LORE methodological note 2014:18

When during the day do respondents want their e-mail survey invitation?

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ABSTRACT

This methodological note examines the times of day respondents prefer to answer online surveys. The results show that evenings seem to be the time of day most respondents prefer. Further, it is revealed that respondents also have a slight tendency to state that they prefer the time of day when they actually received their e-mail invitation, and that the short-term participation rate is higher when matching respondents' preferred response time to when they receive the survey invitation. Lastly, responses collected during weekends seem to follow respondents' preferred answer times less closely and have another logic.

Introduction

Methodological note 2014:17 demonstrated that only very small participation rate differences could be found among Citizen Panel respondents when different invitation times during the day were tried experimentally. This note examines more closely at which time during the day that respondents say they prefer to respond to surveys and how this affects responses.

Results

The data was collected between November 27 and December 5, 2014 in Citizen Panel 13. By the 13th field day, the participation rate was 57 percent (the data included in this study). Respondents were randomly assigned to one of six different dispatch times during the day and with one corresponding time period asked in the time preference question (see LORE methodological note 2014:17 for more information).

Table 1 displays how popular when it comes to responding to online surveys different periods during the day are among Citizen Panel participants. The first column shows the preferences of all respondents, including those who stated preference for all alternatives (which was only 1 percent). The next two columns exclude respondents with 3 or more

and 2 or more preferences, respectively. It is clear from table 1 that the two evening periods generally seem to be more preferable than other periods irrespective of which of the three measures we use.

Table 1. Preferred time period during the day to receive e-mail invitation by number of stated preferences (percent)

	1-7 preferences	1-2 preferences	1 preference
06-09	13	10	7
09-12	24	18	14
12-13	10	3	2
13-17	21	14	12
17-20	41	35	29
20-23	43	40	34
23-06	6	3	2
N	27,810	24,263	18,562
Percentage of all respondents	100	87	67

***Comments*: Multiple-response question. The question wording was: "What time during the day would you like to respond to surveys from the Citizen Panel?". This question was included in Citizen Panel 13.**

Table 2 displays the preferred times of respondents depending on which time of the day they actually received their e-mail survey invitation. Each number along the diagonal in table 2, bolded numbers with a light grey background, shows the time period (displayed row-wise) connected to a specific time experiment group (displayed column-wise). It was hypothesized that the assigned time during the day would affect what respondents state as their most preferred time. For example, respondents who received the e-mail at 07:00 would, according to the hypothesis, be slightly more inclined to say the period 06-09 was their preferred period. And there is indeed such an effect; all numbers with a dark grey background are shown to be significantly different from and lower than the value of the diagonal on the same row at the 95% confidence level by post-hoc tests (and lower).

But what is also apparent is that although our random assignments to different dispatch times influence respondents preferred period somewhat there is still also a generally higher preference for evening periods in this sample. Interestingly, another pattern is visible here. Each number to the left of a bolded number along the diagonal is not significantly different from the bolded number. An interpretation of this is that there is a sort of weak procrastination effect; respondents are almost as likely to state that they prefer the next period to the one they were assigned to. Since they are spending time at the moment they are answering the survey, they might reason that just a little bit later would also have been a good period.

Table 2. Preferred time period during the day to receive e-mail invitation by experiment group (percent)

	Time during the day when respondent actually received their survey invitation									
	07:00	**10:00**	**12:20**	**14:20**	**18:00**	**21:00**	**Min**	**Max**	**Coefficient of variation (cv)**	**Group preferring most**
06-09	**16**	9	9	8	10	11	8	16	27	07:00
09-12	22	**24**	17	14	14	17	14	24	24	10:00
12-13	3	4	**4**	2	2	3	2	4	24	12:20
13-17	12	15	18	**18**	10	10	10	18	26	12:20
17-20	32	33	37	41	**39**	30	30	41	11	14:20
20-23	36	36	36	37	44	**47**	36	47	13	18:00
23-06	2	4	3	4	4	4	2	4	19	21:00
Most preferred time period	20-23	20-23	17-20	17-20	20-23	20-23				

***Comments*: Significances are based on Tukey post-hoc tests. This table excludes respondents with more than 2 preferences (13 percent of the total sample), N = 24,263. Coefficient of variation=std dev/mean.**

A potential use of this data is to study strategies for optimizing the timing of e-mail invitations. Even though respondents' preferred time was unknown beforehand, a subsample was matched "unintentionally", i.e. they received the invitation during the time period they happen to prefer. This group, which amounts to 25 percent of the total sample, will be labeled as *optimized* here. Table 3 shows that this unintentionally matched group had a significantly higher participation rate after 24 hours. After 6 days however, there is no such difference. Thus, it seems that when matching respondents' preferred answering time and the time they receive an e-mail survey invitation we can get quicker responses, but not more responses.

