Norwegian Citizen Panel

2020, Seventeenth Wave

Methodology report

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BACKGROUND

This report describes the procedures of data collection in the seventeenth wave of The Norwegian Citizen Panel. Furthermore, the report discusses technical aspects of the data collection before turning to the representativity of the panel and how the weights are calculated.

The Norwegian Citizen Panel (NCP) is one of the main components of Digital Social Science Core Facility (DIGSSCORE) at the University of Bergen. NCP was established as a collaboration between several departments at the Faculty of Social Sciences at the University of Bergen and NORCE.

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

TECHNICAL ASPECTS OF THE SURVEY

SOFTWARE

The surveys are administrated through the web-based survey software Confirmit. 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.

PILOT – PROCEDURE AND ASSESSMENT

The survey went through small-N pilot testing before data collection. 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.

The field period started by inviting a random sample of the respondents (soft launch). This was done in order to minimize the consequences if the questionnaire contained technical errors. No such errors were located/reported after two hours of data collection among the random sample. Remaining panel members was therefore invited. No major errors were located/reported throughout the rest of the data collection; thus, the field period is regarded successful.

RANDOMIZATION PROCEDURES

Each wave of NCP has an extensive use of randomization procedures. The context of each randomization procedure may vary, [1] but they all share some common ground that will be described in the following.

All randomization procedures are executed live in the questionnaire. This means that the randomization takes place while the respondent is in the questionnaire, as opposed to pre-defined randomizations that are uploaded to the questionnaire. All randomizations are independent from another, unless the documentation states otherwise.

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[1] Some examples: sorting respondents in different thematic subsets, randomly allocate treatment value in experiments, randomize order of an answer list/array, order a sequence of questions by random, ask a given question to a subset of the respondents.

The randomization procedures are written in JavaScript. Math.random()[2] is a key function, in combination with Math.floor()[3]. These functions are used to achieve the following:

- Randomly select one value from a vector
- Randomly shuffle the contents of an array

The first procedure is typically used to determine a random sample of respondents to i.e. a control group. Say for example we wish to create two groups of respondents: group 1 and group 2. All respondents are randomly assigned the value 1 or 2, where each randomization is independent from one another. When N is large enough these two groups will be of equal size (50/50).

Here is an example of the JavaScript code executed in Confirmit:

```
var form = f("x1");
if(!form.toBoolean()) // If no previous randomization on x1
{
  var precodes = x1.domainValues();// Copies the length of x1
  var randomNumber : float = Math.random()*precodes.length;
  var randomIndex : int = Math.floor(randomNumber);
  var code = precodes[randomIndex];
  form.set(code);
}
```

The second procedure is typically used when defining the order of an answer list as random. This can be useful for example when asking for the respondent's party preference or in a list experiment. However, since i.e. a party cannot be listed twice, the procedure must take into account that the array of parties is reduced by 1 for each randomization.

Here is an example of the JavaScript code executed in Confirmit [4]:

```
Function shuffle(array) {
  var currentIndex = array.length, temporaryValue, randomIndex;
  // While there remain elements to shuffle...
  while (0 !== currentIndex) {
    // Pick a remaining element...
    randomIndex = Math.floor(Math.random() * currentIndex);
    currentIndex -= 1;

    // And swap it with the current element.
    temporaryValue = array[currentIndex];
    array[currentIndex] = array[randomIndex];
    array[randomIndex] = temporaryValue;
  }
  return array;
}
```

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[2] Please see following resource (or other internet resources):https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/random
[3] Please see following resource (or other internet resources):https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/floor
[4] Code collected from Mike Bostocks visualization: https://bost.ocks.org/mike/shuffle/

PANEL RECRUITMENT

Panel members were recruited in wave 1, wave 3, wave 8, wave 11, wave 14 and wave 16. All samples were drawn from the *National Population 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 Norwegian Citizen Panel after relevant permissions were acquired from the Norwegian Tax Administration.

The samples consisted of people over the age of 18 that were randomly drawn from the register. The extracted information was a) last name, b) first name, c) address, d) gender, e) year of birth, and f) phone number (the latter was not included in wave 1). The sample excluded persons without a current home address in Norway.

For a detailed description of the recruitment process in wave 1, wave 3, wave 8, wave 11, wave 14 and wave 16, we refer to the respective methodology reports for each wave. Note, however, that there are some differences between the four recruitment processes. Please refer to table 1.

