

**TIERED INCENTIVE PAYMENTS: GETTING THE MOST BANG FOR YOUR BUCK**

**BY**

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## BACKGROUND

Since Congress enacted the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996, states have implemented strict TANF (Temporary Assistance for Needy Families)<sup>1</sup> work requirements and time limits. These changes have precipitated concern about the well-being of families that have left and those that remain on TANF. In response to that concern, many states have sponsored TANF “leaver” and/or “stayer” surveys. Mathematica Policy Research, Inc. (MPR) has conducted many such TANF leaver and stayer surveys for states over the years; most involve offering a monetary incentive to respondents to help increase response rates and reduce nonresponse bias.

Monetary incentives have been used for years to increase survey response rates and reduce nonresponse. Many studies document the positive effects of monetary incentives with respect to response rates on mail surveys (Church, 1993; Fox, Crask & Kim, 1988; Harvey, 1987; Hopkins & Gullickson, 1992; Yammarino, Skinner & Childers, 1991). In addition, a growing body of research documents a similar trend on telephone and in-person surveys (Benus and Ackerman, 1971; Gunn and Rhodes, 1981; Kerachsky and Mallar, 1981; Singer, 1999; Webber et al, 1982). As well as increasing response rates, monetary incentives can also lower overall data collection costs by reducing time and labor spent locating respondents and repeatedly re-contacting a household. This is especially true when surveying hard-to-reach populations, such as welfare recipients.

What is less widely known is the most effective *amount* of incentive to offer a respondent to maximize the survey response rate and minimize costs. This question has been tested by only a handful of researchers and usually with the general population or another hard to reach group,

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<sup>1</sup> Prior to the enactment of PRWORA in 1996, TANF was known as AFDC (Aid to Families with Dependent Children).

physicians. Gunn and Rhodes (1981) conducted an experiment to study the effects of varying monetary incentives on physicians participating in a telephone survey. Physicians were randomly assigned to three groups; no incentive, \$25 and \$50. They were notified of the study in an advance letter and of the amount of monetary incentive they would receive for participating. The results indicated that as the incentive payment increased, so did the response rate. Weber and colleagues (1982) yielded similar results on an in-person survey using the same range of incentive payments. While there is no gold standard on how much incentive to offer a survey respondent, the Office of Management and Budget (OMB) has recently approved using monetary incentives in the range of \$20 to \$30 with specific target populations similar to those of interest here (Singer and Kulka 2002).

We therefore conducted an incentive payment experiment on a recent study of TANF recipients in Illinois. Our goal was to answer two questions: (1) which monetary incentive amount would achieve the highest response rate, and (2) which incentive amount would require the fewest contact attempts per completed case. We devised three incentive amounts, all relatively similar in size: \$20, \$35, and a split \$35/\$20 amount. The split amount offered respondents \$35 for completing the interview within a three-week time period; those not responding in three weeks would receive \$20. We devised this split incentive strategy to test whether respondents would complete the survey more quickly in order to attain an extra \$15 (the difference between \$35 and \$20), which would reduce the number of contact attempts (and thus resources we would need to expend). Our hypothesis was that the split amount would yield the best results (i.e., the highest response rate with the lowest contact effort), followed by the \$35, then \$20 amounts.

## EXPERIMENTAL DESIGN

Data were collected during a telephone survey of single adults with children who received a positive TANF benefit from the state of Illinois in November 2001.<sup>2</sup> The initial sample release, consisting of 426 cases, was randomly assigned into three groups (n=142) based upon the incentive amount; \$20, \$35 or the “split incentive.” Advance letters were mailed to all 426 sample members prior to any telephone contact.<sup>3</sup> Each personalized letter described the purpose of the study, the study sponsor, and stressed the importance of participation. In addition, the letter presented the incentive amount and a toll-free number to call to participate. The experiment ran for the first three weeks of the data collection period, from November 19, 2001 to December 10, 2001.<sup>4</sup>

MPR interviewers conducted all interviews by telephone using a hard-copy instrument. Telephone interviewing began three days after the advance letters were mailed. During the survey introduction, the incentive amount was reiterated to sample members. We tracked the number of completed interviews by incentive amount through the end of the experiment. For purposes of cost comparison, we also tracked the number of completed interviews that resulted from sample members calling in to our telephone center (call-ins) versus the number that resulted from direct telephone interviewer efforts (call-outs). Call-ins are defined as cases where a sample member called in to the telephone center using a toll-free number to complete the

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<sup>2</sup> The total sample size for the survey was 532. However, we initially released 80% of the sample (n=426) at the start of data collection. A second wave of sample (n=106) was released approximately one month later.

