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Abstract

Members of professional groups were much more likely to respond to a mail survey than nonmembers who were also experts in the area (43.7% versus 13.7%). A one-dollar (U.S.) prepaid monetary incentive increased the response rates, and it was as effective for members as for nonmembers (gains of 18.6% and 15.3%, respectively). Surprisingly, the U.S. dollar monetary incentive had a greater effect on foreign than U.S. response rates (gains of 32.6% and 12.9%, respectively).

Comments

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Effectiveness of Monetary Incentives: Mail Surveys to Members of Multinational Professional Groups

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Members of professional groups were much more likely to respond to a mail survey than nonmembers who were also experts in the area (43.7% versus 13.7%). A one-dollar (U.S.) prepaid monetary incentive increased the response rates, and it was as effective for members as for nonmembers (gains of 18.6% and 15.3%, respectively). Surprisingly, the U.S. dollar monetary incentive had a greater effect on foreign than U.S. response rates (gains of 32.6% and 12.9%, respectively).

Introduction

Assume that you would like to assess how members of a multi-national professional group would respond to a new service that you would like to offer to the members. Or perhaps you are interested in their opinions about topics related to their areas of expertise. You decide to conduct a survey to assess their opinions. How can you obtain a high response rate?

By virtue of their membership in a group, we expected that the members would feel an obligation to respond. Thus, we expect higher response rates from members of an organization than from people who have similar interests but who are not members.

Research on mail surveys has revealed many procedures that will enable one to achieve a high response rate. One of the most effective of these procedures is the prepaid monetary incentive. For example, you can enclose a dollar with the questionnaire. Most of these studies have been done on general populations. Would incentives be effective also for members of a professional group? These members might already view it as their responsibility to respond to a survey about their opinions, thus rendering the incentive to be of little added value.

Surveys of international groups pose a problem in that it is expensive to obtain incentives that are in the denomination of the recipient's country. What happens if one simply uses U.S. currency in each country?

To address these questions, we first examined why prepaid monetary incentives are expected to be effective. Then we report on the literature. Finally, we report on the results of a study that we conducted.

Why Prepaid Incentives Work

Prepaid incentives rely on the norm of reciprocity. When Person A does something for Person B, B feels an obligation to respond. In the case of prepaid monetary incentives, the responses are limited. One can return the questionnaire or the money. Taking the money without responding would create dissonance because one is violating the norm of reciprocity. This explains why prepaid monetary incentives work, whereas offering to pay for a completed questionnaire has negligible impact on return rates [1]. Because the norm of reciprocity is found in all cultures, we expect monetary incentives to work for international surveys.

Notice that one should not treat the prepaid incentive as a payment for one's time. Thus, the questionnaire is accompanied by a note stating that the dollar is enclosed as a token of appreciation.

When Monetary Incentives Work

Prior studies on prepaid monetary incentive in mail surveys show that they consistently improve response rates in general populations. The results are remarkable. In the quantitative review by Armstrong [1], response gains were noted in each of the 18 comparisons. Studies on this topic continue to be published and monetary incentives almost always increase returns (e.g., [2-5]). In their meta-analysis, Yammano, Skinner, and Childers [11] found that monetary incentives of 50 cents and over increased response rates by an average of 12 %. Of particular interest for our study, monetary incentives are useful for industrial [6] and professional groups [6, 8-10].

Given this uniformity of results, one might ask whether there are any conditions where monetary incentives do not work. Yammano, Skinner, and Childers [11] suggested the need to examine possible conditions that might limit the use of monetary incentives.

Our study examined two moderators that might limit the effectiveness of monetary incentives in mail surveys. First, we expected incentives to have little favorable impact upon members of a professional organization when the questionnaire is relevant to the mission of the organization. We believed that they would feel obliged to reply to a survey simply because they are members of a professional organization that is associated with the study. An incentive might even interfere with recipients' feelings of responsibility to the organization. That is, it might make them attend to the money rather than to their organizational obligation.

