

A LONGITUDINAL STUDY OF FACTORS  
AFFECTING MAIL RESPONSE RATE

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There have been a number of studies reported in the literature during the past several years regarding methods of improving the quality and quantity of information generated by survey research. Mechanisms for enhancing the response rate of mail surveys have received most attention in the literature. A number of variables have been found to influence rates, including questionnaire length, sponsorship of the research, degree of personalization of the appeal, and use of monetary and nonmonetary incentives.

The objective of this paper is to investigate the effects of sponsorship, incentive use, and a variable which might best be described as involvement, on response rate and response time in a longitudinal mail survey experiment. Based on the results of previous research, the following hypotheses were tested:

1. Incentives will increase response rates, and rates of response will be higher for greater incentive levels.
2. Immediate rewards will produce higher response than promised rewards.
3. Higher respondent involvement will produce higher response rates.
4. Commercial sponsorship will produce higher response than student sponsorship.
5. Incentives and incentive levels will have an effect on response rate over time.

The same five hypotheses were expected to be true for response speed as the dependent variable as well as response rate.

#### Methodology

A survey was conducted in late 1977 and early 1978 to measure various characteristics and attitudes of credit card holders of a large regional gasoline refiner. Questionnaires were sent to 356 households. Of these, one group of 188 was defined as having a higher degree of involvement in the study since they held gasoline credit cards and might be expected to have a greater degree of familiarity with the operations of the company and be especially qualified to answer questions in regard to these operations. Equal numbers of households were assigned to one of five possible treatment groups which consisted of incentives given to promote the return of the questionnaire: One group was offered nothing, a second group was sent one dollar with the questionnaire, a third group was sent 50 cents, a fourth group was promised one dollar to be sent by return mail after the

questionnaire was returned, and a fifth group was promised 50 cents for returning the questionnaire. Thus, both incentive level and immediacy of reward were involved as treatments in the study, and credit card ownership was involved as a blocking variable. A third variable of interest, sponsorship of the survey, was established for this survey as a local research firm whose address was used for the return of the questionnaire.

A second survey was conducted 13 months later in early 1979. Questionnaires of the same length and content were mailed to as many as possible of the respondents from the original sample who had completed the first questionnaire in late 1977 and early 1978. A total of 190 of these 279 respondents were mailed this second questionnaire. Of these, 84 were credit card holders and 106 were not. No rewards of any type were offered for participation in the second survey. Sponsorship of the survey was attributed to a graduate student and the return envelope was addressed to his home.

Results- The results of a multiple comparison of proportions showed that the receipt of money with the questionnaire compared to no money provided a significantly higher rate of response as expected. However, the amount of money, whether 50 cents or \$1.00 made no difference. The promise of money to be sent after the questionnaire was completed yielded significantly lower response rates than sending money with the questionnaire. Use of a "promise" did not yield significantly different results than sending no money at all.

The possibly higher involvement of the respondent with the topic of the survey as indicated by the respondent's ownership of a credit card, was shown by the simple t test for the difference in proportions to be significant at the .05 level. Therefore, hypothesis three was accepted.

The test for the significance of the multiple comparison of proportions was performed for the response rates of the second survey. No significant differences in response rates were found for the five groups as defined by the incentive received in the first survey. Likewise, no significant difference in response rates were shown by a t test of differences in proportions for the credit card owners and non-owners. Since differences in response did not appear at all in the second survey, hypothesis five must be rejected. This demonstrated that no carryover effect of receiving incentives in the first study remained in the second survey.

The data suggest acceptance of the fourth hypothesis, though a conclusive test was not possible in this study. Comparison of incentive groups suggested that lack of monetary incentives in the second survey was not the reason for the lower response rate, since the "no money" condition in the second survey produced about the same returns as did the other groups. Although it is not possible to prove the reasons for the relatively poor response, it appeared that sponsorship combined with a preliminary interview were responsible.

An analysis of variance was conducted to assess the impact of the incentives and credit card ownership on the number of days required for questionnaires to be returned, or time of response. Unfortunately, no significant main effects of either the monetary rewards or of involvement as measured by credit card ownership were found in the first survey.