

The Panel of Elected Representatives

2023, Eighth Wave

Methodology report

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BACKGROUND

This report describes the data collection in the eighth wave of The Panel of Elected Representatives, and discusses 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, the Norwegian Journalist Panel, and the Norwegian Panel of Public Administrators. The University of Bergen is the owner and responsible for the Panel of Elected Representatives. ideas2evidence is in charge of survey implementation, is responsible for recruiting participants, as well as conducting the field period.

The first and second waves were fielded in 2018 and 2019 respectively, with the third wave fielded in the spring and the fourth in the fall of 2020. The fifth and sixth wave was fielded during spring and autumn of 2021. The seventh wave was fielded in late winter and early spring 2022 while the eighth wave ran in November 2022.

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 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 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 was therefore invited the following day.

RANDOMIZATION PROCEDURES

Each wave of PER has an extensive use of randomization procedures. The context of each randomization procedure may vary¹, but they all share some common characteristics 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 filling in the questionnaire, as opposed to pre-defined randomizations. Randomizations are mutually independent, unless the documentation states otherwise.

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

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 Conconfirmit:

```
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 Conconfirmit⁴:

```
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, THREE, FIVE AND SEVEN

In wave one, three, and seven, panel members were 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 4,321 representatives recruited in wave one, 2,247 were excluded after the 2019 municipal and country election. 2,074 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 once more to participate in wave three.

Wave five applied a different approach compared to previous waves. Invitations and reminders were exclusively distributed by email. Invitees included representatives who 1) who were not already registered in the panel, and 2) did not purposefully abstain from participation in wave three. Note also that wave five recruitment used the same recruitment pool as wave three as there were no changes in the target population. Previous recruitment attempts have been in the wake of an election, altering the recruitment pool (as described above), and consequently renewed the population with representatives who might be inclined to participate. Therefore, it is reasonable to assume that wave recruitment did not reproduce recruitment rates similar to past waves as the representatives most inclined to participate already were participants. Wave seven recruited municipal and county representatives from the same pool as wave five, and the recruitment process exhibited the same features. Additionally, wave seven recruited newly elected parliamentary representatives and Sami parliamentary representatives, both by postal invitation and email reminders.

WAVE EIGHT RECRUITMENT PROCESS

Elected representatives across all administrative levels were targeted when recruiting new respondents in wave eight. The recruitment approach was comparable to the strategy applied in wave five. But the municipal and county representatives received invitation by post, not by email. Drawing on the same pool of representatives, a somewhat similar recruitment rate was observed despite the change in mode of recruitment. Recruitment aimed at parliamentary and Sami parliamentary representatives was kept digitally in all phases.

Table 1 shows and outline of the different recruitment processes. For a detailed account of the recruitment processes for previous waves, please refer to the respective methodology reports.

Table 1: Recruitment response across all waves with recruitment

	Invitations	Mode	Contacts	Responses	Recruitment rate (%)
Wave eight (2022)	3,575	Postal/email	4	218	6.9 %
Wave seven (2022)	4,034	Postal/email	4	353	8.9 %
Wave five (2021)	4,388	Email	4	407	9.3 %
Wave three (2020)	7,668	Postal/email	5	2,557	33.3 %
Wave one (2018)	11,334	Postal/email	5	4,321	38.2 %

DATA COLLECTION

A total of 8,812 representatives were invited to participate in wave eight. 5,237 were already members of the panel, and 3,575 were invited in as new participants.

The survey was closed on the 5th of December 2022. For various reasons, 96 representatives actively opted out. 422 of the invitational letters were returned as they failed to reach their intended destination. 33.7 percent (2,798) of the remaining invitees logged on and accessed the survey. 1,992 individuals completed the questionnaire, and 798 exited the questionnaire before completion. 3.7 percent of the incomplete responses are kept as a part of the survey data, while the remaining incomplete responses are excluded from the survey due to lack of data. A total of 2,130 representatives are accepted as wave eight respondents, leaving the overall response rate at 25.6 percent, which mirror the response rate from the previous waves in which recruitment was conducted.

Invitational response is presented in table 2 for newly recruited panel members. The invitation generated the most amount of responses, along with the second reminder, as can be seen below.

