Norwegian Citizen Panel

2016, Seventh Wave

Methodology report

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December, 2016

NORSK MEDBORGERPANEL

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BACKGROUND

This report describes the procedures of data collection in the seventh wave of The Norwegian Citizen Panel. Further, the report discusses the representativity of the panel and how the weights are calculated.

The Norwegian Citizen Panel (NCP) was established as a collaboration between several departments at the Faculty of Social Sciences at the University of Bergen and the UNI Research Rokkan Centre.

ideas2evidence is responsible for the panel recruitment, the administration of the panel, and the technical solutions regarding data collection and computing.

PANEL RECRUITMENT FIRST AND THIRD WAVE

Panel members were recruited in wave 1 and wave 3. The samples in wave 1 and wave 3 were drawn from the *National Registry* of Norway. This registry holds information on everyone born in Norway, as well as former and current inhabitants. The formal responsibility for this registry is held by the Norwegian Tax Administration but has partly outsourced the administration to the private IT-company Evry. Evry drew the sample on behalf of the Citizen Panel after relevant permissions were acquired from the Norwegian Tax Administration.

25,000 people over the age of 18 were, in both the first and the third wave, randomly drawn from the register. The extracted information was a) last name, b) first name, c) address, d) gender, e) age, and f) phone number (the latter was included in wave 3 only). The sample excluded persons without a current home address in Norway.

After receiving the data, everyone over the age of 95 was excluded from the sample.

For a detailed description of the recruitment process in wave 1 and 3, we refer to the respective methodology reports for each wave. Note, however, that the process differed between these two waves in that recruitment in the first wave was done through postal recruitment only, while we in the third wave, in addition to postal recruitment, also sent out reminders by text message to all respondents with available phone numbers, and telephonic reminders to a randomly drawn subset of the gross sample.

The total recruitment rate in these two waves were respectively 20 percent in the first wave and 23 percent in the third wave.

DATA COLLECTION SEVENTH WAVE

Wave 7 of the NCP involved data collection from existing members of the panel. The data collection was conducted during the month of November and the two first days of December 2016.

This section firstly describes software solutions and pilots. Then a brief assessment of the data collection phase is included. Lastly, it presents the data collection procedure and its results, including response and response rates, the use of different platforms, and time usage.

SOFTWARE AND PILOTS

The web-based research software Confirmit administers the surveys and the panel. Confirmit is a "Software-as-a-Service" solution, where all software runs on Confirmit's continuously monitored server park, and where survey respondents and developers interact with the system through various web-based interfaces. This software provides very high data security and operational stability. The security measures are the most stringent in the industry, and Confirmit guarantees 99, 7 percent uptime. ideas2evidence does the programming of the survey in Confirmit on behalf of The Norwegian Citizen Panel.

The survey went through both large-N and small-N pilot testing before it went live to the panel. The large-N pilot were done in cooperation with a local high school. In addition, the survey was tested extensively during the development phase by ideas2evidence and the researchers involved in the project.

The pilot testing was regarded as successful, and no major technical revisions were deemed necessary.

ASSESMENT OF THE DATA COLLECTION PHASE

On launch day, a small error in the survey was detected. A small subset of panel members answering on mobile phones experienced an error where the "next"-button on a specific question failed to generate, thereby making it impossible to advance in the survey. This error affected mobile phones randomly[1] and was therefore not detected during the pilot testing phase.

In total, this error affected 36 panel members. They were contacted individually after the error had been corrected. In the end 31 (?) of these respondents completed the survey, leaving us with a loss of 5 respondents.

With the exception of this error, the data collection was carried out without any major irregularities.

RESPONSE OF PANEL MEMBERS

The survey was launched November 1st 2016. It was sent to the email accounts of the panel's 10,130 members. In these e-mails, the basic information about the Citizen Panel was repeated, and the individual panel members received unique URLs that led to the questionnaire.

The invitation, the first reminder and the second reminder were all distributed via e-mail. The third, and last reminder was, depending on whether the individual panel member has a registered mobile phone or not, distributed via SMS and e-mail.

