The Panel of Elected Representatives

2021, Sixth Wave

Methodology report

Øivind Skjervheim

Amund Eikrem

Olav Bjørnebekk

Joachim Wettergreen

September, 2021

REPRESENTANTPANELET

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BACKGROUND

This report describes the data collection in the sixth wave of The Panel of Elected Representatives. Furthermore, the report describes technical aspects of the data collection as well as the representativity and continuity of the panel. The panel was fielded before parliamentary elections were held in autumn of 2021.

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 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 and the fourth in the fall of 2020. The fifth wave was fielded during spring of 2021.

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 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 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 vary[1], 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 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 WAVES ONE, THREE AND FIVE

In wave one and three, 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

[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/

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 has 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.

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

Table 1: Recruitment response waves one, three, and five

	Invitations	Mode	Contacts	Responses	Recruitment rate (%)
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 WAVE SIX

A total of 5,022 representatives were invited to participate in wave six.

The survey was closed on the 8th of September 2021. For various reasons, 60 representatives actively opted out. 46.9 percent (2,331) of the remaining 4,962 logged on and accessed the survey. 2,003 individuals completed the questionnaire, and 328 exited the questionnaire before completion. 33.5 percent of the incomplete responses are kept as a part of the survey data, while the remaining 218 incomplete responses are excluded from the survey due to lack of data. A total of 2,064 representatives are accepted as wave six respondents, leaving the overall response rate at 41.5 percent.

Invitational response is presented in table 2. Responses yielded by the initial invitation is substantially higher than all subsequent reminders.

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

	Responses	Cumulative Responses	Response rate	Cumulative response rate
Invitation (16th/17th of August)	1,018	1,018	20.5 %	20.5 %
Reminder 1 (23rd of August)	467	1,485	9.4 %	29.9 %
Reminder 2 (27th of August)	283	1,768	5.7 %	35.6 %
Reminder 3 (1st of September)	296	2,064	5.9 %	41.5 %

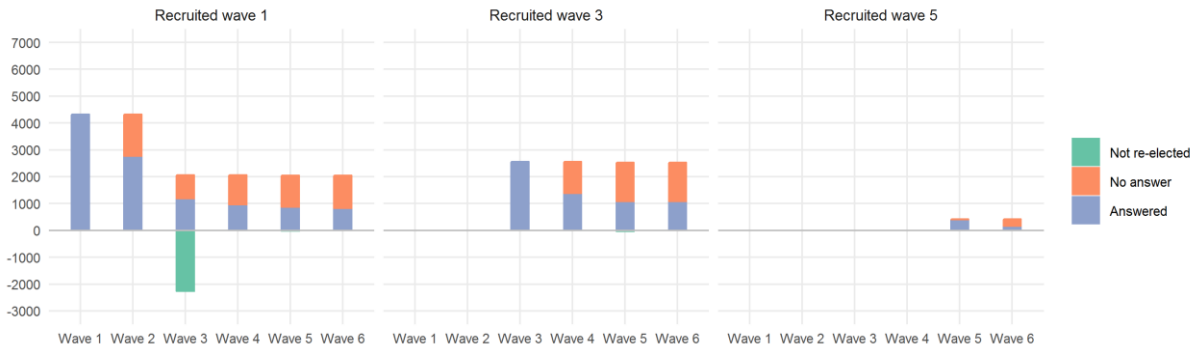
RESPONSE OF PANEL MEMBERS OVER TIME

We will now examine the panel retention, the rate at which the panel members continue responding to the survey waves. 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 illustrated in figure 1 below.

The retention rate is at its lowest in the respondent's second wave. 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. For instance, among those recruited in wave 3, who also responded in wave 4, 78 percent are respondents in wave 5.

Retention is low among respondents who were recruited in wave 5. As noted previously, recruitment in wave 5 occurred in special circumstances considering the pool of representatives available. Nevertheless, only 161 of the 407 who were recruited in wave 5 participated in wave 6 amounting to a retention rate of 39.5 percent.

