Norwegian Citizen Panel

2020, Twentieth Wave

Methodology report

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BACKGROUND

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

Wave twenty was the fifth wave of NCP to be fielded during the Coronavirus pandemic. In addition to the ordinary waves eighteen, nineteen and twenty, two extraordinary fast track waves were fielded in March 2020 and August 2020 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, SOFT LAUNCH, AND DISTRIBUTION

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 high participation respondents (soft launch). Soft launch is used in order to minimize the consequences if the questionnaire contained technical errors. No such errors were located/reported, and remaining panel members were therefore invited the following day.

Upon full launch, we detected an email delivery issue, resulting from some email providers erroneously flagging invitations as spam. 2 263 invitations were affected, and were delayed until the issue was fixed by confirmit on February 12th[1]. The data collection restarted Monday 15th of February, two weeks delayed. Around 22,500 emails were successfully delivered.

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[1] In January 2021, the panel was transferred to a new server, for regulation compliance reasons. While a small number of invitations is flagged as spam in every wave of NCP, the problem was vastly exacerbated by the server transfer, as the new server IP address was blacklisted by Microsoft. In wave nineteen, we successfully delivered invitations to 1 660 of the 2 263 affected addresses. The remaining 603 were flagged as spam in wave nineteen as well.

Each wave of NCP has an extensive use of randomization procedures. The context of each randomization procedure may vary, [2] 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()[3] is a key function, in combination with Math.floor()[4]. 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 [5]:

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[2] 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.
[3] Please see following resource (or other internet resources):https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/random
[4] Please see following resource (or other internet resources):https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/floor
[5] 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 (%)
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 %
Recruitment 7 (wave 18)	15 000	Postal/SMS	2	381	14 %

RESPONSES BY METHOD OF DATA COLLECTION

The survey was distributed via email to 25,007 existing panel members on January 26th and on January 27th 2021. 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 twenty, 41.4 percent of the panel members were registered with a mobile phone number.

As previously described in sub-section 'Pilot, Soft Launch, and Distribution', the survey was delayed by two weeks due to email delivery issues. Respondents who did not receive the invitation at 27th of January were re-invited on February 15th, and subsequent reminders were sent with shorter time intervals in order to align the last reminder sent by email or SMS on 25th of February.

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 (26th and 27th January/15th of February)	6002	6002	40.4 %	40.4 %
1st reminder (15th/18th of February)	2056	8058	13.9 %	54.3 %
2nd reminder – email (19th/22nd of February)	1053	9111	7.1 %	61.4 %
3rd reminder – email (25th of February)	543	9654	3.7 %	65.1 %
3rd reminder – SMS (25th of February)	767	10421	5.2 %	70.3 %

In total, 10,421 existing panel members filled out the questionnaire. A response rate of 39.4 percent was reached between the invitation and the first reminder. 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 2.

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 14,841 eligible respondents. The overall response rate, as reported in table 2, is **70.3 percent**.

It is likely that issues with email deliverability influenced the response rate negatively. However, all batch email distributions are at some level inflicted by spam issues. Even though Confirmit provided a fix to the main issue, 4 percent (1,006) of all invitations were still marked as spam. In comparison, 3.4 percent of all invitations were marked as spam in wave 19.

RESPONSE OF EXISTING PANEL MEMBERS OVER TIME

Comparing the number of wave twenty respondents (10,421), to the number of respondents in the previous wave nineteen (12,460), gives an overall wave-to-wave retention rate of 83.6 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[6] and the KODEM-initiative associated with wave 19.

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[6] This extraordinary wave focusing on matters related to the Coronavirus pandemic, yielded particularly high participation.