Table 1: Responses and response rate for panel members by the different stages of data collection

	Responses	Cumulative Responses	Response Rate (%)	Cumulative Response Rate (%)
Invitation (1st of November)	1939	1939	30 %	30 %
1st reminder (3rd of November)	1473	3412	23 %	52 %
2nd reminder (8th of November)	615	4027	9 %	62 %
3rd reminder – email (11th of November)	69	4096	1 %	63 %
3th reminder – SMS (11th of November)	593	4689	9 %	72 %

In total, the wave 7 survey received 4,689 answers. 1,939 respondents completed the survey in the period between the invitation and the first reminder (November 01st – 03rd), a response rate of 30 percent. The pattern is similar to earlier waves; the invitation produces a higher number of respondents than the subsequent reminders, and there is a considerable drop in number of responses between the first and the second reminder. For details on the number of respondents after each reminder, we refer you to table 1.

The overall response rate, as reported in table 1, is **72 percent**. Some clarifications concerning the calculation of the response rate are necessary. We present the clarifications, along with the response rate for the respondents recruited in wave 1 and the respondents recruited in wave 3 respectively, in the following sub-chapters.

Notwithstanding these clarifications, it is important to note that the response rate in the seventh wave is higher than expected: 72 percent compared to 67 percent in the sixth wave. The number of respondents in this last wave is as already mentioned 4,689 – compared to 4,859 in wave 6. This gives us a wave-to-wave retention rate

[1] Testing after the fact showed that this error presented itself randomly even when testing on the same input device. The affected mobile phones varied in manufacturer, model and OS.

of almost 96.5 percent, significantly higher than in earlier waves. In comparison, the retention rate between the fifth and the sixth waves were approximately 89 percent.

There are (at least) three possible explanations for the improved retention rate. In the seventh wave, panel members were reminded via SMS. This was not a part of the data collection in the sixth wave. The third reminder, where either SMS or e-mail was utilized, produced 662 responses to the survey. In wave 6, where only e-mail was used, the third reminder produced 591 responses to the survey.

Secondly, as the number of active panel members decrease (see next sub-chapter), the number of highly motivated panel member within the active group increases. 66 percent of the 4,689 respondents in wave seven have answered every survey they have been invited to participate in. The presence of these loyal panel members gives the panel a bedrock of responses that creates a less volatile retention rate.

A third possible explanation, is the American Presidential Election of 2016. Election day was November 8th, in the middle of the data collection period. The election was given a lot of attention in Norwegian media, and may have created more interest for a survey that focuses on politics. An interesting point in this respect is that the after several rounds with a decrease in participation from the young panel members, wave seven saw a marginally better representation rate of panel members in the age bracket 18-29 years old, compared to wave six.

RESPONSE OF ALL PANEL MEMBERS

Table 2: The historic participation of all respondents

			Respondents w07	
			No	Yes
Respondents w05	Yes	w06-yes	703	3,471
		w06-no	774	432
	No	w06-yes	354	293
		w06-no	3,626	477

As already mentioned, NCP has 10,130 panel members. Many of them have not actively opted out of the panel, but they have silently withdrawn by not participating in the surveys. As shown in table 3,626 respondents have not participated in any of the three last waves (w05-w07). Including these respondents in the calculation of response rate would arguably give an artificially low rate. Therefore, these 3,626 respondents are not included in the calculation of response rates given above.

RESPONSE OF PANEL MEMBERS RECRUITED IN THE FIRST WAVE

Table 3: The historic participation of respondents recruited in the first wave

			Respondents w07	
			No	Yes
Respondents w05	Yes	w06-yes	269	1,651
		w06-no	317	188
	No	w06-yes	141	127
		w06-no	1,741	217

4,651 of NCPs panel members were recruited in wave 1. As shown by table 3, 1,741 respondents have not participated in any of the three last waves (w05-w07). 2,183 of the eligible panel members recruited in the first wave responded to the questionnaire in wave 7. This gives a response rate of 75 percent.

RESPONSE OF PANEL MEMBERS RECRUITED IN THE THIRD WAVE

Table 4: Historic participation of the respondents recruited in the third wave

			Respondent w07	
			No	Yes
Respondent w05	Yes	w06-yes	434	1,820
		w06-no	457	244
	No	w06-yes	213	166
		w06-no	1,885	260

NCP have 5,479 panel members that were recruited in wave 3. Table 4 shows, however, that 1,885 respondents have not participated in any of the three waves (w05-w07), thereby leaving us with 3,594 eligible panel members in this group. In wave 7 we received 2,490 responses from this group, giving us a response rate of 69 percent.

