

Norwegian Panel of Public Administrators

2024, Fifth Wave

Methodology report

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BACKGROUND

In this report we describe the procedures of data collection in the fifth wave of The Norwegian Panel of Public Administrators. Furthermore, we describe technical aspects of data collection as well as the representativity of survey respondents, as compared with the population.

The Norwegian Panel of Public Administrators is an internet-based survey of public administrators. The panel includes administrators from ministries and their underlying directorates and agencies.¹

The Norwegian Panel of Public Administrators (NFP) is a collaboration between the University of Bergen (UiB), the University of Oslo (UiO), the University of Agder (UiA), The Arctic University of Tromsø (UiT), the Norwegian University of Technology and Science (NTNU), the Institute for Social Research (ISF) and the Norwegian Research Centre (NORCE). UiB is the data controller on behalf of the other institutions. NFP is a part of the Digital Social Science Core Facility (DIGSSCORE) at UiB. The panel is affiliated with the Norwegian Citizen Panel (NCP), The Norwegian Panel of Elected Representatives (PER), and the Norwegian Panel of Journalists (NJP). ideas2evidence is responsible for the implementation of the survey, including recruiting participants and distributing surveys to respondents.

The fifth wave was fielded in June 2024.

TECHNICAL ASPECTS OF THE SURVEY

SOFTWARE

The web-based research software Confirmit (now part of the company Forsta) 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 Norwegian Panel of Public Administrators.

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.

RANDOMIZATION PROCEDURES

NFP has an extensive use of randomization procedures. The context of each randomization procedure may vary², 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 The term "agencies" includes what in Norwegian is called "tilsyn", "etat", "institutt" etc. Note that some directorates are called agencies in English.

² 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()`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 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. Since, for example, 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 Confirmit⁵:

```
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;
}
```

THE POPULATION

The target population was employees of the Norwegian central government. Central government is understood as ministries (excluding political leadership) and their underlying agencies (directorates and supervisory

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/>

authorities). The target population excludes regional or local branches, or branches of the underlying organization with extensive operational rather than administrative duties. According to the Norwegian Agency for Public and Financial Management, the central government consists of 72 entities, 16 of which are ministries, which had a combined employee count of 22,167 in 2020.⁶⁷ While the long-term goal of the panel is to recruit bureaucrats/public administrators from all governmental levels (municipal, regional, and state), this was determined to be out of scope for the first five waves.

PREVIOUS WAVES OF RECRUITMENT

Existing panel members were recruited in wave 1 through 5. Table 1 outlines a short summary of these previous recruitment efforts, in addition to the latest recruitment in wave 5. 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. A detailed description of the recruitment in wave 5 follows in the next section.

Table 1: Information on recruitment

	Population size	Gross sample	Gross adjusted	Net recruited	Mode		Response Contacts	Rate ⁸
Recruitment 1 (wave 1)	≈23 000	≈23 000	-	2279	Snowball method, personal email		2	≈10 %
Recruitment 2 (wave 2)	≈23 000	7 734	7 658	603			4	7.9 %
Recruitment 3 (wave 3)	≈22 000	9 090	8 948	1 557	Personal email, opt-in form		3	17.5 %
Recruitment 4 (wave 4)	≈22 000	426	419	153			3	36.5 %
Recruitment 5 (wave 5)	≈22 000	746	739	162	Personal email		3	21.4 %

The data collection procedure of wave 5 mirrors that of the previous three waves, employing a mode of recruitment by personal invitation via email. Generally speaking, recruitment was limited by the number of e-mail addresses collected by DIGSSCORE. Like wave 4, the gross sample for wave 5 was fairly small, comprising of less than 750 individuals overall.

In wave 2, 3, and 4 a registration form was made available on the web, allowing for self-recruitment.⁹ Enrolment through this form has generally been limited, contributing to only a fraction of the overall number recruited. This opt-in form was not used during wave 5.

DATA COLLECTION

RECRUITING A NEW SET OF PANEL MEMBERS

The panel recruited new panel members in wave 5. This section gives a detailed description of the sample frame, recruitment process, and results of the recruitment effort.

