6th Conference of the
European Survey Research Association
Reykjavik, Iceland, July 13-17, 2015

WE ♥ SURVEY METHODOLOGY

The use of text messages in a web-survey. The case of a survey of Italian graduates

Emanuela Sala, Chiara Respi and Alessandra Decataldo

Department of Sociology and Social Research
University of Milano-Bicocca
Italy

Non response in surveys

- Survey costs are high, web surveys as possible way to reduce the costs

- With web surveys, issues concerning survey participation: incentives and reminders may improve response

- We explore the impact of different types of reminders on response and data quality

Previous research

- A number of studies tackled issues regarding the role of reminders in web surveys (e. g., Keusch 2014)
- These studies aimed at evaluating the impact of e-mails and SMS on different survey outcomes (i. e., response and data quality) (e. g., Steeh, Buskirk and Callegaro 2007; Bosnjak et al. 2008; Bandilla et al. 2012; Mavletova and Couper 2014; Tolonen et al. 2014).
- Two key findings:

  -positive impact on data quality and survey participation;
  -the most effective combination: SMS as prenotification or reminder and e-mails as invitation (Bosnjak et al. 2008; Mavletova and Couper 2014).

Aims and research questions

Investigate the impact of different types of reminders on response in web surveys

RQ1: What is the impact on response rates?

RQ2: What is the effect on response speed?

RQ3: What is the impact on data quality (item non response and misreporting)?

Data

Experimental data from a **national study** on labour market outcomes of graduates in Social Work

- 21 of the 43 university courses in Social Work in Italy
- AAPOR RR2: 36.3%
- CAWI
- Administrative data are available

Experiment

- 6294 graduates
- 3 experimental groups
  - T1: e-mail only
  - T2: e-mail + SMS
  - C: no reminder
- Random allocation
- First reminder

Experiment design

Experimental group	Contacts	
	1st reminder: 10/12/2013	2nd reminder: 12/12/2013
T1. E-mail only	9.30 a.m.	e-mail, 2.15 p.m.
T2. E-mail and SMS	3.00 p.m.	e-mail, 2.15 p.m.
C. No reminder	n/a	e-mail, 2.15 p.m.

Methods

RQ1: comparison of response rates, bivariate analysis

RQ2: comparison of response speed, survival analysis

RQ3: comparison of

(i) item non response for questions asked to all respondents (29 variables)

(ii) misreporting «rate» (3 variables)

Methods

Analysis carried out on:

- respondents who completed the questionnaire within 47 hrs from 1st reminder
- all respondents

Methods

Why 47 hours? As reminders were sent at different times of the day. Recall….

Experimental group	Contacts	
	1st reminder: 10/12/2013	2nd reminder: 12/12/2013
T1. E-mail only	9.30 a.m.	2.15 p.m
T2. E-mail and SMS	3.00 p.m.	
C. No reminder	n/a	

Methods

Analysis carried out on:

- respondents who completed the questionnaire within 47 hrs from 1st reminder
- all respondents

Results – RQ1 (response rate)

Experimental group***	Response rate	
	After 47 hrs***	Final
T1. E-mail only	8.2 (818)	33.8 (2118)
T2. E-mail and SMS	11.0 (575)	35.5 (2079)
C. No reminder	0.5 (829)	34.2 (2097)
Total	6.1 (2222)	34.5 (6294)

