

An Experiment With Measuring Impact of Monetary Incentives On Rate and Speed of Response to Web-Based Surveys

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ABSTRACT

This study analyzed how monetary incentives influence responses to web-based surveys. A sample of 422 electronic mail (e-mail) addresses was contacted by e-mail to respond to such a survey. One third of the sample received the chance to win \$50 upon completion of the survey; another third the chance to win \$100; and the remaining third no monetary incentive. The rate of response and the timeliness of the response were tracked for the three groups. The incentives influenced the speed of the response but not necessarily the rate.

Background

It is now technically feasible to collect marketing data completely electronically. Respondents can be contacted via e-mail with a message that contains a link to an internet web page where a questionnaire resides. With a single click on the link, the respondents are transported to the questionnaire, which they can begin answering at once. Upon completion, with another final click they can submit their responses for analysis. The medium thus potentially offers several advantages like faster turnaround for data collection and analysis, reduced coding errors, and lower cost.

The viability of Internet research, however, depends in part on whether it can provide adequate response rates. The potential respondents must choose to return to the web based survey.

Response Rates

There is no research on which factors affect the response rates to web based surveys. Response rates to surveys, which have been e-mailed to respondents vary between 19 percent in a university setting to a high of 73 percent in a closed corporate environment (Kiesler and Sproull 1986, Schuldt and Totten 1994, Oppermann, 1995). A recent study by

Bachmann, Elfrink, and Vazzana (1996) found that the response rates to the mail surveys were significantly greater than to the e-mail surveys. However, both rates were common to those found in historical mail survey results.

Most of the response rate literature pertains to mail surveys. A sampling of the studies (Donald, 1960; May, 1960; Dillman 1978; Downs & Kerr 1986; Harvey 1987; Martin 1989; Faria & Dicken 1990; Kalafaris & Madden, 1993; Biner & Kidd, 1994; Bachmann, Elfrink, & Vazanna 1995; Paxson, 1995) shows that the factors which most consistently affect response rates for mail surveys are stamped return envelopes, follow-up techniques, and monetary rewards or token incentives.

The research on response rates of surveys administered via fax machines is limited. According to Tse, et al. (1993), fax surveys have a faster return speed and are less expensive to administer than mail surveys. However, the response rates are not as high as for mail surveys.

Tse, et al. (1993) found a 12 percent response rate to a fax survey where both the survey and response had been faxed. Within the same study a mail survey that included a stamped return envelope garnered a 43 percent response rate.

Speed of Response

There is some research on the speed of response to mail, fax, e-mail and telephone surveys (Dillman 1978; an Tse et al. 1992; Vazzana, Elfrink and Bachmann 1995; Oppermann 1996; Schuldt and Totten 1994). The consensus is that mail surveys are significantly slower than both fax and e-mail surveys, and e-mail surveys are faster than fax. In a study by Oppermann (1995), the response rate to the e-mail

survey was 23.6 percent after two days. In the time usually required to distribute traditional mail surveys nationwide, almost one-fourth had responded.

Use of Incentives and Monetary Rewards

The literature on cash incentives on mail surveys is vast and the majority points to a similar conclusion. Providing monetary incentives is one of the most effective means of increasing response rates in surveys of the general public (Fox, Crask, & Kim, 1988; Brennan, M. 1992). Prepayments are effective by creating feelings of obligation among recipients (Biner & Kidd 1994).

Research Methodology

In this study, respondents were solicited to participate in a survey located on the Planet Volleyball web site. The membership list of e-mail addresses generated through the Planet Volleyball web site over the past year was used as the population. The available e-mail list of 423 addresses was sorted alphabetically and then split into three groups of 141 (Table 1).

Each e-mail address within the three groups was sent a specific recruitment letter asking them to respond to the survey on the Planet Volleyball web site. Group 1 was offered the opportunity to win \$100; Group 2 \$50; and Group 3 received no mention of any cash. Eleven responses were obtained from individuals who did not disclose their e-mail addresses and therefore could not be placed in a specific group and from other individuals that arrived at the survey without solicitation.

TABLE 1

Response Rates to the Survey by Prize Level

	E-Mails Sent	Response Rate Percentage
\$100 Prize	141	18
\$50 Prize	141	26
No Prize	141	15
*Chi- Square	D.F.	Significance
.3836	1	0.5357

The URL address of the exact location of the survey was included in the e-mail solicitation, which enabled respondents to go directly to the survey. By clicking on the URL most browsers were able to open to the survey location directly.

After completing the last survey question, respondents could click a submit button. Doing so would automatically return the survey responses via e-mail. Only one response per person was accepted.

Responses were collected over a period of seven days, from the time the recruitment letters were first e-mailed to the list of potential respondents. Each response was printed out, clearly displaying the exact date and time it was submitted.

Motivation to participate in the survey was measured by asking: "What motivated you to do this survey?" The closed-ended responses were the prize, curiosity, like to help out, interest in volleyball, and bored.

