The Panel of Elected Representatives

2020, Third Wave

Methodology report

Øivind Skjervheim

Amund Eikrem

Olav Bjørnebekk

June, 2020

REPRESENTANTPANELET

IDEAS2EVIDENCE
Bygger kunnskap

TABLE OF CONTENTS

BACKGROUND

This report describes the procedures of data collection in the third wave of The Panel of Elected Representatives, including the recruitment of new panel members. Furthermore, the report describes technical aspects of the data collection as well as the representativity and continuity of the panel.

The Panel of Elected Representatives is an internet-based survey of elected representatives, on all political levels in Norway. The survey deals with matters that are important to society, representation and democracy. All elected politicians are invited to participate.

The Panel of Elected Representatives (PER) is part of The Digital Social Science Core Facility (DIGSSCORE) at the University of Bergen (UiB). The Panel of Elected Representatives is also affiliated with the Norwegian Citizen Panel (NCP). The University of Bergen is the owner and treatment manager of the Panel of Elected Representatives. ideas2evidence handles practical implementation of the survey, and is responsible for recruiting participants, as well as sending and receiving surveys to and from respondents

The first and second waves were fielded in 2018 and 2019 respectively, with the third wave fielded in the spring of 2020.

TECHNICAL ASPECTS OF THE SURVEY

SOFTWARE

The web-based research software Confirmit is used to administer the surveys and the panel. Confirmit is a "Software-as-a-Service" solution, where all software runs on Confirmit's continuously monitored servers, and where survey respondents and developers interact with the system through various web-based interfaces. The 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 is responsible for the programming of the survey on behalf of The Panel of Elected Representatives

PILOT AND OVERALL ASSESSMENT

The survey went through extensive small-N pilot testing before data collection. The pilot testing was done in collaboration between ideas2evidence and the involved researchers. Testing was regarded as success, and no major technical revisions were deemed necessary.

The field period was delayed by almost one month, due to some problems with the recruitment address list. The field period was somewhat prolonged, in part because of the Coronavirus pandemic. While representatives are likely to have been impacted on some level by the pandemic, it hit rather late in the field period, and can as such have affected only a minor portion of the respondents. As such, the field period is regarded a success, and was completed with no technical irregularities.

RANDOMIZATION PROCEDURES

Some of the questions in The Panel of Elected Representatives requires randomization procedures. The context of each randomization procedure may vary[1], but they all share some common characteristics that will be described in the following.

[1] Some examples: randomly allocate treatment value in experiments, randomize order of an answer list/array, order a sequence of questions by random.

All randomization procedures are executed live in the questionnaire. This means that the randomization takes place while the respondent is filling in the questionnaire, as opposed to pre-defined randomizations. Randomizations are mutually independent, 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 of values
- Randomly shuffle the contents of an array