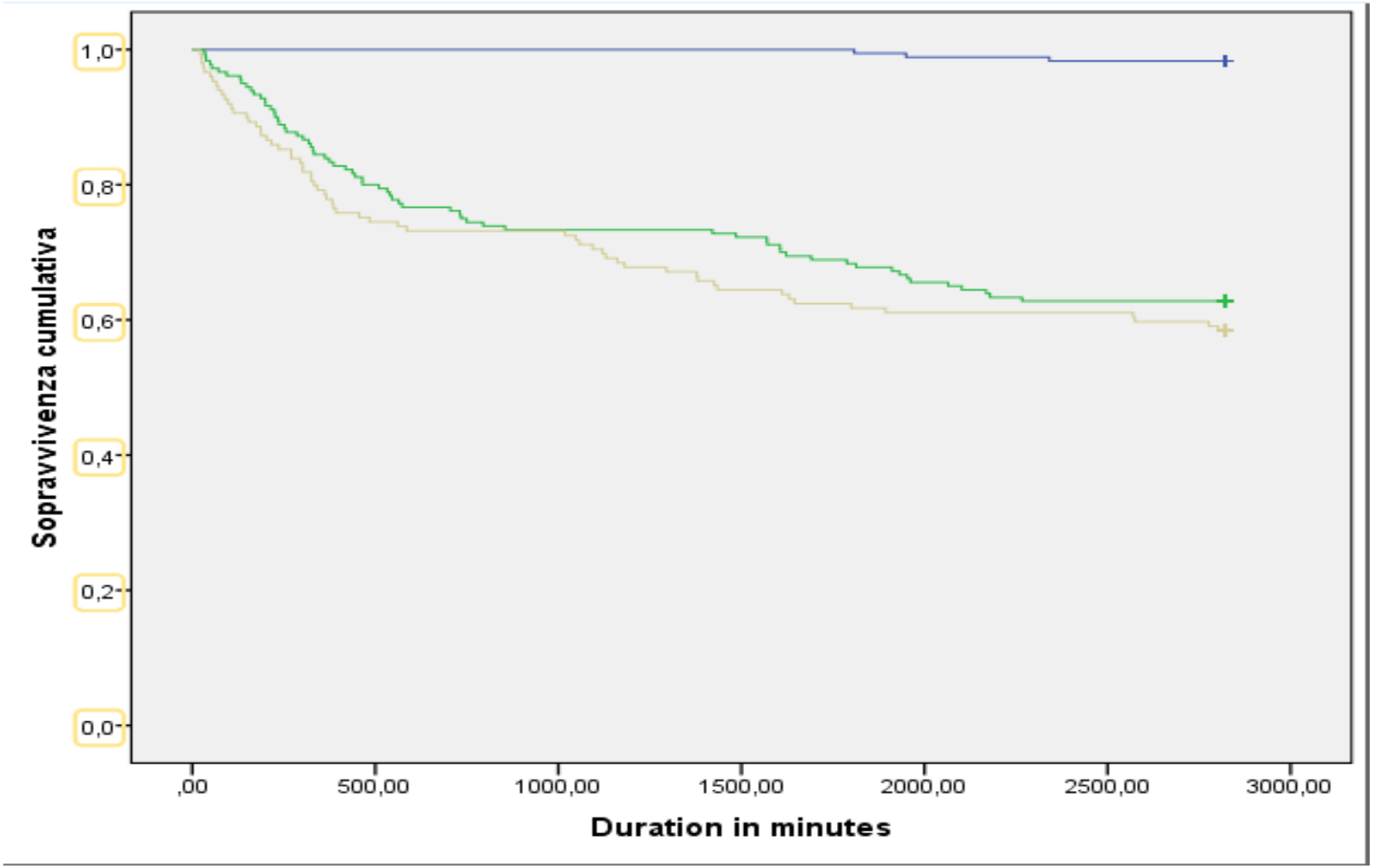
Note: ***Significant at the .01 level
Number in brackets: total N

Results – RQ1 (response rate)

Experimental group***	Response rate	
	After 47 hrs***	Final
T1. E-mail only	8.2 (818)	33.8 (2118)
T2. E-mail and SMS	11.0 (575)	35.5 (2079)
C. No reminder	0.5 (829)	34.2 (2097)
Total	6.1 (2222)	34.5 (6294)

Number in brackets: total N

Results – RQ2 (response speed)



Log Rank (Mantel-Cox): Chi Square: value 82.125, df 2, p. 0.000

Results – RQ3 (data quality)

Data quality	47 hrs respondents	All respondents
Item non response on 29 survey variables		
At least one missing data	0.8%	1.6%
Misreporting on 3 variables		
At least one inconsistent answer:		
- Year of birth	0.8%	no misreport
- Type of high school	24.0%	26.2%
- Score obtained at the final high school examination	10.1%	14.4%

Results – RQ3 (item non response)

Item non response
(respondents within 47 hrs from 1st reminder)

Experimental group	No missing data		At least one missing data		N
	V.A.	%	V.A.	%	
T1. E-mail only	67	100.0	0	0.0	67
T2. E-mail and SMS	62	98.4	1	1.6	63
C. No reminder	3	100.0	0	0.0	3
Total	132	99.2	1	0.8	133

Note: Chi-square not significant (value 1.120, df 2, p. 0.571).

