

# Norwegian Citizen Panel

2020, Nineteenth Wave

Methodology report

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## BACKGROUND

This report describes the procedures of data collection in the nineteenth 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.

This nineteenth wave of NCP was part of the first wave of KODEM (Coordinated Online Panels for research on Democracy and Governance in Norway), a digital infrastructure for coordinating panel surveys directed at four sub populations. Besides NCP, the subpopulations were: elected representatives on all political levels, through the Panel of Elected Representatives (PER); journalists and editors, through the Norwegian Panel of Journalists (NJP); and public administrators, through the Panel of Public Administrators (NFP). While NCP and PER were established panels, with infrastructure and panel members, NJP and NFP had their first wave. We provide separate methodology reports for each of the panels.

Wave nineteen was the fourth wave of NCP to be fielded during the Coronavirus pandemic. In addition to the ordinary waves eighteen and nineteen, two extraordinary fast track waves were fielded in March and August respectively, as a response to the pandemic.

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 AND SOFT LAUNCH

The survey went through small-N and large-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 high participation respondents (soft launch). This was done in order to minimize the consequences if the questionnaire contained technical errors. No such errors were located/reported, and remaining panel members was therefore invited the following day.

## RANDOMIZATION PROCEDURES

Each wave of NCP has an extensive use of randomization procedures. The context of each randomization procedure may vary,<sup>1</sup> 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.

The randomization procedures are written in JavaScript. `Math.random()`<sup>2</sup> is a key function, in combination with `Math.floor()`<sup>3</sup>. 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 Confirmat:

```
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 Confirmat<sup>4</sup>:

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<sup>1</sup> 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.

<sup>2</sup> Please see following resource (or other internet resources):[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Math/random](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/random)

<sup>3</sup> Please see following resource (or other internet resources):[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Math/floor](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/floor)

<sup>4</sup> Code collected from Mike Bostocks visualization: <https://bost.ocks.org/mike/shuffle/>