⁶ Utviklingen i antall arbeidsforhold i stats- og sentralforvaltning 2019-2020. DFØ-notat 2021:02. <https://dfo.no/rapporter/utviklingen-i-antall-arbeidsforhold-i-stats-og-sentralforvaltningen-2019-2020>

⁷ In 2024 there were actually 88 entities, 17 of which were ministries, but employee data for this period was found lacking. Organisering av virksomheter og ansatte i staten. DFØ. <https://dfo.no/nokkeltall-og-statistikk/organisering-av-virksomheter-og-ansatte-i-staten>

⁸ Based on net recruited / adjusted gross sample (opt-out excluded).

⁹ Registration form made available at the NFP home page: <https://uib.no/nfp>

THE RECRUITMENT PROCESS

For this particular recruitment effort, engaging employees at ministries currently not participating in the panel was a central objective. In other words, the scope was targeted at ministerial employees that had escaped previous recruitment efforts.

In wave 5, personal invitations were sent by email to 746 public administrators.

Employees at agencies were not attempted recruited in wave 5.

The invitation emails contained relevant information, such as a description of the project, the privacy policy and contact information for relevant parties involved in the project. A link to participate in the survey was included in the email. At the very end of the email, a link to deregister from participation was also provided.

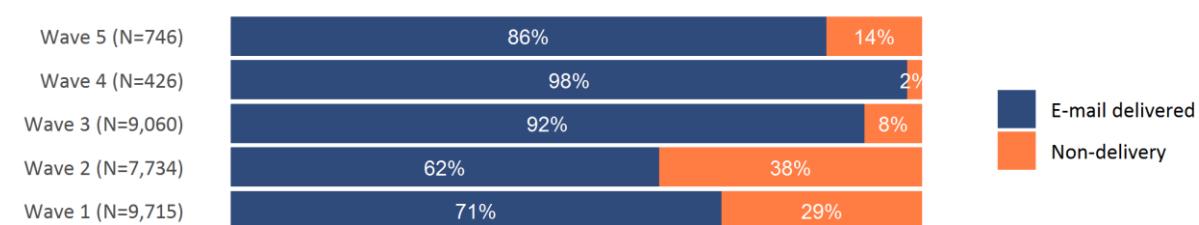
As usual, prior to survey deployment, the quality of the list was controlled, and any apparent errors were corrected. Contact information was compared with the panel database and any existing panel member who could be identified as a duplicate was removed from the (new) list of respondents.

The majority of invitations were distributed on the 4th of June 2024, though a few were distributed as part of a soft launch on the 3rd of June.

In surveys comparable to NFP, the number of complete responses is usually greater than the number of incomplete responses.¹⁰ In the first three waves of NFP, we observed an unusually high rate of incomplete responses, a majority of which are seemingly left by respondents briefly opening the questionnaire, before rejecting participation. As stated in previous panel reports, we attributed this in part to IT systems at various ministries and directorates automatically checking links for malicious content. We find little evidence for such a pattern in wave 5, however. In the end, 16 percent of new respondents (also 16 percent overall) opened the questionnaire without further interaction.

The first reminders were distributed by email on the 10th of June. They were sent to respondents who either had not accessed the link in the initial invitation or had started the questionnaire without completion. Respondents were encouraged to join the panel. The final reminder was distributed on the 19th of June.

Figure 1: E-mail delivery rate by wave, new recruits only



In the first two waves, high rates of invalid e-mail addresses and issues with reaching some relevant ministries due to security settings at the receiving end hampered recruitment efforts. Issues with deliverability were far less pronounced in wave 3 and 4, as illustrated by figure 1. In wave 5, there was a slightly more pronounced issue with deliverability, though not at the level of the first two waves.

¹⁰ See *Norwegian Citizen Panel Twentieth Wave Methodology Report* (Skjervheim, Høgestøl, Bjørnebekk, Eikrem and Wettergreen, 2021) or earlier NCP methodology reports for examples of this.

RESULTS OF THE RECRUITMENT PROCESS – SURVEY RESPONDENTS AND PANEL MEMBERS

It is necessary to make a distinction between panel members and survey respondents. We define panel members as respondents who register their e-mail address, regardless of whether they have completed the questionnaire or not. Survey respondents are respondents who have completed a certain share of the questionnaire, regardless of whether they have entered their e-mail address or not. Since there was no opt-in form provided, this distinction is less significant for wave 5.