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

	Responses	Cumulative Responses	Response rate	Cumulative response rate
Invitation (November 1st/November 2nd)⁵	111	111	3.56 %	3.56 %
Reminder 1 (November 9th/November 16th)	27	138	0.87 %	4.43 %
Reminder 2 (November 16th/November 25th)	76	214	2.44 %	6.86 %
Reminder 3 (November 25th/November 30th)	4	218	0.13 %	6.99 %

A summary for previously recruited panel members is presented in table 3. For both newly and previously recruited panel members, the initial invitation yielded most answers.

Table 3: Number of responses from previously recruited panel members, by number of contacts

	Responses	Cumulative Responses	Response rate	Cumulative response rate
Invitation (November 1st/November 2nd)	824	824	15.92 %	15.92 %
Reminder 1 (November 9th)	439	1263	8.48 %	24.40 %
Reminder 2 (November 16th)	297	1560	5.74 %	30.14 %
Reminder 3 (November 25th)	352	1912	6.80 %	36.94 %

RESPONSE OF PANEL MEMBERS OVER TIME

We will now examine panel retention; the rate at which the panel members continue responding to survey waves after the initial wave in which they were recruited. When recruited, the representatives become panel members,

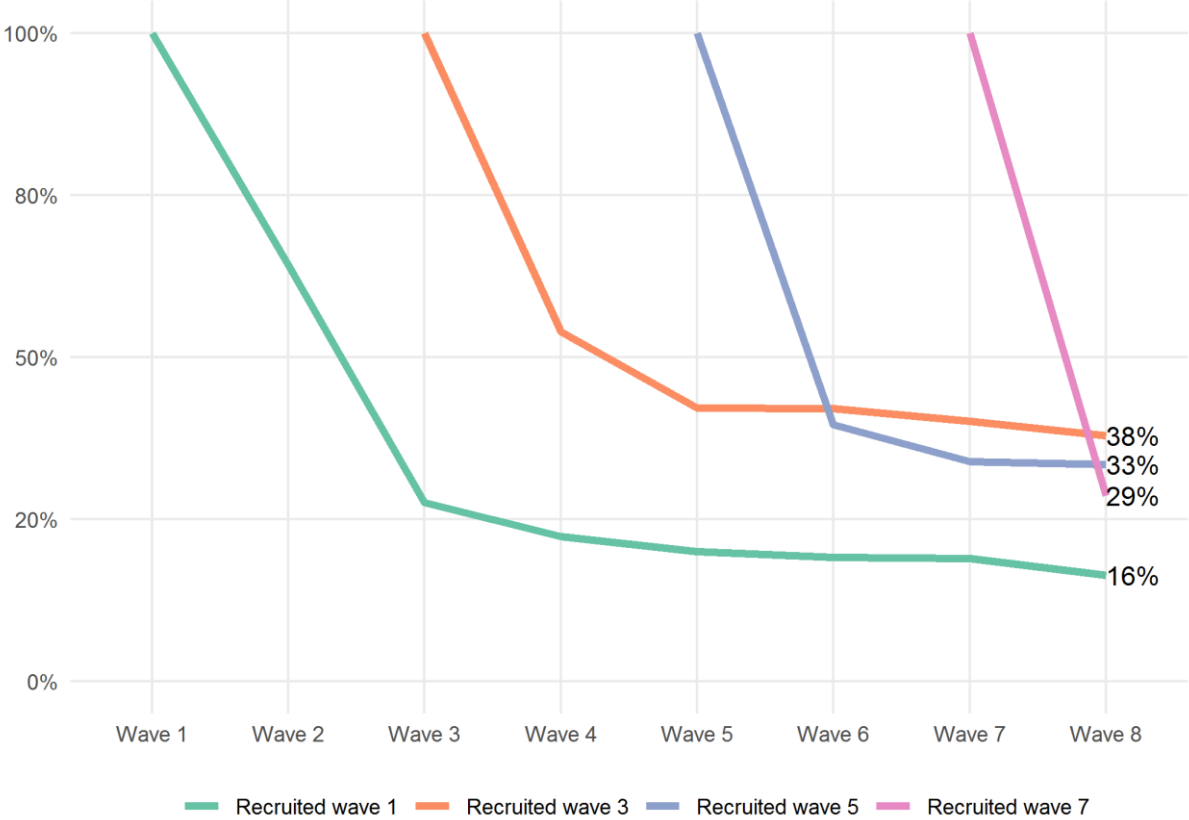
⁵ Reminders to municipal and county representatives were distributed with delay as their invitation was delivered by mail.