Results – RQ3 (item non response)

Item non response
(all respondents)

Experimental group	No missing data	At least one missing data	N
	%	%	
T1. E-mail only	98.3	1.7	180
T2. E-mail and SMS	99.3	0.7	150
C. No reminder	97.8	2.2	178
Total	98.4	1.6	508

Note: Chi-square not significant (value 1.327, df 2, p. 0.515).

Results – RQ3 (misreporting)

Year of birth
(respondents within 47 hrs from 1st reminder)

Experimental group	Yes		No		N
	V.A.	%	V.A.	%	
T1. E-mail only	0	0.0	66	100.0	66
T2. E-mail and SMS	1	1.8	55	98.2	56
C. No reminder	0	0.0	3	100.0	3
Total	1	0.8	124	99.2	125

Note: Chi-square not significant (value 1.242, df 2, p. 0.537).

Results – RQ3 (misreporting)

Type of high school
(respondents within 47 hrs from 1st reminder)

Experimental group	Yes		No		N
	V.A.	%	V.A.	%	
T1. E-mail only	10	21.3	37	78.7	47
T2. E-mail and SMS	12	25.5	35	74.5	47
C. No reminder	1	50.0	1	50.0	2
Total	23	24.0	73	76.0	96

Note: Chi-square not significant (value 0.994, df 2, p. 0.608).

Results – RQ3 (misreporting)

Type of high school
(all respondents)

Experimental group	Yes	No	N
	%	%	
T1. E-mail only	25.2	74.8	147
T2. E-mail and SMS	25.2	74.8	123
C. No reminder	28.2	71.8	142
Total	26.2	73.8	412

Note: Chi-square not significant (value 0.428, df 2, p. 0.807).

Results – RQ3 (misreporting)

Score obtained at the final high school examination (respondents within 47 hrs from 1st reminder)

Experimental group	Yes		No		N
	V.A.	%	V.A.	%	
T1. E-mail only	4	8.5	43	91.5	47
T2. E-mail and SMS	6	12.0	44	88.0	50
C. No reminder	0	0.0	2	100.0	2
Total	10	10.1	89	89.9	99

Note: Chi-square not significant (value 0.554, df 2, p. 0.758).

Results – RQ3 (misreporting)

Score obtained at the final high school examination (all respondents)

Experimental group	Yes	No	N
	%	%	
T1. E-mail only	13.4	86.6	149
T2. E-mail and SMS	12.5	87.5	128
C. No reminder	17.1	82.9	140
Total	14.4	85.6	417

Note: Chi-square not significant (value 1.346, df 2, p. 0.510).

Conclusions

RQ1 - Differences in response rates:

- differences between control group and treatment groups
- no apparent differences within treatment groups

RQ2 - Response speed:

- evidence for differences between the treatment groups

RQ3 - Data quality:

…tricky, because not enough variability

Suggestions are welcome!

Lessons learnt

- “Piggy-backing” on a major survey, the design and the implementation of the experiment may be dependent on the timing and design of the former

- This may not be ideal for carrying out experiments (different and sometimes conflicting priorities)

Thanks for your attention!

