

LORE methodological note 2014:10

The long-term development of cumulative response rates in a probability based web panel

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ABSTRACT

This methodological note analyzes how the cumulative response rate following a probability based recruitment effort carried out in November 2012 develop over time. The conclusions are that the cumulative response rate in most cases is halved after five consecutive steps of the Citizen Panel regardless of the amount of initial effort used in the recruitment, of the initial recruitment rate, and of the age of the respondents. Subsequently though, the cumulative response rate flattens out in coming waves of the panel and stops diminishing at the same rate.

Background and data

In November 2012, 29,000 randomly selected individuals were invited to join the Citizen Panel at the University of Gothenburg in a major experimental recruitment effort. The different treatment groups in this recruitment used different amounts of effort, where respondents received either no reminder, one reminder or several reminders. To experiment with optimizing the recruitment there were also different versions of the postcards used to invite respondents: a standard postcard, a personalized postcard (containing the sentence: "Currently we are especially looking for more [men/women] between [18 and 30/31 and 50/51 and 70] years old in order to make the Citizen panel represent Sweden well." with the text matching the respondents' own characteristics), a symbolic lottery incentives (worth 0.3 euros and awarded if the respondent signed up before a specific date) and a mix of the personalization and the incentive. See appendix 1 for the experimental set-up.

One of the main challenges of running a probability based web panel is to recruit and maintain a representative panel. This note continues the analysis from LORE methodological note 2014:8 where recruitment rates based on different amounts of effort used in the recruitment were examined. In note 2014:8 the main conclusions were that personalization by itself does not raise recruitment rates, but that incentives and a combination of incentives and personalization does as well as using reminders in general. This note complements that analysis by analyzing the cumulative response rates in eight consecutive waves following the recruitment. The aim is to evaluate the recruitment

strategies over time by analyzing the cumulative response rates and to see how it differs in different experimental groups and across age.

This methodological note focuses the analysis on 8 of the 13 treatment groups. Groups 12 and 13 are excluded as these groups did not use a login and the respondents thus not are possible to identify, and groups 7, 8 and 11 are excluded since due to technical problems all of these respondents did not join the Citizen Panel despite answering the recruitment survey.

Results

Most of the respondents recruited in this recruitment effort 1,864 out of 1,951 were assigned to a long-term election study panel within the frame of the Citizen Panel. In June 2014 these respondents had been invited to eight panel waves, out of which six belonged to the election panel. The following graphs display the cumulative response rates in these eight surveys. In order to hold the content of survey waves constant for all respondents as far as possible, this note only examines those respondents who were assigned to the long-term election study panel.