```

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;
}

```

## PREVIOUS WAVES OF RECRUITMENT

Existing panel members were recruited in wave 1, wave 3, wave 8, wave 11, wave 14, wave 16 and wave 18. 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 Norwegian Tax Administration holds the formal responsibility for this registry, but the administration is partly outsourced 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 registry. 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.

A short summary of previous recruitment efforts is presented in table 1. Note that there are some differences between the recruitment processes. For a detailed description of each recruitment process, please refer to the respective methodology reports.

The response rate of recruitments 4-7 were substantially lower than earlier waves of recruitment. The most important explanation is new restrictions enforced by the Norwegian Tax Administration with regards to how many times the Citizen Panel can contact persons in the net sample. Respondents in recruitments 4-7 were contacted twice at most. Recruitment 1 also had a maximum of two contact points, but achieved a response rate of 20 percent. One explanation for why we cannot replicate a response rate of 20 percent in recruitments 4-7 might be that NCP did a lot of promotion of the panel through different media outlets leading up to and during recruitment 1. The promotion of the panel was also done in relation to the Norwegian Parliamentary election that same fall.

Table 1: Summary of recruitment processes

	Sample size	Mode	Contacts	Returned letters	Response Rate (%)
<b>Recruitment 1 (wave 1)</b>	25 000	Postal	2	546	20.1 %
<b>Recruitment 2 (wave 3)</b>	25 000	Postal, phone/SMS	4	543	23.0 %
<b>Recruitment 3 (wave 8)</b>	22 000	Postal/SMS	3	479	19.4 %
<b>Recruitment 4 (wave 11)</b>	14 000	Postal/SMS	2	334	15.1 %
<b>Recruitment 5 (wave 14)</b>	14 000	Postal/SMS	2	389	15.0 %
<b>Recruitment 6 (wave 16)</b>	34 000	Postal/SMS	2	994	14.9 %
<b>Recruitment 7 (wave 18)</b>	15 000	Postal/SMS	2	381	14 %

## DATA COLLECTION WAVE 19

### RESPONSES BY METHOD OF DATA COLLECTION

The survey was distributed via email to 25,050 existing panel members on November 2<sup>nd</sup> 2020. 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 or e-mail. Prior to wave nineteen, 35.9 percent of the panel members were registered with a mobile phone number.

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

	Response	Cumulative Responses	Response Rate (%)	Cumulative Response Rate
Invitation (2 <sup>nd</sup> and 3 <sup>rd</sup> of November)	7048	7048	43.5 %	43.5 %
1 <sup>st</sup> reminder (10 <sup>th</sup> of November)	2697	9745	16.6 %	60.1 %
2 <sup>nd</sup> reminder – email (13 <sup>th</sup> of November)	1443	11188	8.9 %	69 %
3 <sup>rd</sup> reminder – email (19 <sup>th</sup> of November)	783	11971	4.8 %	73.8 %
3 <sup>rd</sup> reminder – SMS (19 <sup>th</sup> of November)	489	12460	3 %	76.8 %

