Norwegian Citizen Panel

2020, Fast Track 1 – Covid-19

Methodology report

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June, 2020

NORSK MEDBORGERPANEL

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TABLE OF CONTENTS

BACKGROUND

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.

This report describes the procedures of data collection in the first fast track 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.

TECHNICAL ASPECTS OF THE SURVEY

SOFTWARE

The surveys are administrated through the web-based research 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 a small-N pilot among the researchers involved in the project. In addition, ideas2evidence and DIGSSCORE team members tested the survey extensively during the development phase.

The field period started by inviting a random sample of the respondents (soft launch). This was done in order to minimize the consequences of potential technical errors in the questionnaire. 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 as 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.

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

[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.

[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

- 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;
}
```

PANEL RECRUITMENT

Panel members were recruited in wave 1, wave 3, wave 8, wave 11, wave 14 and wave 16 of the NCP. 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 it 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.

[4] Code collected from Mike Bostocks visualization: https://bost.ocks.org/mike/shuffle/

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 %

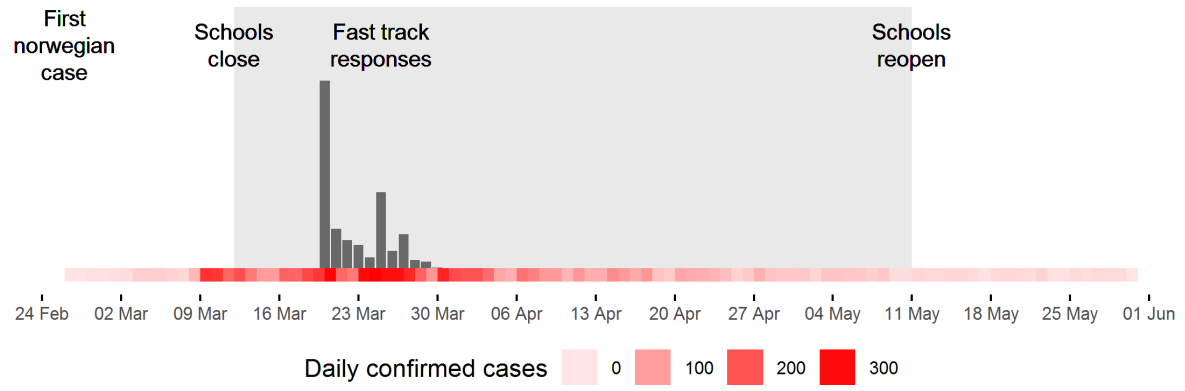
DATA COLLECTION FAST TRACK 1

CONTEXTUAL BACKGROUND

To cover the need for research on the outbreak of the Covid-19 pandemic of early spring 2020, this extraordinary wave of the NCP was issued shortly after the disease was first observed in Norway. The wave was conducted as a "fast track survey", where the survey questionnaire was developed over a short period of time, resulting in a survey with a lower level of complexity (i.e. simpler routing and less use of survey experiments) compared to a normal NCP data collection. The survey addressed a wide range of topics that were particularly relevant given the situation. Moreover, the fast track survey had a shortened field period. In a normal NCP wave, data is collected over two to three weeks. The fast track survey collected data for eleven days, between March 20th and March 30th.