Figure 1: Wave-to-wave retention rate
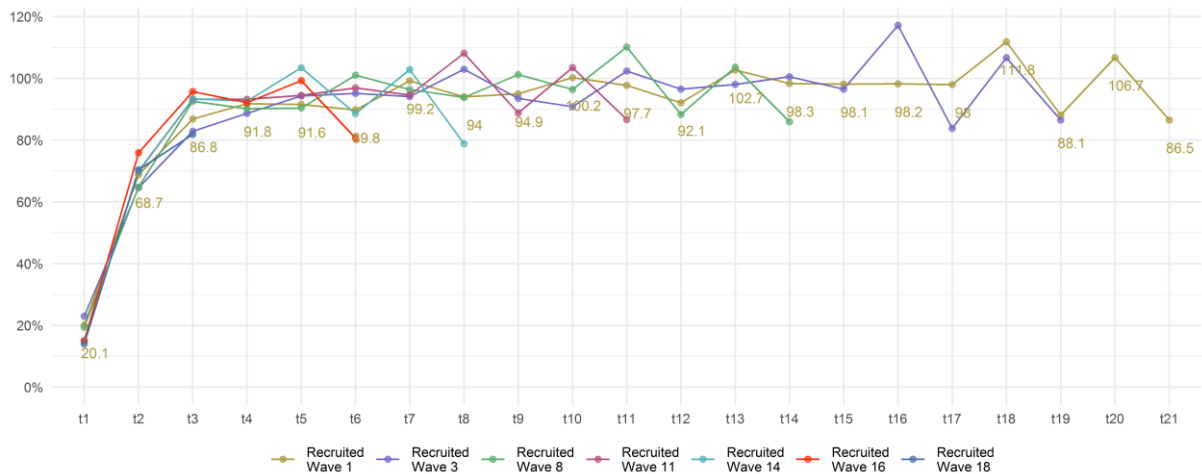
PLATFORMS

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. 41 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. 8.5 percent of the mobile users did not reach this minimum requirement, compared to 10.2 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 20**
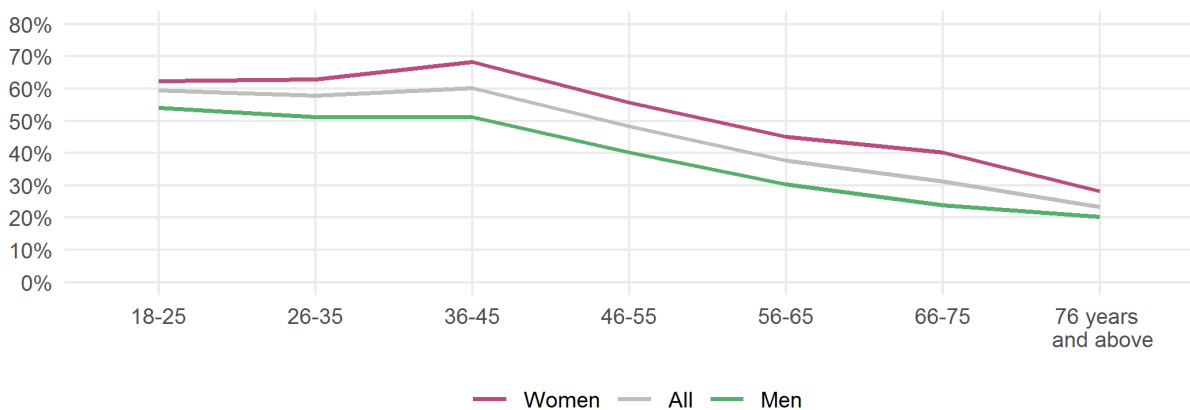
TIME USAGE

The average respondent used 17.1 minutes to complete the questionnaire. This is two minuntes 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 17.1 minutes therefore includes only the respondents which spent 60 minutes or less completing the survey.