In total, 11,971 existing panel members filled out the questionnaire. A response rate of 43.5 percent was reached between the invitation and the first reminder (November 2<sup>nd</sup> - 10<sup>th</sup>). Following a pattern observed in earlier waves, the email invitation produced a higher number of respondents than the subsequent reminders. For details on the number of respondents after each reminder, see table 3.

When calculating the response rate, we follow the methodology from earlier waves, and exclude respondents who have not participated in any of the last three waves. This leaves us with 16,212 eligible respondents. The overall response rate, as reported in table 3, is **76.8 percent**.

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### RESPONSE OF EXISTING PANEL MEMBERS OVER TIME

Comparing the number of wave nineteen respondents (12,460), to the number of respondents in the previous wave eighteen (12,727), gives an overall wave-to-wave retention rate of 97.9 percent. Figure 1 shows that the wave-to-wave retention rate normally increases substantially the first three waves after recruitment, before stabilizing around a mean of 95 percent. A peak in the retention rates was also observed in the extraordinary fast track one wave of March 2020<sup>5</sup>.

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<sup>5</sup> This extraordinary wave focusing on matters related to the Coronavirus pandemic, yielded particularly high participation.

**Figure 1: Wave-to-wave retention rate**



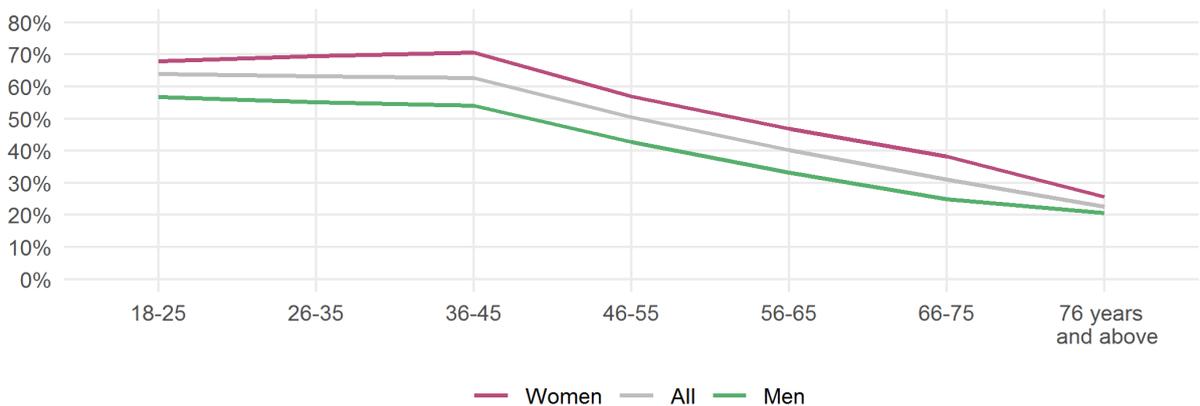
**PLATFORMS**

The questionnaire was prepared for data input via smart phones. In order to enhance the respondents’ experience with the questionnaire, mobile users got a slightly different visual representation of most 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. 44 percent of all survey respondents that opened the questionnaire used a mobile phone.

A small number of survey questions must be answered for a person to be included as a survey respondent. 6.1 percent of the mobile users did not reach this minimum requirement, compared to 7.6 percent for non-mobile users.

The share of mobile users is high among respondents between 18 and 45 of age. As shown in figure 2, the share of mobile users declines substantially with age, starting at age 46-55. Overall, women are more inclined to use a mobile phone to fill out the questionnaire than men are.

**Figure 2: Share of mobile users by gender and age in wave 19**

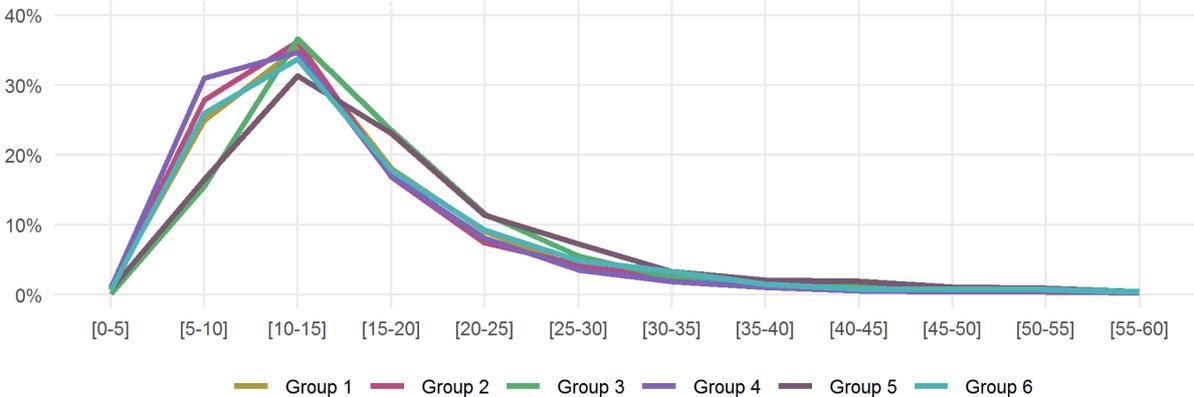


**TIME USAGE**

The average respondent used 15.8 minutes to complete the questionnaire. This is nearly a minute more than what the respondents were told upon invitation. Measuring average time usage poses a challenge, in 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 15.8 minutes therefore includes only the respondents which spent 60 minutes or less completing the survey.