Wave 5 included a set of questions at the beginning of the survey where the respondent could be *screened out* based on their responses. These questions were designed to capture respondents who were either retired or not working at one of the ministries or agencies in the target population. Identified respondents were gently ejected from the questionnaire and not asked further questions. Employees working at local or regional offices of certain agencies (e.g., The Labour Inspection Authority) were also excluded.

130 public administrators completed the questionnaire without being screened out, while 32 incomplete responses are kept as part of the survey data as these respondents completed a certain amount of the questionnaire before exiting. Another 131 incomplete responses were excluded from the final data set due to lack of data.

Of the 746 invites that were distributed, 5 actively opted out, 2 were screened out due to their responses, resulting in an adjusted gross sample of 739.

In summary, recruitment in wave 5 resulted in 162 new survey respondents, a recruitment rate of 21.9 percent.

Further discussions in this report, which concern new recruits in wave 5, are based on survey respondents.

RESPONSES BY METHOD OF DATA COLLECTION

Table 2 summarizes the effect of the various stages of data collection. The initial invitation yielded 50 responses, while the first reminder yielded slightly fewer. The final reminder generated more responses than the initial invitation. While textually very similar to the previous reminder, the last reminder made it clear already in the email subject field that this was the last chance to respond, perhaps giving the respondents a sense of urgency.

Table 2: Number of responses and response rates for the new survey respondents by various stages of data collection

Response	Cumulative Responses	Response Rate	Cumulative Response Rate
Invitation (June 3 rd / June 4 th)	50	6.8 %	6.8 %
1 st reminder (June 10 th)	49	6.6 %	13.4 %
2 nd reminder (June 19 th)	63	8.5 %	21.9 %

RESPONSES OF EXISTING PANEL MEMBERS

Wave 5 of the NFP also included data collection from existing members of the panel, recruited in wave 1, 2, 3, and 4. Data collection among existing panel members was conducted in parallel with the recruitment of, and data collection among, new members. Existing panel members received an additional reminder on June 14th. Panel members registered with a personal cell phone number¹¹ also received an SMS text message instead of an email as their final reminder, while the rest received an email.

Of the 4,482 invites that were distributed to existing panel members, 39 opted out. 1,923 respondents completed the questionnaire, while 82 incomplete responses are kept as part of the survey data as these respondents completed a certain amount of the questionnaire before exiting. 324 incomplete responses were

¹¹ 2645 public administrators, comprising of 59 percent of the existing panel members, were registered with a cell phone number prior to fielding.

excluded from the final data set due to lack of data, and 52 complete responses were excluded due to the previously mentioned filtering process at the start of the survey.

Table 3: Number of responses and response rates for existing panel members by various stages of data collection

