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The Effects of Differential Interviewer Incentives on a Field Data Collection Effort

Jeffrey Rosen¹, Joe Murphy¹, Andy Peytchev¹,
Sarah Riley², and Mark Lindblad²

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Abstract

Surveys routinely offer incentives to motivate respondents and increase the likelihood of their participation, yet surprisingly little is known about the effectiveness of interviewer incentives. If interviewer incentives increase interviewers' success in gaining cooperation, they could help address declining survey response rates. In this article, we present the results of an experiment testing the effectiveness of interviewer incentives in the form of cash bonuses for each successfully completed field interview. We did not find evidence that higher payments to interviewers for each completion led to increased effort on the part of interviewers nor did they lead to higher levels of success in securing respondent cooperation. These findings suggest that per complete interviewer incentives may not be cost effective in reducing survey nonresponse.

¹ RTI International, Chicago, IL 60606, USA

² Center for Community Capital, University of North Carolina at Chapel Hill, NC, USA

Corresponding Author:

Jeffrey Rosen, RTI International, 230 West Monroe Street, Suite 2100, Chicago, IL 60606, USA

Email: jrosen@rti.org

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survey nonresponse, interviewer motivation, incentives

Introduction

The interviewer plays a critical role in survey research. One of the most important responsibilities of the interviewer is gaining the participation of survey respondents. This is becoming increasingly important, as response rates continue to decline in face-to-face surveys. In this article, we examine one potential method for reducing unit nonresponse, paying monetary incentives directly to interviewers for successful interview completions.

The practice of compensating interviewers for completed interviews via cash or some other reward system has been proposed in the survey literature (Lavarakas 1993; Groves and Couper 1998) and has been selectively implemented in some survey organizations (Weisberg 2005). But this can be quite costly and it raises the serious risk of interview falsification (i.e., an interviewer making up responses to get compensation for a completed interview). So it is surprising that little published research empirically examines the effectiveness of this approach. We present the results of an experiment designed to test the effectiveness of incentives paid directly to interviewers for successfully completed interviews. We found no evidence that higher payments to interviewers for each completion led to increased effort on the part of interviewers or to higher levels of success in securing respondent cooperation.

Nonresponse, the Interviewer, and Interviewer Incentives in Surveys

Nonresponse is a critical problem for survey researchers and users of survey data. Researchers and survey managers have different methods available to increase response rates, which can usually be classified into two types: (1) those intended to increase interviewer and field effort; and (2) those intended to reduce the reluctance of potential respondents to participate. Manipulations designed to reduce nonresponse have historically focused on the latter by, for example, increasing the incentive amount given to respondents on completion of the interview. Interviewers, however, are generally prepared to deal with nonresponse through proactive methods. Most commonly, interviewers are presented with extensive interviewer training programs that emphasize nonresponse avoidance, and, in general,

this training is thought to be helpful in reducing nonresponse (Groves and McGonagle 2001).

For nonresponse avoidance, training seems to matter, as do the interviewer's attitudes, characteristics, and behaviors at the moment of sample member contact (Hox et al. 1998). Groves and Couper (1998) conducted a review of interviewer effects on nonresponse and found evidence that more experienced interviewers tended to achieve greater rates of cooperation. They provide less concrete empirical evidence regarding interviewer behaviors but suspect that these are also important in affecting respondent cooperation.

Other researchers have found evidence that interviewers matter a great deal (O'Muircheartaigh and Campanelli 1999; Chromy et al. 2005), which suggests that investigations into methods to improve interviewer performance are worthwhile. One promising method of influencing interviewer behavior could be to affect their *motivation* to secure completions. Providing external motivation, such as monetary compensation tied to completion of interviews, may help interviewers gain cooperation from a greater proportion of the sample and help overcome increasing problems with nonresponse.

