LORE methodological note 2015:1

Attitude stability in a self-recruited web-panel across ten panel waves

Johan Martinsson
Marcus Samanni

ABSTRACT

This methodological note examines attitude stability in a mostly self-recruited Swedish web-panel with 10 waves spanning over about 3.5 years. It is concluded that the highest stability is found for attitudes like ideological left-right position and evaluations of the government. It is also noted that items differ not only in their stability over time (r-values of correlations for the same item in different waves) but also on how much this stability changes over time, that is how much weaker the correlations get when the time difference between the waves in a correlation gets bigger.

Introduction

In this methodological note we examine the stability of different attitudes in a Swedish web panel called the Citizen Panel (CP) that is regularly used for collecting web survey data on political and social attitudes. The Citizen Panel is a mostly self-recruited panel with thus far 10 waves of panel data from late 2010 to mid-2014 (see appendix for details). The number of respondents in the analyses included in this report spans from 5,820 to 11,730.

Correlations with first wave as independent variable

In this section we present correlations for the same questions from different waves of the Citizen Panel. The independent variable in each correlation is always from the survey where the question appeared for the first time. This means that the sample usually gets smaller for the latter correlations (as some respondents leave the panel) and that the correlations usually get weaker, since the time between the two waves in the correlation gets longer and longer. To get a sense of the over-time stability we also present the mean change in r per year, from the first correlation to the last correlation (the column furthest to the right in the tables).[1]

---

[1] To get the mean change in r per year, we first calculated the difference in r between the first correlation and the last correlation for each variable. Then we divided this difference by the number of days between the

Table 1. Left-right own position, evaluation of government and political interest (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Left-right own position	CP3	r			0.92	0.91	0.91	0.91	0.91		0.89	-0.013
		N			5768	5489	5153	1942	2493		2165	
Evaluation of government since last election in 2010	CP3	r				0.87			0.82	0.78		-0.065
		N				5535			1748	611		
Political interest	CP3	r				0.73	0.75	0.71	0.72	0.69	0.69	-0.027
		N				5478	5135	1944	4227	2319	2168	

Comment: All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Table 2. Attitudes to policy proposals from the public debate (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Proposal: Reduce the public sector	CP4	r				0.81	0.82	0.83	0.82		0.79	-0.012
		N				5512	3539	1950	1731		1822	
Proposal: Lower the taxes	CP3	r			0.83	0.81	0.84	0.82			0.79	-0.020
		N			5717	5439	3512	1932			1816	
Proposal: Strive towards an environmentally friendly society	CP3	r			0.74	0.73	0.73	0.72	0.72		0.69	-0.026
		N			5761	5504	3526	1955	1733		1827	
Proposal: Accept fewer refugees into Sweden	CP3	r			0.85	0.82	0.82	0.83	0.84	0.81	0.81	-0.016
		N			5741	5465	3517	1938	1726	1467	1824	
Proposal: Strive towards a society with greater equality between women and men	CP3	r			0.61	0.57	0.58	0.52	0.58	0.60	0.59	-0.008
		N			5679	5425	3478	1910	1699	1448	1789	
Proposal: Reduce income differences in society	CP5	r					0.72	0.73		0.73		+0.007
		N					4270	2471		1751		

Comment: All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Two of the attitudes with the highest stability that we have found are the left-right own position and the evaluation of the (Swedish) government since the last election in 2010 (table 1). The correlation of the left-right own position also diminishes very little over time, where the first correlation is at r = 0.92 and the last almost the same at r = 0.89. That means that the mean change in r per year is only -0.013.