The first procedure is typically used to determine a random sub-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. When N is sufficiently large, the 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;
}
```

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

PANEL RECRUITMENT WAVES ONE AND THREE

Panel members are initially invited by a postal letter and subsequent email reminders. First, letters are sent to all elected representatives. The letters contain the following information: a) a description of the project, b) the Citizen Panel's policy on privacy and measures taken to protect the anonymity of the participants, c) the time-frame of the project, d) the participants' rights to opt out of the panel at any time in the future, e) contact information for the people responsible for the project, f) a unique log-in id and the web address to the panel's web site and g) the estimated time required to complete the survey.

All elected representatives at all political levels in Norway – municipal councils, county councils, the Storting (parliament) and the Sami Parliament of Norway – are invited to participate in the Panel of Elected Representatives. The contact information is collected through Kommuneforlaget AS's registers, as well as public information from the websites of municipalities, counties, the Storting and the Sami Parliament of Norway.

The representatives were originally recruited in wave one, from a population of representatives elected in the 2015 municipal and county council elections, as well as the 2017 Storting and Sami Parliament elections. For the representatives, continued eligibility for PER is contingent on being re-elected. Elections are held every four years, setting the panel population to change every other year. As such, following every election, newly elected representatives have to be invited to participate in PER, while representatives who were not re-elected, have to be excluded from further participation. Of the 4321 representatives recruited in wave one, 2247 were excluded after the 2019 municipal and country election. 2074 representatives were re-elected and therefore continued members of the panel.

In wave three, newly elected representatives from the 2019 election were recruited, following the procedure from wave one. Re-elected representatives who did not respond to the wave one recruitment effort were also invited to participate.

THE RECRUITMENT PROCESS

Contact information was collected and systematized by the project team at DIGSSCORE. Only representatives on the county and municipal levels were recruited in wave three, due to a change in target population following the 2019 election.