Second, we examined whether a small incentive in a currency that is foreign to the recipient would be less effective because the cost (fees plus the time and effort) of converting the currency would exceed the value of the currency. We expected that some recipients would regard it as inappropriate to include such a token because it should be clear that the currency has no value to them. Some may believe that it is egotistical to use U.S. dollars. In the one study that we found on this issue, Keown [7] tested the use of a \$1.00 U.S. incentive in mailings to Japan and Hong Kong. Overall, 17.7 % of the no incentive group ($n = 100$) responded versus 24.5 % of the incentive group ($n = 100$). This 6.8 % gain was not statistically significant. Thus, the incentive did not seem to be particularly effective for the foreign sample.

Design

We conducted a survey of forecast professionals in October 1990. These professionals were chosen from a list provided by the International Institute of Forecasters (IIF). The list consisted of people who were members of IIF as well as those who had attended forecasting conferences, former IIF members, authors of papers on forecasting, and people who requested information about the IIF. Their interests were primarily in the development, testing, and application of forecasting methods.

The same cover letter, written on Wharton School stationery, was addressed "Dear Colleague" for all respondents. It was signed by both authors. Because the lead author was a founder and was then the President of the IIF, we believed that the members would feel obligated to complete the survey. The cover letter consisted of two brief paragraphs. The first paragraph was intended to heighten the sense of obligation among members by stating "We are interested in your opinions on a wide range of topics within the discipline of *forecasting*. The questionnaire is designed to identify those issues that should be studied in forecasting." The second paragraph referred to the incentive as "an appreciation" and stated that the responses would be kept anonymous.

The questionnaire was nine pages long and it contained 198 questions. A self-addressed stamped envelope was enclosed. Of the 783 questionnaires sent out, 521 went to members of the IIF and the remaining 262 went to non-members. A systematic 50 % sample of each group received one U.S. dollar and the others received no monetary incentive. Of the 521 surveys sent to IIF members, 347 went to U.S. members and 174 went to members in 36 countries throughout all continents. About 40% of these non-U. S. members were from Canada, England, and Australia. To

obtain a good response rate, the mailings used first-class mail, and contained personalized signatures and a self-addressed return envelope. A reminder postcard was sent 10 days after the questionnaire was mailed.

Results

As expected, a higher response rate was achieved for the IIF group members than for nonmembers (52.9% versus 21.2%). This supports the expectation that the members would feel obligated to respond. We also heard expressions of guilt from members who promised that they would be returning their questionnaire soon. Members' responses continued over a longer time span; the average elapsed time for U.S. responses was 31.8 days for IIF members versus 13.3 days for the nonmembers ($t = 6.6$; $p < .0001$).

Consistent with research on consumers and on the public, the monetary incentive produced a substantial increase in returns from nonmembers; twice as many responses were received, representing a 15.3% gain (29% versus 13.7%). This increase was statistically significant ($t = 3.1$; $p < .01$). However, contrary to our expectations, the monetary incentive also had a significant positive impact on response rate of professional group members ($t = 4.3$; $p < .001$). In fact, the absolute percentage increase in response rate was slightly larger for the members than nonmembers (18.6 % versus 15.3 %). The top half of Table 1 summarizes these results.

Table 1
Effect of Incentive on Percentage of Returns (sample size)

	No Incentive	Incentive	Totals
Membership in IIF			
No	13.7 (131)	29.0 (131)	21.2 (262)
Yes	43.7 (261)	62.3 (260)	52.9 (521)
Totals	33.7 (392)	51.1 (391)	(783)
Nationality (IIF Members Only)			
U.S.	46.2 (210)	59.1 (137)	51.3 (347)
Foreign	33.3 (51)	65.9 (123)	56.3 (174)
Totals	43.7 (261)	62.3 (260)	(521)

Consistent with London and Dommeyer [8], the monetary incentive had no impact on the speed of the responses for either members or nonmembers. The average number of elapsed days was 38.7 for responses from the group receiving the incentive and 35.5 for the others. This suggests that the dissonance passes quickly, unlike the case for membership, where the guilt lingers on.