Many of the attitudes concerning proposals from the political debate are also relatively stable over time (table 2). The correlations between the first and the second wave are generally high, and they don't diminish very much when we move to correlations with later waves. Among these items, the most stable one is the attitude towards the proposal to accept fewer refugees into Sweden (r between 0.81 and 0.85). The least stable one regards the proposal to strive towards a society with greater equality between women and men (r between 0.52 and 0.61). However, the over-time change in this latter correlation is pretty low. The correlation is at its lowest between CP3 and CP7 (r = 0.52), but then actually rises somewhat and is at 0.59 for the correlation between CP3 and CP9. The correlation on the proposal for reducing income differences behaves in a similar way: the first correlation (between CP5 and CP6) has an r of 0.72, which actually rises slightly to 0.73 for the correlation between CP5 and CP9.

Among the different trust items (table 3), trust in government has the strongest correlations, although it diminishes over time (r between 0.71 and 0.82, mean change in r per year = -0.031). Trust in local government administration and trust in people in general have clearly weaker r-levels. However, they diminish less over time, with a mean change in r of -0.008 and -0.007 respectively.

In table 4 we list the correlations for different items regarding worry about one's own situation. The correlations are on average only slightly weaker than for the trust items. However, the correlations diminish a lot more over time (and are hence stronger for the earlier waves), which can be seen in the column furthest to the right, listing the mean change in r per year. For example, the item on worry for own financial difficulties has a rather strong correlation between CP4 and CP5: r = 0.71. At CP10 this correlation has dropped to r = 0.44, giving a mean change in r per year of -0.174. The item on the worry for being assaulted has the strongest correlations among these items, and it also drops relatively little over time (mean change in r = -0.026).

Table 3. Trust (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Trust: Government	CP1	r	0.82	0.81	0.79	0.79	0.78	0.74	0.76	0.71	0.72	-0.031
		N	3023	3448	3157	2683	2877	1173	1040	334	1104	
Trust: Parliament	CP1	r	0.66	0.64	0.65	0.64	0.63	0.62	0.62		0.57	-0.031
		N	2992	3409	3123	2658	2846	1157	1026		1094	
Trust: Government board in municipality	CP1	r	0.66	0.65	0.62	0.61	0.60	0.57	0.55	0.59	0.56	-0.031
		N	3000	3421	3131	2664	2858	1158	1031	327	1099	
Trust: Council in municipality	CP1	r	0.62	0.63	0.60	0.60	0.58	0.57	0.54			-0.033
		N	2988	3406	3110	2650	2845	1154	1028			
Trust: National public administration	CP1	r	0.57	0.56	0.57		0.57	0.54				-0.012
		N	2983	3396	3115		2835	1159				
Trust: Local government administration	CP1	r	0.60	0.59	0.58		0.57	0.58				-0.008
		N	2988	3398	3120		2844	1162				
Trust: EU	CP4	r				0.73	0.71	0.71				-0.036
		N				5497	5606	2246				
Trust: Swedish politicians	CP1	r	0.71	0.69	0.67	0.68	0.67	0.69	0.67	0.64	0.64	-0.021
		N	3000	3421	3137	2666	2854	1172	1044	1155	1106	
Social trust: People in general	CP1	r	0.64	0.64	0.65	0.65	0.62	0.61	0.62	0.60	0.62	-0.007
		N	3042	3441	3159	2685	2881	1180	1052	1161	1119	

Comment: **All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.**

Table 4. Worry own situation (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Worry own situation: Become unemployed	CP1	r	0.72	0.66	0.64	0.61	0.61	0.58			0.55	-0.054
		N	2983	3398	3120	2638	2834	1155			1094	
Worry own situation: Be assaulted	CP1	r	0.71	0.68	0.66	0.66	0.66	0.65			0.62	-0.026
		N	2983	3395	3116	2633	2833	1153			1094	
Worry own situation: Global epidemic	CP1	r	0.57	0.57	0.56	0.54	0.51	0.51			0.48	-0.030
		N	2984	3400	3120	2640	2844	1160			1104	
Worry own situation: Natural disaster	CP1	r	0.52	0.50	0.47	0.51	0.45	0.47			0.41	-0.034
		N	2996	3420	3140	2656	2857	1163			1105	
Worry own situation: Terrorism	CP1	r	0.66	0.65	0.65	0.60	0.61	0.63			0.56	-0.033
		N	2958	3367	3104	2625	2819	1146			1094	
Worry own situation: Financial difficulties	CP4	r				0.71	0.71	0.69			0.44	-0.174
		N				5544	5628	2289			2075	

Comment: **All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.**

If we instead move to items concerning worry or concern on societal matters (table 5), the correlations are slightly weaker, varying between 0.35 and 0.62. The correlations change less over time though. The correlations for the item on worry for societal problems caused by natural disasters only has a mean change in r per year of -0.003 and the item on concern for societal problems caused by financial crises has a change in r of -0.007.