Table 1: Summary of recruitment processes

	Sample size	Mode	Contacts	Returned letters	Response Rate (%)
Recruitment 1 (wave 1)	25 000	Postal	2	546	20.1 %
Recruitment 2 (wave 3)	25 000	Postal, phone/SMS	4	543	23.0 %
Recruitment 3 (wave 8)	22 000	Postal/SMS	3	479	19.4 %
Recruitment 4 (wave 11)	14 000	Postal/SMS	2	334	15.1 %
Recruitment 5 (wave 14)	14 000	Postal/SMS	2	389	15.0 %
Recruitment 6 (wave 16)	34 000	Postal/SMS	2	994	14.9 %

DATA COLLECTION WAVE 17

RESPONSES BY METHOD OF DATA COLLECTION

The survey was launched January 15th 2020. It was sent to the email accounts of the panel's 23,211 members. In these e-mails, the basic information about the Norwegian 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 had a registered mobile phone number or not, distributed via SMS and e-mail. Prior to wave 17, 32.8 percent of the panel was registered with a mobile phone number.

**Table 2: Responses and response rate for panel members by the different stages of data collection**

	Responses	Cumulative Responses	Response Rate (%)	Cumulative Response Rate
Invitation (15th of January)	6 317	6 317	42.3 %	42.3 %
1st reminder (21st of January)	2 520	8 837	16.9 %	59.2 %
2nd reminder (27th of January)	1 563	10 400	10.5 %	69.6 %
3rd reminder – email (31st of January)	577	10 977	3.9 %	73.5 %
3rd reminder – SMS (31st of January)	407	11 384	2.7 %	76.2 %

In total, the questionnaire received 11,384 answers. 6,317 respondents completed the survey in the period between the invitation and the first reminder (January 15th – January 21st), a response rate of 42.3 percent. The pattern is similar to earlier waves; the email invitation produces a higher number of respondents than the subsequent reminders. For details on the number of respondents after each reminder, we refer you to table 2.

As before, we exclude respondents that have not participated in any of the last three waves when we calculate the response rate. This leaves us with 14,936 eligible respondents. The overall response rate, as reported in table 2, is **76.2 percent**.

RESPONSE OF EXISTING PANEL MEMBERS OVER TIME

The number of respondents in this last wave is as already mentioned 11,384 – compared to 12,904 in wave 16. This gives us an overall wave-to-wave retention rate of 88.2 percent. This is on par with what is considered normal as illustrated in figure 1. Fall of 2017 (t10, t8 and t3, depending on time of recruitment) and fall of 2016 (t7 and t4, depending on time of recruitment) have higher retention rates, suggesting that questionnaires fielded in the fall receive answers from a larger share of panel members compared to questionnaires fielded in the spring.


Figure 1: Wave-to-wave retention rate
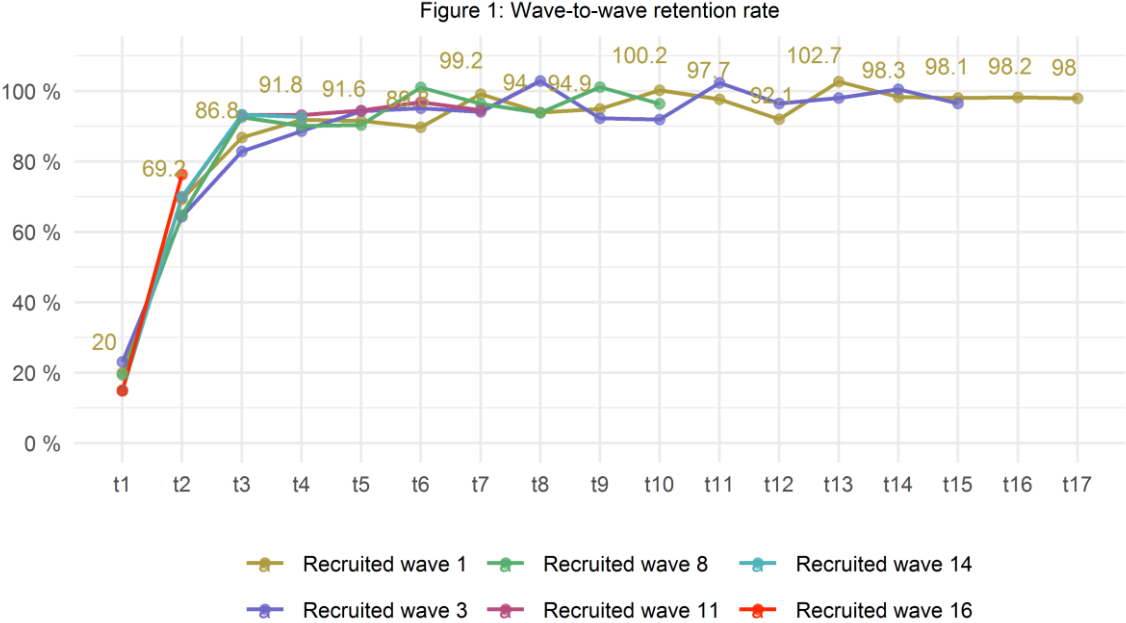
PLATFORMS