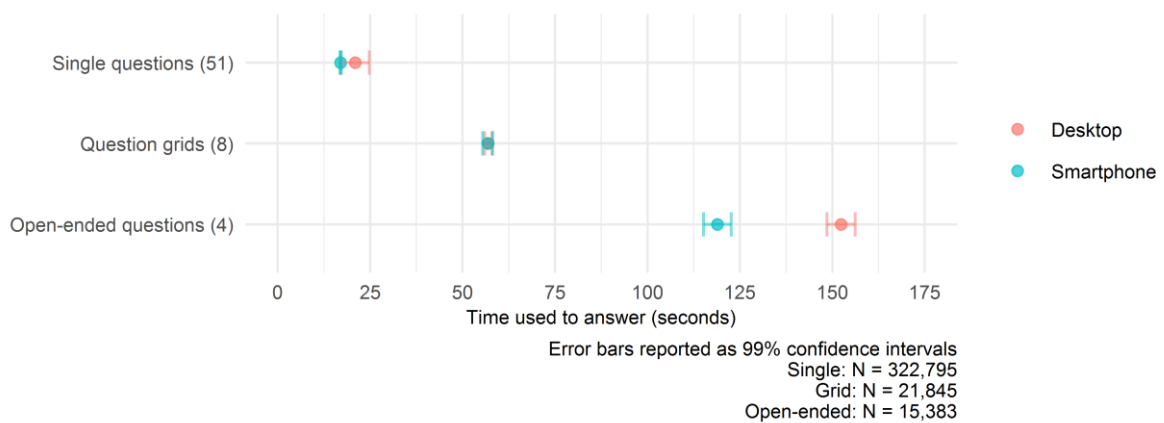**Figure 3: Time usage distribution of survey respondents in wave 20 subgroups**
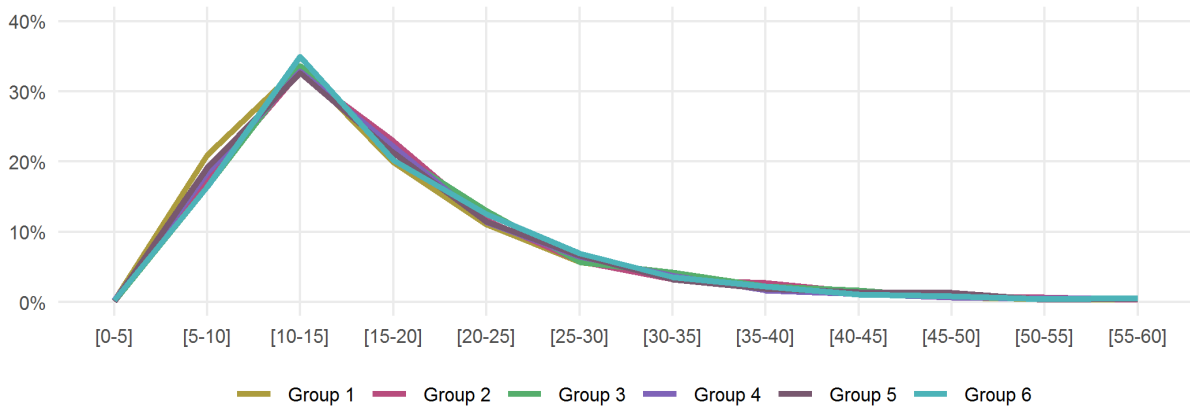
The questionnaire consisted of six subsets of questions, given to groups 1-6. Groups 2-5 had instructions for which respondents were eligible for randomization, and group 6 was populated by respondents based on their wave eighteen subgroup.

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

	All	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
All users	17.1	16.6	17.3	17.4	17	17.1	17.3
Non-mobile users	17.8	17.3	17.8	18.3	17.6	17.9	18
Mobile users	16.1	15.6	16.5	16.2	16.1	16.1	16.2

Figure 4 shows average response time for 51 single questions, 8 grids and 4 open ended survey questions asked in wave nineteen and twenty. On average, mobile users spend significantly less time answering open-ended questions, compared to the desktop users. While desktop users spend 152 seconds on average, mobile respondents spend only 119 seconds. The difference is very small, but still significant, when looking at standard single questions. There is no difference in time usage when respondents answer grid questions. One possible explanation for the time usage alignment on question grids is the difference in layout on mobile and desktop. The desktop users are presented with a table layout, while the mobile users are presented with a layout where the grid elements are stacked on top of each other. It is possible that a more effective mobile layout compensates for the difference in time usage.