Characteristics of Respondents

A total of 423 e-mail recruitment letters were sent out with 14 percent returned undeliverable. Of the 364 e-mails delivered successfully, 22 percent responded to the survey.

The immediate return of undeliverable addresses is an important feature especially when surveys are targeted at a highly mobile population. It is easy to ascertain that a pre-specified total number of questionnaires are actually delivered and one does not need to wait until undelivered traditional mail is returned. Undeliverable e-mail of 14 percent found in this study is very good. In studies reviewed, undeliverable rates of 24.8 percent were found (Oppermann, 1995).

Overall, females made up 22 percent of the total respondents; 24 percent of Group 1 (\$100); 16 percent of Group 2 (\$50), and 28 percent of Group 3. In 1996, it was estimated that females comprised 32 percent of Internet users (Tchong, 1996).

The age breakdown of the respondents was as follows: 14 - 18 (18.6%); 19 - 24 (20%); 25 - 34 (37.1%); 35 - 55 (18.6%) and over 55 (1.4%). The average age of computer users is 39, while the average age of the Internet user is 32. About one in ten Internet users are children under 18 years of age (Tchong, 1996).

Results of Study

Response Rates

The response rates varied by group (Table 1). Group 1, who received the \$100 prize offer, had

an 18 percent response rate. Group 2, who received the \$50 prize offer, had a 26 percent response rate. Group 3, who received no prize offer, responded at a rate of 15 percent. However, based on the chi square analysis, the results were not significant.

Response Speed

Table 2 shows the frequency at which responses were received over the duration of the study. Since the study lasted seven days, each time period represents a 12-hour period. Some 57 percent

TABLE 2
Frequency of Responses per Half Day Period

	1	2	3	4	5	6
\$100	5	10	0	5	0	0
\$50	4	14	3	7	0	1
No Prize	4	3	3	2	1	1
Totals	13	40	46	60	61	63
Cum. %	19	57	66	86	87	90

of all the responses were received within one day of the recruitment e-mails being sent out. Similarly, 87 percent of all responses were received within two days. Please note that "other respondents" were not included in Table 2. Group 1 (\$100) averaged .86 days to return their surveys; Group 2 (\$50) averaged 1.36 days; and Group 3 (no prize) averaged 1.88 days (Table 3). As the value of the incentive increased, the speed of the response decreased.

TABLE 3

Response Speed

	Mean Response Speed in Days
Group 1 - \$100 Prize	.86
Group 2 - \$50 Prize	1.36
Group 3 - No Prize	1.88
Groups 1,2,3 Average	1.37

F Ratio 2.25 F Prob. .096

According to the respondents, the biggest factor in responding to the survey was their interest in volleyball. This was true for both the groups who were and were not offered an incentive. Among those who were offered the opportunity to win a prize, 52 percent said they responded because of their interest in volleyball; 21 percent because of the prize; 21 percent to help out; 4 percent out of curiosity; and 2 percent out of boredom. Among those who were not offered the chance for a prize, 56 percent said

they responded because of their interest in volleyball and 44 percent to help out.

Summary and Conclusions

It is now technically feasible to administer marketing surveys via a web site on the internet. Both closed and open-ended responses can be obtained quickly and cost effectively. According to this study, the response rate, which was 22 percent, appears to be in line with mail, fax and email surveys.

More investigation, however, needs to be done on which levels of monetary incentives are effective in increasing response rates to web-based surveys. In this study, a sweepstakes comprised of two different levels of monetary prizes had surprisingly little impact on response rate. Perhaps web-based surveys are still novel enough that respondents are willing to answer regardless of the cash incentive. On the other hand, sweepstakes may not have the necessary credibility to serve as a bona fide inducement. Users of the web are deluged with sweepstakes, whose rules and winners are not always clear. Moreover, other studies support that prepayments are far more effective than the promise of money at the conclusion of the interview (Goyder, 1994). Further research needs to be done measuring the effect of guaranteed cash incentives on response rates not just the chance to win cash as was done in this study. It should be noted, however, that it is not possible to provide prepayments with web based surveys.

Offering a cash incentive did improve the speed of the response. When response speed is critical, the study supports that a cash incentive should be included. However, further research should be conducted with regard to the level of incentive and guaranteed payments versus sweepstakes.

The study indicated that the response rate for a web-based survey might hinge on less tangible factors like the respondent's interest in the subject. Interest in volleyball was the primary motivation to respond to the survey for both the treatments and the control group. Marketing researchers need to become adept at alerting potential respondents to the purpose of the survey and how it relates to them, and appealing to the respondents' desire to be helpful.

The web-based survey may be used to effectively gather valuable data on customers who are on the web. The technique automates data collection, eliminates coding errors for closed-ended questions, speeds up administration, and reduces data gathering costs. Using websites to collect data from individuals could potentially become the most efficient and effective method of market research yet developed. However, there is much to learn. This study is only a small, preliminary step of many to come that will accurately layout the steps needed to ensure the most effective use of online surveys.

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