In the United States, most interviewers are paid an hourly rate, but occasionally survey organizations will provide additional rewards to interviewers in the form of bonuses for superior service or cash incentives for each interview completed or for meeting certain production goals. Carr and colleagues (2006) presented findings from several survey projects using interviewer incentives and summarized the positive and negative outcomes. They found a per complete interviewer incentive ranging from about \$12 to \$33 to be effective in boosting production during critical stages of data collection in the 2004 General Social Survey. Only a very small number of studies have been able to experimentally study interviewer incentives. Philipson and Lawless (1997) examined data from an experimental study of interviewer compensation strategies conducted in the 1960s. They compared randomly assigned per interview and hourly wage rates among 200 interviewers to investigate the effects of compensation on the production costs of surveys. Although traditional response outcomes were not tracked, they found that per interview incentives did not ultimately improve the quality of the data being collected.

For many, there is an expectation that incentives paid directly to interviewers should be effective in reducing nonresponse and increasing interviewer effort. Theory on interviewer incentives is less developed than on respondent incentives. Respondent incentives have long been used to

increase response rates (Singer et al. 1999) and reduce nonresponse bias (Groves et al. 2004; Groves et al. 2006). Conceptual models for how respondent incentives can achieve those goals include leverage-salience theory (Groves et al. 2000), as well as specific social theories on how incentives influence participation, such as social exchange theory (Homans 1958; Dillman 1978). These theories of survey cooperation do not fit the role of the interviewer very well. Although respondents have little motivation to cooperate with survey requests, interviewers have already accepted their role in the survey task when they are employed by the survey organization.

How interviewer incentives could influence survey participation may be less grounded in social theory and more substantiated in the literature on human resource management—it is likely more related to an economic exchange, influencing interviewer motivation to perform their task well. Monetary incentives in pay for performance programs have been extensively studied both theoretically and empirically (e.g., Kuhn and Yockey 2003), and findings suggest that individual pay incentives increase performance and often significantly so. A recent experimental study on paid incentives finds that pay for performance has two distinct advantages relative to fixed salaries. First, pay for performance attracts higher quality employees. Second, and critically important for this article, pay for performance motivates employees to exert more effort (see, e.g., Cadsby et al. 2007). *We expect that interviewers who are offered incentives for completions will be more motivated, exert a greater effort, and complete more cases.* Training in nonresponse is likely helpful, but we believe that methods of increasing interviewer motivation may be promising in the quest to gain respondent participation.

A critical element of performance-based incentive systems in surveys is how success is measured and what exactly should be optimized—the overall interviewer response rate or the participation of an individual sample member. We argue that it should be the latter; interviewers who have already achieved their target to receive an incentive may not have the same motivation to complete interviews with the remainder of their assigned sample. Further, providing incentives at the sample member level instead of the interviewer avoids an inherent inequality in compensation across field interviewers—interviewers in geographic areas with higher response rates will have an unfair advantage in earning additional performance-based compensation. This problem is minimized when incentives are provided for each completed interview instead of the overall response rate goal.

In addition to increasing response rates, providing interviewer incentives may actually decrease the cost per completed interview if it leads to

sufficiently improved interviewer performance. This may be gauged by needing fewer calls to contact a sample member and fewer call attempts to complete the interview. There are potential drawbacks to the use of interviewer incentives. Interviewer falsification—interviewers falsifying interview data to receive an incentive—is a major concern. If interviewer incentives increase the chances of interviewer falsification, both the cost of verification and the possible toll from excluding selected sample members from the respondent data may outweigh any increase in response rates.

Summary of Approach and Research Questions

In this article, we examine whether incentives paid to interviewers for completed interviews improves survey outcomes.

We test three hypotheses:

Hypothesis 1: Providing greater compensation to interviewers for completed interviews increases their ability to contact sample members.

Hypothesis 2: Providing greater compensation to interviewers for completed interviews leads to greater success in obtaining cooperation when sample members are contacted.