**Figure 3: Time usage distribution of survey respondents in wave 19 subgroups**



The wave nineteen questionnaire consisted of six subsets of questions, given to groups 1-6. Respondents were allocated by random to all groups, except group 4 which was populated by respondents based on their wave eighteen subgroup. Note that groups five and six were given survey questions corresponding to the rest of the KODEM panels.

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

	All	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
All users	15.8	15.7	15	16.9	14.4	17.7	15.8
Non-mobile users	16.4	16.6	15.5	17.4	15.1	18.2	16.3
Mobile users	15	14.5	14.4	16.2	13.3	16.9	15.1

As previously observed, mobile users on average use less time filling out the questionnaire, than non-mobile users. In the wave seven methodological report, we found that mobile users spent less time answering 85 percent of the survey questions. The difference was particularly large in questions with long and/or complex vignettes. Mobile users also gave substantially shorter responses to open text questions, and were, in the case of one particularly complex question more likely to state that they did not know what to respond.

**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 members 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.

**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 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 nineteen.

**Table 4: Age distribution in the population and the net sample of wave 19**

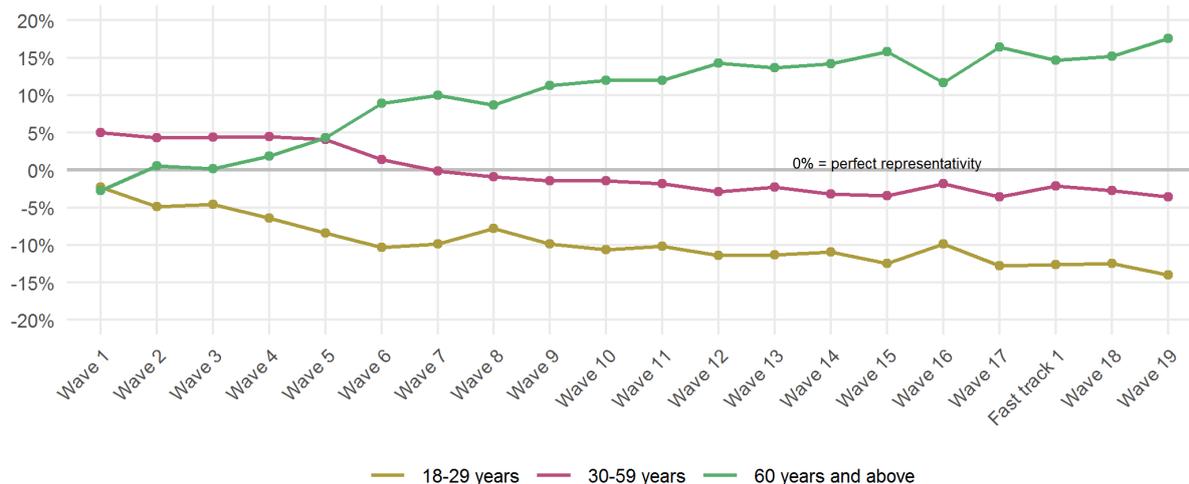
	18-29 years	30-59 years	60 years and above
<b>Population</b>	20.3 %	50.6 %	29.1 %
<b>Net sample</b>	6.9 %	47.3 %	45.8 %

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

Over time, we have observed a drift away from perfect representativity of age groups (figure 4). While the oldest respondents started out as underrepresented in wave one, they have become increasingly overrepresented over time. The youngest respondents, on the other side, have become increasingly underrepresented. This can be explained by a difference in panel membership loyalty; younger panel members are more likely to stop responding to new NCP waves after having been an active member of the panel.

Representativity is usually improved in recruitment waves (wave 1, 3, 8, 11, 14, 16, and 18), as the newly recruited respondents more closely represent the population. An exception to this, is Fast track one, where representativity was improved, even without the recruitment of new panel members. This exception may explain why the overall age representativity was not improved by recruitment in wave 18, with the exception of the youngest age bracket, which was marginally improved.

**Figure 4: Representativity of age groups from wave 1-19**



In table 5, the population and net sample are broken down by age and gender. This reveals a gender-age interaction in the panel representativity. Younger men are more underrepresented than younger women, while older men are more overrepresented than women in the same age bracket. Lastly, middle-aged men 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 18**