Figure 4: Average time spent on answering questions

Error bars reported as 99% confidence intervals
Single: N = 322,795
Grid: N = 21,845
Open-ended: N = 15,383

On average, mobile users write fewer characters on open-ended questions compared to desktop users (figure 5). On average, mobile users write 31 characters and desktop users write 42 characters.

Figure 5: Average number of characters written in open-ended questions

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 twenty.

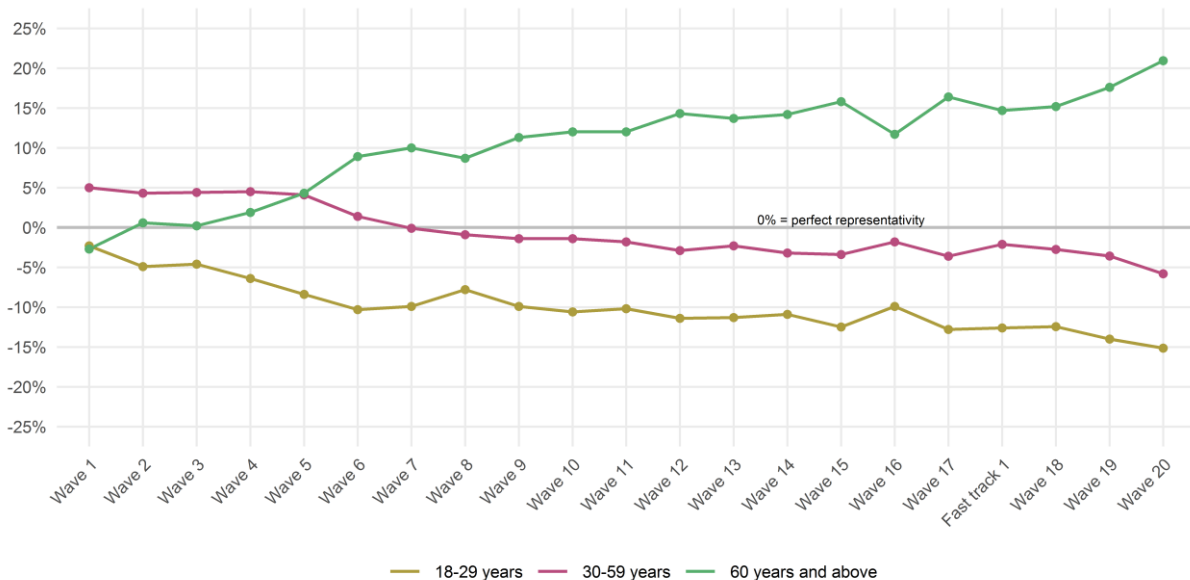**Table 4: Age distribution in the population and the net sample of wave 20**

	18-29 years	30-59 years	60 years and above
Population	20.3 %	50.6 %	29.1 %
Net sample	5.2 %	44.8 %	50.1 %

From the age distribution presented in table 4, we see that 18-29 year olds are clearly underrepresented in the net sample of wave twenty. 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 6). 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. It is noteworthy that the rate of misrepresentation of age groups has picked up the last two waves. As a result, the age groups has never been as far away from perfect representativity as in wave 20.

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 6: Representativity of age groups from wave 1-20

In table 5, the population and net samples 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 20

	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	1.9 %	3.3 %	21.4 %	23.4 %	27.3 %	22.7 %

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 20

		Population		Net sample	
		Men	Women	Men	Women
No education/elementary school	18-29 years	3.8 %	2.9 %	0.1 %	0.1 %
Upper secondary education		4.2 %	3.3 %	0.8 %	1.3 %
University/university college		2.3 %	3.6 %	1 %	1.9 %
No education/elementary school	30-59 years	5.5 %	4.6 %	0.6 %	0.4 %
Upper secondary education		11.2 %	7.9 %	7.2 %	4.9 %
University/university college		9.3 %	12.2 %	13.7 %	18.2 %
No education/elementary school	60 and above	3.1 %	4.4 %	1.9 %	1.6 %
Upper secondary education		6.9 %	7.4 %	9.2 %	6.7 %
University/university college		3.8 %	3.6 %	16.3 %	14 %