Hypothesis 3: Providing greater compensation to interviewers for completed interviews leads to cost efficiencies, by decreasing the number of call attempts needed to contact sample members.

These hypotheses are tested in a field experiment described in the following section.

Method

To evaluate the effects of differential interviewer compensation per completed interview, we conducted an experiment on the 2008 Community Advantage Program Survey (CAPS). This survey is funded by the Ford Foundation and managed by the Center for Community Capital (CCC) at the University of North Carolina–Chapel Hill. RTI International conducts the data collection. The CAPS evaluates the Community Advantage Program (CAP), a secondary mortgage market program. To qualify for the CAP, borrowers must meet one of the three criteria: (1) Have income of no more than 80% of the area median income (AMI); (2) be a minority with income not in excess of 115% of AMI; (3) or purchase a home in a high-minority (>30%) or low-income (<80% of AMI) census tract and have income not

in excess of 115% of AMI. To evaluate the performance and impacts of homeownership on low- and moderate-income borrowers who are participating in the CAP program, the CCC conducts an annual panel survey of selected CAP owners and a set of geographically matched renters, which serve as a comparison group.

As of the end of the 2007 data collection year, the CAPS owner and renter panels had completed five and four survey administrations, respectively. The 2008 data collection period, began in July 2008 with 2,796 owners and 1,088 renters.¹ Cases were assigned to either an in-person computer-assisted interviewing mode or a computer-assisted telephone interviewing mode based on baseline subject characteristics and interviewing modes from prior rounds. For the 2008 survey, in-person data collection was conducted for 2,192 cases. For these cases, data collection ended in January 2009.

In an effort to boost retention and minimize any response biases resulting from the loss of participants, we implemented a case prioritization scheme during the 2008 field data collection period. Specifically, 1,077 participants who were least likely to complete the 2008 survey were assigned to a priority subsample, and these cases received special treatment. To assign a priority score to each survey participant, we estimated response propensities by predicting the 2007 response outcome of respondents who were eligible to be surveyed in 2008. As possible predictors of 2007 survey response, we considered demographic characteristics, substantive survey variables, and survey paradata such as interviewer observations during previous interactions.

Predicted probabilities for completed interview in the prior wave were used to divide each sample into two equal groups: a low- and a high-response propensity. However, because of concerns about unequal opportunities for compensation of field interviewers because high-propensity cases will generally have lower compensation per interview, this division was done within each interviewer's workload for the in-person samples. In addition to providing equal compensation opportunities for interviewers, this approach also held two important interviewer characteristics variables—training and experience—constant, as case prioritization was done within each interviewer.

The 1,077 cases in the low-propensity group (those cases least likely to end up as completed interviews) were randomly split into two groups. The first group of low-propensity cases represented the experimental group and was labeled "Priority Sample," signaling to interviewers that these cases were very important to complete. The other random half of low-propensity cases represented the control group and was labeled "Main Sample." No mention was

made to the interviewers that these cases were any different than high-propensity cases. Interviewers saw the Main Sample control cases as important to complete but not at the same priority level as the Priority Sample experimental cases.

Our treatment doubled the per completed interview bonus payment for field interviewers completing experimental cases. Field interviewers received a \$10 bonus payment for each completed control interview and a \$20 bonus payment for each experimental interview during the first 6 weeks of data collection (Phase 1). Interviewers received no bonus payment after the first 6 weeks for control interviews and \$10 for experimental interviews (Phase 2). Note that in Phase 2, no incentive payment was offered for control interviews. Finally, for the last 8 weeks of data collection (Phase 3), interviewers received the original \$10 and \$20 bonus payments for each completed interview. To avoid delayed action on the part of the interviewers, they were not notified in advance that bonuses in Phase 3 of data collection would be offered. These bonus payments were given in addition to the interviewers' normal hourly wages. We hypothesized that the larger bonus would be more effective in motivating interviewers to complete interviews.