<sup>3</sup> Addresses were obtained from State administrative data files. Of the 426 advance letters mailed, nine were returned to MPR from the Post Office due to incorrect address.

<sup>4</sup> The decision to run the experiment for a three week period was based on the theory that following the experiment through the entire 12-week field period might depress the response rate for the \$20 incentive group and, thus, the survey response rate as a whole.

interview as a direct result of receiving the advance letter. Specifically, these individuals did not speak with an MPR interviewer or receive any information regarding the experiment from personal contact,<sup>5</sup> prior to making their first call to the telephone center. Any completed cases where an MPR interviewer made the initial contact with the sample member or a relative was considered a “call-out.”

## **LOGISTICS AND INTERNAL VALIDITY**

We implemented a number of tools to better ensure that the results of the experiment would be internally valid. The first tool was the use of random assignment. We randomly assigned sample members to the experimental and comparison groups to feel confident that systematic bias did not affect the assignment of sample members to any of the groups. In addition, we examined each group along geographic dimensions and found that neither group differed significantly from the geographic distribution of the full sample.

We employed other measures to further ensure that the results of the experiment would be internally valid. Some measures were employed to reduce potential bias by sample members:

- Mailing identical versions of the advance letter, except for the sentence that described the incentive amount
- Mailing all advance letters on the same day so each sample member had an equal chance of receiving the letter in time to participate

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<sup>5</sup> Telephone interviewers relayed a brief message to relatives and other non-sample members that MPR would pay the sample member their designated incentive amount if the sample member completed the survey.

- Allowing sufficient time for sample members to receive their letter and respond before the experiment ended

Other measures were employed to minimize confusion and reduce error by telephone interviewers and supervisory staff. These measures included:

- Creating three versions of the questionnaire, identical in every way except for the survey introduction which was tailored to the particular incentive group
- Printing the incentive amount in large font on the front cover of the questionnaire and on the top of the respondent information sheet (contact sheet)
- Color-coding the questionnaires and contact sheets by incentive group (for example, questionnaire covers and contact sheets for the \$20 group were printed on blue paper; \$35 on green paper and the “split” on yellow)
- Creating a “look-up” file that identified which incentive group a sample member belonged to, so that when a sample member called in to complete an interview, the supervisor could easily identify the proper incentive amount that an interviewer should offer, and the appropriate color-coded questionnaire to use
- Instructing telephone interviewers and supervisors to work all sample pieces evenly; supervisors were told to distribute sample to interviewers equally across all three groups (since interviewers who may have been more enthusiastic about the experiment might want to call “split incentive” cases more than single amount cases)<sup>6</sup>

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<sup>6</sup> We recognize that telephone interviewers may have conveyed their enthusiasm for the “split group” in subtle ways during the survey introduction. We did not monitor survey introductions during the experiment phase to measure any interviewer behavioral differences.

- Handling refusal avoidance, refusal conversion and locating efforts the same across all three groups (we did not conduct any refusal-conversion or locating attempts until after the experiment ended)

## RESULTS

At the end of the three-week experiment, 204 out of 426 sample members completed the interview, yielding an overall interim response rate of 48%. When analyzing the response rates in terms of the sample release for each of the three incentive groups, the “split group” yielded a higher percentage of completes than either of the single amount groups. As Table 1 shows, approximately 56% (n=80) of the “split group” sample completed an interview by the end of the experiment, compared to 46% (n=65) of the \$20 group and 42% (n=59) of the \$35 group. Using a chi-square test on the percentage, the differences between the three incentive groups were statistically significant for the combined data,  $\chi^2(2, n=426) = 6.6, p < .05$ . Hence, the chi-square test confirms that there is an association between the three different incentive groups and the number of completed interviews. Further, the difference in response rates between the \$35 incentive group and the “split group” was significant,  $\chi^2(1, n=284) = 6.21, p < .025$ . However, there was not a significant difference in the number of completed interviews for the \$20 incentive group versus the \$35 incentive group or for the \$20 incentive group versus the “split group.”