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. For instance is a question grid presented as a set of individual questions on the same page, which is different from the desktop presentation where grid questions are presented in a table.

41.1 percent of all survey respondents that opened the questionnaire used a mobile phone. 8 percent of the mobile users did not complete to such an extent that they were classified as respondents in the wave 17. For non-mobile users the percentage was 7 percent. Mobile users were thus marginally more likely to leave the questionnaire before completion. This was also the case in previous waves.

**Figure 2: Share of mobile users by gender and age in wave 17**
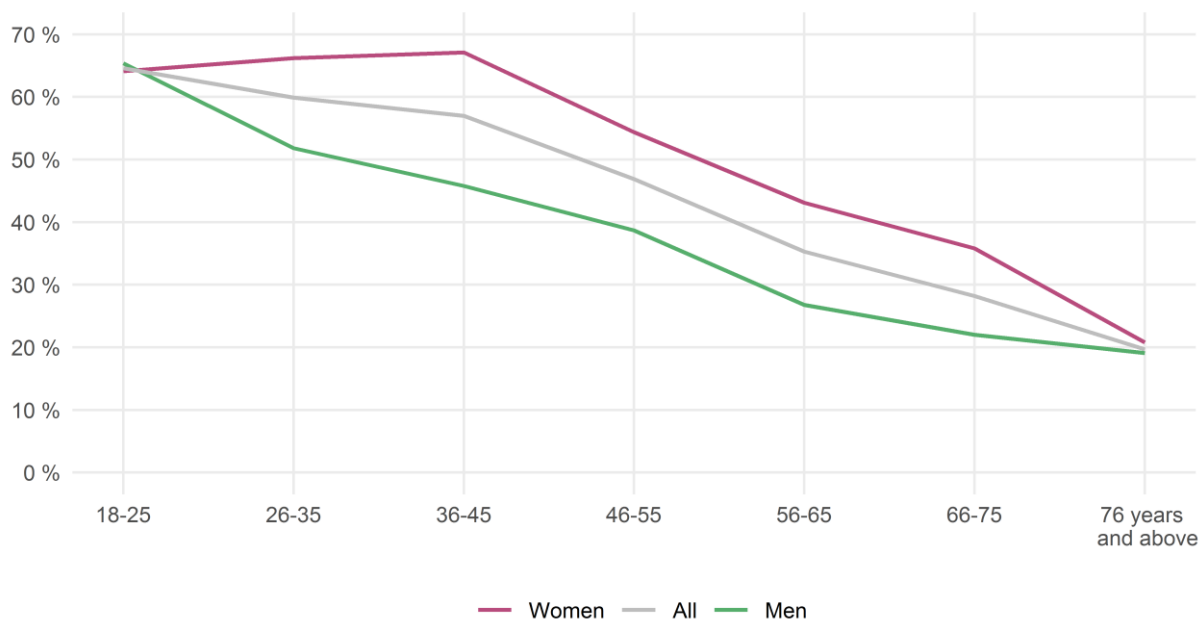
Respondents between 18 and 45 years old are more inclined than others to use their mobile phone when answering the questionnaire, as shown in figure 2. From 46 years and older, the share of mobile users declines substantially. Overall, women are more inclined to use mobile to answer the questionnaire compared to men, and the "gender gap" is most pronounced among the 36-45 year olds. In the oldest and the youngest age groups however, there is no difference in mobile device usage *between genders.* In sum, 64.6 percent of respondents in the youngest age bracket used a mobile device compared to only 19.7 percent of the seniors above the age of 75.