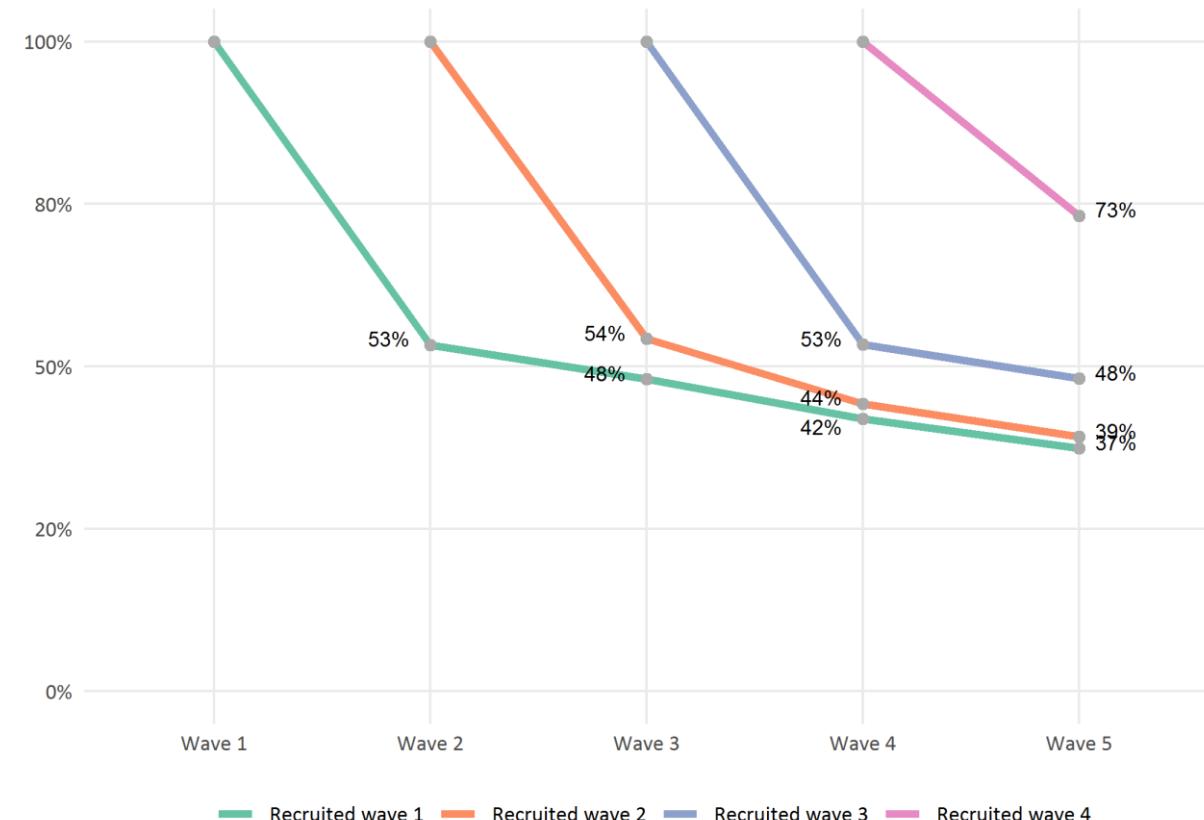
	Response	Cumulative Responses	Response Rate	Cumulative Response Rate
Invitation (June 3rd / June 4th)¹²	819	819	18.6 %	18.6 %
1st reminder (June 10th)	563	1382	12.8 %	31.4 %
2nd reminder (June 14th)	317	1699	7.2 %	38.6 %
3rd reminder (June 19th)	121	1820	2.8 %	41.4 %
3rd reminder – SMS (June 19th)	129	1949	2.9 %	44.3 %

Wave 5 was the third wave of NFP where SMS was deployed as a contact method. This time the SMS reminder yielded a comparable number of responses compared to the usual email reminder, with only 0.1 percentage points separating them. This is more in line with the Norwegian Citizen Panel than previous waves, where the equivalent SMS reminder usually yields more responses compared to email.¹³

Wave 5 resulted in a cumulative response rate of 44.3 percent, slightly lower than the 46.6 percent observed in wave 4.

RESPONSE OF EXISTING PANEL MEMBERS OVER TIME

Figure 2: Wave-to-wave retention of existing panel members



¹² 714 existing panel members received their invitation on the 3rd of June, so as to uncover any potential remaining technical issues before launching the survey in full. None were found.

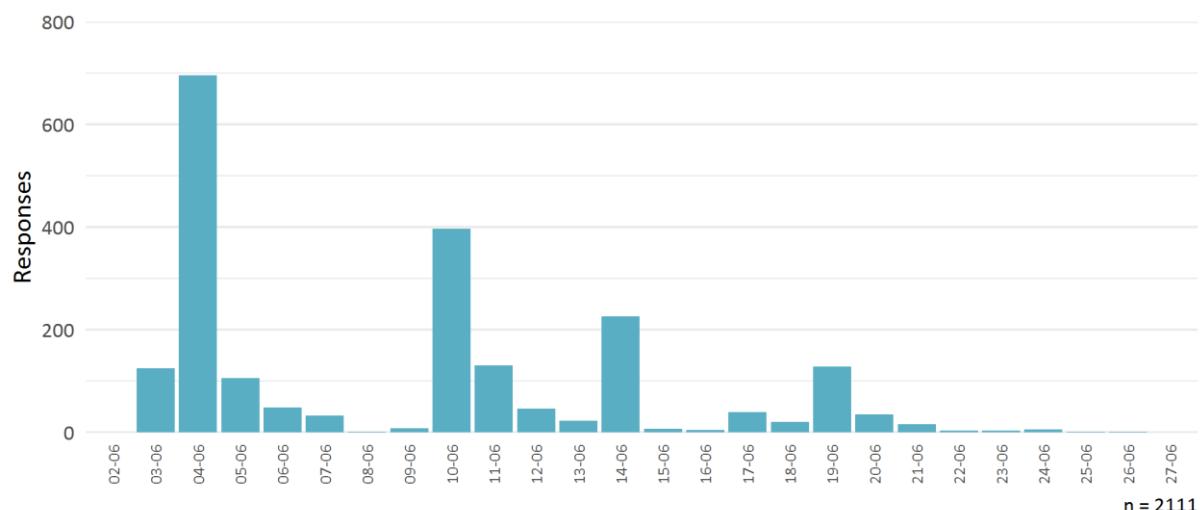
¹³ In wave 25 of the NCP, SMS yielded 1.6 percentage points higher response rate compared to email. See *Norwegian Citizen Panel 25th Wave Methodology Report* (Skjervheim, Bjørnebekk, Wettergreen and Grendal, 2022) for more information.