Regarding the items on satisfaction with democracy (table 6), the correlations are stronger for the satisfaction on the national and on the EU level than on the regional and municipality level. The mean changes in r per year are about on average (between -0.015 and -0.033).

The items on policy evaluations (table 7) have correlations that on average are about as strong as those for the items on satisfaction with democracy (r between 0.73 and 0.51). They also diminish about as much over time (mean change in r per year between -0.012 and -0.049).

Table 5. Societal concern (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Societal concern: Unemployment	CP1	r	0.51	0.45	0.40	0.42	0.40	0.40			0.35	-0.051
		N	2975	3403	3128	2645	2842	1161			1091	
Societal concern: Organized crime	CP1	r	0.61	0.57	0.57	0.55	0.55	0.53			0.50	-0.034
		N	2976	3391	3112	2637	2837	1150			1086	
Societal concern: Terrorism	CP1	r	0.62	0.62	0.60	0.56	0.55	0.57			0.57	-0.018
		N	2970	3388	3119	2641	2837	1157			1082	
Societal concern: Natural disasters	CP1	r	0.50	0.51	0.46	0.47	0.46	0.45			0.49	-0.003
		N	2983	3399	3129	2649	2849	1158			1089	
Societal concern: Global epidemics	CP1	r	0.52	0.53	0.51	0.50	0.50	0.47			0.46	-0.019
		N	2960	3377	3110	2635	2825	1154			1087	
Societal concern: Financial crisis	CP4	r				0.48	0.49	0.50			0.47	-0.007
		N				5528	5619	2279			2066	

Comment: All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Table 6. Satisfaction with democracy (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Satisfaction with democracy: EU	CP1	r	0.68	0.64	0.67	0.62	0.62	0.60	0.57	0.60	0.57	-0.033
		N	2968	3382	3100	2636	2821	1157	1025	814	1086	
Satisfaction with democracy: Sweden	CP1	r	0.66	0.66	0.66	0.62	0.63	0.62	0.62	0.59	0.61	-0.015
		N	2945	3343	3066	2617	2804	1145	1010	795	1062	
Satisfaction with democracy: region	CP1	r	0.58	0.57	0.57	0.53	0.51	0.51	0.49	0.51	0.50	-0.026
		N	2974	3396	3117	2648	2839	1157	1025	814	1088	
Satisfaction with democracy: municipality	CP1	r	0.59	0.59	0.57	0.55	0.53	0.51	0.52	0.49	0.50	-0.029
		N	2975	3391	3107	2641	2833	1153	1021	814	1086	

Comment: All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Table 7. Evaluation of policies (r-value)

Variable name	Independent variable from wave:		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10	Mean change in r per year
Evaluation: Labor market policy	CP1	r	0.73						0.64	0.59		-0.049
		N	3010						1050	447		
Evaluation: Criminal policy	CP1	r	0.57						0.51	0.54		-0.012
		N	3000						1048	445		
Evaluation: Environmental policies	CP1	r	0.61						0.57	0.54		-0.024
		N	2978						1047	446		

Comment: All correlations are significant at the 99.9 % level. The correlations are between the wave where the item first appeared and the subsequent waves. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Correlations between adjacent waves

For a selection of the variables we also ran the correlations in a different way. Instead of always picking the independent variable from the first available wave we let the independent variable be from the closest preceding wave. This means that the r-values are somewhat higher and more stable.