Table 3. Net participation rate by time optimization (percent)

	Non-optimized	**Optimized**	**Difference**
Participation within 24 hours	54	57	3,7 *
Participation within 6 days	76	77	0,9
N	18,254	6,010	

***Comments*: Excludes respondents with more than 2 preferences. * = significantly different from zero at the 95 % confidence level.**

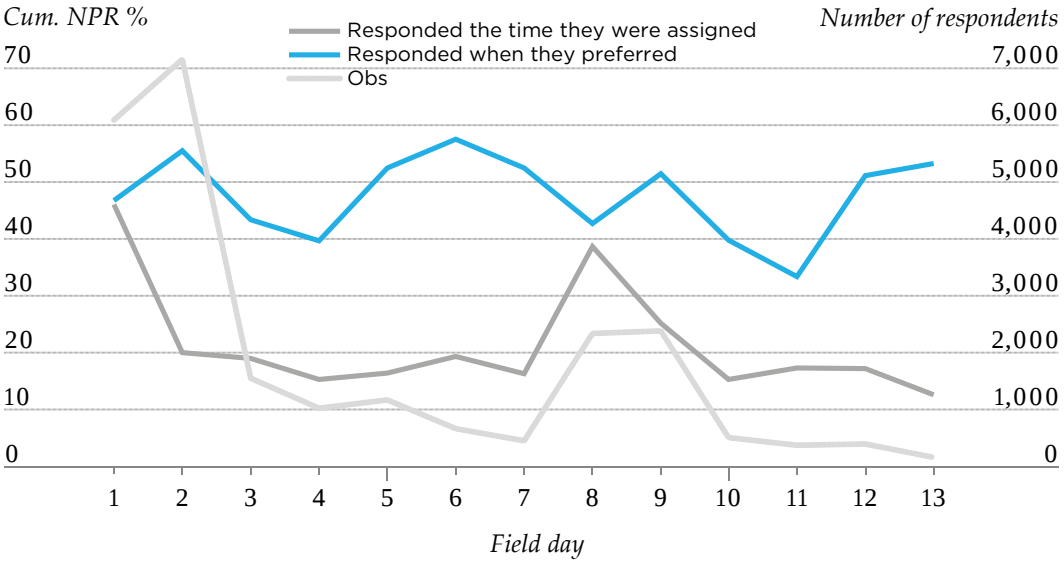
In total, approximately one out of four respondents with no more than 2 stated times they prefered (28 percent) actually started taking the survey within the time of day they were assigned to. On the other hand, almost every second respondent (49 percent) started the survey during the time period they said that they prefer.

Lastly, figure 1 below shows the ratio of respondents during each field day who started their survey in either the time period they were assigned to or in the time period they preferred (note that they can simultaneously be included in both these categories). Field

day 1 and 8 (when respondents received the invitation and the reminder) are very similar, the ratio of responses during the assigned period increases to about half of the total, a result of many responses being given in close proximity to an e-mail invitation. This ratio is naturally lower during other field days.

Responses during preferred periods do not have the same clear pattern. Instead this share oscillates between roughly 40 and 55. The pattern does not appear random however, since there seems to be a weekend effect where field days 3-4 and 10-11 have a lower share of responses during prefered times without a corresponding increase in responses during assigned times. This could be related to weekends being outside the pattern most Citizen Panel respondents usually follow since survey invitations are generally dispatched on weekdays. One possible interpretation of this weekend deviation is also that when respondents answer the question about at what times of day they prefere to answer surveys they tend to think of a typical weekday rather than a typical weekend day. One suggestion could therefore be to ask specifically for which times during weekdays and during weekends they prefer to answer online surveys.

Figure 1. Ratio of assigned and preferred time by field day



***Comments*: This figure excludes respondents with more than 2 preferences. Field day 1 represents a Thursday and reminder was sent on field day 8 (also a Thursday).**

To summarize, there is a preference for responding to online surveys during evening hours. Respondents' preferred time period is slightly affected by which time period they received their invitation. In the short term, there also seem to be a positive effect on participation rates when matching preferred time with actual time. Lastly, responses collected during weekends seem to follow respondents' preferred answer times less closely and have another logic. Improvements in future studies should include asking questions about how important they think it is to receive e-mail invitations during certain times during the day. It is doubtful whether the proxy used for importance in this study, the number of preferred periods, is a sufficient measure.

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