Given the precarious and rapidly evolving situation prompting the fast track survey, the context of the data collection is even more important in this wave than in ordinary waves. In figure 1, the Fast track 1 field period is shown alongside indicators of disease spread and government response. While disease spread is self-explanatory, government response may be more diffuse, as the government implemented a number of different measures at different points in time. For the sake of simplicity, we use the closing and reopening of schools as an indicator of government response.

Figure 1: Distribution of responses per day, with indicators of disease spread and government response[5].



[5] Data from the Norwegian Institute of Public Health (https://fhi.no/sv/smittsomme-sykdommer/corona/dags--og-ukerapporter/ dags--og-ukerapporter-om-koronavirus) and regjeringen.no (https://regjeringen.no/no/tema/Koronasituasjonen/nasjonale-tiltak)

The very same day as the survey launched, March 20th, daily disease spread peaked at 308 new confirmed cases, and the number of new cases stayed high throughout the eleven-day field period. Eight days earlier, on March 12th, schools were closed. Thus, the data were collected at what we now recognize as the height of the disease spread, at a point where it was unclear whether the spread would stagnate, decline, or continue to accelerate. As for government response, the fast track survey was conducted in the early days of strong government response.

RESPONSES BY METHOD OF DATA COLLECTION

The survey was launched on March 20th 2020, when an invitation to participate was sent to the email accounts of the panel's 23,115 members. Non-participants were reminded two times, on the 25th and the 27th of March. In all 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 e-mails stressed the importance of research on public opinion during the pandemic, while also expressing understanding that some panel members might have difficulty finding the time to respond.

The field period lasted for eleven days, which is quite short compared to the normal waves which usually last two to three weeks. Still, the number of respondents in Fast track 1 (12,051) surpassed that of wave 17 (11,384). Wave-to-wave increases in the number of respondents are highly unusual, and we have not previously observed an increase of this magnitude in the NCP.[6] We theorize that the urgency of the pandemic may have served as an extra motivation for survey participation.

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 (20th of March)	8029	8029	52.1%	52.1%
1st reminder (25th of March)	2632	10661	17.1%	69.2%