The difference in response rate between first and third wave recruits can be explained by two factors. Firstly, since we withdraw inactive members from the calculation of the response rate, more respondents recruited in the first wave have had time to become inactive, thereby leaving a lower number of baseline respondents that are more loyal to the panel.
At the same time, when comparing the response rate of this group to the response rate of the first wave recruits in the fifth wave[2], we note that the response rate of the panel members recruited in wave 3 are (marginally) lower, 69 percent versus 72 percent[3]. The recruitment in wave 1 and wave 3 was identical in sample size and sample frame, but in the third wave more, and a different set of, reminders were utilized. In wave 1 prospective panel members were contacted through an invitational letter and a reminder post card. Wave 3 also used an invitational letter and a reminder post card in the recruitment process. In addition, the sample received a reminder by text message, and a subset of the sample were contacted through a telephone call.

As shown in the documentation reports from wave 3 and 4, the increase in the number of recruitment methods (SMS and telephone call, in addition to postal recruitment) in wave 3 resulted in a higher recruitment rate. However, the higher recruitment rate in wave 3 was followed by a lower response rate in wave 4 when compared to the rate achieved in the second and third wave from panel members recruited in the first wave. The response rate of the members recruited in wave 3 declines in correspondence with how many reminders the panel members needed in order to be recruited. This indicates that panel members who need multiple reminders in order to be recruited are not as loyal as those who need fewer reminders.

PLATFORMS

The questionnaire was prepared for data input via smart phones. In order to enhance the respondents' experience with the questionnaire, mobile users got a different visual representation of some questions. These questions are documented in the codebook.

26 percent of all survey respondents that opened the questionnaire used a mobile phone. That is 2.7 percentage points higher than in the sixth wave. The increase in mobile users can partly be explained by the use of SMS-reminders in this wave.

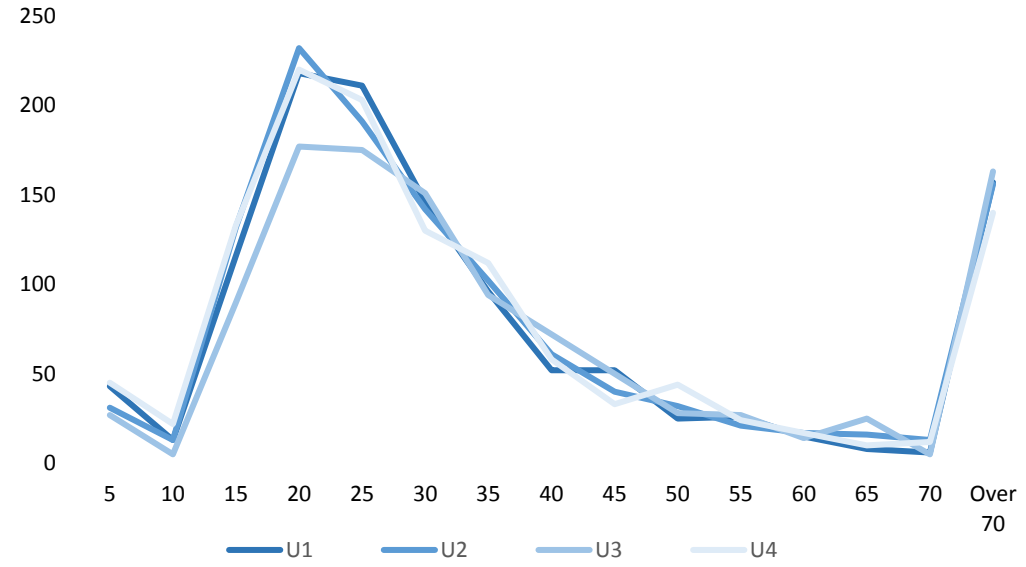
8.7 percent of the mobile users did not complete to such an extent that they were classified as respondents in the seventh wave. For non-mobile users the percentage was 4.2 percent. Mobile users were thus more likely to

[2] For the sake of clarity: the seventh wave is the fifth survey for the panel members recruited in the third wave, just as the fifth wave was the fifth survey for the panel members recruited in the first wave.
[3] This tendency, with lower response rate from the panel members recruited in the third wave compared to the first wave, was also discussed in the documentation reports for the fourth and the fifth wave.

leave the questionnaire before completion. This was also the case in the third, the fourth, the fifth and the sixth wave. The non-completion rate for non-mobile users have been approximately the same in the last three waves (w05-w07). The non-completion rate for mobile users fell from more than 10 percent in the fifth wave, to 6.6 percent in the sixth wave and now up to 8.7 percent in the seventh wave.