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.

The retention rate is at its lowest in the respondent’s second wave before retention flattens out. 64 percent of the respondents recruited in wave 1, also participated in wave 2. Correspondingly, 54 percent of the respondents recruited in wave 3, also participated in wave 4. In subsequent waves, the retention rate increases when compared to the first drop-off. For instance, among those recruited in wave 3, who also responded in wave 4, 78 percent are respondents in wave 5. Among representatives recruited in wave 1, 16 percent of them participated in wave eight.

Retention after first wave among respondents who were recruited in wave 5 and 7 is low when compared to the retention rate for respondents recruited in wave 1 and wave 3. As noted previously, recruitment in both waves occurred in special circumstances considering the pool of representatives available despite the small addition of new parliamentary and Sami parliamentary representatives in wave 7.

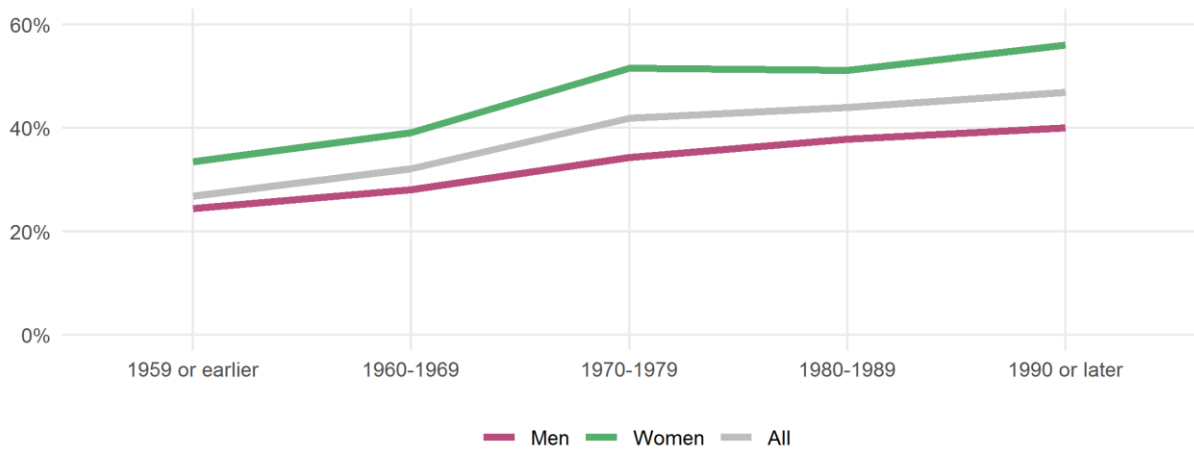
Figure 1: Panel history of PER respondents



PLATFORMS

The questionnaire was prepared for data input via smart phones. 28.2 percent of survey respondents that opened the questionnaire used a mobile phone. 5.7 percent of the mobile users did not complete to such an extent that they were classified as respondents. To compare, 19.7 percent of the non-mobile users left the questionnaire without being included as respondents.

Figure 2: Percentage of mobile users by gender and year of birth.



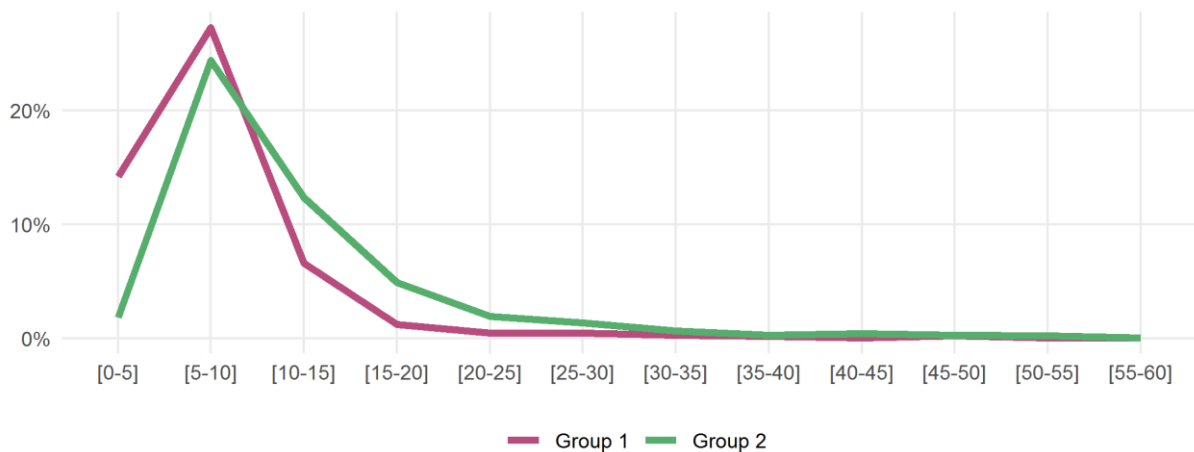
The general tendency is that younger respondents are more inclined to use their mobile phone when answering the questionnaire. Young female representatives are the most frequent users of mobile devices.