2nd reminder (27th of March)	1390	12051	9%	78.2%

Between the invitation and the first reminder (March 20th – March 24th), 8,029 respondents completed the survey. This is two thirds of the responses to Fast track 1. The pattern is similar to earlier waves; the 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.

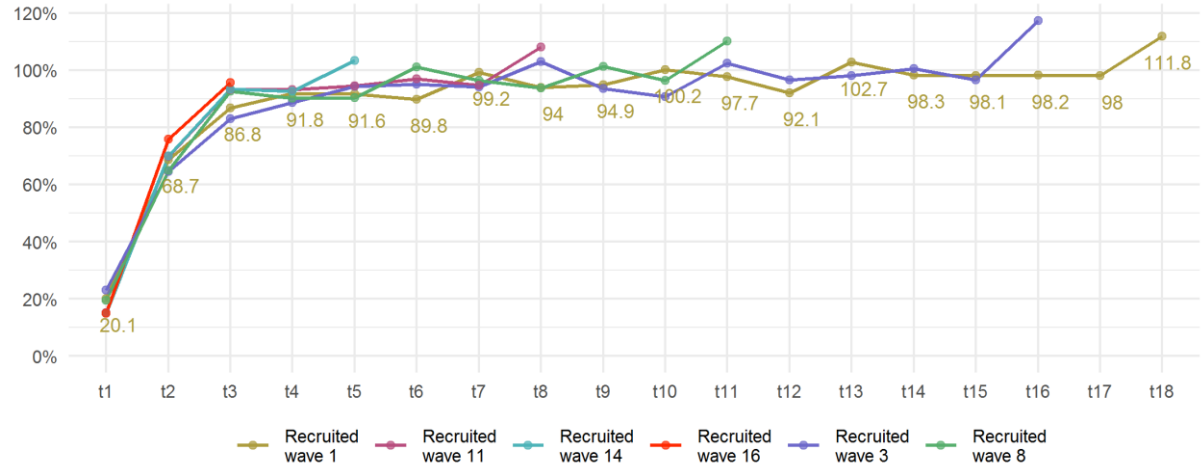
As in previous methodological reports, we exclude respondents that have not participated in any of the last three waves when calculating the response rate. This leaves us with 15,409 eligible respondents. The overall response rate, as reported in table 2, is **78.2 percent**.

RESPONSE OF EXISTING PANEL MEMBERS OVER TIME

We will now examine the panel members' response over time. We calculate the retention rate by dividing the number of responses in one wave, to the number of responses in the previous wave[7]. Retention rates are calculated separately for panel members recruited at different points in time, resulting in six separate time series. As shown in figure 2, the retention rates follow reproducible patterns. However, Fast Track 1, the end point of all the time series, deviates from the general pattern and sets a record retention rate for every point of panel membership maturity.

[6] In recruitment waves, the number of respondents is increased by adding new panel members.
[7] For the point of recruitment (t1), we use the number of invitations as a baseline. This is the same number as the recruitment rates reported in table 1.

Figure 2: Wave-to-wave retention rate

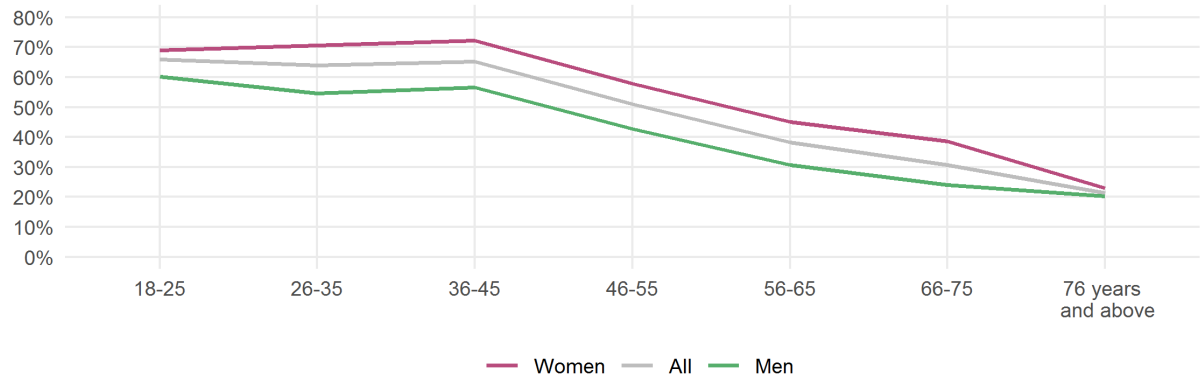


PLATFORMS

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. 45 percent of all 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. 2.8 percent of the mobile users did not reach this minimum requirement, compared to 3.2 percent for non-mobile users. Opposite to what we have usually observed in the NCP, mobile users were thus marginally more likely to complete the questionnaire than non-mobile users.

Figure 3: Share of mobile users by gender and age in Fast track 1

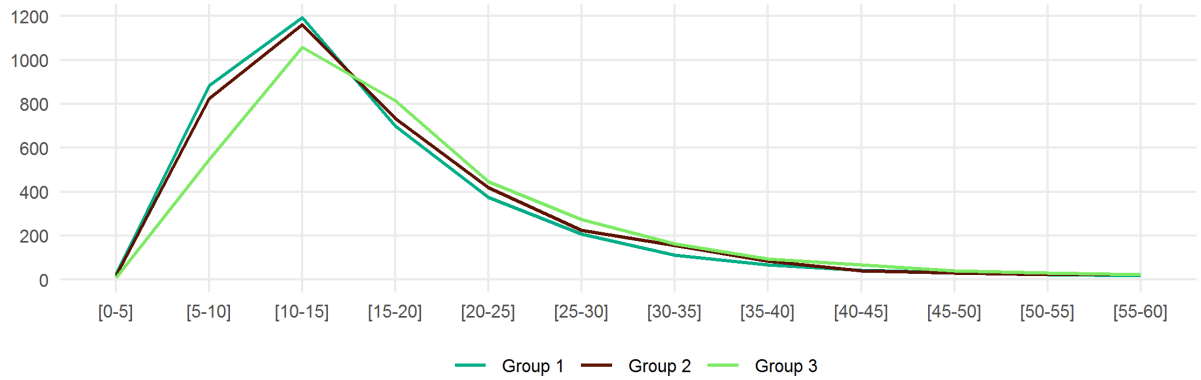


The share of mobile users is high among respondents between 18 and 45 of age. As shown in figure 3, the share of mobile users declines substantially with age, starting at age 46-55. Overall, women are more inclined to use a mobile phone to fill out the questionnaire than men are.

TIME USAGE

The average respondent spent 17.1 minutes filling out the questionnaire. This is two minutes more than what the respondents were told 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 time for completing the survey. The average of 17.1 minutes therefore only includes the respondents who used less than, or equal to, 60 minutes.

