LORE methodological note 2014:14

Personalization and incentives. Who can be convinced to join a web panel?

Johan Martinsson
Karolina Riedel

ABSTRACT

This methodological note analyzes the recruitment rate, and the probability of different demographic groups to join the Citizen Panel, based on whether the respondent received a standard postcard, a personalized postcard, an incentive postcard or a postcard combining personalization and an incentive. The main conclusion from this analysis is that increased field work efforts results in a more even and thus more representative age distribution among the recruited respondents.

Background and data

Understanding the mechanisms behind who is recruited into a probability based web panel is important in order to improve panel quality and tailor efforts to maximize recruitment rates and representativeness. To understand these mechanisms LORE launched a probability based recruitment effort in November 2012 to 29,000 randomly selected Swedish inhabitants. The recruitment used an experimental approach with a standard invitation 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."), a postcard containing a small lottery incentive (worth 0.3 euros) and a combined postcard using both personalization and the lottery incentive. See appendix 1 for the complete experimental set-up; note however that groups 3, 6 and 11-13 are excluded from the analyses in this methodological note. The respondents in each of the eight treatment groups included in these analyses received either no or one reminder postcard. LORE methodological note 2014:8 examined the different recruitment rates in this recruitment effort, and LORE methodological note 2014:10 analyzed the long term response pattern for the different experimental groups. This note complements these analyses by breaking down the recruitment rates according to demographic factors retrieved from the Swedish national population register. A similar analysis has also been carried out in LORE methodological note 2014:9 where demographic factors for an entire recruitment effort carried out in 2013 were examined. This note examines the role of demographic factors in relation to type of postcard invitation. The aim is thus to enhance the understanding of the efficiency of the different recruitment strategies in different population segments. The main hypothesis is that personalization and incentives will reduce the demographic response bias found in regular postcard recruitments.

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Results

Table 1 performs binomial logistic regressions for each of the four different postcard types; standard, personalization, incentive, and the combination of personalization and incentives.

Table 1: The effect of demographic factors on the likelihood of panel registration (logistic regression, odds ratios)

Explanatory factors	Model 1 Standard		Model 2 Personalization		Model 3 Incentives		Model 4 Personalization & incentives	
		p-value		p-value		p-value		p-value
18-30 years	-		-		-		-	
31-40 years	1.80***	(0.00)	1.47*	(0.06)	1.70***	(0.00)	1.07	(0.65)
41-50 years	1.58**	(0.02)	1.80***	(0.00)	1.55**	(0.01)	1.32*	(0.07)
51-60 years	2.25***	(0.00)	2.61***	(0.00)	1.78***	(0.00)	1.72***	(0.00)
61+ years	3.03***	(0.00)	2.97***	(0.00)	2.11***	(0.00)	1.58***	(0.00)
Female	-		-		-		-	
Male	0.93	(0.43)	0.93	(0.49)	0.91	(0.24)	0.82**	(0.01)
Married	-		-		-		-	
Not married	0.90	(0.40)	0.72**	(0.01)	0.59***	(0.00)	0.74**	(0.01)
Divorced	0.76*	(0.08)	1.07	(0.62)	0.66**	(0.00)	0.84	(0.18)
Widowed	0.82	(0.5)	0.55	(0.14)	0.68	(0.22)	1.03	(0.92)
Born in Sweden	-		-		-		-	
Born in Europe	0.67**	(0.01)	0.56***	(0.00)	0.50***	(0.00)	0.62***	(0.00)
Born outside Europe	0.29***	(0.00)	0.33***	(0.00)	0.37***	(0.00)	0.30***	(0.00)
0 children < 20 yrs	-		-		-		-	
1 child < 20 yrs	0.63**	(0.01)	1.03	(0.70)	0.70**	(0.01)	0.86	(0.27)
2 children < 20 yrs	0.63**	(0.05)	0.76	(0.13)	0.83	(0.18)	0.70**	(0.02)
3 children < 20 yrs	0.91	(0.71)	0.43**	(0.02)	0.57*	(0.02)	0.49***	(0.01)
4+ children < 20 yrs	1.21	(0.63)	0.40	(0.21)	0.71	(0.41)	0.84	(0.65)
0-200 km from Gothenburg	-		-		-		-	
201-400 km from Gothenburg	0.94	(0.62)	0.71**	(0.01)	0.97	(0.81)	0.70***	(0.00)
401-600 km from Gothenburg	0.83	(0.16)	0.70**	(0.01)	0.89	(0.30)	0.89	(0.27)
601+ km from Gothenburg	0.99	(0.94)	0.94	(0.75)	0.83	(0.32)	0.87	(0.38)
Large city	-		-		-		-	
City	0.89	(0.37)	0.83	(0.16)	0.90	(0.36)	1.01	(0.92)
Countryside	0.60***	(0.00)	0.61***	(0.00)	0.67***	(0.00)	0.96	(0.73)
Rural countryside	0.57	(0.12)	0.50*	(0.05)	0.85	(0.57)	0.89	(0.69)
N		5,962		5,954		5,950		5,974
Pseudo R2		0,0445		0,0545		0,0396		0,0349
Recruitment rate		8.64		7.81		11.56		11.78