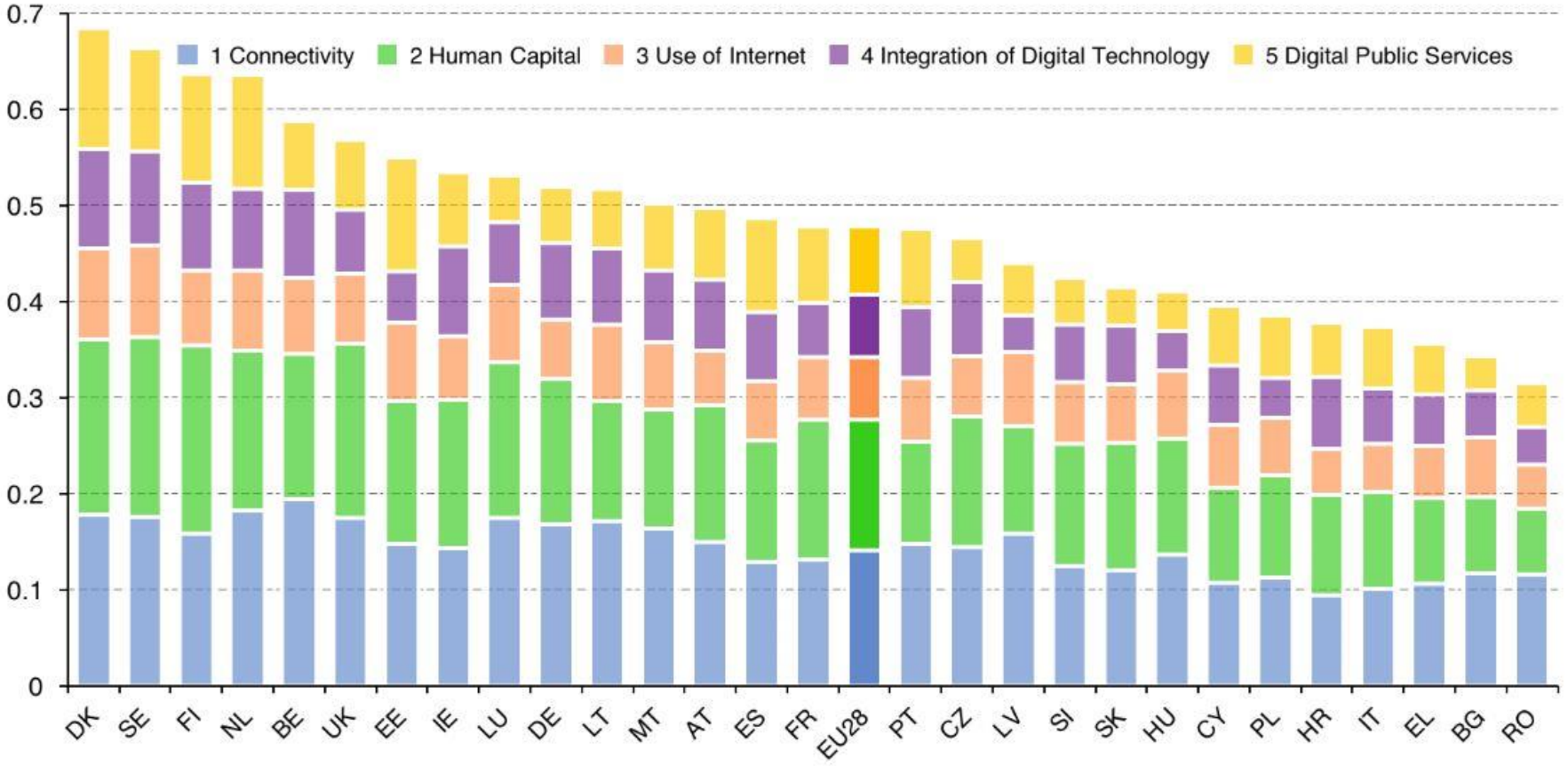
For further information, please contact:

chiara.respi@unimib.it

emanuela.sala@unimib.it

alessandra.decataldo@unimib.it

Digital Agenda Scoreboard (Europe)



European Commission, 2015

Appendix 1 – Content of the e-mail

- Mention of the invitation e-mail
- Presentation of incentives (free partecipation to a summer school)
- Request to partecipate in the survey
- URL
- E-mail address for info
- Thanks and greetings
- Info about privacy

Appendix 2 – Text of the SMS

The university of Milano-Bicocca is carrying out a study on labour market outcomes of graduates in Social Work. Check out your inbox university or private e-mail address. Info at asricerca@unimib.it

Italian text: L'università Bicocca sta facendo una ricerca sui laureati in servizio sociale.Controlla la tua mail universitaria o quella privata.Per info asricerca@unimib.it

Appendix 3 – Contact process

Experimental group	Contacts			
	Invitation: 2/12/2013	1st reminder: 10/12/2013	2nd reminder: 12/12/2013	3rd reminder: 16/12/2013
T1. E-mail only	e-mail	9.30 a.m.	e-mail, 2.15 p.m.	e-mail
T2. E-mail and SMS	e-mail	3.00 p.m.	e-mail, 2.15 p.m.	e-mail
C. No reminder	e-mail	n/a	e-mail, 2.15 p.m.	e-mail