Figure 4: Time usage of survey respondents in Fast track 1



Upon entering the questionnaire, respondents were randomly assigned to one of three subsets, group 1-3, that were given different sets of survey questions. Figure 4 and table 3 show that group 3 respondents spent more time filling out the questionnaire than groups 1 and 2. Group 2 spent marginally less time than group 1.

Table 3: Average time usage (minutes) in each subset in Fast track 1

	All respondents	G1-respondents	G2-respondents	G3-respondents
All users	17.2	16.2	16.9	18.4
Non-mobile users	18.1	17.2	17.9	19.2
Mobile users	16.1	15.1	15.6	17.5

As previously observed, mobile users on average use substantially less time filling out the questionnaire, than non-mobile users. For a more in-depth comparison of mobile and non-mobile, please refer to the wave 7 methodology report.

REPRESENTATIVITY

In this section, we describe the representativity of the survey respondents, compared to the population. 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 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 for 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 4.1 million individuals. Earlier reports have documented a systematic underrepresentation of respondents belonging to the two lowest educational groups, independent of gender and age. However, the underrepresentation has been particularly strong for young men. Individuals with education from universities or university colleges are overrepresented.

Fast track 1 attracted more respondents than normal NCP waves, and this may have affected the demographic composition of the respondents slightly. While previously observed biases are still present in Fast track 1, we observe a small improvement in the representativity of age groups.

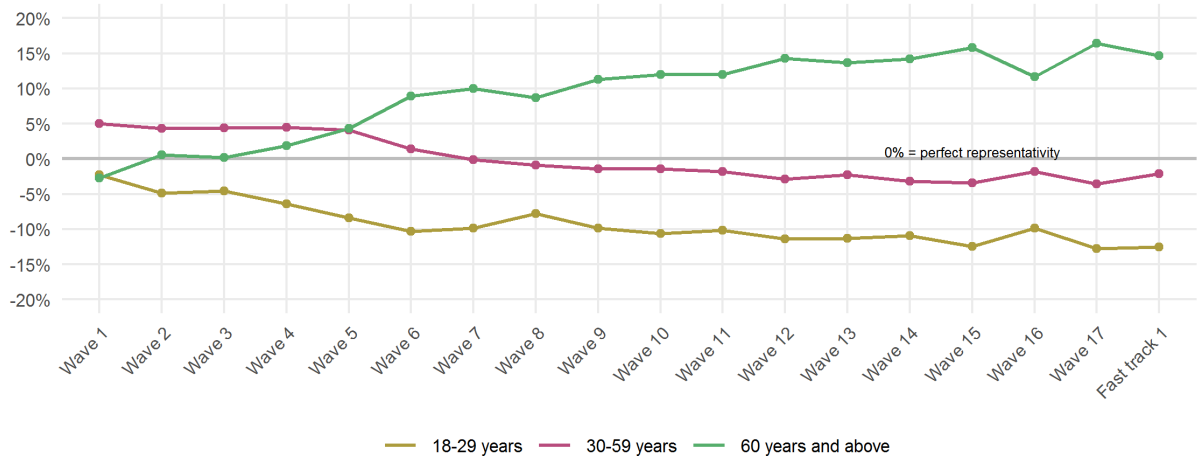
From the age distribution presented in table 4, we see that people aged 18 to 29 are underrepresented in the net sample. People aged 30 to 59 are underrepresented as well, but to a smaller degree than the youngest group. As such, people of age 60 and above, are clearly overrepresented in Fast track 1.

Table 4: Age distribution in the population and the net sample of Fast track 1

	18-29 years	30-59 years	60 years and above
Population	20.3%	51.1%	28.6%
Net sample	7.7%	48.5%	43.8%