The workload for field interviewers averaged 43 cases, distributed roughly equally among experimental and control cases. During interviewer training, interviewers were instructed not to devote inordinate efforts to complete the experimental cases but to note that these cases were very important for the successful completion of the project. They were told to exert great effort in all cases, both control and experimental.

Throughout data collection, we monitored the number of calls and call outcome patterns for the control and experimental groups of cases. We compared the number of calls made to cases in these groups and response rates achieved to determine whether the differential extra incentives offered to interviewers had an impact on the ways in which they approached these cases and their success and efficiency in completing them. We conducted difference of means and proportions tests to test the hypotheses that the extra interviewer bonuses would result in a more efficient data collection (fewer calls required) and a higher response rate compared to the cases allocated a smaller bonus.

Results

We found no difference between the control and experimental conditions in the number of sample cases contacted, as there were only three cases that

were not contacted—one in the control condition and two in the priority group. However, this study used very intensive methods in attempting to contact and interview cases as well as extending the data collection period to help achieve this goal. We expected that interviewers, because of larger incentives, would contact sample members sooner when they are provided a higher incentive for completing interviews at those addresses. The contact rates during data collection were, however, almost identical between the priority and control group, as shown in Figure 1.

We expected an incentive to increase contacting effort, but contact with a sample member may not be completely under the control of the interviewer. Contact may also be a function of, for example, interviewer work schedule. More directly, we expected the presence of incentives to increase success in obtaining interviews conditional on contact by providing greater incentive for interviewers to persuade sample members into participation. Among contacted sample addresses (excluding deceased sample members), providing higher interviewer incentives did not lead to a higher proportion of completed interviews among contacted cases, with completion rates of 91% (486 of 534) in the experimental condition and 90% (484 of 538) in the control condition ($\chi^2(1) = .342, p = .559$).

We expected that interviewer incentives would lead to interviews being collected in less time. We did not find support for this hypothesis, with almost entirely overlapping cumulative percent interviewed during the course of data collection for the priority and control groups, as shown in Figure 2.

We expected that higher interviewer incentives would lead to fewer call attempts needed to finalize a case. We did not find support for this hypothesis either, with 4.9 average number of calls in the experimental condition and 5.0 in the control condition (t test (066) = .21, $p = .837$).²

We were cognizant of the potential for interview falsification since we provided incentives for completed interviews. Through the verification process, which included calling 79% of the sample members with completed interviews (100% verification of completed interviews was attempted during periods with higher interviewer incentives), no falsified interviews were found in any of the experimental conditions. We are also aware that interviewer training and experience, as Groves and Couper (1998) found, can explain some performance differences across interviewers. In our design, we prioritized cases *within* each interviewer and therefore an interviewer's experience and training did not vary and cannot explain our results.

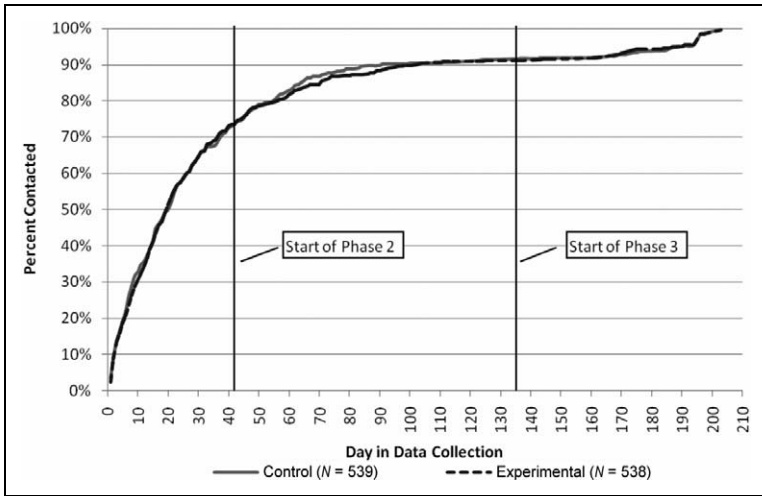


Figure 1. Cumulative percent contacted by day in data collection for high- and low-propensity cases, by interviewer incentive.