TIME USAGE

The average respondent used 18.6 minutes to complete the questionnaire. This somewhat longer than the estimate of 15 minutes respondents were presented with upon invitation. 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 18.6 minutes therefore only includes the respondents which used less than, or equal to, 60 minutes.

Figure 3: Time usage of survey respondents in wave 17
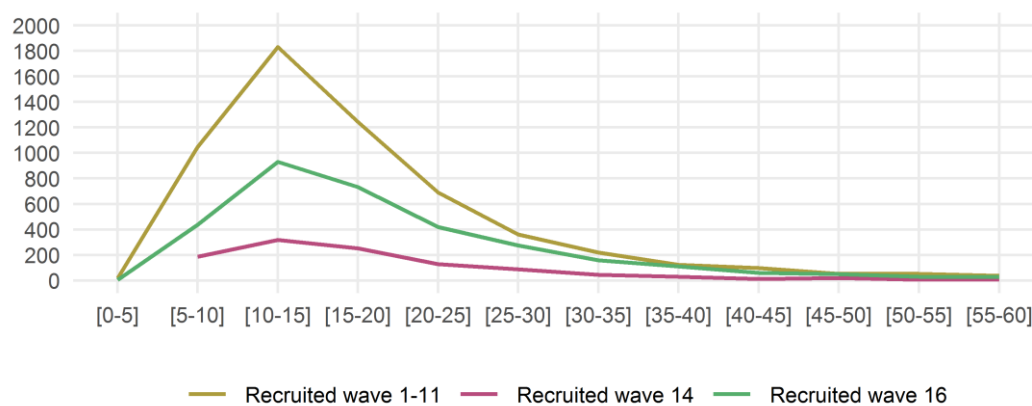
Like in previous waves of the NCP, respondents were subdivided into groups. In wave 17 however, only three groups were assigned, demarcated by time of recruitment:

- Group 1: Recruited between wave 1-11
- Group 2: Recruited in wave 14
- Group 3: Recruited in wave 16

The differences in the questionnaire between the groups were fairly minor, amounting to the inclusion or exclusion of a few questions per group. While figure 3 highlights that the three groups broadly follows the same pattern in terms of time usage, table 3 shows that respondents in group 3 spent slightly more time filling out the questionnaire, compared to the other groups.

Table 3: Average time usage (minutes) in each subset in wave 17

	All respondents	G1-respondents	G2-respondents	G3-respondents
All users	18.6	18.0	18.6	19.7
Non-mobile users	19.4	18.7	19.5	20.6
Mobile users	17.5	16.8	17.4	18.5

As before, mobile users on average use noticeably less time on the survey than non-mobile users. The documentation report from wave 7 showed that mobile users spend less time writing text on open text questions. Mobile users in wave 7 wrote on average 42 characters in the open text questions, while users answering on non-mobile platforms on average wrote 62 characters.

The same report also noted that mobile users spend considerably 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 wave 7 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 was 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 panel as a whole. 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 when recruiting panel and maintaining panel members:

- 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.

On January 1st 2020 Norway implemented a regional reform decreasing the number of counties ("fylker") from 18 to 11. Of note is that the county of Akershus – traditionally grouped together with Oslo in the NCP – merged with Buskerud and Østfold to form the new county of Viken. In this report, we retain the abovementioned geographical divisions with basis in the old county structure.

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 4.2 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 however particularly strong for young men. As expected, individuals with education from universities or university colleges are overrepresented. All of these observations are still true for wave 17.

