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THE IMPACT OF DAY OF MAILING ON WEB SURVEY RESPONSE RATE AND RESPONSE SPEED

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Outline

- Background
- Understanding Society Innovation Panel (IP)
- First experiment
- Second experiment
- Preliminary results

BACKGROUND

- Most of the research on optimal contact has been carried out for telephone and F2F surveys (Durrant et al., 2011; Wagner, 2013) → importance of the timing of calls
- We argue that the timing an e-mail invitation is sent could be even more important in case of web responses

BACKGROUND

- Targeted design practice is particularly suitable for longitudinal surveys: once wave 1 has been completed, a wealth of information is available that can be used for targeting, including survey data and paradata from all previous waves
- Two experiments: the first to study changes in the propensities to respond by web when invitation sent on different days; the second to study the effect of targeted timing invitation (based on previous response behaviour) on web responses

UNDERSTANDING SOCIETY INNOVATION PANEL

- Probability-based longitudinal panel
- Started in 2008
- Purpose: to enable methodological development and testing
- Target population: population aged 16 or over resident in England, Scotland, or Wales
- Initial sample of approximately 1500 households
- Waves 4 and 7: refreshment samples
- Topics: housing, economic activity, health, income, political attitudes, and several other topics
- Instruments: HH grid, HH questionnaire, individual questionnaires

UNDERSTANDING SOCIETY INNOVATION PANEL

- Mode: F2F and mixed-mode
- Mixed-mode group:
 - letter + email invitation to take part by web
 - two email reminders
 - remainder by post
 - F2F interviews
 - CATI mop-up stage
- Devices: IP5 not suitable for completion using a small mobile device, IP9 possible
- Cooperative (previous wave respondents) and non-cooperative (previous-wave non-respondents) sample members: previous wave non-respondents are known to have lower response propensities in subsequent waves

UNDERSTANDING SOCIETY INNOVATION PANEL

Individual Response outcome	Wave 5		Wave 9	
	N.	%	N.	%
Full interview	1995	65.6	2174	79.9
Proxy interview	147	4.8	63	2.3
Non-contact	210	6.9	114	4.2
Refusal	499	16.4	151	5.6
Other	189	6.2	219	8.0
Total	3040	100	2721	100.0

Issued sample to the field
and Individual response rates
at Waves 5 and 9

HH Response outcome	Wave 5		Wave 9	
	N.	%	N.	%
Complete HH	893	56.8	982	65.1
Partial HH	331	21.0	295	19.6
Non-contact	125	7.9	135	8.9
Refusal	194	12.3	77	5.1
Other	30	1.9	20	1.3
Total	1573	100.0	1509	100.0

Issued HH sample and HH
response rates at Waves 5
and 9

FIRST EXPERIMENT

- Randomized experiment carried out on IP5 (2012)
- HHs randomly allocated to two groups: one was sent the advance mailings (by post, and email where possible) timed to arrive on a Monday, the other on a Friday
- Data for the analysis: 1037 HHs and 1995 sample persons aged 16 or over issued to the field at wave 5

Previous wave outcome	Monday	Friday
Responded	461	468
Did not respond	56	52
Total	517	520

HHs allocation to experimental groups

FIRST EXPERIMENT - RQs

- 1) Is the propensity to participate by web different if invited on a Monday than on a Friday? Is there any difference for cooperative or non-cooperative sample members?
- 2) Is the propensity to participate promptly (within three days from invitation) by web different if invited on a Monday than on a Friday? Any difference between cooperative and non-cooperative sample members?
- 3) Are web responses different for individuals with different organization of time if invited on a Monday as opposed to a Friday?