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 7: Representativity of education groups from wave 1-20
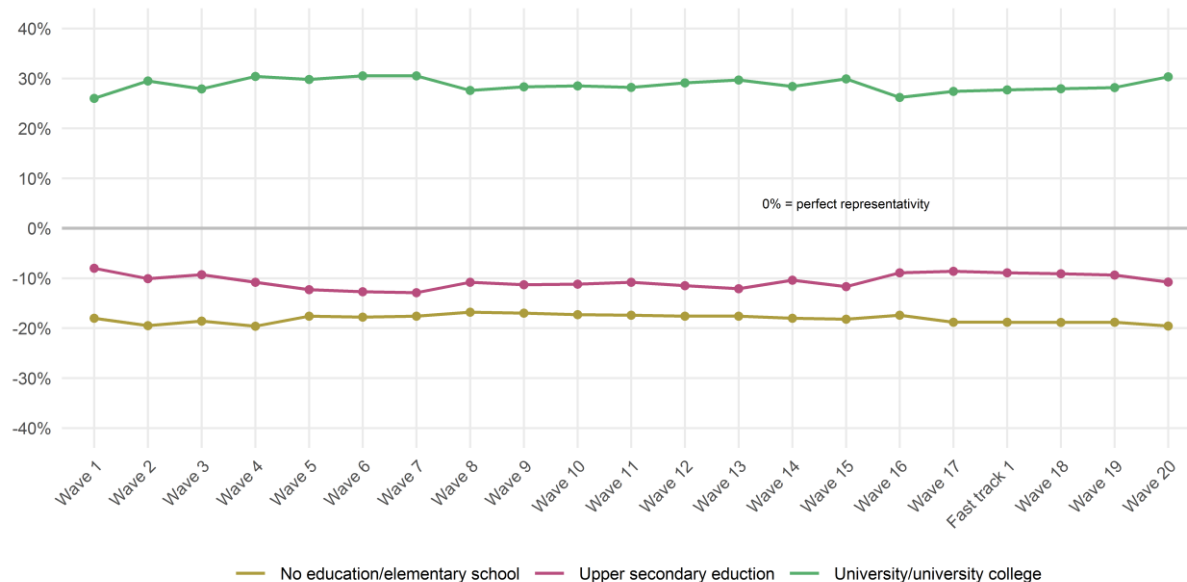
Figure 7 illustrates the representation of education groups since wave one. The general trend is that the highly educated are overrepresented compared to those with less or no education. Except for slight adjustments, improving the representativity of the education groups when new respondents are recruited (wave 1, 3, 8, 11, 14, 16 and 18), the overall pattern has remained stable throughout all waves.

In regard to geography, (table 7) we observe that the representation of panel members living in Trøndelag 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, Southern Norway and Eastern Norway meanwhile are underrepresented among the respondents in the twentieth wave.

Table 7: Combined distribution of age, gender and geography in the population and the net sample of wave 20