Following each recruitment wave (waves 1, 3, 8, 11, 14 and 16), there is a tendency towards better age representativity (figure 5). This pattern can be explained by a difference in panel loyalty between the age brackets. While people aged 60 and above were initially underrepresented in wave 1, older respondents are more loyal to the panel, or more interested in panel participation, and have over time increasingly become overrepresented in the panel. Conversely, the youngest respondents are more likely to stop responding to the surveys and have increasingly become underrepresented. In Fast track 1 we observe a minor improvement to the representativity of all age groups, in particular among older and middle-aged people.

Figure 5: Representativity of age groups from wave 1 to Fast track 1



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 Fast track 1

	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%	4.8%	21.9%	26.5%	23.5%	20.3%

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 seems to be especially strong for young respondents.

Table 6: Combined distribution of age, gender and education in the population and the net sample of Fast track 1

		Population		Net sample	
		Men	Women	Men	Women
No education/elementary school	18-29 years	3.8 %	2.9 %	0.3%	0.4%
Upper secondary education	18-29 years	4.2 %	3.3 %	1.4%	1.9%
University/university college	18-29 years	2.3 %	3.6 %	1.2%	2.4%
No education/elementary school	30-59 years	5.5 %	4.6 %	0.7%	0.6%
Upper secondary education	30-59 years	11.2 %	7.9 %	7.9%	6.2%
University/university college	30-59 years	9.3 %	12.2 %	13.5%	19.8%
No education/elementary school	60 and above	3.1 %	4.4 %	2%	1.6%
Upper secondary education	60 and above	6.9 %	7.4 %	8.1%	6.5%
University/university college	60 and above	3.8 %	3.6 %	13.5%	12%

Respondents who have upper secondary education as their highest completed education are underrepresented in all age brackets, except for 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 6: Representativity of education groups from wave 1 to Fast track 1

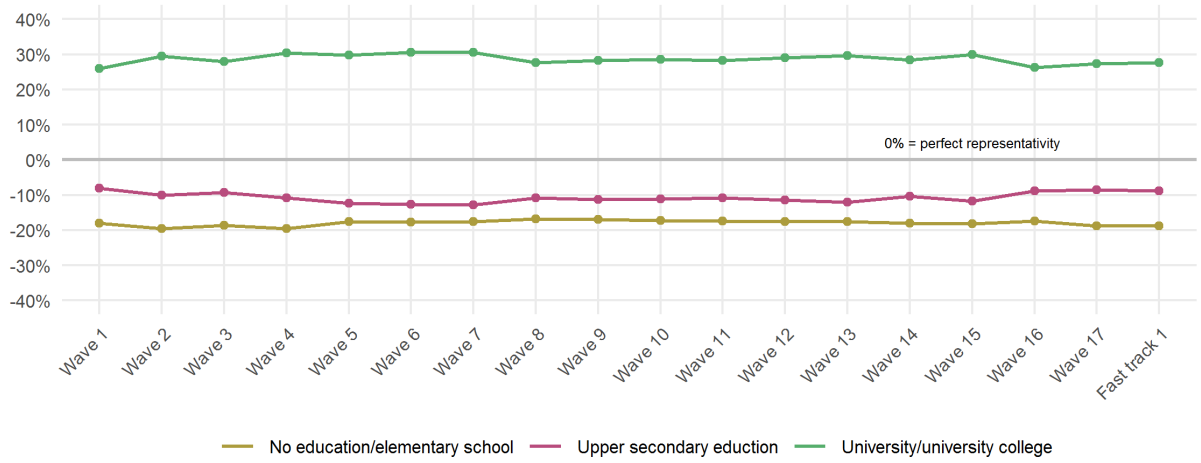


Figure 6 illustrates the representation of education groups since wave 1. The general trend is that the highly educated are overrepresented compared to those with less or no education. Except for slight adjustments, improving the representativity of the education groups when new respondents are recruited (wave 1, 3, 8, 11, 14 and 16), the overall pattern has remained stable throughout all waves.

Representativity by age, gender and geographical region is shown in table 7. The most notable bias is the 4.5 percentage point overrepresentation of the capital area, the counties of Oslo and Akershus. Western Norway is overrepresented as well, while all other regions are somewhat underrepresented. Easter Norway is the most