Comment: ***, **, * Variable significant at 99%, 95% and 90% respectively. The first category of each factor serves as reference category. The models are estimated based on the net sample, i.e. the original sample minus returned postcards and dropped invalid addresses. Large cities are defined as highly urbanized municipalities which are located in the Stockholm, Gothenburg, and Malmö regions. City municipalities with at least 30,000 inhabitants and/or where the main town has at least 25,000 inhabitants. Countryside municipalities have at least 5 inhabitants per km2 and are smaller than city municipalities. Rural countryside has less than 5 inhabitants per km2 (Swedish Board of Agriculture, 2013).

The postcards that use either incentives or a combination of both incentives and personalization reach higher recruitment rates than the other groups, an average of almost 12 percent compared to the others' around 8 percent. LORE has repeatedly found that older people are much more prone to sign up to the panel, which is especially visible in models 1 and 2 where people over 61 have three times higher odds of signing up to the panel. In model 4 this odds ratio on the other hand is 1.6, indicating a more even recruitment in different age categories. The higher recruitment rate attained by the mixed postcard thus seems to slightly even out the age bias. Similarly does an incentive in itself reach a somewhat similar result with a more even age distribution. The combined postcard is, on the other hand, the only postcard resulting in a significant gender difference, where females are more probable to join the panel when receiving both an incentive and a personalized postcard.

The other results in the regression are more difficult to explain and generalize. The recruitment seems to work better among married people than among divorced in most cases. People born outside Sweden, but within the EU reach a lower recruitment rate than those born in Sweden, and those born outside the EU reach an even lower recruitment rate. This pattern is similar in all treatment groups. Having children under the age of twenty does diminish the likelihood of signing up in all treatment groups, but the effect is irregular across the treatment groups and appears at different number of children. It is thus difficult to draw any conclusions more than that having children in some way affects the recruitment rate negatively. The same is true when it comes to the distance from the respondents' home to Gothenburg where a longer distance has a significant negative impact on recruitment rate in all treatments but the standard postcard. Living on the countryside has a negative impact in all treatments but the mixed.

To further understand the age and gender effects of using a personalized postcard versus a standard postcard table 2 extends the analysis by including interaction terms between the personalized postcard versions and age and gender. The only significant interaction effect is the combination of the personalized postcard and people aged 31-40 years, where the personalized postcard yields a significantly lower odds ratio than the standard postcard. That no other interactions are significant indicates that no particular demographic groups reacted more positively to this kind of weak personalization.

Table 2: The effect of age and sex on the likelihood of panel registration, with interactions (logistic regression, odds ratios)

Demographic factors	Model 5	
		p-value
Personalization	0.87	(0.31)
18-30 years	-	-
31-40 years	1.37*	(0.07)
41-50 years	1.11	(0.61)
51-60 years	1.76**	(0.02)
61+ years	2.53***	(0.00)
Female	-	-
Male	0.76	(0.18)
Male*age	1.00	(0.27)
Personalization*18-30 years	0.75	(0.12)
Personalization*31-40 years	0.83*	(0.05)
Personalization*41-50 years	1.02	(0.80)
Personalization*51-60 years	1.02	(0.58)
Personalization*61+ years	0.97	(0.31)
Personalization*Male	1.01	(0.94)
N		11,916
Pseudo R2		0,0301

Comment: *****, **, * Variable significant at 99%, 95% and 90% respectively. The first category of each factor serves as reference category. The models are estimated based on the net sample, i.e. the original sample minus returned postcards and dropped invalid addresses.**

Concluding remarks

This note finds that personalization in itself seems to have a negligible impact on the demographic composition of the recruited respondents to a probability based web panel. The strongest result found in this note is that using incentives in itself to some extent, and the combination of personalization and incentives to a greater extent, decreases the age bias of the recruited respondents. Further, when scrutinizing the demographic differences between a standard and a personalized recruitment the only significant effect is concerning respondents aged 31-40 years where personalization results in a lower probability to be recruited. The hypothesis is thus true for the respondents receiving incentives or a combination of personalization and incentives, but no clear effects of personalization alone on demographic composition are found in this study. The overall demographic pattern is very similar to that reported in methodological note 2014:9.