	18-29 years		30-59 years		60 years and above	
	Men	Women	Men	Women	Men	Women
<b>Population</b>	10.4 %	9.9 %	26.0 %	24.7 %	13.8 %	15.4 %
<b>Net sample</b>	2.4 %	3.8 %	21.9 %	25.1 %	25.2 %	21.5 %

The inclusion of educational level in table 6 reveals a systematic underrepresentation of respondents with little or no education, independent of age and gender. The underrepresentation is present in all age brackets, but is especially strong for young respondents.

**Table 6: Combined distribution of age, gender and education in the population and the net sample of wave 18**

		Population		Net sample	
		Men	Women	Men	Women
<b>No education/elementary school</b>	18-29 years	3.8 %	2.9 %	0.2 %	0.3 %
<b>Upper secondary education</b>		4.2 %	3.3 %	1 %	1.6 %
<b>University/university college</b>		2.3 %	3.6 %	1.2 %	2 %
<b>No education/elementary school</b>	30-59 years	5.5 %	4.6 %	0.7 %	0.5 %
<b>Upper secondary education</b>		11.2 %	7.9 %	7.6 %	6.1 %
<b>University/university college</b>		9.3 %	12.2 %	13.7 %	18.6 %
<b>No education/elementary school</b>	60 and above	3.1 %	4.4 %	2.1 %	1.7 %
<b>Upper secondary education</b>		6.9 %	7.4 %	8.6 %	6.7 %
<b>University/university college</b>		3.8 %	3.6 %	14.6 %	12.9 %

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 1-19

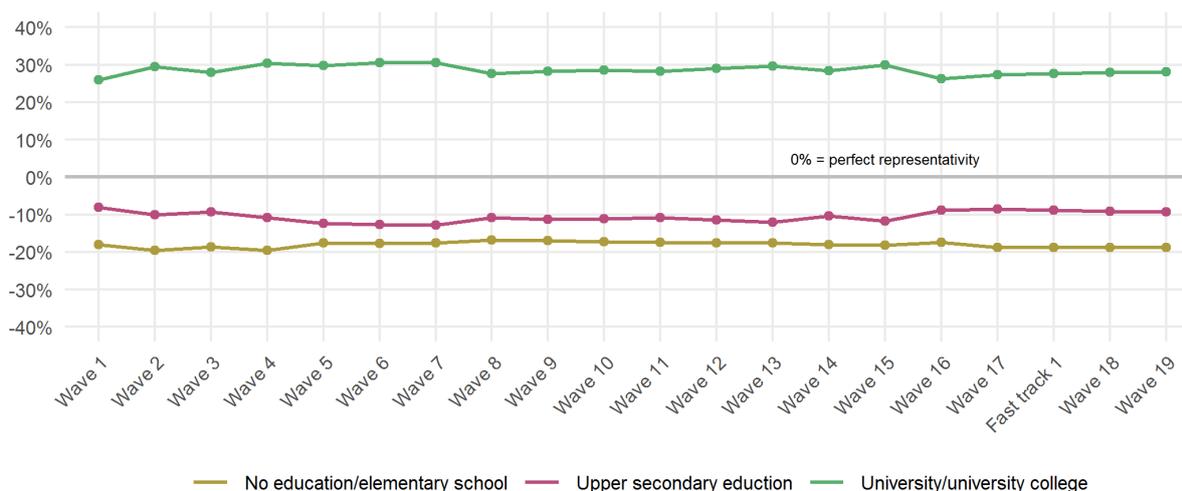


Figure 5 illustrates the representation of education groups since wave one. The general trend is that the highly educated are overrepresented compared to those with less or no education. Except for slight adjustments, improving the representativity of the education groups when new respondents are recruited (wave 1, 3, 8, 11, 14, 16 and 18), the overall pattern has remained stable throughout all waves.

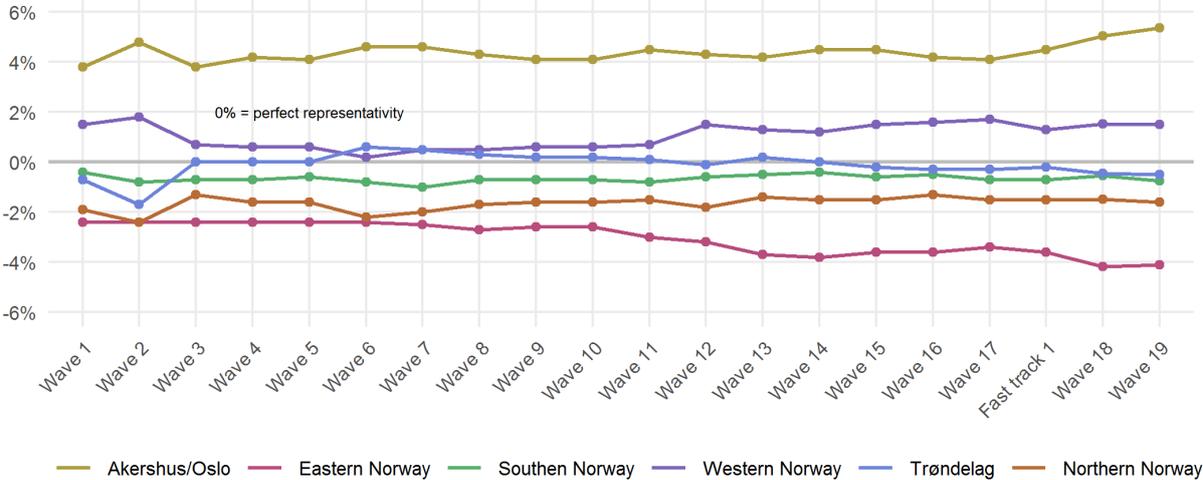
In regard to geography, (table 8) we observe that the representation of panel members living in Trøndelag and Southern Norway are on level with the population, while the capital region (the counties of Oslo and Akershus) is clearly overrepresented. Western Norway is also overrepresented, but not as prominent as the capital region. Northern Norway and Eastern Norway meanwhile are underrepresented among the respondents in the nineteenth wave.

Table 7: Combined distribution of age, gender and geography in the population and the net sample of wave 18

		Population			Net sample		
		Men	Women	Total	Men	Women	Total
<b>Akershus/Oslo</b>	18-29 years	2.6 %	2.6 %	5.2 %	0.7 %	1.5 %	2.2 %
	30-59 years	6.8 %	6.5 %	13.3 %	6.8 %	8.4 %	15.2 %
	60 and above	2.8 %	3.2 %	5.9 %	6.4 %	5.9 %	12.4 %
	<b>In total</b>	<b>12.1 %</b>	<b>12.3 %</b>	<b>24.4 %</b>	<b>14 %</b>	<b>15.8 %</b>	<b>29.8 %</b>
<b>Eastern Norway</b>	18-29 years	2.5 %	2.3 %	4.8 %	0.5 %	0.8 %	1.3 %
	30-59 years	6.6 %	6.4 %	13.0 %	4.2 %	5.2 %	9.4 %
	60 and above	4.1 %	4.6 %	8.7 %	6.2 %	5.4 %	11.6 %