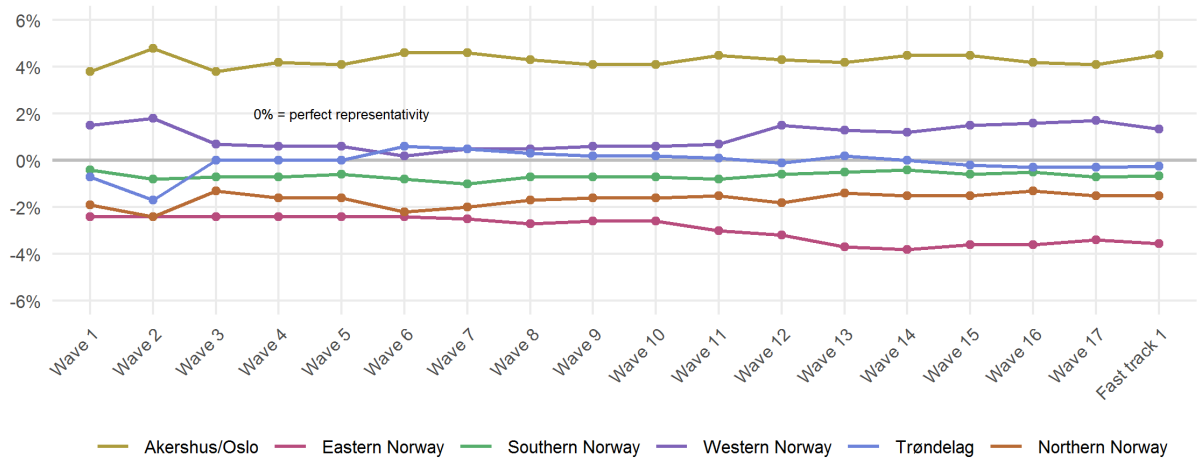
underrepresented, with a negative bias of 3.6 percentage points. Trøndelag and Southern Norway are quite close to being represented fairly.

Table 7: Combined distribution of age, gender and geography in the population and the net sample of Fast track 1

		Population			Net sample		
		Men	Women	Total	Men	Women	Total
Akershus/Oslo	18-29 years	2.6 %	2.6 %	5.2 %	0.8%	1.6%	2.4%
	30-59 years	6.8 %	6.5 %	13.3 %	6.4%	8.5%	14.9%
	60 and above	2.8 %	3.2 %	5.9 %	6%	5.6%	11.7%
	In total	12.1 %	12.3 %	**24.4 %**	13.2%	15.7%	**28.9%**
Eastern Norway	18-29 years	2.5 %	2.3 %	4.8 %	0.6%	0.8%	1.4%
	30-59 years	6.6 %	6.4 %	13.0 %	4.6%	5.6%	10.3%
	60 and above	4.1 %	4.6 %	8.7 %	6%	5.3%	11.3%
	In total	13.2 %	13.3 %	**26.5 %**	11.2%	11.7%	**22.9%**
Southern Norway	18-29 years	0.6 %	0.6 %	1.2 %	0.1%	0.2%	0.4%
	30-59 years	1.4 %	1.4 %	2.8 %	1.1%	1.3%	2.4%
	60 and above	0.8 %	0.9 %	1.7 %	1.2%	1.1%	2.3%
	In total	2.8 %	2.8 %	**5.7 %**	2.4%	2.6%	**5%**
Western Norway	18-29 years	2.7 %	2.6 %	5.3 %	0.8%	1.2%	2%
	30-59 years	6.7 %	6.2 %	12.9 %	6.1%	7.1%	13.2%
	60 and above	3.5 %	3.8 %	7.3 %	6.3%	5.4%	11.7%
	In total	12.9 %	12.6 %	**25.5 %**	13.2%	13.7%	**26.8%**
Trøndelag	18-29 years	1.0 %	0.9 %	1.9 %	0.4%	0.7%	1.1%
	30-59 years	2.2 %	2.0 %	4.2 %	2.1%	1.9%	4%
	60 and above	1.2 %	1.3 %	2.6 %	1.9%	1.5%	3.3%
	In total	4.4 %	4.3 %	**8.7 %**	4.4%	4.1%	**8.5%**
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%	2.1%	3.7%
	60 and above	1.4 %	1.5 %	2.9 %	2%	1.5%	3.6%
	In total	4.7 %	4.6 %	**9.3 %**	3.9%	3.9%	**7.8%**

People of age 60 and above, living in Akershus or Oslo, are quite overrepresented. This group accounts for 5.9 percent of the population, while making up 11.7 percent of Fast track 1 respondents. Young people in all regions are underrepresented, as is middle-aged people living in Eastern Norway.

Figure 7: Representativity of regions from wave 1 to Fast track 1



The representativity of the regions has more or less been unchanged from wave 1 through Fast track 1 (figure 7). There are, however, patterns suggesting that the regions of Eastern Norway and Western Norway are slowly moving away from their perfect representativity in waves 13 to 15. That said, geography does not seem to play the most important role in determining survey participation, at least not to the same extent as 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.[8] 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. 3 percent of the twelfth 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.

