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Are Advanced Postcards or Letters Better? An Experiment with Advance Mailing Types

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Are Advanced Postcards or Letters Better? An Experiment with Advance Mailing Types

Busy survey shops struggle daily to figure out the most methodologically sound approach that fits within clients' (often limited) budgets. Many projects require innovative techniques even with basic practices, such as advance notification. Sending advance (or prenotification) letters prior to a call or survey helps to increase response rates (De Leeuw et al. 2007; Dillman, Gallegos, and Frey 1976), but does the type of mailing matter as well? In this article, I compare the results of an advance postcard versus an advance letter, and find that overall letters are the more cost-effective option.

Hembroff et al. (2005) established that the format of advance notification (letter versus postcard) matters insofar as advance letters tend to increase response rates more than advance postcards, which in turn reduces the overall survey costs. Obtaining a higher response rate is a desired outcome of most survey research projects because of concern with nonresponse (Groves 2006). Even if both types of advance mailings increase the overall response rate, if there is differential response by subgroups, then this raises concerns about nonresponse bias. To evaluate differential response by mail type, I examined responses to key demographic variables by mailing type. In addition, Dillman, Smyth, and Christan (2009) hypothesize that higher response rates achieved from an advance letter versus a postcard are due in part to respondent recall. Therefore, it is also important to determine if recall is different by advance mail type.

Hembroff et al. (2005) provide a detailed account of costs by mailing type, but for some cost-incurring items the researchers relied on estimates rather than real costs. Accordingly, we still need a detailed understanding of actual costs incurred by each mailing type, relative to the response rate. Can clients save money and maintain sufficient response rates using postcards instead of letters?

Methodology

To answer my questions I use the 2007 Nebraska Annual Social Indicators Survey (NASIS). The 2007 NASIS was designed in late 2007 and fielded from February to August 2008 by the University of Nebraska-Lincoln Bureau of Sociological Research (BOSR). It was a CATI survey using a statewide

directory listed sample of 5,901 households, drawn by Marketing Systems Group from a database of telephone book white page listings (for more information see the NASIS 2007 Methodology Report). 1,811 adults (aged 19 and older) completed the survey for an overall response rate of 33 percent (AAPOR RR1). Of the 5,901 advance mailings, 617 were returned as undeliverable, 312 letters and 305 postcards. Unless otherwise noted, these households are excluded from the analyses.

Each sampled household was randomly assigned an advance mailing condition (2,590 to the letter and 2,591 to the postcard condition). In order to ensure that the text of the mailing did not influence the results, the same text was used on both the letter and the postcard. Additionally, both the letter and the postcard included the university logo (sized and placed appropriately based on common practice for each type). In order to replicate what is normal formatting and practice for both mailing types, I did not incorporate some of Hembroff et al.'s (2005) methods for depersonalizing the letter. For instance, contrary to Hembroff et al.'s methods, in my experiment the household address appears at the top of the letter and the signature on the letter was printed in blue ink rather than being an obvious photocopied signature. The font size (not style) also differed slightly due to space limitations.

Results

The completion rate was slightly higher for households that received the advance notification letter (38.6%) compared to households that received the postcard (35.0%). This difference was statistically significant ($X^2 p < 0.05$). Logistic regression showed that the odds of a household completing the survey were 14.2 percent less for those who received a postcard versus a letter ($p < 0.05$).

In order to better understand the higher completion rate findings, I calculated the cooperation and contact rates (APPOR Standard Definitions 2007, COOP1 and CON1) for each mail type. The contact rates for each condition were not significantly different (95.6% for the letter condition and 95.3% for the postcard condition), but the cooperation rate was significantly higher for the letter condition (40.4% versus 36.8% for the postcard, ($X^2 p < 0.05$)). Thus, the significant difference in completion rate is not due to a difference in reaching a household by telephone; rather it is due to being able to convince a respondent to cooperate once they are on the phone. In other words, the letter and the postcard are not differentially affecting the frequency with which a called phone is answered, but the letter is more effective at convincing respondents to complete the interview once on the phone (which is consistent with nonresponse theories like social exchange and leverage salience).