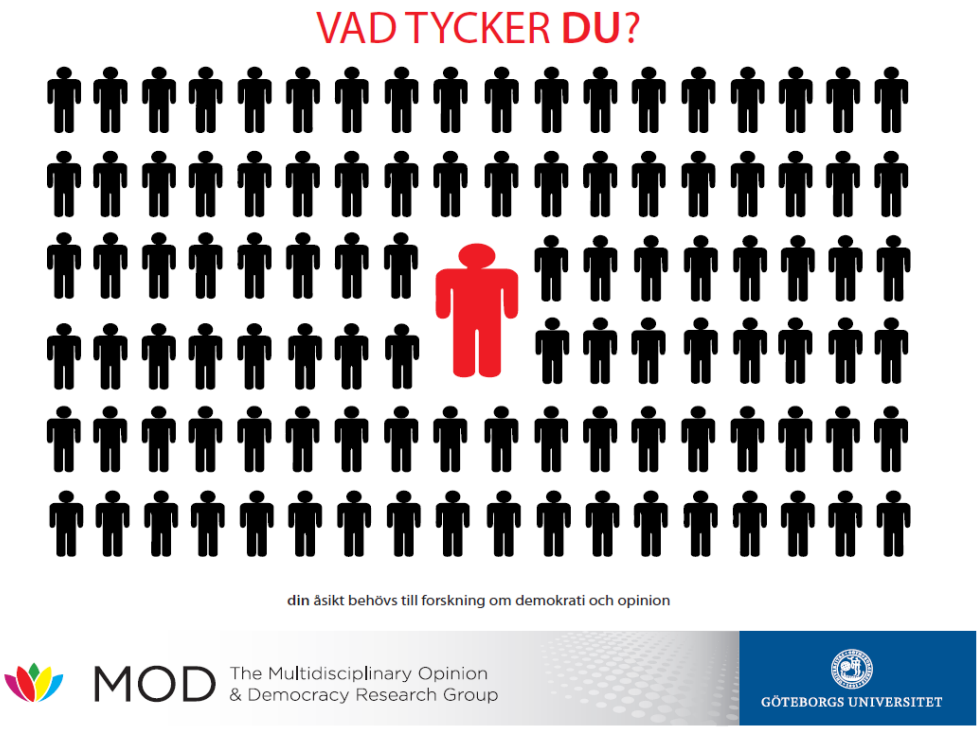
Appendix 1: Experimental set-up

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: Recruitment rates in different demographic groups

Demographic factors	Model 1 Standard		Model 2 Personalization		Model 3 Incentives		Model 4 Personalization & incentives	
		N		N		N		N
18-30 years	5.2	1,548	3.9	1,519	6.8	1,504	8.8	1,497
31-40 years	7.5	1,126	5.3	1,123	10.9	1,060	8.3	1,142
41-50 years	6.5	1,166	6.8	1,23	10.4	1,215	10.6	1,212
51-60 years	10.6	1,041	11.5	1,020	13.7	1,102	15.9	1,071
61+ years	15.3	1,081	13.6	1,062	18.0	1,069	16.9	1,052
Female	9.0	2,92	8.1	2,949	12.3	2,871	12.9	2,944
Male	8.3	3,042	7.5	3,005	10.9	3,079	10.7	3,030
Married	10.2	2,470	9.6	2,411	15.0	2,481	13.5	2,515
Not married	7.1	2,767	5.5	2,771	8.4	2,717	9.9	2,683
Divorced	8.8	635	11.2	671	11.0	663	12.4	686
Widowed	12.2	90	6.9	101	14.6	89	16.7	90
Born in Sweden	9.5	4,894	8.6	4,868	12.7	4,898	13.1	4,832
Born in Europe	7.3	480	6.0	487	7.5	507	9.1	508
Born outside Europe	2.7	588	2.8	599	5.3	545	4.1	634
0 children < 20	10.0	3,724	8.6	3,691	12.6	3,658	13.1	3,758
1 child < 20	5.8	862	8.0	926	8.9	922	11.1	862
2 children < 20	6.0	982	6.2	972	11.6	999	9.2	957
3 children < 20	7.9	302	3.5	288	8.0	288	6.4	299
4+ children < 20	8.7	92	2.6	77	8.43	83	8.2	98
0-200 km from Gothenburg	9.2	1,430	9.6	1,381	12.2	1,381	13.6	1,336
201-400 km from Gothenburg	8.6	2,056	7.0	2,014	11.8	2,050	10.2	2,088
401-600 km from Gothenburg	8.3	1,839	7.3	1,909	11.3	1,938	12.0	1,932
601+ km from Gothenburg	8.6	637	8.0	650	10.3	581	12.6	618
Large city	9.4	2,140	8.6	2,250	12.1	2,240	11.5	2,231
City	9.3	1,793	8.0	1,738	12.2	1,758	11.7	1,778
Countryside	7.3	1,856	6.7	1,779	10.4	1,784	12.2	1,788
Rural countryside	6.4	173	6.4	187	11.3	168	11.9	177
Overall recruitment rate	8.64	5,962	7.81	5,954	11.56	5,950	11.78	5,974

Appendix 3: Postcard layout (“What do You think?”)



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info@lore.gu.se