		Population			Net sample		
		Men	Women	Total	Men	Women	Total
Akershus/Oslo	18-29 years	2.6 %	2.6 %	5.2 %	0.5 %	1.1 %	1.6 %
	30-59 years	6.8 %	6.5 %	13.3 %	6.5 %	8 %	14.5 %
	60 and above	2.8 %	3.2 %	5.9 %	7.2 %	6.4 %	13.6 %
	In total	12.1 %	12.3 %	**24.4 %**	14.2 %	15.5 %	**29.7 %**
Eastern Norway	18-29 years	2.5 %	2.3 %	4.8 %	0.4 %	0.6 %	1 %
	30-59 years	6.6 %	6.4 %	13.0 %	4.2 %	4.6 %	8.8 %
	60 and above	4.1 %	4.6 %	8.7 %	6.8 %	5.8 %	12.6 %
	In total	13.2 %	13.3 %	**26.5 %**	11.4 %	11 %	**22.4 %**
Southern Norway	18-29 years	0.6 %	0.6 %	1.2 %	0.1 %	0.1 %	0.2 %
	30-59 years	1.4 %	1.4 %	2.8 %	1.1 %	1.1 %	2.2 %
	60 and above	0.8 %	0.9 %	1.7 %	1.4 %	1.1 %	2.5 %
	In total	2.8 %	2.8 %	**5.7 %**	2.6 %	2.3 %	**4.8 %**
Western Norway	18-29 years	2.7 %	2.6 %	5.3 %	0.6 %	0.8 %	1.3 %
	30-59 years	6.7 %	6.2 %	12.9 %	6.2 %	6.1 %	12.3 %
	60 and above	3.5 %	3.8 %	7.3 %	7.5 %	6 %	13.5 %
	In total	12.9 %	12.6 %	**25.5 %**	14.2 %	12.9 %	**27.2 %**
Trøndelag	18-29 years	1.0 %	0.9 %	1.9 %	0.2 %	0.5 %	0.7 %
	30-59 years	2.2 %	2.0 %	4.2 %	2 %	1.7 %	3.7 %
	60 and above	1.2 %	1.3 %	2.6 %	2.2 %	1.7 %	3.8 %
	In total	4.4 %	4.3 %	**8.7 %**	4.4 %	3.8 %	**8.2 %**
Northern Norway	18-29 years	1.0 %	0.9 %	1.9 %	0.1 %	0.2 %	0.3 %
	30-59 years	2.3 %	2.1 %	4.4 %	1.5 %	1.8 %	3.4 %
	60 and above	1.4 %	1.5 %	2.9 %	2.3 %	1.8 %	4 %
	In total	4.7 %	4.6 %	**9.3 %**	3.9 %	3.8 %	**7.7 %**

People aged 60 years and above are overrepresented in all parts of the country, especially in Akershus/Oslo and Western Norway. Conversely, young people aged 18-29 years are underrepresented in all regions.

Figure 8: Representativity of regions from wave 1-20
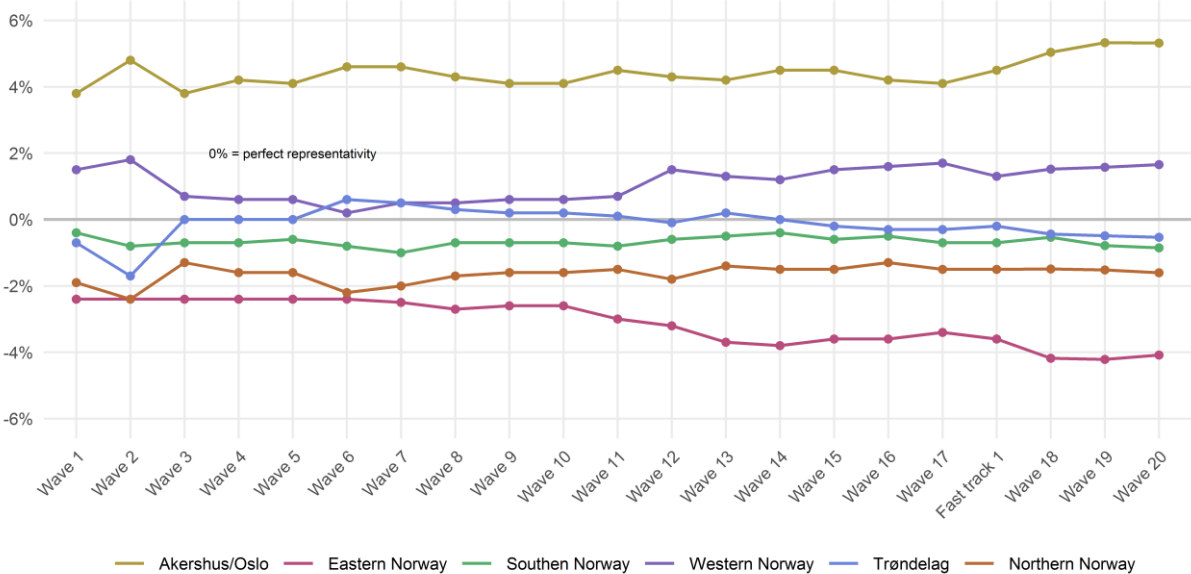
The representativity of the regions has more or less been unchanged from wave 1 through wave seventeen (figure 8). Note that Akershus/Oslo and Eastern Norway diverge in wave eighteen, due to the regional reform