TIME USAGE

Figure 1: Time usage of survey respondents in the seventh wave



The average respondent used 25.2 minutes to complete the questionnaire. This is almost a three minutes higher completion time than in the sixth wave. The challenge of measuring average time usage is that respondents may leave the questionnaire open in order to complete the survey later. This idle time causes an artificially high average for completing the survey. The average of 25.2 minutes therefore only includes the 85 percent of the respondents, which used less than, or equal to, 60 minutes.

As in earlier waves, the NCP questionnaire is divided into different subsets (U1-U4). Table 5 shows that respondents that answered questions in the U1, U2 and U4 subsets spent an equal amount of time on the questionnaire, while respondents from the U3 subset on average spent over 1.5 minutes longer. The breakdown of time usage for each subset is shown in table 5.

Table 5: Average time usage (minutes) in each subset in the seventh wave

	All respondents	U1-respondents	U2-respondents	U3-respondents	U4-respondents
All users	25,2	24,8	24,9	26,6	24,8
Non-mobile users	26,0	25,6	25,9	27,1	25,6
Mobile users	22,8	22,6	21,9	24,5	22,6

It is interesting to note that mobile users on average use substantially less time on the survey than non-mobile users, despite the survey being displayed in a more time-effective manner on non-mobile platforms.

One probable explanation for this is that mobile users spend less time writing text on open text questions. Mobile users write on average 42 characters in the open text questions, while users answering on non-mobile platforms on average write 62 characters.

We also note that mobile users spend considerable less time answering some of the more complex questions in the questionnaire (i.e. questions with long and/or high degree of complexity in the vignettes). This could imply that users on mobile platforms spend less time reading vignettes before answering the questions. 65 percent of

the respondents answering “don’t know” on one specific, complex question in the survey were mobile users, a significantly higher number than expected when we take into account that the percentage of respondents answering the survey on a mobile phone is 26 percent of the total sample.

Our numbers show that mobile users on average spent less time than non-mobile users on 85 percent of the questions in the seventh wave.

REPRESENTATIVITY

In this section, we describe the representativity of the survey respondents. First, we will discuss factors explaining representativity. Thereafter we apply demographic variables to present data on representativity by different strata. The data on representativity is the foundation for the section on weighting.

FACTORS EXPLAINING LACK OF REPRESENTATIVITY

There are two main points that can serve as explanations to non-response and lack of representativity:

- access to and familiarity with the internet (given that a web-based questionnaire was the only response mode made available)
- the motivation and interest of the respondents

The first challenge is strongly related to the age composition of the survey respondents. Although Norway has a very high computer and internet density, the probability of having an e-mail address, and the skills required to access and fill in an online questionnaire, normally decreases with increasing age. The second challenge, motivation and interest, is often explained by the respondents’ level of education. In addition to age and education, we added the variables of geography and gender in order to test the representativity of the survey respondents. The variables have the following categories:

- Age: 19-29 years, 30-59 years, 60 and above.
- Highest completed education: no education/elementary school, upper secondary, university/university college.
- Geography: Oslo/Akershus, Eastern Norway, Southern Norway, Western Norway, Trøndelag, Northern Norway.

THE REPRESENTATIVITY OF THE NORWEGIAN CITIZEN PANEL

The sampling frame of the survey equals to the Norwegian population above the age of 18, comprising a population of approximately 3,9 million individuals. Earlier reports have documented a systematic underrepresentation of respondents belonging to the two lowest educational groups, independent of gender and age. The underrepresentation is particularly strong for young men. As expected, individuals with education from universities or university colleges are overrepresented. All of these observations are also true for wave 7. The result of lower participation from younger age groups, is that respondents with high education in this age bracket are not overrepresented compared to the population. They are however overrepresented *within* their age bracket.