Wave-to-wave retention is a metric indicating how many respondents participated in each wave in relation to how many were initially recruited. Figure 2 shows that only 53 percent of the respondents recruited in the first wave participated in wave 2, and now only 37 percent remain in wave 5. A similar trend can be seen for those recruited in wave 2 and 3. Those recruited in wave 4 seem to have a higher initial retention rate, however, compared to previous waves. In other DIGSCORE panels, such as The Panel of Elected Representatives, we observe a pattern where retention drops sharply in the wave following recruitment, before stabilizing and descending slowly in future waves. We are starting to see the same pattern materialize for NFP participants.

OVERALL RECRUITMENT AND RESPONSES

The overall recruitment attempts and data collection among public administrators resulted in 2,108 survey responses and panel members. The data collection period occurred in June 2024, as shown in figure 3.

Figure 3: Responses by date



We attempted to reach 5,139 (new and existing panel members) by individual email invitations, and 41 percent responded. However, our address list does not make up the whole population of public administrators. As noted above, approximately 22,000 persons were employed by the central government in 2020. Therefore, nearly **10 percent** of public administrators in the central government participated in wave five of NFP.

PLATFORMS

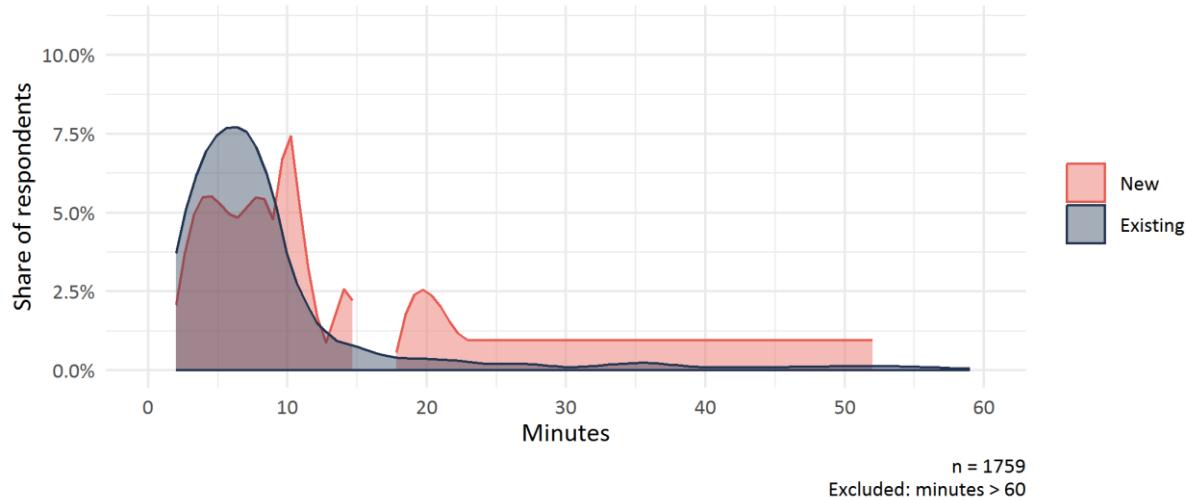
The questionnaire was made accessible for data input via mobile devices. 11.2 percent of survey respondents who completed the questionnaire used a mobile device. This is a much lower number than is observed for the Norwegian Citizen Panel (48 percent in wave 25), and for the Panel of Elected Representatives (28 percent in wave 8). The low share of respondents using mobile devices is not surprising however, as much of the contact information is comprised of work e-mails and the panel is directed to respondents in their function as employees in the state administration.