During routine controls, several errors in the address list were detected, delaying the planned January 14th launch with about one month.

The invitational letters were posted on 11th of February 2020. Letters were sent to 7668 representatives. 147 letters were returned without reaching the addressee. Reminders were subsequently distributed by email to respondents who had not logged into the survey, or who had not completed the survey. The emails referred to the invitational letter and reiterated essential information about the project. The unique log-in code and web address was replaced by a direct link to the survey.

All representatives could be reached either by post or by email. While 762 representatives were listed with a postal address only, and did not receive email reminders, 42 representatives could only be reached by email.

Recruitment efforts in waves one and three are summarized in table 1. The response rate in wave three were somewhat lower than in wave one, due to an overlap between the recruitment populations in wave one and wave three. The overlap consists of re-elected representatives, and some of the re-elected representatives most prone to participate were already recruited in wave one.

For a detailed account of wave one recruitment, please refer to the wave one methodology report.

Table 1: Recruitment response waves one and three

	Invitations	Contacts	Responses	Recruitment rate (%)
Wave three (2020)	7668	5	2557	33,3 %
Wave one (2018)	11334	5	4321	38,2 %

DATA COLLECTION WAVE 3

A total of 9784 representatives were invited to participate in wave three. 2074 of the representatives were recruited in wave one, and received an email invitation on February 13th. The remaining 7668 were contacted on February 11th, as described in the above section.

The survey was closed on May 1st. For various reasons, 38 representatives actively opted out. 42.2 percent (4129) of the remaining 9784 logged on and accessed the survey. 3629 individuals completed the questionnaire, and 500 exited the questionnaire before completion. 23.8 percent of the incomplete responses are kept as a part of the survey data, while the remaining 381 incomplete responses are excluded from the survey due to lack of data. A total of 3748 representatives are accepted as wave three respondents, leaving the overall response rate at 38.3 percent.