From the age distribution presented in table 6, we see that 18-29 year olds are underrepresented in the net sample of the seventh wave. The representation of the age group 30-59 years in the net sample is on par with the age distribution in the population, while respondents aged 60 years and above are clearly overrepresented. The underrepresentation of 18-29 year olds is more prominent in this wave compared to both the fourth and the fifth wave, but on par with the sixth wave. This age group has over time had a lower degree of panel loyalty than the older panel members, but the retention rate for this group in this particular wave is better than previous waves, especially when you take into account the aging of the panel since new members last were recruited.

Table 6: Age distribution in the population and the net sample of the seventh wave

	18-29 years	30-59 years	60 years and above
Population	20.5 %	51.6 %	28.0 %
Net sample - w07	10.6 %	51.4 %	38.0 %

New patterns emerge when adding gender in table 7; young men are more underrepresented than young women are. In the oldest age group, men are clearly overrepresented, while women are slightly overrepresented. Lastly, the middle-aged men in the net sample are underrepresented, while women in this age bracket are overrepresented.

Table 7: Combined distribution of age and gender in the population and the net sample of the seventh wave

	18-29 years		30-59 years		60 years and above	
	Men	Women	Men	Women	Men	Women
Population	10.50 %	10.00 %	26.50 %	25.10 %	13.00 %	14.90 %
Net sample - w07	4.4 %	6.2 %	24.3 %	27.0 %	21.5 %	16.5 %

The inclusion of educational level in table 8 reveals a systematic underrepresentation of respondents with little or no education, independent of age and gender. As discussed in relation to table 7 and 8, the underrepresentation is especially strong for young respondents. The underrepresentation is also strong for middle-aged respondents with little or no education. In wave 7, the representation of men in the net sample aged 60 and above with low education is on par with the distribution in the population.

Respondents that have upper secondary education as their highest completed education are somewhat underrepresented in all groups. Those who have university or university college education are clearly overrepresented in the two oldest age brackets, independent of gender.

Table 8: Combined distribution of age, gender and education in the population and the net sample of the seventh wave

		Population		Net sample - w07	
		Men	Women	Men	Women
No education/elementary school	18-29 years	4.1 %	3.2 %	0,42 %	0,93 %
Upper secondary education	18-29 years	4.2 %	3.4 %	2,47 %	2,80 %
University/university college	18-29 years	2.2 %	3.4 %	1,51 %	2,33 %
No education/elementary school	30-59 years	5.5 %	4.9 %	1,27 %	1,31 %
Upper secondary education	30-59 years	12.1 %	8.8 %	8,51 %	6,42 %
University/university college	30-59 years	9.0 %	11.4 %	14,97 %	19,62 %
No education/elementary school	60 and above	3.2 %	4.9 %	3,07 %	2,51 %
Upper secondary education	60 and above	6.5 %	7.1 %	6,24 %	4,18 %
University/university college	60 and above	3.3 %	2.9 %	11,89 %	9,55 %

In regards to geography, (table 9) we observe that Western Norway and Trøndelag both are slightly overrepresented, while the capital area – the counties of Oslo and Akershus – is clearly overrepresented. Southern Norway, Northern Norway and Eastern Norway meanwhile are all underrepresented among the respondents in the seventh wave.

The clearly most overrepresented group are men aged 60 years above living in the capital area. This group accounts for 2.6 percent of the population but 5.1 percent of the respondents in wave seven belongs to this demography. The most underrepresented groups are young men in Eastern Norway, and young men and women in Southern Norway.

Table 9: Combined distribution of age, gender and geography in the population and the net sample of the seventh wave