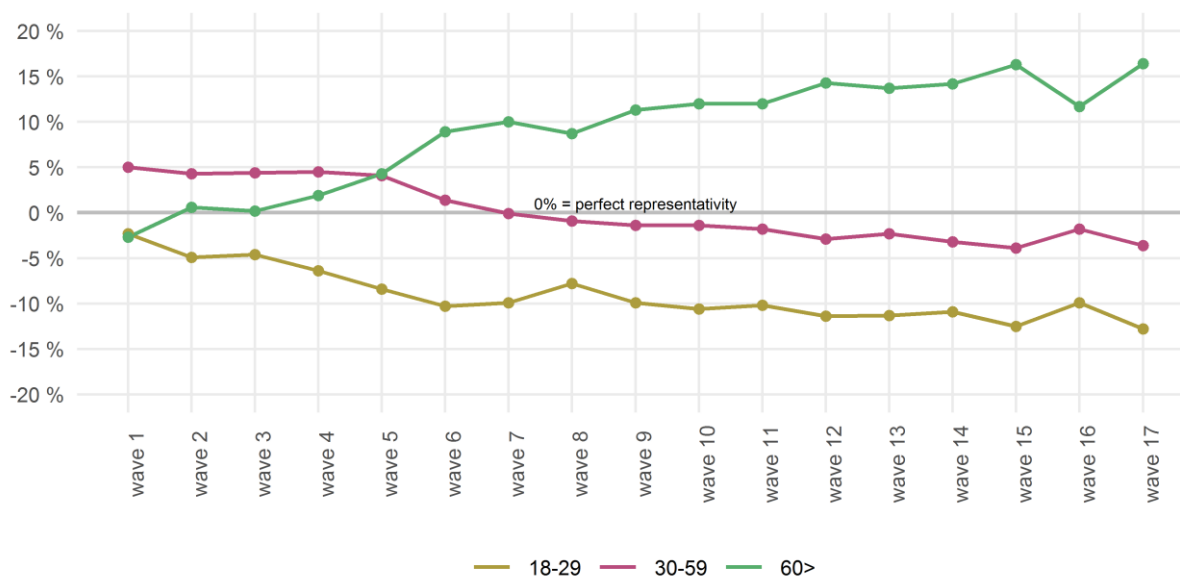**Table 4: Age distribution in the population and the net sample of wave 17**

	18-29 years	30-59 years	60 years and above
Population	20.3 %	51.1 %	28.6 %
Net sample	7.5 %	47.0 %	45.5 %

From the age distribution presented in table 4, we see that 18-29-year olds are underrepresented in the net sample of wave 17. The representation of the age group 30-59 years in the net sample is slightly underrepresented compared to the distribution in the population, while respondents aged 60 years and above are clearly overrepresented.

In wave 17, all age brackets have become less representative compared to the population (figure 4). From wave 15 to 16 we saw a small drop in the overrepresentation of older respondents and an increase in the underrepresentation of younger and middle aged respondents. With wave 17 however, we observe a return to levels of representatively similar to wave 15.

Waves that succeed a recruitment wave share a pattern. After each recruitment wave (wave 1, 3, 8, 11, 14 and 16), all age brackets become either more underrepresented or more overrepresented compared to the population. These patterns are explained by varying degree of panel-loyalty between the different age groups. The oldest age group started out as underrepresented in wave 1, but thereafter they have become increasingly overrepresented since they are more likely to answer once they have been recruited. A lesser sense of loyalty/interest explains the development of 18-29-year olds. This group also started out as underrepresented, but their underrepresentation has steadily increased as they are less likely to answer succeeding waves after they have been recruited.

Figure 4: Representativity of age groups from wave 1-17

New patterns emerge when adding gender in table 5; young men are more underrepresented than young women. In the oldest age group, men are clearly overrepresented, more so than women. Lastly, the middle-aged men in the net sample are underrepresented, while women in this age bracket are slightly overrepresented.

Table 5: Combined distribution of age and gender in the population and the net sample of wave 17

	18-29 years		30-59 years		60 years and above	
	Men	Women	Men	Women	Men	Women
Population	10.4 %	9.9 %	26.0 %	24.7 %	13.8 %	15.4 %
Net sample	2.9 %	4.6 %	22.0 %	25.0 %	24.7 %	20.9 %

The inclusion of educational level in table 6 reveals a systematic underrepresentation of respondents with little or no education, independent of age and gender. As discussed in relation to table 4, the underrepresentation is especially strong for young respondents. The underrepresentation is also strong for middle-aged respondents with little or no education. There is also some underrepresentation of respondents aged 60 and above with little or no education.