As respondents recruited in wave one has already shown interest for participating in PER, a higher rate of response is to be expected than for the representatives invited in wave three. Furthermore, wave one recruits received the initial invitation by e-mail, while the rest received postal letters as the first point of contact. As such, responses by point of contact is best examined separately for the two groups.

Invitation response from the newly recruited is presented in table 2. Responses yielded by the initial invitation and the first email reminder was about the same. Subsequent reminders yielded diminishing response.

Table 2: Number of responses from newly recruited representatives, by number of contacts

	Responses	Response rate (%)	Cumulative responses	Cumulative response rate (%)
Invitation (11th of February)	678	8,8 %	678	8,8 %
Reminder 1 (e-mail) (24th of February)	693	9,0 %	1371	17,8 %
Reminder 2 (e-mail) (3rd of March)	495	6,4 %	1866	24,2 %
Reminder 3 (e-mail) (10th of March)	293	3,8 %	2159	28,0 %
Reminder 4 (e-mail) (17th of March)	398	5,1 %	2557	33,2 %

A summary for panel members recruited in wave one, is presented in table 3. As respondents typically respond faster to email invitations, the relative number of responses also taper of more quickly.

Table 3: Number of responses from panel members recruited in wave one, by number of contacts

	Responses	Response rate (%)	Cumulative responses	Cumulative response rate (%)
Invitation (e-mail) (13th of February)	553	26,7 %	553	26,7 %
Reminder 1 (e-mail) (24th of February)	262	12,6 %	815	39,3 %
Reminder 2 (e-mail) (3rd of March)	183	8,8 %	998	48,1 %
Reminder 3 (e-mail) (10th of March)	78	3,8 %	1076	51,9 %
Reminder 4 (e-mail) (17th of March)	115	5,5 %	1191	57,4 %

A contextual note should be added. During the wave three field period, the Corona virus pandemic hit Norway and the rest of the world. The starting point for the pandemic in Norway, is popularly held to be March 12th, but was subject to massive media attention in the preceding days. We note that email reminders sent on March 10th yielded a weaker response than the preceding and succeeding reminders. The March 17th reminder was worded

somewhat differently from the previous reminders, expressing understanding that responding to the survey may not be a priority, given the situation. 408 responses were collected after March 12th.

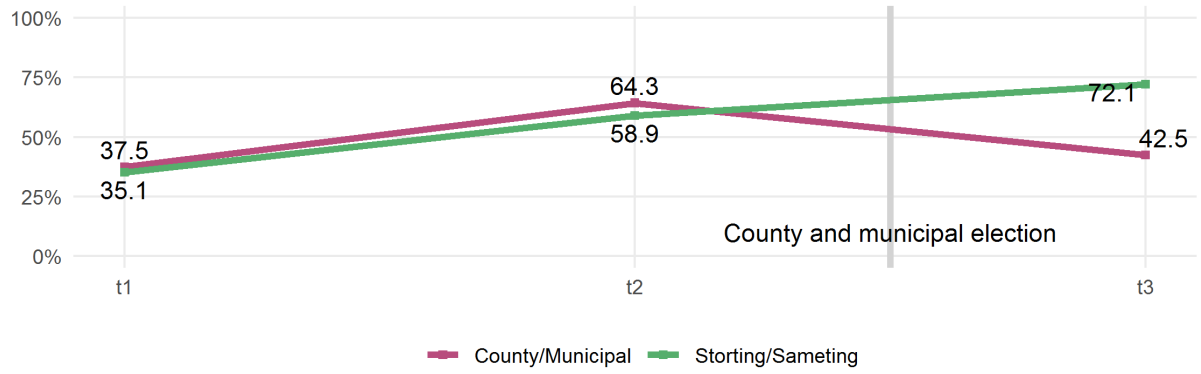
RESPONSE OF PANEL MEMBERS OVER TIME

When recruited, the representatives become panel members, and are invited to the following wave. For every wave, panel members can choose to opt out of their membership. Panel members losing their seat in elections, are excluded from subsequent waves. As such, PER members must be expected to leave the panel in quite large numbers for every election.