		Population			Net sample - w07		
		Men	Women	Total	Men	Women	Total
Akershus/Oslo	18-29 years	2.5 %	2.6 %	5.1 %	1,2 %	2,0 %	3,2 %
Akershus/Oslo	30-59 years	6.7 %	6.4 %	13.1 %	6,8 %	8,5 %	15,3 %
Akershus/Oslo	60 and above	2.6 %	3.0 %	5.6 %	5,1 %	4,9 %	10,0 %
Akershus/Oslo	In total	11.8 %	12.0 %	**23.8 %**	13,1 %	15,3 %	**28,5 %**
Eastern Norway	18-29 years	2.5 %	2.3 %	4.8 %	0,8 %	1,5 %	2,3 %
Eastern Norway	30-59 years	6.8 %	6.6 %	13.4 %	5,2 %	5,9 %	11,1 %
Eastern Norway	60 and above	3.9 %	4.5 %	8.4 %	6,4 %	4,5 %	10,8 %
Eastern Norway	In total	13.2 %	13.4 %	**26.6 %**	12,3 %	11,8 %	**24,2 %**
Southern Norway	18-29 years	0.6 %	0.6 %	1.2 %	0,3 %	0,2 %	0,5 %
Southern Norway	30-59 years	1.5 %	1.4 %	2.9 %	1,1 %	1,5 %	2,6 %
Southern Norway	60 and above	0.7 %	0.9 %	1.6 %	0,8 %	0,7 %	1,5 %
Southern Norway	In total	2.8 %	2.9 %	**5.7 %**	2,2 %	2,4 %	**4,6 %**
Western Norway	18-29 years	2.8 %	2.7 %	5.5 %	1,2 %	1,7 %	2,8 %
Western Norway	30-59 years	6.9 %	6.3 %	13.2 %	6,6 %	7,0 %	13,6 %
Western Norway	60 and above	3.3 %	3.7 %	7.0 %	5,7 %	4,1 %	9,9 %
Western Norway	In total	13.0 %	12.7 %	**25.7 %**	13,5 %	12,8 %	**26,3 %**
Trøndelag	18-29 years	1.0 %	0.9 %	1.9 %	0,6 %	0,6 %	1,2 %
Trøndelag	30-59 years	2.2 %	2.1 %	4.3 %	2,4 %	2,3 %	4,7 %
Trøndelag	60 and above	1.2 %	1.3 %	2.5 %	1,8 %	1,4 %	3,2 %
Trøndelag	In total	4.4 %	4.3 %	**8.7 %**	4,8 %	4,3 %	**9,1 %**
Northern Norway	18-29 years	1.0 %	0.9 %	1.9 %	0,4 %	0,3 %	0,7 %
Northern Norway	30-59 years	2.4 %	2.2 %	4.6 %	2,1 %	1,8 %	3,9 %
Northern Norway	60 and above	1.4 %	1.5 %	2.9 %	1,7 %	1,0 %	2,7 %
Northern Norway	In total	4.8 %	4.6 %	**9.4 %**	4,2 %	3,1 %	**7,4 %**

WEIGHTING

To compensate for the observed biases, we have calculated a set of weights. The weights are equal to the relation between a given strata in the population and the total population, divided by the relation between a given strata in the net sample and the total net sample.[4] This procedure returns values around 1, but above 0. Respondents belonging to a stratum that is underrepresented will receive a weight above 1 and respondents belonging to an overrepresented stratum will receive a weight below 1. We have listed the weights of the different strata in table 13 in the appendix.

When calculating the weights, information regarding the respondents' geographical location, gender and age is based on registry data. Information on these variables was included in the sample file we received from the Norwegian National Registry. Information regarding the level of education is from the survey. 4 percent of the seventh wave net sample have not answered the question about level of education. Because of this, two different weights have been calculated:

- **Weight 1** is based on demographic variables only (age, gender and geography)
- **Weight 2** combines the demographic variables with education. Respondents with missing data on the education variable are only weighted on demography (the education component of the weight is in these cases set to 1).

The variables have the following categories:

- **Age**: 19-29 years, 30-59 years, 60 and above.
- **Highest completed education**: no education/elementary school, upper secondary, university/university college.
- **Geography**: Oslo/Akershus, Eastern Norway, Southern Norway, Western Norway, Trøndelag, Northern Norway.

The method for calculating weights is equal to that of previous waves.

When applied, both weights will provide a weighted N equal to the number of respondents in the dataset.

As shown in the discussion above, of the factors considered, level of education creates the most bias. We therefore strongly recommend using weight 2 in most statistical analyses, as this weight provides the most accurate compensation for the various sources of bias in the net sample. Table 11 shows the effects of weight 2 on the distribution of self-reported level of education in the net sample. As we can observe, the weight gives the sample a perfect distribution compared to the population. It is however important to stress that the distribution when not weighted is far from ideal, with a clear underrepresentation of the population with low levels of education.