Table 6: Combined distribution of age, gender and education in the population and the net sample of wave 17

		Population		Net sample	
		Men	Women	Men	Women
No education/elementary school	18-29 years	3.8 %	2.9 %	0.2 %	0.3 %
Upper secondary education		4.2 %	3.3 %	1.3 %	1.8 %
University/university college		2.3 %	3.6 %	1.3 %	2.4 %
No education/elementary school	30-59 years	5.5 %	4.6 %	0.7 %	0.6 %
Upper secondary education		11.2 %	7.9 %	7.9 %	6.1 %
University/university college		9.3 %	12.2 %	13.5 %	18.5 %
No education/elementary school	60 and above	3.1 %	4.4 %	2.0 %	1.7 %
Upper secondary education		6.9 %	7.4 %	8.6 %	6.6 %
University/university college		3.8 %	3.6 %	14.1 %	12.4 %

Respondents that have upper secondary education as their highest completed education are underrepresented in all groups, except men with upper secondary education aged 60 years or above. Those who have university or university college education are clearly overrepresented in the two oldest age brackets, independent of gender.

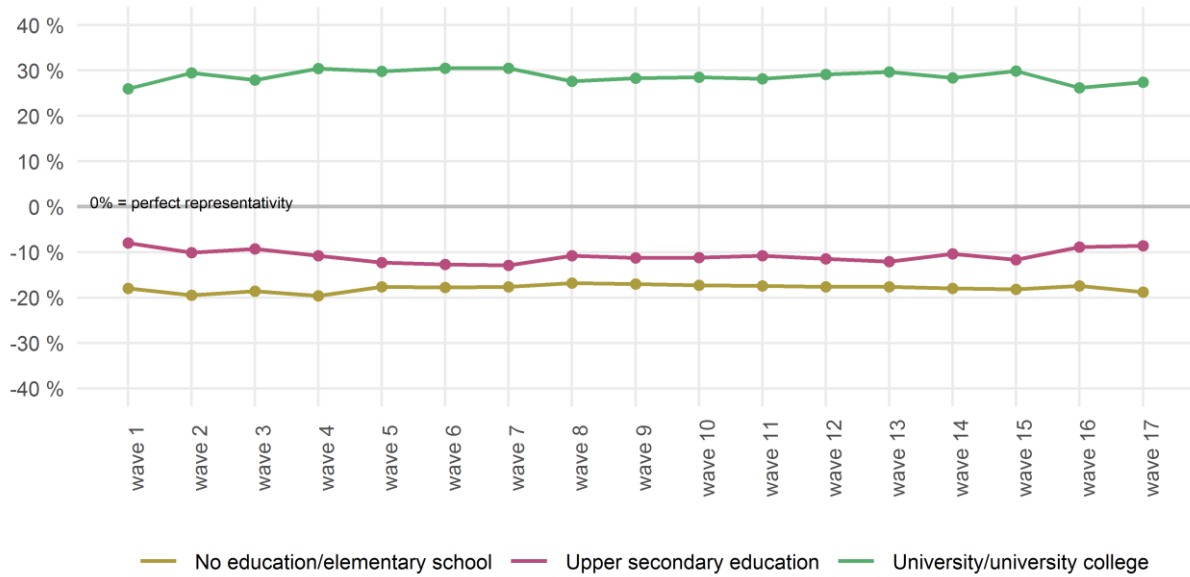## Figure 5: Representativity of education groups from wave 1-17

Figure 5 illustrates the representation of education groups since wave 1. The general trend is that the highly educated are overrepresented compared to those with less or no education. Except for slight adjustments improving the representativity of the education groups when new respondents are recruited (wave 1, 3, 8, 11, 14 and 16), the overall pattern has remained stable throughout all waves.

In regards to geography, (table 7) we observe that Trøndelag are on level with the population, while the capital area – the counties of Oslo and Akershus – is clearly overrepresented. Western Norway is also overrepresented, but not as prominently as the capital area. Northern Norway and to a lesser extent Southern Norway, are somewhat underrepresented. Overall, Eastern Norway are the most underrepresented among the respondents in the seventeenth wave.

