

LORE methodological note 2015:7

Effects of additional reminders on survey participation and attrition

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ABSTRACT

This study examines the impact of adding several reminders to a non-commercial web survey on survey participation rates, completion rates and panel unsubscription rates. 10,000 invited respondents were randomized into four groups and assigned to receive a maximum of no reminder, one reminder, two reminders or three reminders during a three week period. The results show that going from zero to one reminder increases the participation rate by eleven percentage points, from one to two by four percentage points, and from two to three by two and half percentage points. As the number of reminders increase, the share of people who complete the entire survey after starting it also goes up, as do the share of the invited sample who instead unsubscribes permanently from the panel.

This methodological note examines the impact of the number of reminders on participation rates, completion rates and unsubscription rates in a web survey sent from a non-commercial university run online panel. Many surveys today are challenged by falling response rates or by the difficulty to recruit panel members. It is often tempting for survey practitioners to send additional reminders in order to achieve higher response rates. Many previous studies have examined this, and it is widespread agreement that several reminders and follow-up contacts do yield higher response rates. According to the comprehensive review by Keusch (2015) this also seems to be valid for web surveys, although there are also indications that reminder effects decline quicker for online surveys than for other survey modes. Previous studies from LORE have also indicated that adding more reminders increases participation rates, and that these effects are not saturated after four reminders (Markstedt 2014a; 2014b). even though the study using up to four reminders suffers from relatively small sample sizes.

However, it is sometimes uncertain when the reminder effects are saturated and adding more reminders will no longer work. There is also a risk of negative effects of using too many reminders, such as for example causing invited participants to feel uncomfortable,

leading to negative attitudes towards the survey organization or survey studies more generally.

In the context of a web panel where people are re-contacted and invited to new studies at regular intervals, the panel provider has good reasons to be careful about using too many reminders since recruiting panel members is sometimes a costly task. To further examine the benefits and costs of adding more reminders we use an experimental design varying the number of reminders potentially being sent to those who do not answer and focus on four outcomes: the share of those invited who start answering the survey (the “click rate”), the share of those invited who finishes the survey (the participation rate), the share of those starting the survey who also finishes it (the completion rate), and finally the share of those invited who instead decides to leave the panel (the unsubscription rate).

Data

We vary the number of reminders from zero up to a maximum of three reminders. When designing studies on reminder effects, all field work factors cannot be held constant simultaneously. In this case, we chose to hold the length of the field work period constant by restricting it to three weeks for all four experimental groups. All survey invitations were dispatched on Monday 11th of May 2015, and the survey was closed three weeks later on June 1st. On average, the survey took slightly less than 15 minutes to respond to, excluding outliers (Martinsson et al 2015).

The experiment was part of a large scale survey with a total invited sample size of 62,910 panel members. A sub-sample of 10,000 was selected for this experiment. This sub-sample was randomized into four groups, where one group was to receive no reminder at all, one reminder, two reminders, or three reminders. Reminders were only sent to those who had not answered the survey before a certain date. Since we wanted to keep the total length of the field period the same for all four groups we decided to allocate the reminders as evenly as possible during the three week period the survey was to remain open. This meant that for example the group who were to receive a maximum of one reminder, the reminder was scheduled in the middle of the period, and the group receiving a maximum of two reminders got the first reminder after one week, and the second after two weeks. A detailed overview of the experimental design and the field work for each treatment group is found in Table 1.

Table 1. Experimental design and field work

No of reminders	Dates of reminders	Sent emails	Bounces	Delivered emails (net sample size)
0	-	2500	72	2428
1	20/5	2500	72	2428
2	18/5, 25/5	2500	84	2416
3	15/5, 20/5, 25/5	2500	71	2429

Results

We start by examining the results for the various participation measures. Table 2 gives a descriptive overview of the participation rates achieved with the different number of reminders, while Table 3 presents the difference it makes to add one more reminder at different levels and whether these differences are statistically significant.

As expected, the group with zero reminders has by far the lowest participation rate, where 50 percent of the net invited sample clicks the link to the survey at all, and 46 percent actually responds to the entire survey. Adding one reminder increases these numbers by approximately eleven percentage points and makes almost 58 percent answer the full survey. However, as we continue to add more reminders these effects decrease substantially, and adding a second reminder increases the participation rate by approximately another 4 percentage points, and a third reminder by 2-3 percentage points. The question whether a fourth reminder would have increased the participation rate further cannot be answered by this study.