Table 10: Effect of weight 2 on self-reported level of education

	Sample - not weighted	Sample - weighted	Population	Difference between sample and population	Difference between weighted sample and population
No education/elementary school	9,5 %	25,9 %	25,9 %	-16,4 %	0,0 %
Upper secondary education	30,6 %	41,9 %	41,9 %	-11,3 %	0,0 %
University/university college	59,9 %	32,2 %	32,2 %	27,7 %	0,0 %

4 The applied formula for weight w_i for element i, in strata h is: $w_i = \frac{N_h/N}{n_h/n}$

Literature on surveys has shown that individuals who are interested in politics are more likely to participate in surveys than individuals who are not. This particularly holds true for surveys with politics as a topic.[5] In previous reports, we have documented the effect of the weights on party affiliation compared to election results, and the respondents interest in politics. This wave included no questions on political interest, and 2016 is not an election year. Therefor no such analysis are included in this report. We refer to the methodology report from the fifth wave for these discussions.

SURVEY EXPERIMENTS

Each wave of the Citizen Panel Survey includes several survey experiments where different groups of respondents receive questions with slightly different wordings. We have achieved this by randomly assigning respondents to groups during the data collection process. In addition, there is also a more permanent split of the respondents into two or more groups. To reduce the overall time required to answer the survey, some sections of the questionnaire were only presented to one of these groups. For both of these reasons, the number of respondents who have answered a single question might be substantially less than the total number of respondents. See the detailed data documentation for further information about this.

5 Groves, Robert M., Stanley Presser and Sarah Dipko (2004): "The Role of Topic Interest in Survey Participation Decisions". *Public Opinion Quarterly*. Vol. 68, No. 1:2-31

APPENDIX

Table 11: Weights applied to different strata (weight 2)

			Men	Women				Men	Women
Oslo/Akershus	18-29 years	No education/elementary school	5.5	2.6	Western Norway	18-29 years	No education/elementary school	16.0	6.3
		Upper secondary education	1.9	0.9			Upper secondary education	1.7	1.2
		University/university college	1.4	1.4			University/university college	1.6	1.3
	30-59 years	No education/elementary school	5.8	4.2		30-59 years	No education/elementary school	5.2	2.9
		Upper secondary education	1.4	1.2			Upper secondary education	1.3	1.3
		University/university college	0.6	0.5			University/university college	0.6	0.6
	60 and above	No education/elementary school	0.7	1.3		60 and above	No education/elementary school	1.0	2.2
		Upper secondary education	1.0	1.3			Upper secondary education	0.9	1.5
		University/university college	0.3	0.3			University/university college	0.3	0.3
Eastern Norway	18-29 years	No education/elementary school	25.6	2.8	Trøndelag	18-29 years	No education/elementary school	8.0	3.1
		Upper secondary education	2.2	1.1			Upper secondary education	0.9	1.3
		University/university college	1.4	1.6			University/university college	2.0	1.3
	30-59 years	No education/elementary school	4.6	6.7		30-59 years	No education/elementary school	2.2	2.6
		Upper secondary education	1.5	1.5			Upper secondary education	1.4	1.2
		University/university college	0.7	0.6			University/university college	0.5	0.6
	60 and above	No education/elementary school	1.2	2.0		60 and above	No education/elementary school	1.0	1.8
		Upper secondary education	1.0	2.0			Upper secondary education	1.2	1.7
		University/university college	0.3	0.3			University/university college	0.3	0.3
Southern Norway	18-29 years	No education/elementary school	5.5	9.0	Northern Norway	18-29 years	No education/elementary school	7.1	3.1
		Upper secondary education	1.4	3.1			Upper secondary education	2.2	3.4
		University/university college	1.5	1.8			University/university college	1.0	2.3
	30-59 years	No education/elementary school	4.2	2.2		30-59 years	No education/elementary school	2.9	2.9
		Upper secondary education	1.4	1.4			Upper secondary education	1.5	1.8
		University/university college	0.8	0.6			University/university college	0.6	0.8
	60 and above	No education/elementary school	2.5	3.8		60 and above	No education/elementary school	1.3	2.8
		Upper secondary education	2.5	2.4			Upper secondary education	1.4	2.2
		University/university college	0.4	0.4			University/university college	0.3	0.5