TIME USAGE

In the survey invitation, the respondents were presented with an estimated time of 10 minutes for filling out the questionnaire. When calculating average time spent, we account for respondents leaving the questionnaire open to complete the survey later. This idle time causes an artificially high average for completing the survey. To reduce noise in the data, respondents using more than 60 minutes are excluded from the calculation. Doing so results in an average response time of 7.7 minutes (table 4).

Newly recruited survey respondents were given an expanded set of questions to answer compared to the existing panel members. Distribution of time usage is presented in figure 4.

Figure 4: Time usage of survey respondents



On average, mobile device respondents spent less time than respondents using non-mobile devices. The difference between these groups is approximately the same as in the Norwegian Citizen Panel questionnaires, but an important difference is that the number of mobile device users in NFP is significantly smaller. Therefore, less emphasis should be put on the time difference in table 4.

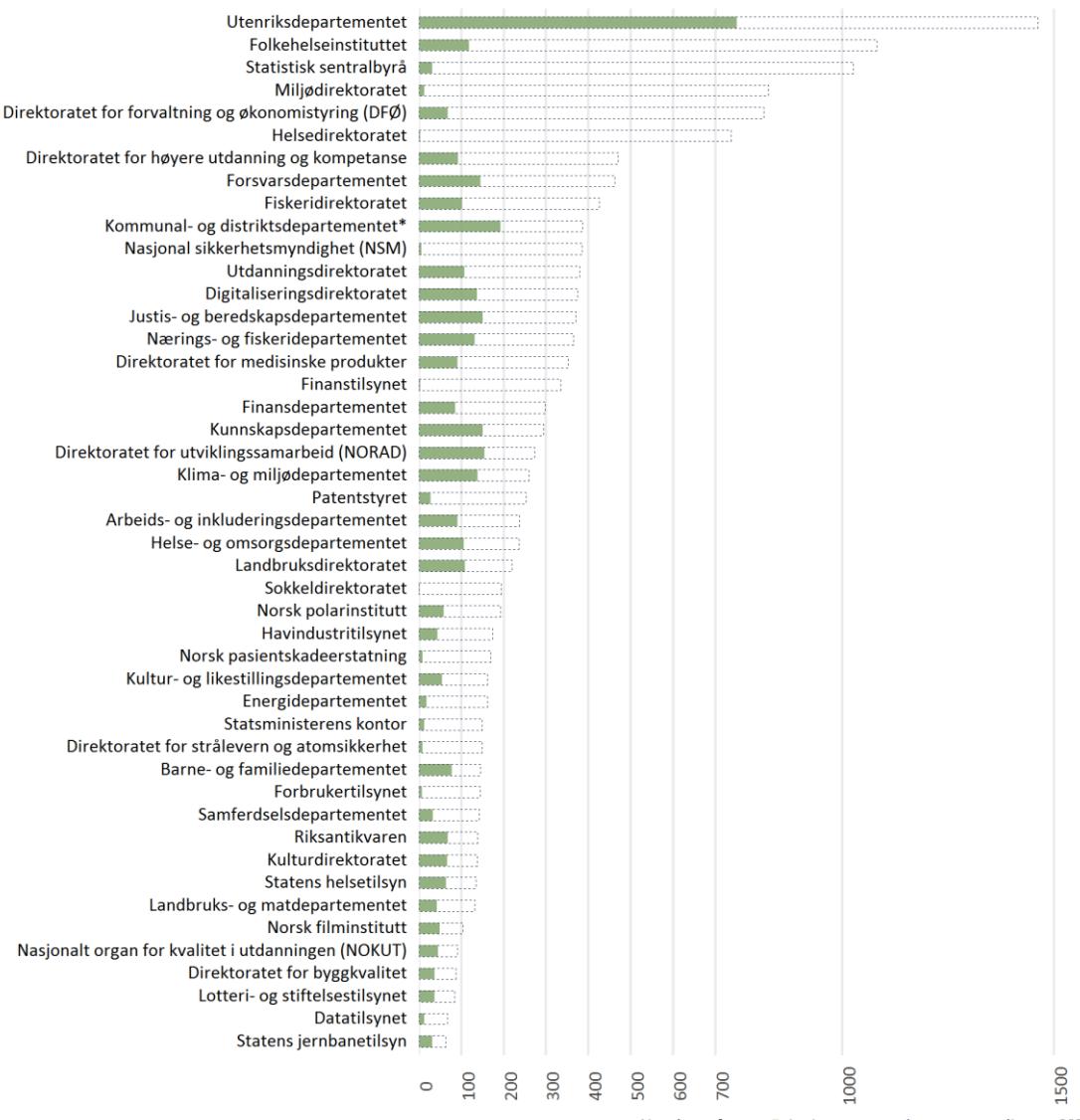
Table 4: Average time spent on questionnaire (minutes)