TIME USAGE

In the survey invitation, an estimated duration of the survey is included. For wave eight, the estimate was of 8 - 11 minutes. We will now examine the time actually spent by the respondents filling out the questionnaire.

Measuring average time usage poses a challenge as 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 this effect, respondents using more than 60 minutes are excluded from the calculation. In this subsample, the average response time is 10.4 minutes as can be seen in table 3.

Figure 3: Time usage of survey respondents



On average, mobile respondents use slightly less time than respondents using non-mobile devices. When compared to previous waves of PER, the difference in time spent in the questionnaire between the two groups is less subtle.

Table 3: Average time spent on questionnaire (minutes)

	All	Group 1	Group 2
All users	10.4	8.5	12.5
Non-mobile users	10.7	8.6	12.8
Mobile users	9.9	8.2	11.8

The survey is comprised of several question types, and it is assumed that time spent on a question is dependent on question type which can range from single questions to grids with multiple questions. Although not analysed for the Panel of Elected Representatives here, the documentation report from wave 20 of the Norwegian Citizen Panel show that respondents spend significantly less time completing single questions compared to grid and open-ended questions in line with what to expect as there is less information to consider for the respondent. There is little variance between mobile and non-mobile users for single and grid questions, with quite a lot of platform variance for open-ended questions. On average, mobile users write fewer characters on open-ended questions when compared to desktop-users.

REPRESENTATIVITY

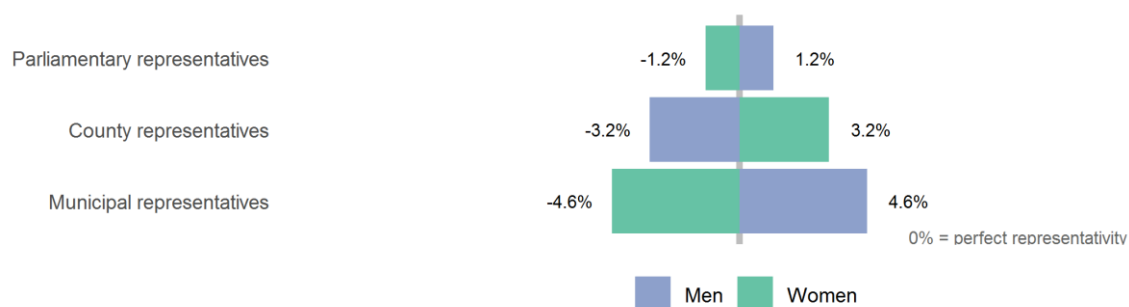
All respondents of the panel are representatives elected to office at different level of administration. Norway's four levels of administration are municipalities, counties, the Sami parliament and the national parliament. In this section, we examine how well different demographics are represented in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

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.

REPRESENTATIVITY OF THE PANEL OF ELECTED REPRESENTATIVES

Figure 4 shows how the proportion of men and women in the panel compares to the proportion in the target population. Men are overrepresented among municipal representatives, while women are overrepresented among county representatives. It should be noted that the total number of participating county representatives are comparatively low to the number of participating municipal representatives and over- or underrepresentation is more subject to be fluctuant between waves.