All of these correlations are presented in table 8 below, with the most stable variable first, and the least stable variable last.

Just as for the correlations presented above the two most stable items are the left-right own position and the evaluation of government since last election. The attitudes on the proposal to reduce the public sector and on the proposal to accept fewer refugees into Sweden are also very stable, followed by trust in government, political interest, trust in Swedish politicians and trust in people in general. Of the variables presented here, satisfaction with democracy in the EU and satisfaction with democracy at the national level are the least stable items.

Table 8. Correlations between adjacent waves (r-value)

Variable name	Independent variable in first correlation		Dependent variable: CP2	Dependent variable: CP3	Dependent variable: CP4	Dependent variable: CP5	Dependent variable: CP6	Dependent variable: CP7	Dependent variable: CP8	Dependent variable: CP9	Dependent variable: CP10
Left-right own position	CP3	r			0.92	0.92	0.92	0.93	0.93		0.92
		N			5768	5970	6484	2499	2113		2504
Evaluation of government since last election in 2010	CP3	r				0.87			0.86	0.90	
		N				5535			2197	560	
Proposal: reduce the public sector	CP4	r				0.81	0.82	0.84	0.86		0.83
		N				5512	4271	1704	2117		2051
Proposal: accept fewer refugees into Sweden	CP3	r			0.85	0.84	0.85	0.86	0.87	0.89	0.87
		N			5741	5896	4231	1688	2107	1322	1378
Trust: Government	CP1	r	0.82	0.81	0.81	0.81	0.82	0.85	0.82		0.83
		N	3023	4307	5789	5573	6139	2510	2129		2068
Political interest	CP3	r				0.73	0.81	0.82	0.78	0.78	0.77
		N				5478	6441	2479	2103	4480	3811
Trust: Swedish politicians	CP1	r	0.71	0.71	0.73	0.73	0.76	0.77	0.78	0.75	0.75
		N	3000	4248	5750	5532	6087	2490	2119	2097	1966
Social trust: People in general	CP1	r	0.64	0.64	0.69	0.71	0.76	0.74	0.75	0.75	0.76
		N	3042	4312	5795	5579	6145	2509	2126	2105	1979
Satisfaction with democracy: EU	CP1	r	0.68	0.66	0.69	0.69	0.68	0.73	0.71	0.73	0.73
		N	2968	4289	5755	5548	6109	2498	2123	1325	1377
Satisfaction with democracy: Sweden	CP1	r	0.66	0.66	0.69	0.69	0.70	0.73	0.73	0.73	0.71
		N	2945	4264	5714	5517	6098	2498	2104	1313	1365

Comment: All correlations are significant at the 99.9 % level. The independent variable is picked from the closest preceding wave. For question wordings and field dates for the different waves of the Citizen Panel, see appendix.

Concluding remarks

To conclude, two variables stand out: left-right own position, and evaluation of the government since the last election. They both have high r-values, and these diminish little even if there is a long time between the two measurements in the correlation. The attitudes towards different policy proposals from the public debate are also very stable, most notably the attitude towards the proposal to accept fewer refugees into Sweden. The attitude towards the proposal to reduce income differences in society also has the peculiarity of getting a stronger r-value in the correlations over time. In contrast to the attitudes to the different policy proposals, the correlations of the items on policy evaluations are more on average. Among the weaker correlations we find items like societal concern for unemployment, natural disasters and economic crises, and also own concern for national disasters. Presumably, these lower correlations reflect the fact that many respondents might not have well considered opinions on these issues. We must also not forget that some of the lower correlations, such as the satisfaction with democracy items, might reflect fewer response options since those have a four point scale. The two items with the strongest correlations on the other hand, left-right position and evaluation of the government, both have eleven point response scales.

One can also note that not only the r-values themselves differ but also how much they diminish over time. These differences are probably much less affected by the length of the response scales. Some of the weaker correlations hardly diminish at all over time, like for example the societal concern for national disasters and economic crises. The same can be noted for some of the stronger correlations, for example the trust for people in general and the proposal to reduce income differences in society, where the latter correlation actually increases somewhat over time.