Table 7: Combined distribution of age, gender and geography in the population and the net sample of wave 17

		Population			Net sample		
		Men	Women	Total	Men	Women	Total
Akershus/Oslo	18-29 years	2.6 %	2.6 %	5.2 %	0.8 %	1.5 %	2.3 %
	30-59 years	6.8 %	6.5 %	13.3 %	6.5 %	7.9 %	14.4 %
	60 and above	2.8 %	3.2 %	5.9 %	6.2 %	5.7 %	11.9 %
	In total	12.1 %	12.3 %	**24.4 %**	13.5 %	15.1 %	**28.6 %**
Eastern Norway	18-29 years	2.5 %	2.3 %	4.8 %	0.5 %	0.9 %	1.4 %
	30-59 years	6.6 %	6.4 %	13.0 %	4.6 %	5.3 %	9.9 %
	60 and above	4.1 %	4.6 %	8.7 %	6.3 %	5.5 %	11.8 %
	In total	13.2 %	13.3 %	**26.5 %**	11.4 %	11.7 %	**23.1 %**
Southern Norway	18-29 years	0.6 %	0.6 %	1.2 %	0.1 %	0.2 %	0.3 %
	30-59 years	1.4 %	1.4 %	2.8 %	1.0 %	1.3 %	2.3 %
	60 and above	0.8 %	0.9 %	1.7 %	1.3 %	1.0 %	2.3 %
	In total	2.8 %	2.8 %	**5.7 %**	2.4 %	2.5 %	**4.9 %**
Western Norway	18-29 years	2.7 %	2.6 %	5.3 %	0.8 %	1.1 %	1.9 %
	30-59 years	6.7 %	6.2 %	12.9 %	6.2 %	6.7 %	12.9 %
	60 and above	3.5 %	3.8 %	7.3 %	6.8 %	5.6 %	12.4 %
	In total	12.9 %	12.6 %	**25.5 %**	13.8 %	13.4 %	**27.2 %**
Trøndelag	18-29 years	1.0 %	0.9 %	1.9 %	0.4 %	0.6 %	1.0 %
	30-59 years	2.2 %	2.0 %	4.2 %	2.0 %	1.9 %	3.9 %
	60 and above	1.2 %	1.3 %	2.6 %	2.0 %	1.5 %	3.5 %
	In total	4.4 %	4.3 %	**8.7 %**	4.4 %	4.0 %	**8.4 %**
Northern Norway	18-29 years	1.0 %	0.9 %	1.9 %	0.2 %	0.3 %	0.5 %
	30-59 years	2.3 %	2.1 %	4.4 %	1.6 %	2.0 %	3.6 %
	60 and above	1.4 %	1.5 %	2.9 %	2.1 %	1.6 %	3.7 %
	In total	4.7 %	4.6 %	**9.3 %**	3.9 %	3.9 %	**7.8 %**

The clearly most overrepresented group are men and women aged 60 years and above living in the capital area, with a deviation of 6 percentage points. Older respondents in Western Norway follows the same pattern, with an overrepresentation of 5.1 percentage points. The most underrepresented groups are young men and women in all regions, in addition to middle-aged men and women in Eastern Norway.

Figure 6: Representativity of regions from wave 1-17
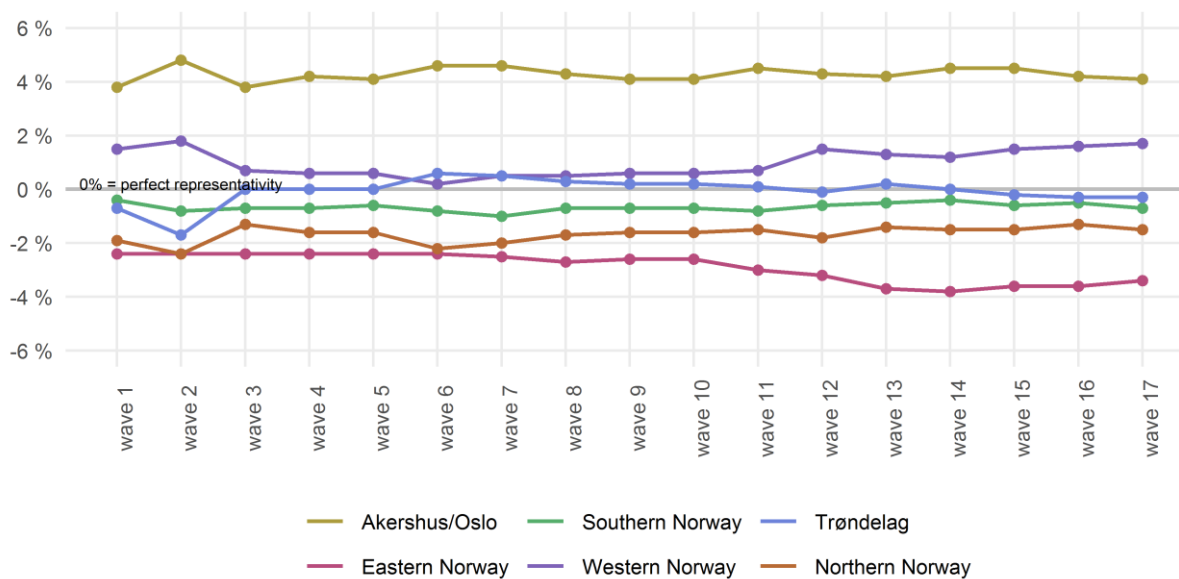
The representativity of regions has fairly constant from wave 1 through wave 17 (figure 6 above). In terms of noteworthy trends, we do observe that the underrepresentation of Eastern Norway declined from wave 10 to wave 13 and then leveled off. Conversely, during the same time interval, Trøndelag has moved in the opposite direction in terms of representativity. Nevertheless, geography does not seem to be the most pertinent factor in predicting the loyalty of the respondent, at least to a lesser extent than to age and education.