**TABLE 1****Completed Interviews (and Response Rates) by Incentive Group**

	<b>Incentive Group</b>			
	<b>\$20</b>	<b>\$35</b>	<b>Split (\$35 / \$20)</b>	<b>Total</b>
Sample Release	142	142	142	426
Completed Interviews (response rate) <sup>7</sup>	65 (46%)	59 (42%)	80 (56%)	204 (48%)

A look at the percentage of completed interviews, by the three subsamples, that were stasured as “call-ins” reveals that the “split group” fared the best. As Table 2 indicates, approximately 46% (n=37) of the “split” completes were “call-ins,” compared to 42% (n=27) for the \$20 group and 41% (n=24) for the \$35 group. However, the differences between the three incentive groups were not statistically significant for the combined data, nor were they for all three combinations of incentive groups and the number of completed interviews.

**TABLE 2****Completed Interviews (and Response Rates) by Call Status and Incentive Group**

<b>Call Status</b>	<b>Incentive Group</b>			
	<b>\$20</b>	<b>\$35</b>	<b>Split Group (\$35 / \$20)</b>	<b>Total</b>
Call-in completed interviews (response rate) <sup>8</sup>	27 (42%)	24 (41%)	37 (46%)	88 (43%)
Call-out completed interviews (response rate) <sup>8</sup>	38 (58%)	35 (59%)	43 (54%)	116 (57%)

<sup>7</sup> Response rates calculated as the number of completed interviews divided by the total release per incentive group (n=142).

<sup>8</sup> Response rates calculated as number of completed interviews for that status divided by the total number of completed interviews per incentive group.



## RECOMMENDATIONS

There are a couple of drawbacks to the experiment, most notably the sample size. Such small sample sizes reduce the reliability of the findings. Another drawback is that the experiment was terminated after three weeks into the data collection phase, once the split amount deadline was reached. We would have preferred to continue the experiment throughout the full data collection period, but our concern with meeting the projected target response rate compelled us to terminate the experiment early<sup>9</sup>. Given these limitations, we believe further research is necessary to validate these findings. We therefore plan to replicate the experiment with a larger sample size and for the entire length of the data collection period. We also plan to track the total number of calls per complete by incentive group and over time to evaluate level of effort.

Other possible variations to the experiment might be to include a no-incentive comparison group, offer a wider variation in incentive amounts, offer one split incentive at the beginning of the field period and another split incentive at the end of the field period, or to conduct a pre- vs. post-paid incentive experiment.

## CONCLUSIONS

The split incentive group yielded the highest number of completed interviews of the three incentive groups. Interestingly, the \$20 amount yielded a higher number of completes than the \$35 amount, though the difference is not statistically significant. We are a bit puzzled by this finding and can only posit some guesses as to why \$20 seems to be more effective than \$35 at

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*(continued)*

<sup>9</sup> The entire data collection period was fifteen weeks. We achieved a total of 416 completes and a 78 percent response rate.

encouraging participation; 1) There may be subtle but significant differences between the respondents randomized into these two groups, differences that we did not detect in our initial comparisons; 2) \$20 may be a more accurate remuneration for responding to the survey than \$35 (sample members may feel that \$35 is too much of an incentive and as a result, become suspicious of the study); and 3) \$20 may be more visually recognizable (\$20 bill) and therefore, may be more a tangible amount than \$35.

As for the comparison of groups by contact attempts, the split incentive group yielded the highest number of completes by call-in status as compared to the other two groups. The other two incentive groups were very similar as to the type and number of contact attempts. Although these findings were not statistically significant in this experiment, it seems possible that offering the split incentive to such a hard to reach population has the benefit of increasing the survey response rate and reducing the number of contact attempts, thereby reducing survey costs, as compared to offering a flat fixed incentive amount. Further research is needed to validate this conclusion.

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