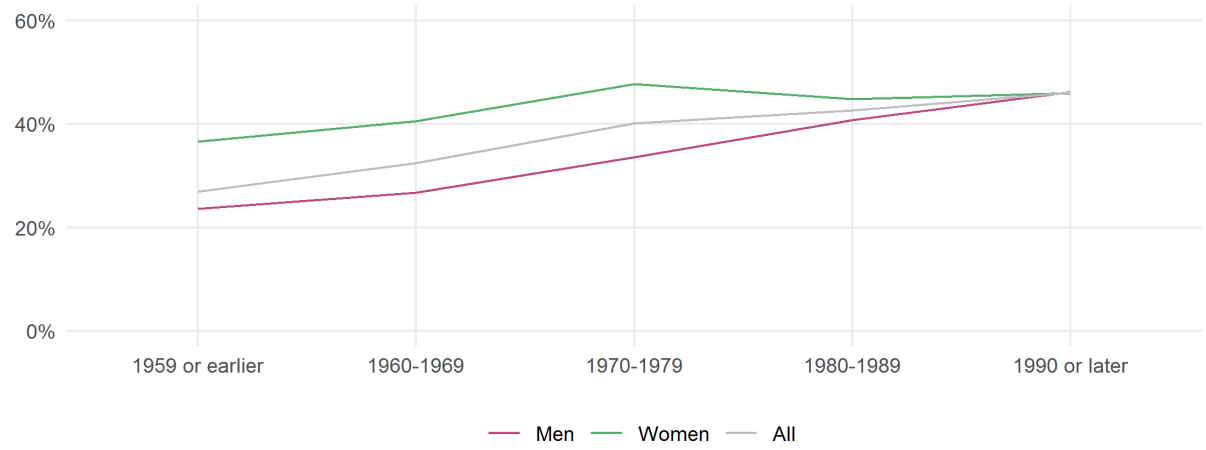
Figure 1: Panel history of PER respondents



PLATFORMS

The questionnaire was prepared for data input via smartphones. 31.1 percent of survey respondents that opened the questionnaire used a mobile phone. 2.9 percent of the mobile users did not complete to such an extent that they were classified as respondents. For a comparison, 15.3 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. Due to small numbers of respondents, older respondents are excluded from the graph.



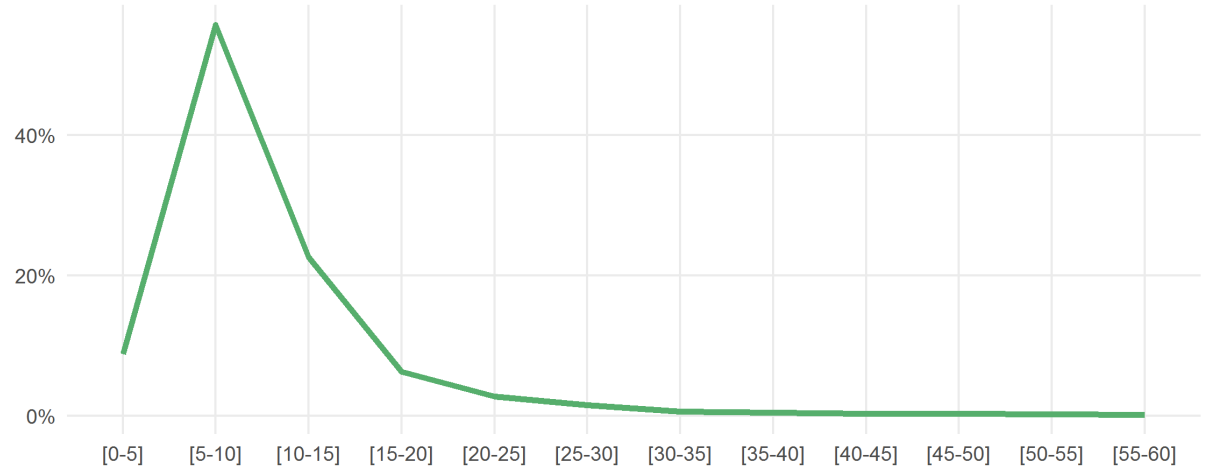
The general tendency is that younger respondents are more inclined to use their mobile phone when answering the questionnaire. Female representatives born between 1970 and 1979 are the most frequent users of mobile devices. Women use mobile devices to answer the questionnaire more often than men.

TIME USAGE

In the survey invitation, an estimated duration of the survey is included. For wave six, the estimate was of 7 - 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 11 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. The difference is smaller than what is documented in the Norwegian Citizen Panel questionnaires, which can be explained by the fact that NCP questionnaires has a more extensive use of complex survey experiments and open ended questions.

Table 3: Average time spent on questionnaire (minutes)

	All
All users	10.8
Non-mobile users	11.3
Mobile users	9.7

The survey is comprised of several question types, and it is assumed that time spent on a question is dependent on question type. 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