Discussion

Offering interviewer incentives for completed interviews did not lead to higher contact and cooperation rates in our sample or to greater efficiency in contacting and interviewing sample members. We see several plausible explanations for our findings.

First, interviewers, when appropriately selected, trained, and compensated, may simply perform their task as well as they can. Additional compensation may not alter their ability to persuade sample members to participate. It is, however, more challenging to explain why cases that had higher incentives for interviewers were not contacted earlier in the data collection period and attempts to do so were not tried more often. It is possible that we did not locate the incentive level that produces significant results. Perhaps the interviewers did not feel that a \$20 versus \$10 or \$10 versus \$0 incentive was motivating enough to tackle very difficult cases. Perhaps with the lengthy field period (roughly 200 days) and our budget restraints, the amount of incentive money we were able to offer was not noticeably high enough to influence interviewer behavior. If we instituted an even larger incentive, perhaps we would have seen different results and this should clearly be explored in future research.

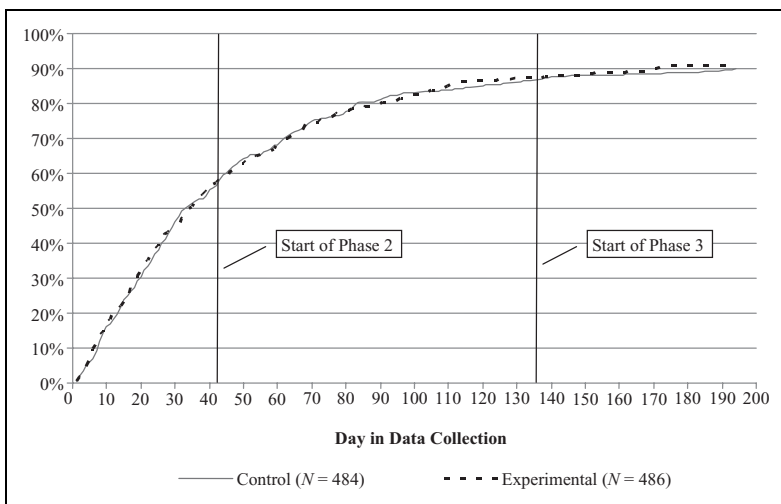


Figure 2. Cumulative percent interviewed by day in data collection for high- and low-propensity cases, by interviewer incentive.

Maybe a significantly higher incentive level that could dramatically raise the interviewer's wages during a field period would influence their motivation to pursue tough cases.

Second, we were not able to implement a no-incentive group *throughout* the field period. We were only able to institute a zero-incentive group during the second phase of data collection. The survey managers were, of course, interested in the greatest response possible and did not feel that a zero-incentive group would be beneficial to the survey. The optimal design would have been to add another experimental group of cases that were eligible for no interviewer incentives whatsoever. Instead, we evaluated two groups with incentive levels different enough that we could reasonably expect interviewers to view them differently. But future tests of this sort should include a zero-incentive group.

This experiment was embedded in a panel study, and nonresponse was generated through attrition rather than initial nonresponse. Panel members in this study had responded to several prior waves of the study and could have been, on average, more cooperative. It is possible that motivating interviewers with incentives will be most effective for sample members who tend to be reluctant respondents, many of whom would have been excluded from this wave of data collection. But attrition in panels is

important to study, as even small levels of attrition can produce undesirable bias in the survey data (Groves 2006).

Finally, even though the samples included both home owners and renters, the panel was comprised of low-income individuals. It is possible that high-income individuals interact and respond differently to interviewers, which could be tested through a general population face-to-face survey.