Two members returned the questionnaires and reported that they were upset because they regarded the incentive to IIF members to be inappropriate. While the organization received no other negative feedback on this issue, other members might have thought the incentive to be inappropriate but chose not to discuss it.

Contrary to our expectations, the effect of the monetary incentive was greater for the foreign sample of IIF members than for the U.S. sample of IIF members. The return rate increased by 32.6 % for the foreign sample versus 12.9 % for the U.S. sample ($t = 4.2$; $p < .001$). These results are summarized in the bottom half of Table 1. The increase for the foreign sample was statistically significant ($t = 4.2$; $p < .001$) as was the increase for the U.S. sample ($t = 2.4$; $p < .01$). We can only speculate as to why this effect was so strong. Perhaps the crisp new U.S. dollar bill attracts attention as a souvenir and thus generates a feeling of reciprocity.

Conclusion

Three conclusions from this study are useful to marketers surveying U.S. or international members of professional groups. First, professional group members demonstrated a higher willingness to respond to a mail survey

than did nonmembers (43.7% versus 13.7%). The response from members continued over a longer period of time, so additional time should be allowed in the administration of the survey.

Second, a one-dollar prepaid monetary incentive increased the mail response rate for members of a professional organization (from 43.7% to 62.3%). Contrary to our hypothesis, the gain was higher for members than nonmembers.

Third, although the incentive was not in the denomination of the recipient's country, the U.S. dollar increased the return for foreign members. The effect of the incentive was actually larger for the foreign members (+32.6 %) than for the U.S. members (+12.9%). In fact, the one-dollar incentive doubled the response rate from foreign professional members.

Consistent with prior research, monetary incentives show a strong and consistent effect across a wide range of conditions. If nonresponse bias represents a threat to the validity of the results, monetary incentives should be used for mail surveys.

References

1. Armstrong, J. S. (1975), "Monetary incentives in mail surveys," *Public Opinion Quarterly*, 39, 111-116.
2. Harry, S. H., and Kanouse, D. E. (1987), "Physician response to a mail survey," *Public Opinion Quarterly*, 51, 102-114.
3. Brennan, M., Hock, I., and Astridge, C. A. (1991), "The effects of monetary incentives on the response rate and cost-effectiveness of a mail survey," *Journal of the Market Research Society*, 33, 229-241.
4. Fox, R. J., Crask, M. R., and Kim, J. (1988), "Mail survey response rate," *Public Opinion Quarterly*, 52, 467-491.
5. James, J., and Bolstein, R. (1990), "The effect of monetary incentives and follow-up mailings on the response rate and response quality in mail surveys," *Public Opinion Quarterly*, 54, 346-361.
6. Jobber, D. (1986), "Improving response rates in industrial mail surveys," *Industrial Marketing Management*, 15, 183-195.
7. Keown, C. F. (1985), "Foreign mail surveys," *Journal of International Business Studies*, 16, 151-153.
8. London, S. J., and Dommeyer, C. J. (1990), "Increasing response to industrial mail surveys," *Industrial Marketing Management*, 19, 235-241.
9. Mizes, L. S., Fleece, E. L., and Root, C. (1984), "Incentives for increasing return rates: Magnitude levels, response bias, and formats," *Public Opinion Quarterly*, 48, 784-800.
10. Paolillo, J. G. P., and Lorenzi, P. (1984), "Monetary incentives and mail questionnaire response rates," *Journal of Advertising*, 13, 46-48.
11. Yamnanno, F. J., Skinner, S. J., and Childers, T. L. (1991), "Understanding mail survey response behavior," *Public Opinion Quarterly*, 55, 613-639.