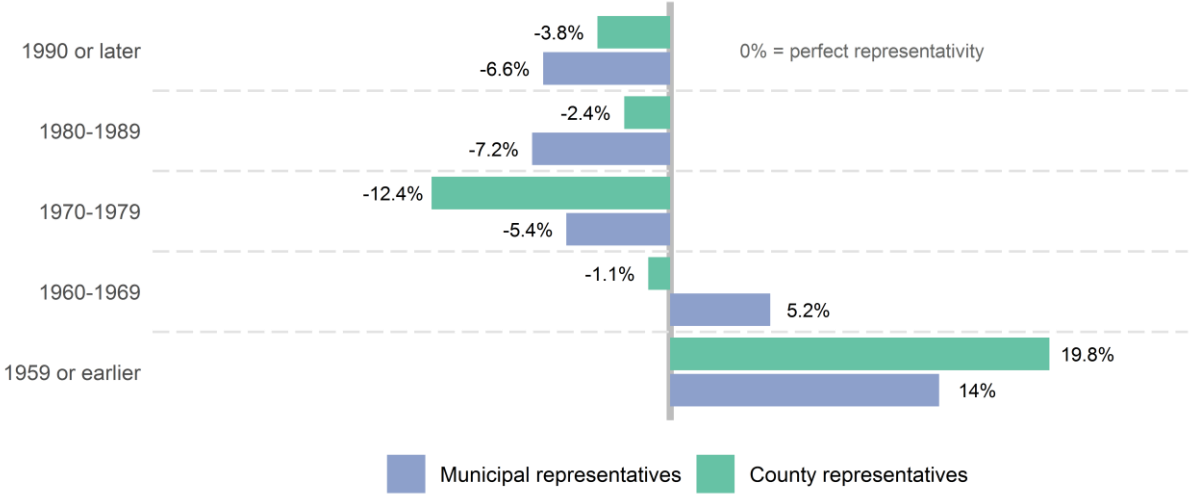
Figure 4: Representativity of gender



The oldest representatives are overrepresented in the panel, as shown in figure 5. While the bias is quite similar for county and municipal levels, it differs on representatives born in 1960-1969 where municipal representatives are overrepresented and county representatives are slightly underrepresented.

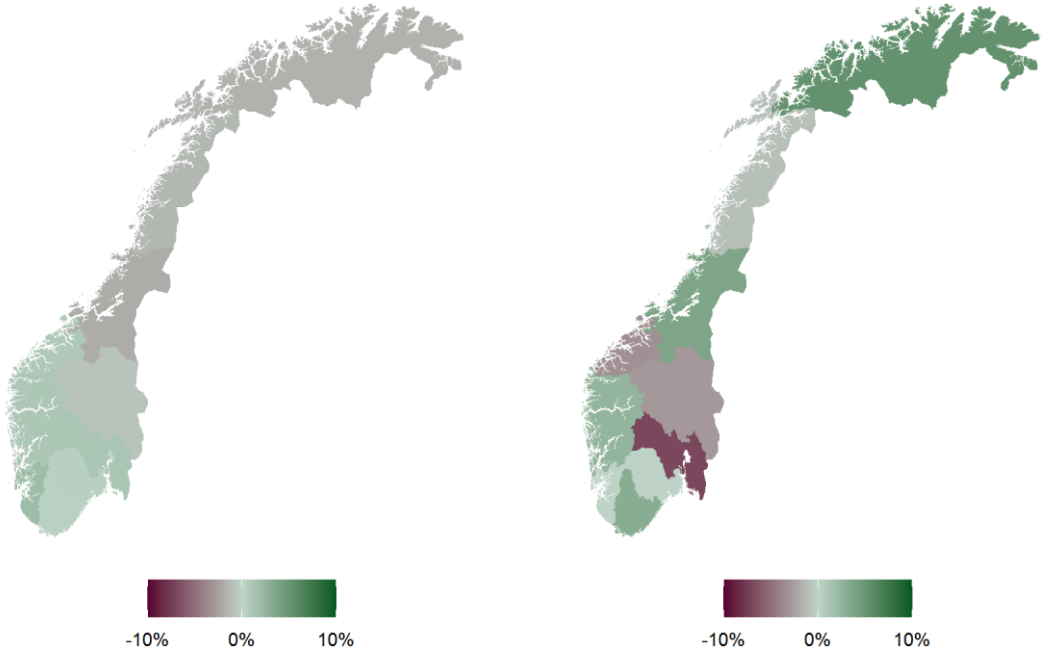
The most pronounced bias can be found among the elder representatives, particularly those born in 1959 or earlier. These respondents are overrepresented by nearly 20 percent at the county level, and 14 percent at the municipal level.