Figure 1: Cumulative response rates in three treatments, in percent

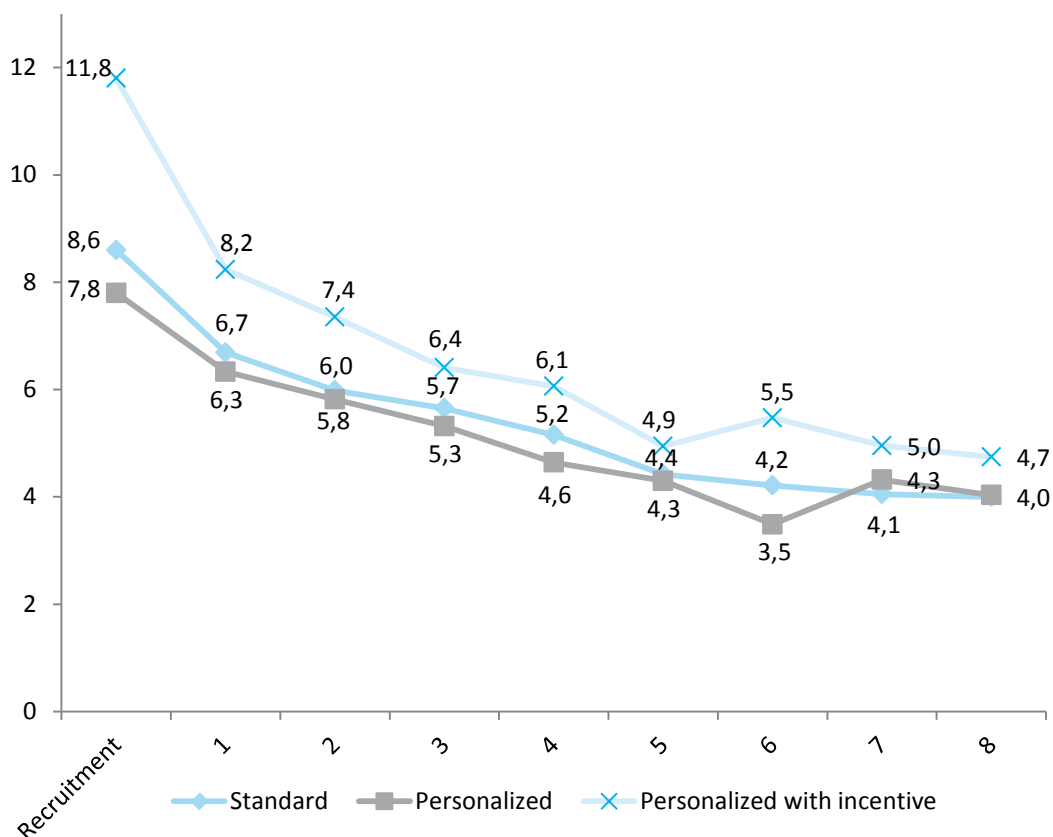


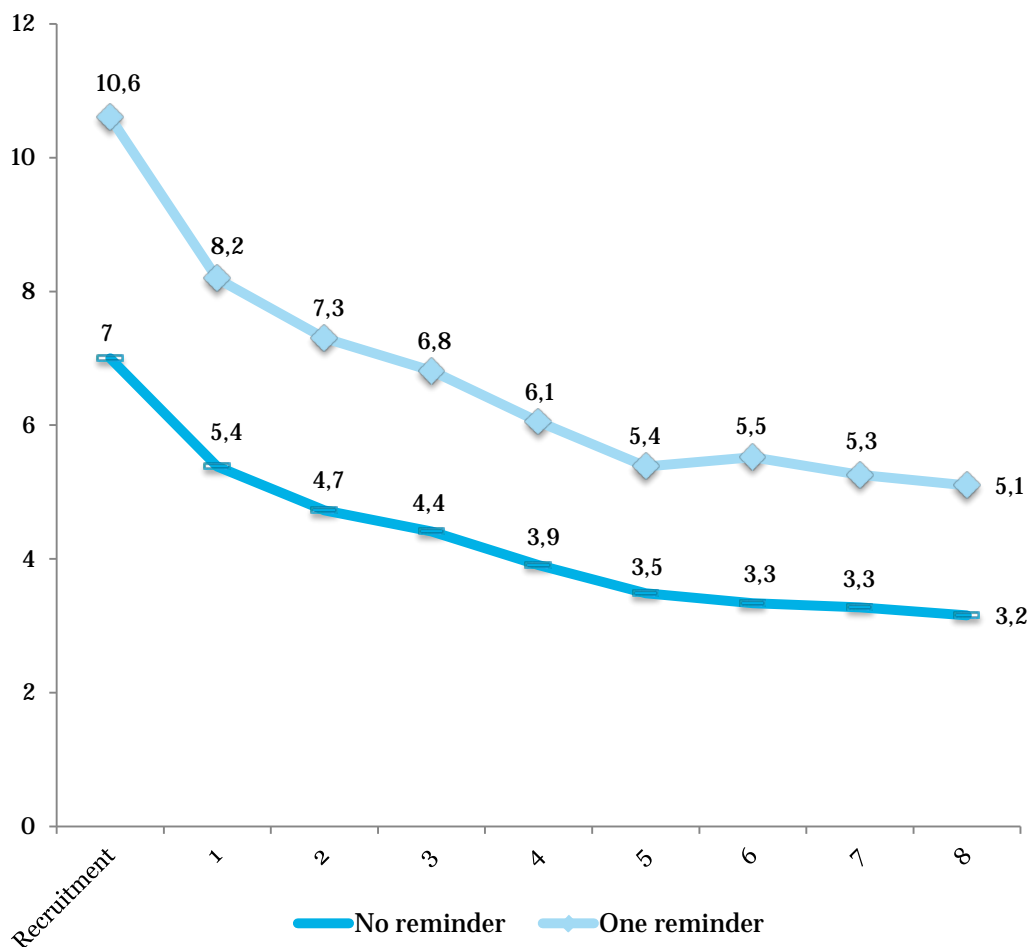
Figure 1 categorizes the treatment groups according to the general mode of the postcards, i.e. standard, personalization, and the combination of personalization and incentives. Note that the figure does not include groups 3 and 6 as they are inconsistent in their

modes between the initial and the reminder postcards. We can observe a decreasing trend in response rates in all consecutive steps of the panel with very few exceptions. The largest drop in cumulative response rates however occurs when the respondents receive the first survey after their recruitment. This should not be mistaken for a large number of recruits dropping out of the panel. It is important to understand that for the cumulative response rates to stay at the same numbers as in the initial recruitment the participation rate in the first survey wave would need to be 100 percent.