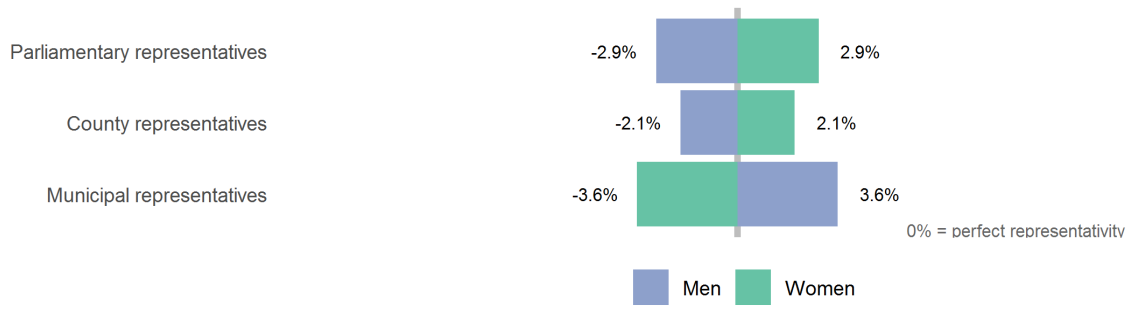
All respondents of the panel are representatives elected to office at different level of administration. Norway's four levels of administration are municipalities, counties, the Sami parliament and the national parliament. In this section, we examine how well different demographics are represented in 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 wave six 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 4 shows how the proportion of men and women in the panel compares to the proportion in the target population. Women are slightly overrepresented at the county level, and in the parliament, while men are overrepresented among municipal representatives.

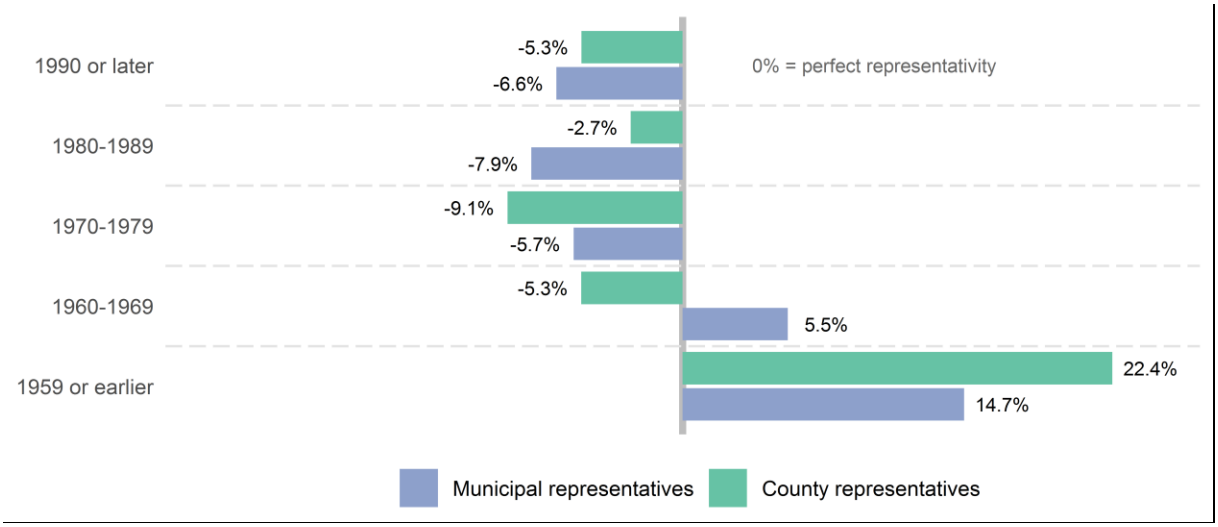
Figure 4: Representativity of genders.



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

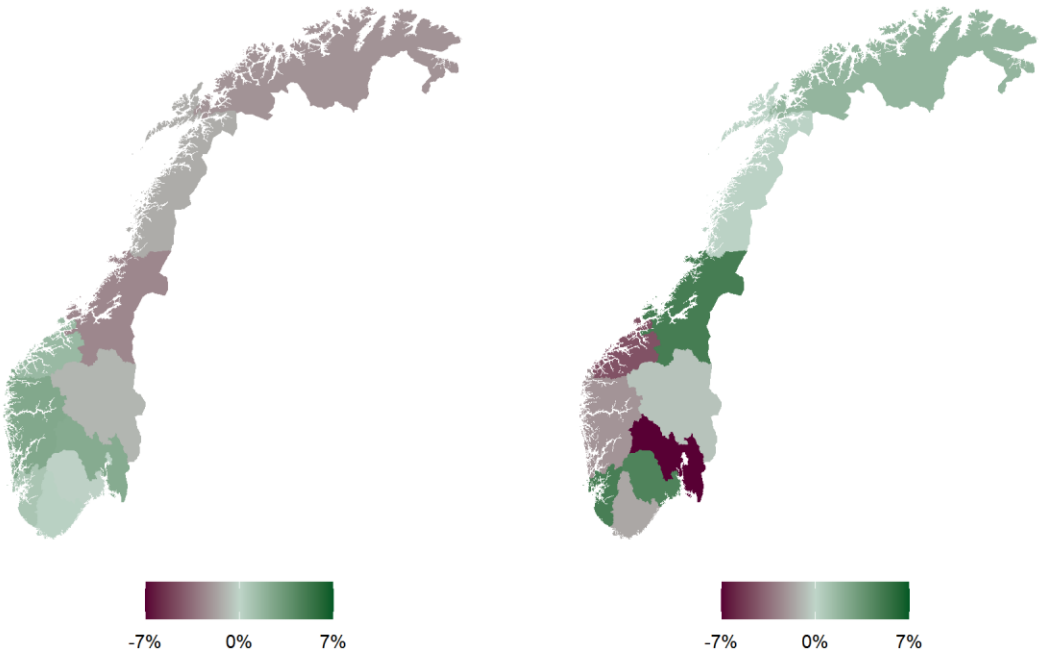
The most pronounced bias can be found among the elder representatives, particularly those born in 1959 or earlier. These respondents are overrepresented by 22.4 percent at the county level, and 14.7 percent at the municipal level as seen in figure 5.