	<b>In total</b>	<b>13.2 %</b>	<b>13.3 %</b>	<b>26.5 %</b>	<b>11 %</b>	<b>11.4 %</b>	<b>22.4 %</b>
<b>Southern Norway</b>	18-29 years	0.6 %	0.6 %	1.2 %	0.1 %	0.2 %	0.3 %
	30-59 years	1.4 %	1.4 %	2.8 %	1.1 %	1.2 %	2.3 %
	60 and above	0.8 %	0.9 %	1.7 %	1.3 %	1 %	2.3 %
	<b>In total</b>	<b>2.8 %</b>	<b>2.8 %</b>	<b>5.7 %</b>	<b>2.5 %</b>	<b>2.4 %</b>	<b>5 %</b>
<b>Western Norway</b>	18-29 years	2.7 %	2.6 %	5.3 %	0.8 %	0.9 %	1.7 %
	30-59 years	6.7 %	6.2 %	12.9 %	6.3 %	6.8 %	13.1 %
	60 and above	3.5 %	3.8 %	7.3 %	6.7 %	5.5 %	12.2 %
	<b>In total</b>	<b>12.9 %</b>	<b>12.6 %</b>	<b>25.5 %</b>	<b>13.8 %</b>	<b>13.2 %</b>	<b>27 %</b>
<b>Trøndelag</b>	18-29 years	1.0 %	0.9 %	1.9 %	0.3 %	0.6 %	0.9 %
	30-59 years	2.2 %	2.0 %	4.2 %	2 %	1.8 %	3.8 %
	60 and above	1.2 %	1.3 %	2.6 %	1.9 %	1.6 %	3.5 %
	<b>In total</b>	<b>4.4 %</b>	<b>4.3 %</b>	<b>8.7 %</b>	<b>4.2 %</b>	<b>4 %</b>	<b>8.2 %</b>
<b>Northern Norway</b>	18-29 years	1.0 %	0.9 %	1.9 %	0.2 %	0.3 %	0.4 %
	30-59 years	2.3 %	2.1 %	4.4 %	1.5 %	2 %	3.5 %
	60 and above	1.4 %	1.5 %	2.9 %	2.2 %	1.6 %	3.7 %
	<b>In total</b>	<b>4.7 %</b>	<b>4.6 %</b>	<b>9.3 %</b>	<b>3.9 %</b>	<b>3.9 %</b>	<b>7.7 %</b>

People aged 60 years and above, living in Akershus or Oslo, are quite overrepresented. This group accounts for 5.9 percent of the population, while making up 12.4 percent of wave nineteen respondents. Young people in all regions are underrepresented.

**Figure 6: Representativity of regions from wave 1-19**



The representativity of the regions has more or less been unchanged from wave 1 through wave seventeen (figure 6). Note that Akershus/Oslo and Eastern Norway diverge in wave eighteen. Compared to age and education, geography does, however, not seem to be a strong determinant of survey participation.

Please note that there is a known, but very small, bias, inflating the number of respondents from Oslo/Akershus and Trøndelag, while deflating the number of respondents from Eastern and Western Norway accordingly. See the wave eighteen methodological report for a more thorough discussion on this bias.

## 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.<sup>6</sup> 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 10 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 collected from NCP surveys. 2.3 percent of the nineteenth 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:

<sup>6</sup> The applied formula for weight  $w_i$  for element  $i$ , in strata  $h$  is:  $w_i = \frac{N_h/N}{n_h/n}$

- ◆ **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 discussed above, level of education is the greatest source of observed bias. We therefore 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. Please note that there is some small biases to the wave nineteen weights. In the appendix of the wave eighteen methodology report, we provide an in depth explanation and analysis concluding that the biases are negligible, and that using wave nineteen weights is still recommended.