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%	23.9%	24.3%	-18.8%	-0.4%
Upper secondary education	32%	41.1%	40.9%	-8.9%	0.2%
University/university college	62.5%	35%	34.8%	27.7%	0.2%

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

APPENDIX

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

			Men	Women				Men	Women
Oslo/Akershus	18-29 years	No education/elementary school	32.1	6.8	Western Norway	18-29 years	No education/elementary school	12.6	6.8
		Upper secondary education	2.9	1.4			Upper secondary education	3.1	2.1
		University/university college	1.9	1.4			University/university college	1.9	1.5
	30-59 years	No education/elementary school	7.8	10.0		30-59 years	No education/elementary school	9.9	8.0
		Upper secondary education	1.4	1.1			Upper secondary education	1.3	1.2
		University/university college	0.7	0.5			University/university college	0.6	0.6
	60 and above	No education/elementary school	1.5	2.2		60 and above	No education/elementary school	1.3	2.8
		Upper secondary education	0.8	0.9			Upper secondary education	0.8	1.0
		University/university college	0.3	0.3			University/university college	0.3	0.3
Eastern Norway	18-29 years	No education/elementary school	12.3	7.0	Trøndelag	18-29 years	No education/elementary school	5.7	29.6
		Upper secondary education	3.8	2.1			Upper secondary education	1.8	1.3
		University/university college	2.3	2.2			University/university college	1.7	0.9
	30-59 years	No education/elementary school	7.3	8.0		30-59 years	No education/elementary school	5.9	6.4
		Upper secondary education	1.6	1.5			Upper secondary education	1.3	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	2.8		60 and above	No education/elementary school	1.4	3.5
		Upper secondary education	1.0	1.3			Upper secondary education	0.9	1.4
		University/university college	0.3	0.3			University/university college	0.3	0.3
Southern Norway	18-29 years	No education/elementary school		6.8	Northern Norway	18-29 years	No education/elementary school	48.6	
		Upper secondary education	3.9	2.8			Upper secondary education	3.0	1.5
		University/university college	1.8	1.5			University/university college	3.2	3.3
	30-59 years	No education/elementary school	6.7	6.5		30-59 years	No education/elementary school	7.4	5.4
		Upper secondary education	1.4	1.2			Upper secondary education	1.8	1.2
		University/university college	0.8	0.7			University/university college	0.7	0.7
	60 and above	No education/elementary school	1.2	2.3		60 and above	No education/elementary school	1.5	4.2
		Upper secondary education	1.1	1.3			Upper secondary education	0.8	1.5
		University/university college	0.3	0.3			University/university college	0.3	0.3