In the following surveys there is a slow and steady attrition of respondents which seems to be fairly similar in all experimental groups, and in the last survey around 50 percent of the recruited respondents remain (see appendix 3 for a complete overview of cumulative response rates in all experimental groups).

In Figure 2 the analysis is simplified by categorizing the experimental groups by the number of reminders used in the recruitment instead of by postcard type. Figure 2 displays a similar pattern as figure 1 with a decreasing response rate in all groups, and that the largest dip occurs already in the first step after the recruitment. Once again, the cumulative response rates seem to halve after five panel waves after the recruitment in both categories and then almost flattens out in the remaining steps.

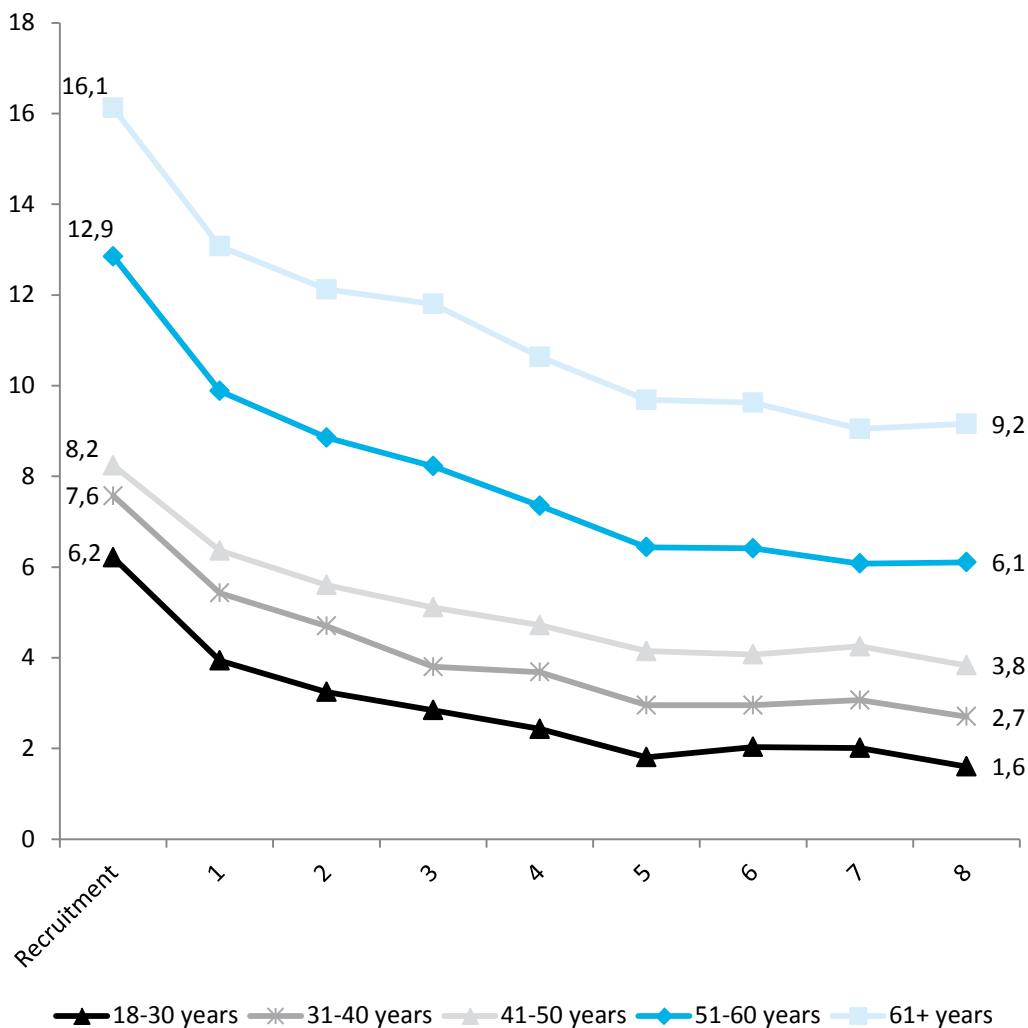
Figure 2: Cumulative response rates depending on number of reminders used in the recruitment, in percent



LORE methodological note 2014:9 demonstrated that age is a powerful predictor of the likelihood that someone that is invited actually signs up to the panel where older people are far more likely than younger people to let themselves be recruited to the web panel. Now the question is if these initially high recruitment rates among older people hold up in the long run or whether they quickly drop to the same low levels as those of the young?