Table 9 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 unweighted distribution is far from ideal, with a clear underrepresentation of people with low levels of education.

**Table 8: Effect of weight 2 on self-reported level of education**

	<b>Sample - not weighted</b>	<b>Sample - weighted</b>	<b>Population</b>	<b>Difference between sample and population</b>	<b>Difference between weighted sample and population</b>
<b>No education/elementary school</b>	5.5 %	24.1 %	24.3 %	-18.8	-0.2
<b>Upper secondary education</b>	31.6 %	41 %	40.9 %	-9.3	0.1
<b>University/university college</b>	63 %	34.9 %	34.8 %	28.2	0.1

## APPENDIX

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

		Men	Women			Men	Women		
Oslo/Akershus	18-29 years	No education/elementary school	20,0	9,8	Western Norway	18-29 years	No education/elementary school	10,7	7,0
		Upper secondary education	3,8	1,4			Upper secondary education	3,4	2,7
		University/university college	1,9	1,4			University/university college	1,7	1,9
	30-59 years	No education/elementary school	8,1	12,2		30-59 years	No education/elementary school	7,0	8,3
		Upper secondary education	1,3	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	1,6	2,1		60 and above	No education/elementary school	1,2	2,8
		Upper secondary education	0,8	0,9			Upper secondary education	0,7	1,0
		University/university college	0,2	0,3			University/university college	0,2	0,3
Eastern Norway	18-29 years	No education/elementary school	25,5	11,9	Trøndelag	18-29 years	No education/elementary school	10,4	7,7
		Upper secondary education	3,6	1,8			Upper secondary education	2,7	1,7
		University/university college	2,1	2,4			University/university college	1,7	1,1
	30-59 years	No education/elementary school	11,6	7,6		30-59 years	No education/elementary school	6,1	6,6
		Upper secondary education	1,7	1,6			Upper secondary education	1,4	1,9
		University/university college	0,8	0,7			University/university college	0,6	0,7
	60 and above	No education/elementary school	2,0	2,7		60 and above	No education/elementary school	1,3	3,2
		Upper secondary education	0,9	1,3			Upper secondary education	0,8	1,6
		University/university college	0,3	0,3			University/university college	0,3	0,3
Southern Norway	18-29 years	No education/elementary school	28,0	5,3	Northern Norway	18-29 years	No education/elementary school	50,5	
		Upper secondary education	5,4	2,9			Upper secondary education	3,8	1,9
		University/university college	2,6	1,6			University/university college	2,5	3,1
	30-59 years	No education/elementary school	5,8	6,7		30-59 years	No education/elementary school	4,6	8,4
		Upper secondary education	1,6	1,1			Upper secondary education	2,0	1,3
		University/university college	0,8	0,8			University/university college	0,8	0,7
	60 and above	No education/elementary school	1,2	3,1		60 and above	No education/elementary school	1,6	2,9
		Upper secondary education	1,1	1,3			Upper secondary education	0,8	1,7
		University/university college	0,3	0,4			University/university college	0,3	0,3