Figure 5: Representativity of age groups



A comparison of wave six respondents to the target population is shown in figure 6, based on county where the representative is elected.[5] 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 dimension of bias. Under- and overrepresentation exhibit less of a pattern at the county level.

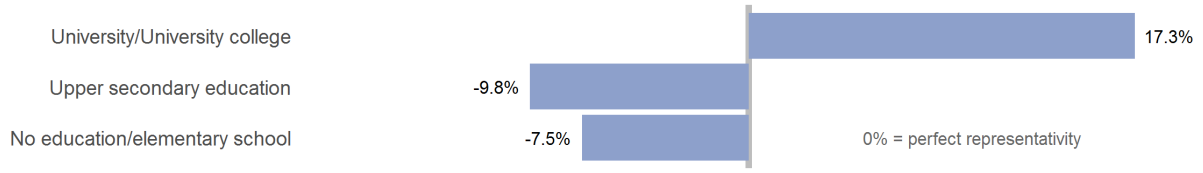
Figure 6: Representativity of municipal (left) and county (right) representatives – by 2020 counties



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.

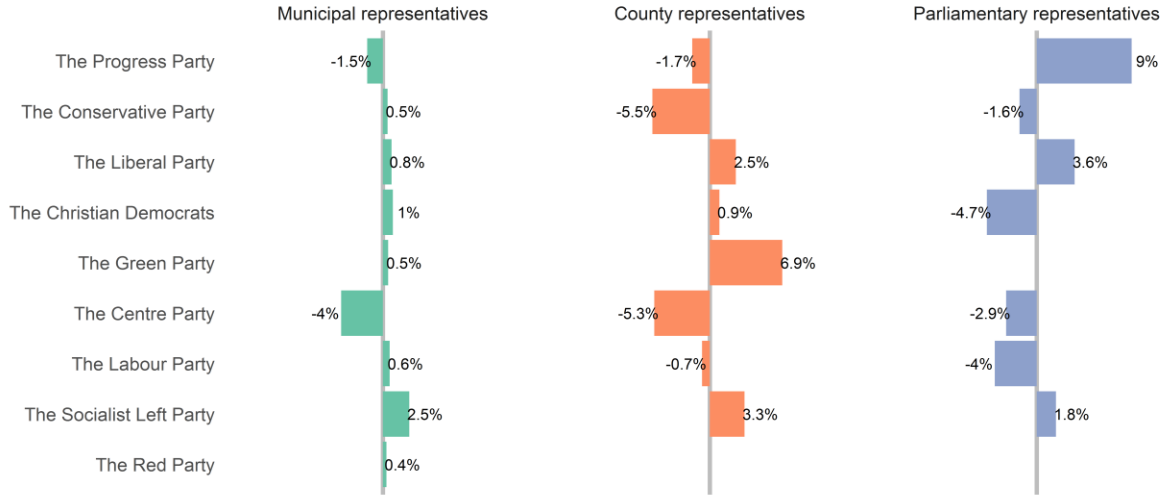
[5] Please note that the distribution is calculated by head counts. It does not take into account that the municipal councils vary in size and form.



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 and the Green Party, no result is displayed.

Most notably, most parties are not systematically under- or overrepresented, except for The Socialist Left Party, The Liberal Party, and The Centre Party. Both the Liberal party and the Socialist Left party are somewhat overrepresented at all political levels, while the Centre party is systematically underrepresented. Moreover, we do not observe biases along the classic left-right party axis. Parties at the municipal level, are more or less on par with the population. The most pronounced bias is The Centre Party which is underrepresented by 4 percentage points.

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. Low N is an important contributor, rendering the numbers more sensitive to variation. The strongest bias is observed for county representatives from the Centre Party, and the Green Party, along with parliamentary representatives from The Labour Party.