Figure 5: Representativity of age groups



A comparison of wave eight respondents to the target population is shown in figure 6, based on county where the representative is elected.⁶ Biases are rather small on the municipal level, and more pronounced on the county level. An important explanation for this, is that the number of eligible respondents is much lower on the county level, and consequently more sensitive to variation. At the municipal level, there is a clear north-south bias dimension, although not severe. Under- and overrepresentation exhibit less of a pattern at the county level.

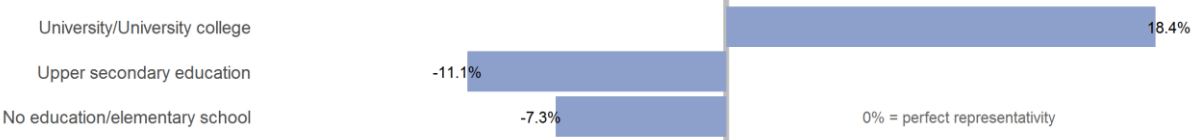
Figure 6: Representativity of municipal (left) and county (right) representatives – by 2020 counties



⁶ 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.

Similar to what is observed in the Norwegian Citizen Panel, and in earlier waves of PER, representatives having completed higher levels of education are overrepresented among the panel members on the municipal level as can be seen in figure 7.

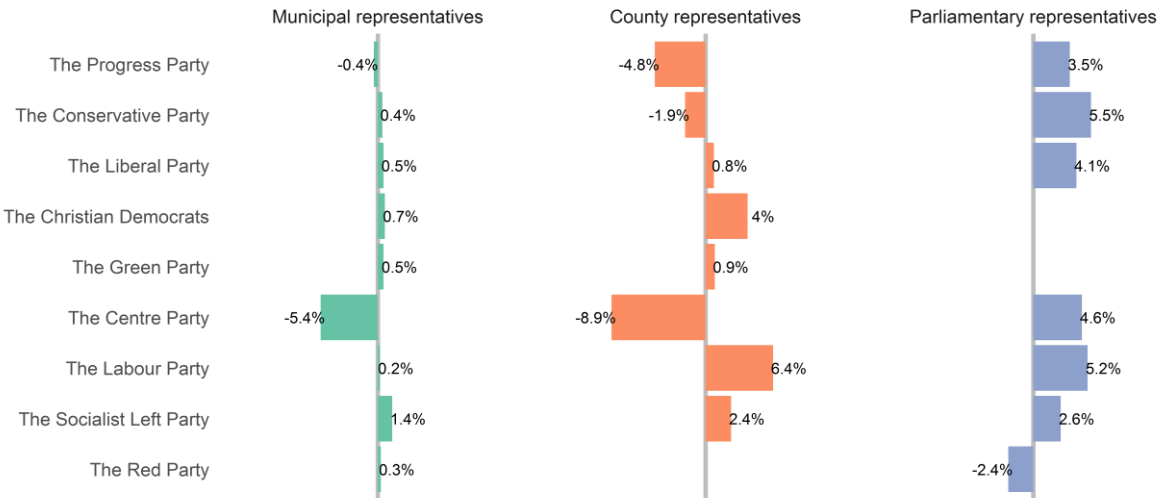
Figure 7: Representativity of levels of education. Calculated for municipal representatives only.



Lastly, party affiliation bias is examined. 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 8 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, the Green Party, and The Christian Democrats, no result is displayed.

Most notably, most parties are not systematically under- or overrepresented. Given the low levels of party over- and underrepresentation at the municipal level, apart from The Centre Party, it is hard to argue that any party is either. Both the Liberal party and the Socialist Left party are somewhat overrepresented at all political levels, while the Centre party is comparatively heavily underrepresented at the municipal and county levels. Moreover, we do not observe biases along the classic left-right party axis.

Figure 8: Representativity of parties from left on party axis (bottom) to right (top)



The bias is stronger and more fluctuant at the county and parliamentary level. A low number of observations is an important contributor, rendering the results more sensitive to variation. The strongest bias is observed for county representatives from the Centre Party, along with parliamentary representatives from The Labour Party and the Conservative Party.