists, such an effect should appear in incentive experiments with customer satisfaction surveys
- Results both reassuring and disappointing
  - No evidence that randomly administered incentives *increase* bias
  - But not enough is known to use them effectively to *reduce* bias

# Effects in Internet Surveys

- Terminology used in research on incentive effects in internet surveys differs from that used in other modes, making comparisons difficult; but where comparable effects are examined, the findings from other modes generally apply: money>gift; prepaid>promised
- Much of the published experimental research has been done by Göritz, who finds that incentives increase proportion of invitees starting a survey and the proportion completing it over a no-incentive group; lotteries are the incentives most often used
- However, specific tests of lotteries against other types of incentives or no incentives show that lotteries are no more effective in web surveys than in other kinds of surveys: in most tests, lotteries did not significantly increase response rates over a no-incentive or alternative incentive group
- Incentives did not affect item nonresponse in any of the studies examining these effects
- Very few internet studies have examined effects of incentives on sample composition

# Differential Incentives

- Differential incentives refer primarily to refusal conversion payments
- Two arguments in favor: (1) More economical than prepaid incentives; (2) more effective in reducing bias
- Argument against: Unfairness
  - Economists say differential payments are fair; those who refuse, consider survey more burdensome and therefore need/are entitled to bigger incentives (need not be true: civic duty)
  - Respondents consider them unfair, but say they would respond to new survey by same organization even when told it engages in practice (Singer, Groves & Corning 1999)
  - They do respond to survey purportedly by another organization a year later; there is no statistically significant difference in response by receipt of incentive or perception of fairness
- Recommendations for best practice:
  - Offer small prepaid incentives to all sample members; this will increase sample size and help satisfy fairness criterion
  - Offer differential incentives to those who refuse (or a subsample) for bias-reduction reasons

# Summary of Findings

- Incentives increase response rates to surveys in all modes, including the web, and in panel as well as cross-sectional studies.
- Monetary incentives increase response rates more than gifts, and prepaid incentives increase them more than promised incentives or lotteries, though they are difficult to implement in web surveys.
- There is no good evidence for how large an incentive should be. In general, though response rates increase as the size of the incentive increases, they do so at a declining rate.
- There is no good evidence that monetary incentives reduce response rates, but there may be ceiling effects. Incentives seem to have greater effects on those less inclined to respond for other reasons.
- Almost all studies that have evaluated the effect of incentives on quality of response have found no effects.
- Relatively few studies have examined the cost-effectiveness of incentives. Those that have done so generally find that they reduce other costs, though not necessarily totally offsetting the cost of the incentives.

# “Best Practices” with Incentives: General

- **Spend more money.** To achieve more representative samples and higher response rates, spend more money, though not necessarily on incentives (e.g., on interviewers, at least for recruitment; interviewer training; pretesting specific survey introductions and incentive schemes; preparing tailored materials and training interviewers in tailored refusal conversion; and better adjustment procedures.)
- **When possible, base practice on theory, not just past experience.** For example, the demonstrated effectiveness of prepaid incentives has a basis in exchange theory, which in turn has been tested in a variety of contexts. Modifications of this practice for large-scale screening studies, as in Brick et al. (2005), may be more cost-effective in specific situations, but without a theoretical foundation one can't be sure they'll work the next time unless all relevant factors are identical (and one rarely knows what they are).

# “Best Practices” with Incentives (ctd)

- **Pretest, pretest, pretest**

- Different people may be motivated by different appeals; research is needed to find out which are most effective for a particular study
- Test the effectiveness of different combinations of appeals in introductory materials including, but not limited to, money
- For a large and expensive survey, a pretest that can yield quantitative estimates of likely response, by important subgroups, may be warranted

- **Investigate respondents’ and nonrespondents’ perceptions of the costs and benefits of survey participation.** The goal of such research is to develop empirically based efforts to improve the survey experience

# Recommendations for Research

- Research is needed on how best to use incentives to bring about decreases in nonresponse bias for the most important dependent variables in a survey. Since all prior studies have used prepaid incentives, one recommendation is to focus research on targeted refusal conversion payments instead or in addition.
- Use ABS rather than RDD to draw the initial sample for telephone surveys, sending letters with prepayment to a random subsample, and measuring nonresponse and nonresponse bias in both groups. A number of studies have shown that advance letters including incentives can substantially increase response in telephone surveys (letters without incentives do not appear to have such effects). However, the percentage of RDD sample members for whom addresses can be obtained is limited, and they tend to differ from those for whom addresses cannot be obtained. As a result, this tactic results in recruiting more respondents like those who would have been recruited even without the letters (Curtin, Presser, and Singer, 2007), thus minimally affecting nonresponse bias.

# Recommendations for Research (ctd)

- Measure long-term effects of incentives on public willingness to participate in research going forward, by adding questions about expectations to a sample of existing cross-sectional surveys (e.g., GSS, Surveys of Consumers). There is no evidence that the increasing use of incentives has had long-term effects on such willingness, but existing studies have looked at change over short intervals and with panel respondents, who may consider multiple waves as one survey.
- Measure (a) changing interviewer expectations about the use of incentives and (b) the effect of these on their response rates. It is plausible to assume that interviewers' expectations will change over the long run as a result of their experience with the increasing use of incentives. The decline in response rates over the past 15 years may in part reflect changing interviewer expectations and behavior, cultivated by reliance on monetary incentives. To shed light on whether and how motivations for survey participation are changing, it would be useful to sponsor systematic inquiry over time into reasons for responding and not responding, using experiments and open-ended questions. Do motives differ by age, gender, ethnicity, race, and income? Are altruistic motives declining?

# Recommendations for Research, ctd.

- More generally, research is needed into respondents' and nonrespondents' perceptions of the benefits and costs of survey participation, designed to yield empirically based efforts to improve the survey experience.
- There is no good evidence that monetary incentives reduce response rates, but there are indications that there may be ceiling effects (Zagorsky and Rhoton 2008; Groves, Singer & Corning 2000). Why should this be? Why are incentives not (always) additive with other motives for responding?
- Relatively few studies have evaluated the effect of incentives on quality of response; most of these have found no effects. Additional research is needed that varies the size of incentives and other variables, such as topic and mode. Additional aspects of quality, such as reliability and validity, also need study.

# Recommendations for Research (ctd)

- Are incentives coercive? Do they have undue influence on sample members' decisions about survey participation, in the sense of inducing them to undertake risks they would not otherwise take? Research so far suggests it does not, but experiments are needed that employ a wider range of incentives, greater variety of risks, among differentially susceptible populations.
- Research is needed on the cost-effectiveness of incentives compared with other efforts to increase response rates and reduce nonresponse bias.
- Look back at the 1993 Recommendations for Research. Many (most?) of them are still valid today.

*Thank you!*