FIRST EXPERIMENT - RQ1

	Monday	Friday	P-value	Obs
Entire sample	32.4	32.1	0.90	1995
IP4 respondents	39.9	38.7	0.73	1394
IP4 non-respondents	16.3	13.7	0.41	491

Individual response rates by web, by sample origin and day of invitation

- No significant effect
- Slightly higher response rates for invitations sent on Monday

FIRST EXPERIMENT - RQ2

	Monday	Friday	P-value	Obs
Entire sample	11.2	9.1	0.13	1995
IP4 respondents	14.5	11.6	0.22	1394
IP4 non-respondents	3.5	2.6	0.49	491

Individual prompt response rates by web, by sample origin and day of invitation

- No significant effect
- Slightly higher response rates for invitations sent on Monday

FIRST EXPERIMENT - RQ3

Three groups of people:

- a) People having a job
- b) Employment-busy people (employed for at least 39 hours per week, or employed for 30 to 38 hours with a commute of at least 60 min)
- c) Retired people

FIRST EXPERIMENT - RQ3

	Monday	Friday	P-value	Obs
Has a job	39.1	42.1	0.50	1000
Employment-busy	36.8	34.0	0.60	341
Retired	30.7	22.4	0.09	452

Individual response rates by web, by day of invitation and group

- Retired group shows higher response rate by web (P=0.09) when invited on a Monday

FIRST EXPERIMENT - RQ3

	Monday	Friday	P-value	Obs
Has a job	13,6	12,8	0,80	1000
Employment-busy	14,8	7,5	0,04	341
Retired	12,6	5,5	0,03	452

Prompt individual response rates by web, by day of invitation and group

- Employment-busy and retired show higher prompt responses by web when receiving the email invitation on a Monday than on a Friday
- No significant difference for those having a job

SECOND EXPERIMENT

- Randomized experiment carried out on IP9 (2016)
- HHs randomly allocated to two groups: one received the invitation (email and post) based on standard procedure, the other group received a targeted timing invitation

Previous wave outcome	Standard timing	Targeted timing
Responded	257	307
Did not respond	13	21
Total	270	328

HHs allocation to experimental groups

Data for the analysis: 598 HHs and 877 sample persons aged 16 or over issued to the field at wave 9

SECOND EXPERIMENT

- Targeted group: received invitation depending on which day they preferably responded to the questionnaire in previous waves
- Initial invitation sent on the same day to all HH members, identifying a preferred day for the HH based on the day the HH questionnaire was completed in previous waves.
- Subsequent personal reminders sent according to past responding days of each individual.
- Identification of preferred day: corresponds to response day at IP8 if available; otherwise to IP7 response day; otherwise to the mode over response days at IP6 and IP5; otherwise generated randomly.

SECOND EXPERIMENT - RQs

- 1) Is the propensity that the HHs fully participate by web different if receiving the invitation on a targeted timing basis compared to a standard one? Is there any difference between cooperative and non-cooperative HHs?
- 2) Is there any difference in terms of responses by small mobile devices between the two groups?

SECOND EXPERIMENT - RQ1

	Targeted timing	Standard timing	P-value	Obs
Entire sample	57.0	51.1	0.15	598
IP8 productive HH	59.6	53.7	0.19	564
IP8 unproductive HH	19.0	0	0.03	34

Full HH response by web (hhgrid, hh and ind. questionnaires), by sample origin and timing

- Tendency of higher response rates for the targeted timing group. Difference reaches statistical significance only for the non-cooperative HH group
- Differences observed let us hope for possible cost reductions in the data collection

SECOND EXPERIMENT - RQ2

	Targeted timing	Standard timing	P-value	Obs
Entire sample	37.5	28.4	0.03	652
IP8 respondents	37.2	29.3	0.08	621
IP8 non-respondents	44.4	7.7	0.03	31

Percentage of individual responses using small mobile devices, by sample origin and timing

- Among total web individual responses, the proportion of responses by small mobile device is significantly higher in the targeted group than the standard timing group
- Possible implications on data quality

SUMMING UP

- We looked at effects on web RRs manipulating the day of mailing
- Cost-free design feature
- First experiment: Higher response speed for some categories of individuals when invited on a Monday rather than on a Friday
- Second experiment: Higher full HH response rates by web under a targeted timing invitation scheme
- Still many aspects to be investigated

Thank you for your attention!

Comments invited: annamaria.bianchi@unibg.it