We will now examine the panel retention, the rate at which the panel members continue responding to the survey waves. The retention rate is computed by dividing the number of responses in one wave, with the number of responses in the previous wave. T1 is the wave in which the respondent is recruited, and the retention rate shown, is the rate of recruitment from the target population. At this point, such computation is only possible for panel members recruited in wave one. As elections are expected to substantially impact retention, political levels sharing election dates are clustered together when computing the retention rate.

Retention rates are shown in figure 1. Around 60 percent of wave one respondents also responded to wave two. As one would expect, the retention rate for representatives on the county and municipal level, dropped after the election. The parliament and Sami Parliament on the other hand, were not up for election, and the retention rate increased from wave increased to 72 percent.

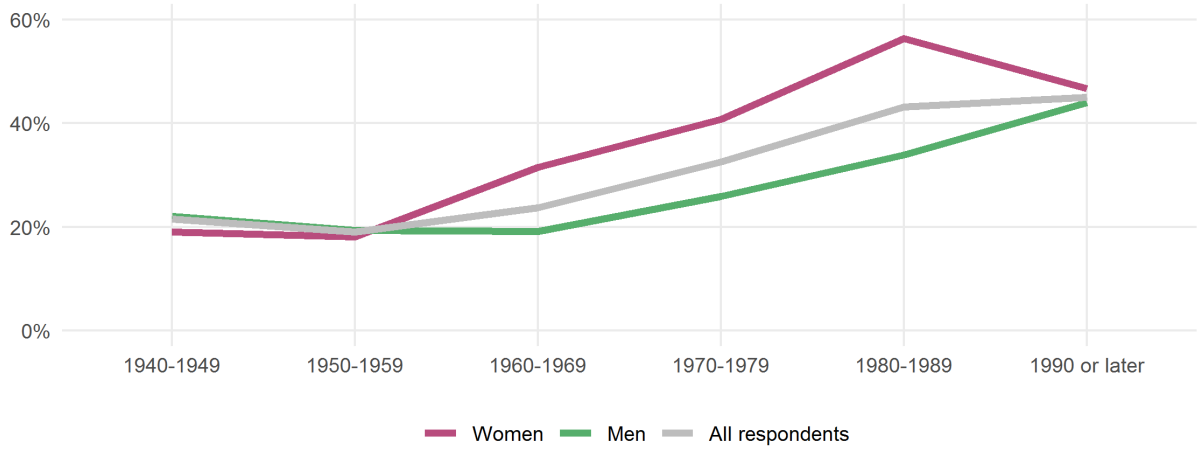
Figure 1: Retention rate of panel members recruited in wave one.



PLATFORMS

The questionnaire was prepared for data input via smart phones. 26.6 percent of survey respondents that opened the questionnaire used a mobile phone. 5.1 percent of the mobile users did not complete to such an extent that they were classified as respondents. For a comparison, 10.7 percent of the non-mobile users left the questionnaire without being included as respondents. Opposite of what we observed in wave one, mobile users were thus somewhat more likely to complete the questionnaire than non-mobile respondents.

Figure 2: Percentage of mobile users by gender and year of birth. Due to small numbers of respondents, older respondents are excluded from the graph.



The general tendency is that younger respondents are more inclined to use their mobile phone when answering the questionnaire (figure 2). Female representatives born between 1980 and 1989 are the most frequent users of mobile devices. Starting with respondents born after 1960, women use mobile devices to answer the questionnaire more often than men. The gap, however, is pretty small for respondents born in 1990 or later.

TIME USAGE

In the survey invitation, an estimated duration of the survey is included. For wave three, the estimate was of 8-10 minutes. Now we will examine the time actually spent by the respondents filling out the questionnaire.