Despite these limitations, these results have important implications for survey research. In a time of limited budgets, it is critical for survey researchers to seek the optimal allocation of resources. Although incentives motivate respondents, we are skeptical that per interview monetary incentives aimed at reducing panel attrition can be motivating enough to encourage higher quality survey estimates. Future research should consider whether it would be more efficient and effective to direct incentive budgets completely toward respondents or to find alternative effective methods of providing incentives to motivate both respondents and interviewers. Most importantly, if interviewer motivation is not a factor in producing better survey data, resources are better spent on training interviewers for contacting sample members and gaining their cooperation at the doorstep.

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Notes

1. About 150 original renters have become homeowners and vice versa.

- Four cases in the priority condition and four cases in the control condition were excluded for having extremely high number of call attempts (over 25). Findings do not change when these cases are left in the analysis.

References

- Cadsby, B., F. Song, and F. Tapon. 2007. Sorting and incentive effects of pay-for-performance: An experimental investigation. *Academy of Management Journal* 50:387–405.
- Carr, C., J. Sokolowski, and C. Haggerty. 2006. Interviewer incentives: Are we getting enough bang for our buck? *Proceedings of the International Field Directors and Technologies Conference*. Montreal, Canada.
- Chromy, J. R., J. Eyerman, D. Odom, M. E. McNeeley, and A. Hughes. 2005. Association between interviewer experience and substance use prevalence rates in NSDUH. In *Evaluating and improving methods used in the national survey on drug use and health*, eds. J. Kennet and J. Gfroerer, 59–86. Washington, DC: Substance Abuse and Mental Health Services Administration.
- Dillman, D. A. 1978. *Mail and telephone surveys*. New York: John Wiley.
- Groves, R. M. 2006. Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly* 70:646–75.
- Groves, R. M., and M. P. Couper. 1998. *Nonresponse in household interview surveys*. New York: John Wiley.
- Groves, R. M., M. P. Couper, S. Presser, E. Singer, R. Tourangeau, G. P. Acosta, and L. Nelson. 2006. Experiments in producing nonresponse bias. *Public Opinion Quarterly* 70:720–36.
- Groves, R. M., and K. A. McGonagle. 2001. A theory-guided interviewer training protocol regarding survey participation. *Journal of Official Statistics* 17:249–65.
- Groves, R. M., S. Presser, and S. Dipko. 2004. The role of topic interest in survey participation decisions. *Public Opinion Quarterly* 68:2–31.
- Groves, R. M., E. Singer, and A. Corning. 2000. Leverage-saliency theory of survey participation—Description and an illustration. *Public Opinion Quarterly* 64:299–308.
- Homans, G. C. 1958. Social behavior as exchange. *American Journal of Sociology* 63:597–606.
- Hox, J. J., E. D. de Leeuw, and G. Snijkers. 1998. Fighting nonresponse in telephone interviews: Successful interviewer tactics. In *Nonresponse in survey research*, eds. A. Koch and R. Porst, 173–85. Mannheim, Germany: ZUMA.
- Kuhn, K. M., and M. D. Yockey. 2003. Variable pay as a risky choice: Determinants of the relative attractiveness of incentive plans. *Organizational Behavior and Human Decision Processes* 90:323–45.

- Lavrakas, P. 1993. *Telephone survey methods: Sampling selection and supervision*. Thousand Oaks, CA: SAGE.
- O'Muircheartaigh, C., and P. Campanelli. 1999. A multilevel exploration of the role of interviewers in survey non-response. *Journal of the Royal Statistical Society* 162:437–46.
- Philipson, T., and T. Lawless. 1997. Multiple-output agency incentives in data production: Experimental evidence. *European Economic Review* 41:961–70.
- Singer, E., J. V. Hoewyk, N. Gebler, T. Raghunathan, and K. McGonagle. 1999. The effect of incentives on response rates in interviewer-mediated surveys. *Journal of Official Statistics* 15:217–30.
- Weisberg, H. F. 2005. *The total survey error approach*. Chicago: University of Chicago Press.