Figure 3 reveals that the rule of thumb that the cumulative response rate decreases to about half its initial value after five panel waves seems to hold in most cases when pursuing the same analysis in different age groups of the panel members. The difference between age categories mainly seems to occur in the recruitment, with substantially higher recruitment rates in the older generations. Interestingly however, this response behavior to some extent seems to remain with relatively speaking lower panel attrition in the older age categories. Note that in figure 3 no consideration is taken to the amount of reminders received in the recruitment or mode of the postcard.

Figure 3: Cumulative response rates depending on age of the respondents, in percent



Concluding remarks

This methodological note concludes that the initial gain in recruitment rates when using more effort in terms of reminders, incentives and personalization seems to last over time. Those samples who start out with a higher cumulative response rate keep this advantage over time. Although the differences between groups in terms of absolute differences in percentage points of cumulative response rates do diminish over time, the relative positions between groups in terms of cumulative response rates seem to last.

In this recruitment effort the pattern of decreasing cumulative response rates is similar in all tested groups. Almost regardless of age and initial amounts of effort used in the recruitment and of initial recruitment rates, the cumulative response rate seems to reach half its initial value after six panel waves, which in this case corresponds to a bit less than two years in the panel. When summarizing all recruitment rates in appendix 3 there seems to be a diminishing decrease in response rates in the last three waves of the panel. Further analysis on the even longer term cumulative response rates would be interesting to really be able to predict when the cumulative response rates stabilize.

Appendix 1

Group nr	Invitation type	Reminder	Gross sample
1	Standard postcard	-	3,000
2	Standard postcard	Standard postcard	3,000
3	Standard postcard	Incentive	1,000
4	Personalized postcard	-	3,000
5	Personalized postcard	Personalized postcard	3,000
6	Personalized postcard	Personalized postcard with incentive	1,000
7	Postcard with incentive	-	3,000
8	Postcard with incentive	Postcard with incentive	3,000
9	Personalized postcard with incentive	-	3,000
10	Personalized postcard with incentive	Personalized postcard with incentive	3,000
11	Personalized postcard with incentive	Personalized postcard with incentive, several reminders	2,000
12	Standard postcard with shorter questionnaire	Standard postcard	500
13	Standard postcard with shorter questionnaire and no login needed)	Standard postcard	500
Total			29,000

Appendix 2

VAD TYCKER DU?



din åsikt behövs till forskning om demokrati och opinion



MOD

The Multidisciplinary Opinion
& Democracy Research Group



GÖTEBORGS UNIVERSITET

Appendix 3

Cumulative response rates in all waves and final cumulative response rate as percent of the initial

Initial postcard	Reminder postcard	Recruitment	1	2	3	4	5	6	7	8	wave 8/ recruitment
1 Standard postcard	-	6,4	5,0	4,4	4,1	3,8	3,3	3,1	3,0	3,0	46%
2 Standard postcard	Standard postcard	10,9	8,4	7,6	7,3	6,0	5,5	5,6	5,2	5,1	47%
3 Standard postcard	Incentive	14,2	10,5	8,4	8,0	8,1	6,5	6,5	6,1	5,9	41%
4 Personalized postcard	-	5,8	5,0	4,6	4,2	3,5	3,4	3,2	3,2	2,9	50%
5 Personalized postcard	Personalized postcard	9,8	7,7	7,1	6,4	5,8	5,2	5,4	5,4	5,2	53%
6 Personalized postcard	Personalized postcard w/ incentive	12,5	9,6	8,0	8,2	7,2	5,8	6,1	6,5	5,4	43%
7 Postcard with incentive	-	8,8									
8 Postcard with incentive	Postcard with incentive	14,4									
9 Personalized postcard w/ incentive	-	9,3	6,6	6,0	5,1	5,1	4,1	4,1	4,1	3,8	41%
10 Personalized postcard w/ incentive	Personalized postcard w/ incentive	14,2	9,9	8,6	7,7	7,0	5,7	5,9	5,8	5,6	40%
11 Personalized postcard w/ incentive	Personalized postcard w/ incentive & more	21,6									
Total		11,0	8,3	7,4	6,8	6,1	5,3	5,3	5,2	4,9	45%

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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