Measuring average time usage poses a challenge, namely 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. In an attempt to reduce noise in the data, respondents using more than 60 minutes are excluded from the calculation. In this subsample, the average response time is 9.4 minutes (table 4).

Table 4: Average time spent on questionnaire (minutes)

	All respondents
All users	9.4
Non-mobile users	9.6
Mobile users	9.0

On average, mobile respondents use slightly less time than respondents using non-mobile devices. The difference is smaller than what is documented in the Norwegian Citizen Panel questionnaires, which can be explained by the fact that the NCP questionnaires has a more extensive use of complex survey experiments and open ended questions.

REPRESENTATIVITY

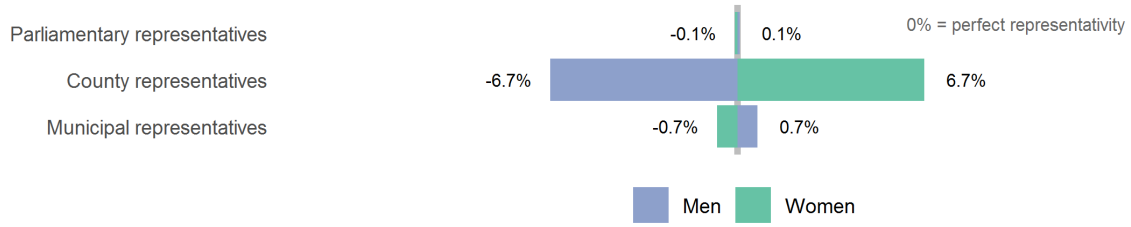
All respondents of the panel are representatives elected to office at different level of administration. Norway's four levels of administration are municipalities, counties, the Sami parliament and the national parliament. In this section, we examine how well different demographics are represented in the panel, compared to their representation in the panel population. We check for biases by gender, age, level of education, county of residence and party affiliation. Analyses are executed using registry data from Statistics Norway as well as data from wave three of PER.

As the number of representatives on each level varies widely, the different levels of administration are examined separately. Data access and anonymity both pose challenges to the analyses. Some numbers are therefore reported only on county and municipal levels, and the Sami parliament is left out altogether.

THE REPRESENTATIVITY OF THE PANEL OF ELECTED REPRESENTATIVES

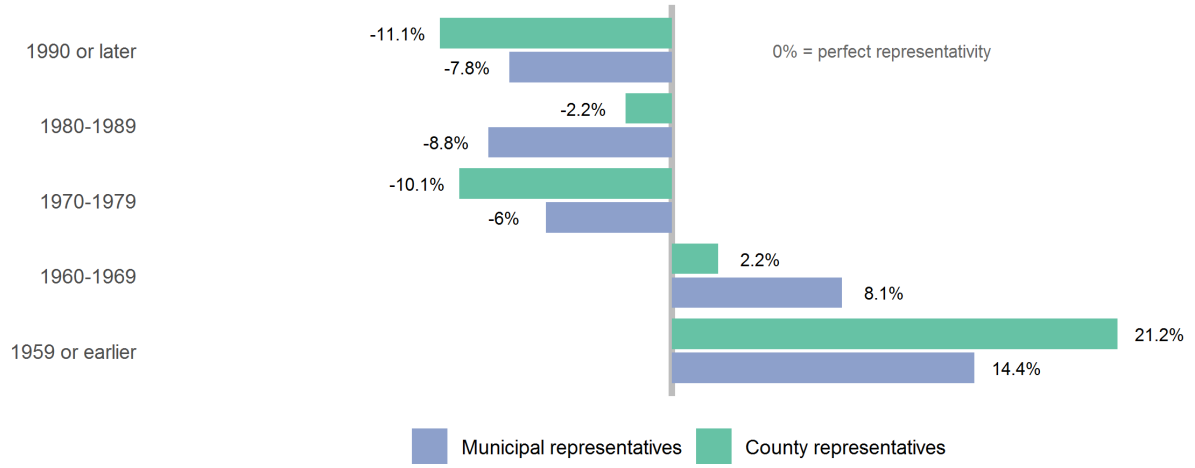
Figure 3 shows how the proportion of men and women in the panel compares to the proportion in the target population. While women are somewhat overrepresented among the county council representatives, there is no substantial bias on the municipal and national parliament level.

Figure 3: Representativity of genders.



Older representatives are overrepresented in the panel, as shown in figure 4. While the bias is quite similar for the county and municipal levels, it is somewhat more pronounced among county level representatives. It should be noted that the age bias observed in wave three is more substantial than what was observed in wave one.

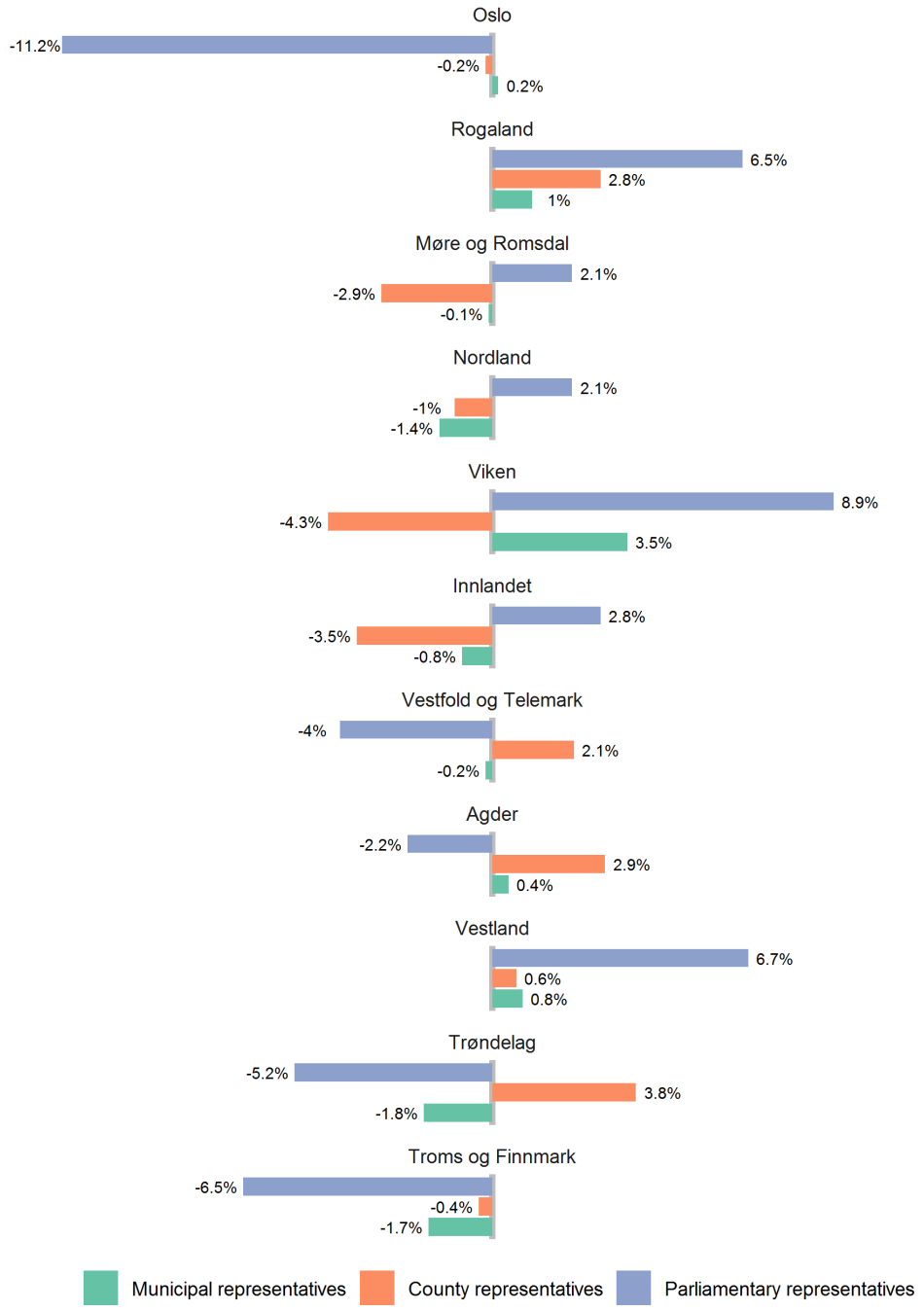
Figure 4: Representativity of age groups