Appendix

Table A.1 Citizen Panel field dates

Wave	Survey opened	Survey closed	Field days
Citizen Panel 1	2010-12-15	2011-01-15	31
Citizen Panel 2	2011-03-28	2011-04-13	16
Citizen Panel 3	2011-10-17	2011-10-31	14
Citizen Panel 4	2012-03-26	2012-04-16	21
Citizen Panel 5	2012-11-12	2012-12-16	34
Citizen Panel 6	2013-02-27	2013-03-31	32
Citizen Panel 7	2013-06-12	2013-08-11	60
Citizen Panel 8	2013-11-14	2013-12-18	34
Citizen Panel 9	2014-03-06	2014-04-07	32
Citizen Panel 10	2014-06-05	2014-07-17	41

Question wordings

Left-right own position. *The concept of a political left–right scale is often used to describe a person's political opinions. Where would you place yourself on such a scale?*

Scale: 0-10. 0 *Far to the left*; 5 *Neither to the left nor to the right;* 10 *Far to the right*.

Evaluation of government since last election in 2010. *How do you think the government performance has been since the general election in 2010?*

Scale: -5 - +5. -5 *Very bad*; +5 V*ery good*.

Political interest. *In general, how interested are you in politics?*

Scale: 1-4. 1 *Very interested*; 2 *Rather interested*; 3 *Not particularly interested*; 4 *Not interested at all*.

Attitudes to proposals from the public debate. *What is your opinion on the following proposals from the public debate? Reduce the public sector; Lower the taxes; Strive towards an environmentally friendly society; Accept fewer refugees into Sweden; Strive towards a society with greater equality between women and men; Reduce income differences in society.*

Scale: 1-5. *Very good proposal*; *Rather good proposal*; *Neither good nor bad proposal*; *Rather bad proposal*; *Very bad proposal*.

Trust in institutions. *How much confidence do you have in the way the following institutions and groups do their job? The government; The national parliament; The municipal boards; The municipal council; The national public administration; The local government administration; The EU.*

Scale: 1-5. 1 *Very high trust*; 2 *Rather high trust*; 3 *Neither high nor low trust*; 4 *Rather low trust*; 5 *Very low trust*.

Trust: Swedish politicians. *In general, how much trust do you have in Swedish politicians?*

Scale: 1-4. 1 *Very high trust*; 2 *Quite high trust*; 3 *Quite low trust*; 4 *Very low trust*.

Trust: people in general. *In your opinion, to what extent can people in general be trusted?*

Scale: 0-10. 0 *It is not possible to trust people in general*; 10 *It is possible to trust people in general*.

Worry own situation. *Looking at your own situation, what worries you the most nowadays? Becoming unemployed; Being assaulted; Being struck by a global epidemic (e.g. H1N1 the swine flu); Being hit by a natural disaster (e.g. storm, snow tempest, flood); Being hit by terrorism; Getting financial problems.*

Scale: 1-5. 1 *Not at all worried*; 5 *Very worried*.

Societal concern. *Looking at the current societal situation, what worries you the most nowadays? Unemployment; Organized crime; Terrorism; Natural disasters; Global epidemics (e.g. H1N1 the swine flu); Financial crisis.*

Scale: 1-5. 1 *Not at all worried*; 5 *Very worried*.

Satisfaction with democracy. *On the whole, how satisfied are you with the way democracy works in: the EU; Sweden; the region where you live; the municipality where you live.*

Scale: 1-4: 1 *Very satisfied*; 2 *Rather satisfied*; 3 *Not particularly satisfied*; 4 *Not at all satisfied*.

Evaluation of policies. *How well do you think that the Swedish policy in the following areas works today? Labor market policy; Criminal policy, law and order; Environmental policy.*

Scale: 1-5. 1 *Not good at all*; 5 *Very good*.

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:

info@lore.gu.se