implemented 1st of January 2020. 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.[7] 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. 1.3 percent of the twentieth 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**: 18-29 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 cases in the dataset. In other words, the weights are calculated using the whole dataset. NCP has an extensive use of (randomized) sub-groups, which might alter the demographic profile of the sub-group compared to the whole dataset. Consequently, the weights might be less precise for some sub-groups. Note that he dataset is provided with necessary information[8] to calculate custom weights if needed, following the procedure described above.

As discussed above, level of education is the greatest source of observed bias. Therefore, weight 2 provides the most accurate compensation for the various sources of bias in the net sample. Please note that there is some

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

[8] See columns r20Weight1_stratapop and r20Weight2_stratapop

small biases to the wave twenty weights due to the region reform of 2020. In the appendix of the wave eighteen methodology report, we provide an in depth explanation and analysis concluding that the biases are negligible.

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 distribution close 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

	Sample - not weighted	Sample - weighted	Population	Difference between sample and population	Difference between weighted sample and population
No education/elementary school	4.7 %	22.7 %	24.3 %	-19.6	-1.6
Upper secondary eduction	30.1 %	41.8 %	40.9 %	-10.8	0.9
University/university college	65.1 %	35.5 %	34.8 %	30.3	0.7

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	28.9		Western Norway	18-29 years	No education/elementary school	25.5	26.4
		Upper secondary education	4.8	2.5			Upper secondary education	5.8	2.8
		University/university college	2.7	1.6			University/university college	1.9	2.1
	30-59 years	No education/elementary school	12.7	9.7		30-59 years	No education/elementary school	8.3	10.5
		Upper secondary education	1.5	1.3			Upper secondary education	1.4	1.6
		University/university college	0.7	0.6			University/university college	0.6	0.7
	60 and above	No education/elementary school	1.4	2.2		60 and above	No education/elementary school	1.3	2.9
		Upper secondary education	0.7	0.9			Upper secondary education	0.7	1
		University/university college	0.2	0.3			University/university college	0.2	0.2
Eastern Norway	18-29 years	No education/elementary school	55.2	20.5	Trøndelag	18-29 years	No education/elementary school		6.6
		Upper secondary education	5.4	2.1			Upper secondary education	3.4	2.8
		University/university college	2.6	3.2			University/university college	2.8	1.2
	30-59 years	No education/elementary school	10.6	14.5		30-59 years	No education/elementary school	7.1	6.9
		Upper secondary education	1.8	1.9			Upper secondary education	1.7	2.2
		University/university college	0.8	0.8			University/university college	0.6	0.8
	60 and above	No education/elementary school	2.2	2.8		60 and above	No education/elementary school	1.4	6.9
		Upper secondary education	0.8	1.2			Upper secondary education	0.8	1.5
		University/university college	0.3	0.3			University/university college	0.3	0.3
Southern Norway	18-29 years	No education/elementary school			Northern Norway	18-29 years	No education/elementary school		
		Upper secondary education	9.4	2.8			Upper secondary education	7.2	3.3
		University/university college	2.3	3.2			University/university college	2.9	3.3
	30-59 years	No education/elementary school	7.6	9.7		30-59 years	No education/elementary school	6	21.8
		Upper secondary education	1.5	1.7			Upper secondary education	2	1.6
		University/university college	0.7	0.8			University/university college	0.8	0.8
	60 and above	No education/elementary school	2.1	3.5		60 and above	No education/elementary school	1.9	2.7
		Upper secondary education	0.9	1.4			Upper secondary education	0.9	1.6
		University/university college	0.3	0.3			University/university college	0.3	0.3