Shown in figure 5, is a comparison of wave three respondents to the target population, based on county where the representative is elected.[5] With a few exceptions, biases are rather small on the county and municipal level. The spread is larger at the parliamentary level. An important explanation for this is that the N is lower at the parliament level, and consequently more sensitive to variation. Rogaland and Vestland are overrepresented on all political levels, while the opposite is true for Troms and Finnmark.

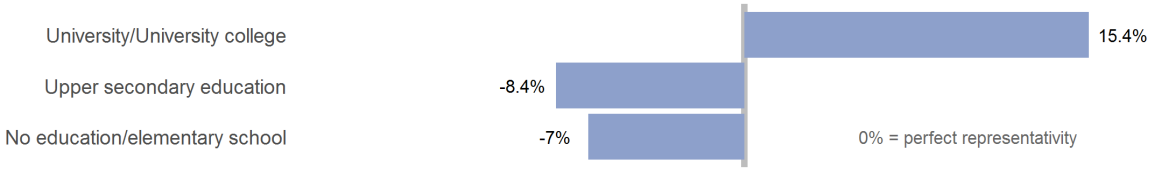
[5] Please note that the distribution is calculated by head counts. It does not take into account that the municipal councils vary in size and form.

Figure 5: Representativity of counties



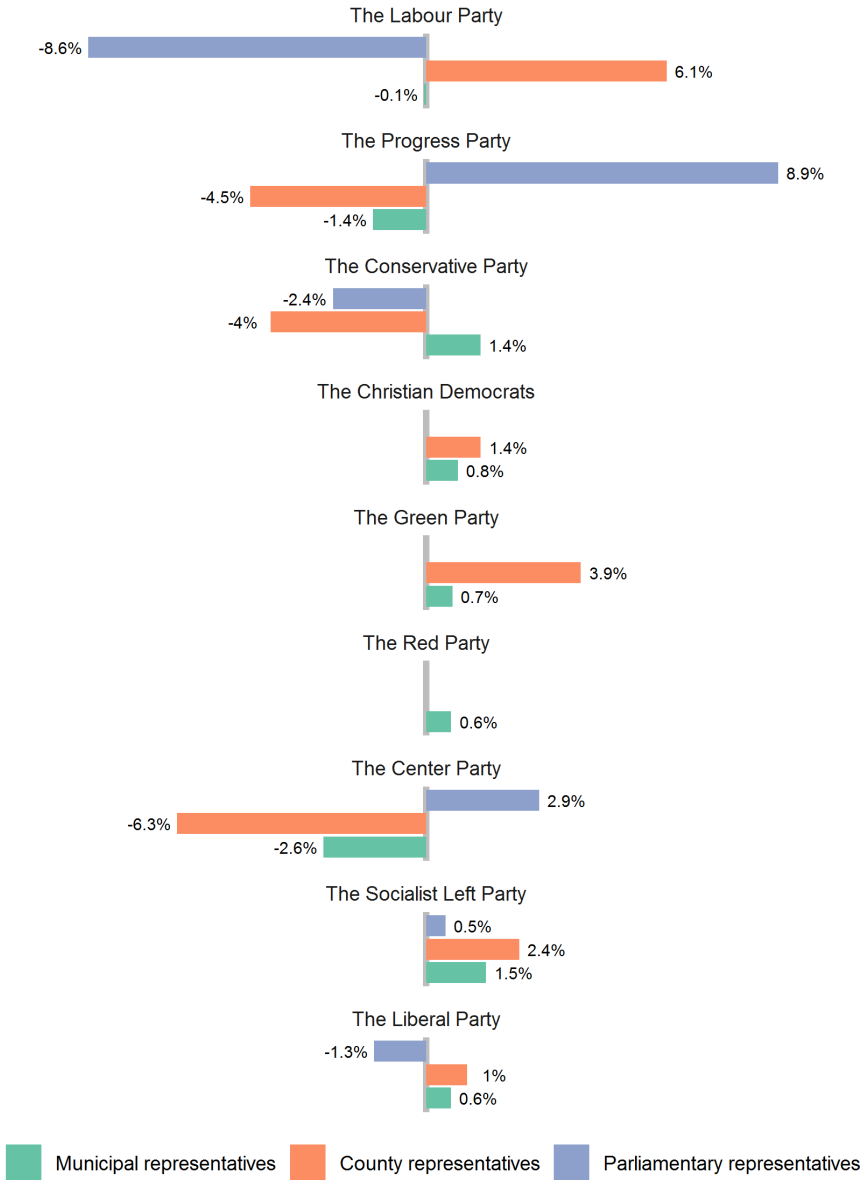
Similar to what is observed in the Norwegian Citizen Panel, representatives having completed higher levels of education are overrepresented among the panel members on the municipal level (figure 6). It seems, however, that the difference between representatives with upper secondary, elementary or no education is quite small.

Figure 6: Representativity of levels of education. Calculated for municipal representatives only.



Lastly, we check for biases by party affiliation. Note that calculation is done by head count, and does not take into account how the council seats are allocated in the different municipalities and counties. Note also that smaller parties are excluded from reporting, and that figure 7 only displays results for parties represented in the national parliament. When a party has fewer than five representatives on a given level of administration, as is the case for the Red Party and the Green Party, no result is displayed. As for the Christian Democrats, we have collected no responses from parliamentary representatives.

Figure 7: Representativitiy of parties.



Most notably, the Center Party is underrepresented on the municipal and county levels alike. As for the parliamentary representatives, biases are stronger. The Labor Party and the Conservative Party are somewhat underrepresented, while the Progress Party and the Center Party are overrepresented.

No party is systematically under or overrepresented on all political levels. Nor do we observe biases along the classic left-right party axis. While we make no attempt at attributing the biases to any specific effect, we observe that municipal and county representatives affiliated with parties who has more support in the rural compared to more urban areas, such as the Center Party and the Progress Party, are underrepresented in the panel.