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Afternoon and morning dispatch effects on participation rates

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ABSTRACT

This methodological note examines whether sending out e-mail invites to participate in a survey is affected by at what time during the day the dispatch is made. Irrespective of how the participation rate is measured, the difference is below 0.5 percent, a non-significant difference.
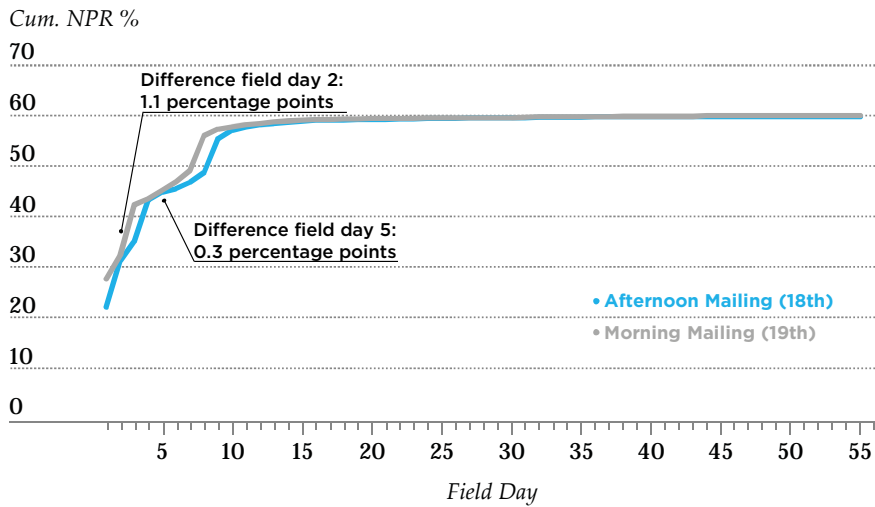
Hypothesis and data

It has been assumed that sending out web questionnaires at different times during the day may affect the overall participation rate. The hypothesis is that dispatching survey links in the afternoon would produce a lower final participation rate than sending them out in the morning.

A questionnaire was mailed out 2.13 p.m. June 18, 2012 to half of the sample, 1,700 participants. Another 1,700 received the survey 16 hours later (6.10 a.m. June 19). The first reminder was sent out June 21, 3 or 4 days after the initial survey, depending on which day respondents got the initial mail. The second reminder was sent the 26th (field day 8 or 9).

Results

As seen in figure 1 below, the morning dispatch group had an initial lead, but this is due to the fact that they received the reminders earlier relative to when they received the mailed invitation to the survey (field day one for the morning group was on the 19th and for the afternoon it was the 18th). After the ninth field day, right around the second reminder, the difference never went past one percent.

Figure 1: Net participation rates by dispatch time

Cum. NPR %

Difference field day 2:
1.1 percentage points

Difference field day 5:
0.3 percentage points

• **Afternoon Mailing (18th)**
• **Morning Mailing (19th)**

Field Day

There are various measures of participation rates, but one emerging standard, as defined by AAPOR's standard guidelines, is the *completion rate* or COMR (based on RR5),

$$COMR = \frac{I + P}{(I + P) + (R + NC)}$$

Where I=completed survey, P=partial survey, R=refusals (or breakoffs, when respondents start a survey but does not finish it) and NC=non-contact. This measure includes e-mail bounces in the base of the calculation (in NC). Since the aim here is to measure the impact of dispatch timing, there is a need to differentiate potential respondents who responded to or saw the e-mail (I's, P's and R's) from those who most likely did not receive an e-mail at all, i.e. definitely confirmed NC's (e-mail bounces). However, the distinction between R and NC is not clear cut since it is sometimes technically impossible to discern which of the non-respondents are R's and which are NC's. It is possible that quite a few of the R's are in fact NC's. For example, consider the situation where potential respondents receive the e-mail but do not notice it, although this miscategorization is likely to decrease with each new reminder. To make sure that different amounts of bounces in the experiment groups do not affect the result, another measure is also used where the bounces are removed from the base. This other measure will be called *net participation rate* or NPR:

$$NPR = \frac{I + P}{(I + P) + (R + (NC - Bounces))}$$

Participation rates are reported in table 1 below. The difference between the two measures is rather small, only about two percent. The final difference is negligible at a 0.4 percent higher participation rate in the morning group using the COMR and close to zero using the NPR.

Table 1: Participation rates

	COMR	NPR	N_{COMR}	N_{NSS}
Afternoon	57.6	59.9	1,700	1,637
Morning	58.0	60.0	1,700	1,643
Total	57.8	59.9	3,400	3,280
Diff. (morn.-a'noon)	0.4	0.1		

Participation rates (NPR) relative to when respondents received the invitation e-mail differ only 0.6 percent 24 hours after initial dispatch and is down to around zero after 48 hours. Using two-sample tests of proportions shows that the differences are not significant (COMR: p=0.42; NSS: p=0.47). The result still holds for different subgroups (see table 2).

	NPR-A'noon	NPR-Morning	$N_{A'noon}$	$N_{Morning}$	Diff (morn-a'noon)	p
Sex						
Man	64	64	960	1002	0,0	0.50
Woman	55	54	664	632	0,5	0.58
Total	60	60	1624	1634		
Age						
-24	37	41	156	148	4,7	0.20
25-34	51	49	434	450	-2,0	0.72
35-44	61	60	368	399	-0,2	0.52
45-54	62	64	298	309	1,7	0.33
55-64	76	77	213	199	1,3	0.37
65-	86	86	152	130	0,7	0.44
Total	60	60	1621	1635		
Education						
Low/middle edu	54	55	766	775	0,8	0.38
High edu	65	65	864	859	-0,3	0.56
Total	60	60	1630	1634		

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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