The increase in the response rate is significant, but for survey operations it is important to consider the practical implications, especially costs. Advance letters clearly boost response rates, but are the gains large enough to justify the additional costs of sending a letter instead of a postcard? Hembroff et

Table 1 Cost calculations letter versus postcard advance mailings.

Total Completes = 1,811	Letter	Postcard
<i>Calculations needed to compare costs</i>		
a. Sample telephone numbers used per completed interview	3	4
b. Sample needed to complete 1811	5,943	6,647
c. Avg. # of calls per completed interview	6	7
d. Total # of calls to complete 1811	10,866	11,953
e. Interviewer hrs needed at avg. # calls per hr-18.65	583	641
<i>Extra cost calculations for postcard sample</i>		
f. Extra interviewer hours needed for postcard sample vs. letter	0	58.26
g. Extra interviewer wages for postcard sample vs. letter	0	\$975.32
h. Extra sample needed for postcard sample vs. letter	0	704.43
i. Extra sample costs vs. letter (cost per sample unit \$0.10)	0	\$70.44
j. Total costs for mailing including preparation and bulk-rate postage	\$1,442.20	\$1,145.14
Difference		\$748.71

al. (2005) included a cost assessment in their research, but for several key items used estimates or predications based on other studies. I include a similar cost comparison, but use real costs tracked during the fielding of the survey, including costs for preparing mailings based on a detailed accounting of the exact amount of time used and the actual costs of printing, postage, and university mail processing fees.

Similarly to Hembroff et al. (2005), I use information about the productivity in each treatment group to calculate what it would have cost to obtain all 1,811 completes using just the letter or just the postcard. The productivity and cost information is shown in Table 1, which is formatted to closely replicate the cost analysis presented in Hembroff et al. (2005), but adjusted for the BOSR accounting system. Specifically at BOSR, telephone costs are included as part of the interviewer rate, and interviewer supervisor hours are not accounted for, as supervisors would have been on duty regardless of the extra interviewer hours due to multiple telephone projects in the field.

After accounting for the extra costs associated with the lower response rate of postcards and subtracting the mail related savings (versus letter), I estimated that it would cost \$748.71 more to get the same number of completed interviews if we had only used the postcard advance mailing. Thus, relative to a postcard, the data collection efficiencies gained from sending an advanced letter covered the added costs of preparing and mailing the letter and then some.

Additional analyses showed that respondents in households that received the letter (i.e., not returned undeliverable) were more likely to recall the mailing than respondents in households that received the postcard (67.5% and 59.8% respectively, $p < 0.05$). Respondents who recalled the postcard or advance letter ($N=980$) were also asked if they actually read the mailing. Similar percentages of respondents recalled reading the letter and the postcard (75.9% and 74.3%

respectively). Interestingly, 33.6 percent of respondents from households in which the advanced mailing was returned undeliverable also indicated that they recalled the mailing.

There is no difference between letter and postcard conditions for any of the four subgroup indicators ((age, gender, income and education) ($X^2 p > 0.05$)). Therefore there is little evidence of differential bias due to the type of advance notice.

Conclusion

The appeal of a postcard advance mailing is the lower mailing cost and effort compared to sending a letter. Yet this study shows that the lower response rate associated with postcards could be more costly overall. Of course it bears repeating that this was a telephone study with a directory listed sample. With a different telephone sample, results may change. For example, the need to conduct address matching for an RDD sample might increase costs more for the postcard treatment because more addresses would need to be matched upfront to get the same results as a letter might get. Different mailing techniques or differing cost accounting methods may also affect results. Considering the size of the cost difference found in this experiment is small relative to the overall costs of phone surveys, many busy shops concerned with efficiencies may not need to worry too much about the type of advance notification, but should continue to recommend the use of advance notification to their clients.

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