What is perhaps more surprising is that the completion rate, the share of those who start the survey that also makes it all the way to the end, increases monotonically with the number of reminders. With no reminders at all, the completion rate is 92 percent, but with three reminders as many as 95 percent of those who start also finishes the survey. Although as seen in Table 3, the effect of adding just one more reminder is not statistically significant when it comes to the completion rate, but if we add two reminders and compare the group who receives no reminder with two reminders ($p=.008$) or one reminder with three reminders, ($p=.010$) these differences are indeed statistically significant.

Table 2. Participation measures and unsubscription rate depending on number of reminders (percent)

No of reminders	Click rate	Participation rate	Completion rate	Unsubscription rate
0	50.1	46.3	92.4	0.9
1	61.5	57.5	93.5	1.7
2	65.3	61.5	94.3	1.3
3	67.4	64.1	95.2	2.5

Comment: Table entries are percentages based on the net sample sizes reported in Table 1. The click rate is the share of the net sample who clicks on the link to be taken to the survey. The participation rate is the share of the net sample who responds to the entire survey and clicks on the 'finish' button on the last page of the survey. The completion rate is the share of those who start the survey that also finishes the entire survey. The share of item missing is not taken into account in the participation rate or the completion rate.

Table 3. Effects of one extra reminder on survey participation and panel unsubscription (percentage point differences)

Change in No of reminders	Click rate	Participation rate	Completion rate	Unsubscription rate
0 -> 1	+11.4***	+11.2***	+1.1	+0.8**
1 -> 2	+3.7***	+4.0***	+0.8	-0.4
2 -> 3	+2.1	+2.6*	+0.9	+1.2***

Comment: ***=statistically significant difference at the 99% confidence level. **=statistically significant difference at the 95% confidence level. *=statistically significant difference at the 90% confidence level. Significance levels were calculated with the `prtest` command in Stata version 13SE.

The increasing completion rate indicates that the reminders to some extent serve to get respondents who had previously started but failed to complete the survey in one session to restart and continue to the end. A contrary hypothesis could have stated that adding more reminders would serve to have more of the less motivated respondents start the survey, and that these would be less likely to endure answering the entire survey, thus increasing the click rate, but simultaneously decreasing the completion rate. Our results show, however, that this is not the dominant effect. The net effect is to increase the completion rate, which is another valuable property of high quality data.

The last potential outcome of adding more reminders that we examine in this note is the potentially adverse effect of annoying panel members and cause them to leave the panel, to unsubscribe from further survey invitations. As seen in Table 2, this is indeed the case in our study. In the group that did not receive any reminder only 0.9 percent decided to leave the panel during the field work period, while 2.5 percent did so in the group receiving up to three reminders. Although these differences are small, they are statistically significant except from the comparison between one and two reminders.

Concluding discussion

As expected, adding more reminders increases survey participation rates. The effect sizes in this study also confirm those found in previous studies by LORE (Markstedt 2014a; 2014b). Going from one to two reminders increases the participation rate by approximately four to six percent, although taking the different sample sizes of these three studies into account, the lower end of this range seems more likely. When moving from two to three reminders, the participation rates tend to increase by approximately two to four percent, once again taking sample sizes into account the lower end of the range seems more likely. The slightly more conservative estimates of this study can also be due to the fact that this design kept the field work length constant, which is not always the case in previous research; more reminders sometimes also entails longer field work periods, which might in itself increase participation rates somewhat (Markstedt & Martinsson 2015).

Another positive effect of adding more reminders found in this study is that they also increase completion rates, thus yielding more complete data and fewer survey breakoffs. Although adding several reminders increases participation rates and completion rates, it unfortunately also seems that it makes more people leave the panel. However, whether this is problematic or not ultimately depends on how likely those unsubscribing panel members would have been to respond to another future survey instead had they not received so many reminders.

References

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The Laboratory of Opinion Research (LORE) is an academic web survey center located at the Department of Political Science at the University of Gothenburg. LORE was established in 2010 as part of an initiative to strengthen multidisciplinary research on opinion and democracy. The objective of the Laboratory of Opinion Research is to facilitate for social scientists to conduct web survey experiments, collect panel data, and to contribute to methodological development. For more information, please contact us at:

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