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.[5] 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 9 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. 1.9 percent of the seventeenth 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 the same as in 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 8 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.

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

Table 8: 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	5.5 %	24.3 %	24.3 %	-23.8 %	0.0 %
Upper secondary education	32.3 %	40.9 %	40.9 %	-8.6 %	0.0 %
University/university college	62.2 %	34.8 %	34.8 %	27.4 %	0.0 %

Table 9: Weights applied to different strata (weight 2)

Region	Age	Education	Men	Women	Region	Age	Education	Men	Women
Oslo/Akershus	18-29 years	No education/elementary school	9,4	4,0	Western Norway	18-29 years	No education/elementary school	6,1	5,2
		Upper secondary education	1,7	1,0			Upper secondary education	1,9	1,4
		University/university college	1,5	1,1			University/university college	1,6	1,2
	30-59 years	No education/elementary school	6,9	5,7		30-59 years	No education/elementary school	5,1	5,1
		Upper secondary education	1,4	1,1			Upper secondary education	1,3	1,1
		University/university college	0,7	0,6			University/university college	0,6	0,6
	60 and above	No education/elementary school	1,4	1,8		60 and above	No education/elementary school	1,2	2,3
		Upper secondary education	0,9	1,2			Upper secondary education	0,9	1,2
		University/university college	0,3	0,3			University/university college	0,3	0,3
Eastern Norway	18-29 years	No education/elementary school	10,9	6,5	Trøndelag	18-29 years	No education/elementary school	4,8	3,9
		Upper secondary education	2,3	1,4			Upper secondary education	1,2	1,1
		University/university college	1,6	1,8			University/university college	1,4	1,1
	30-59 years	No education/elementary school	6,7	7,2		30-59 years	No education/elementary school	4,6	5,1
		Upper secondary education	1,5	1,4			Upper secondary education	1,4	1,5
		University/university college	0,7	0,8			University/university college	0,6	0,7
	60 and above	No education/elementary school	1,8	2,3		60 and above	No education/elementary school	1,4	2,7
		Upper secondary education	1,0	1,5			Upper secondary education	1,0	1,6
		University/university college	0,3	0,3			University/university college	0,3	0,4
Southern Norway	18-29 years	No education/elementary school	14,4	3,6	Northern Norway	18-29 years	No education/elementary school	8,6	5,3
		Upper secondary education	2,0	1,4			Upper secondary education	1,8	1,9
		University/university college	1,5	1,6			University/university college	2,1	1,8
	30-59 years	No education/elementary school	4,0	4,3		30-59 years	No education/elementary school	4,7	3,7
		Upper secondary education	1,6	1,3			Upper secondary education	1,7	1,2
		University/university college	0,7	0,7			University/university college	0,7	0,7
	60 and above	No education/elementary school	1,5	2,2		60 and above	No education/elementary school	1,3	3,5
		Upper secondary education	1,0	1,7			Upper secondary education	1,1	1,8
		University/university college	0,3	0,4			University/university college	0,3	0,3