	All	New	Existing
All users	7.8	9.2	7.7
Non-mobile users	7.9	9.0	7.8
Mobile device users	7.1	11.7	6.9

REPRESENTATIVITY

In this section, we examine how well different demographics are represented in the panel, compared to their representation in the panel population (as defined in the chapter “The Population”).

Figure 5: Invited compared to number of employees by organization¹⁴



Number of wave 5 invitees vs employees according to SSB table 12623

*In 2024, Kommunal- og distriktsdepartementet underwent a reorganization upon which the Digitaliserings- og forvaltningsdepartementet was established. Since the latest data from SSB is from 2023, they are shown as one ministry here.

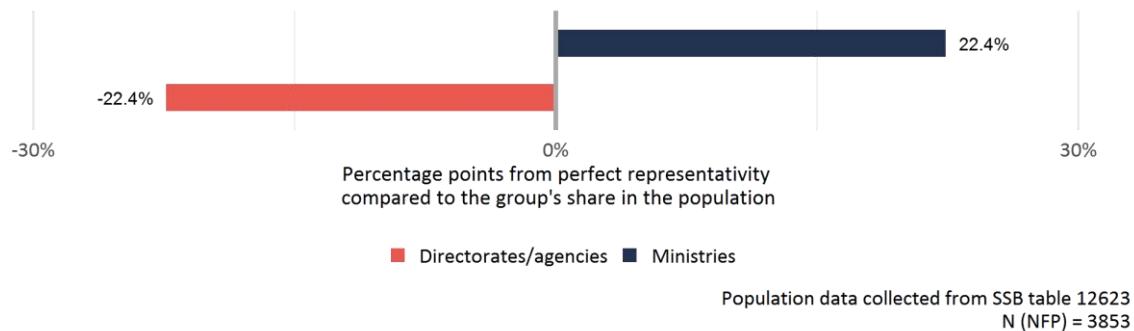
The gross sample of invited public administrators does not perfectly mirror the target population. While a portion of employees in most organizations have been invited in the 5 waves of the panel, there is a large discrepancy between the total number of employees and the number of invitees (Figure 5). In some cases, the discrepancy has been intended. Some organizations have extensive operational duties, and rather small administrative duties, and are intentionally not targeted for recruitment. This includes agencies such as Tolletaten (customs), Mattilsynet (Food Safety Authority), and Statens Vegvesen (Public Roads Administration).

¹⁴ Due to anonymity considerations, organizations with 60 employees or fewer are not displayed, but are counted in the representativity analysis. The following organizations are not displayed: Vegtilsynet, Dagligvaretilsynet, Kunst i offentlige rom (KORO), Medietilsynet, Norsk Akkreditering, Kulturtanken – Den kulturelle skolesekken Norge, Norsk Nukleær dekommisjonering, and Statens havarikommisjon.

In the following analyses, we have excluded these organizations, as the population statistics published by Statistics Norway do not differentiate between employees with administrative and operational duties. This procedure for calculating representativeness is slightly different compared to the previous waves. Whereas the previous procedure differentiated between organizations where the number of invitees closely matched the number of employees, the recruitment strategies in both wave 4 and 5 have been quite limited in scope compared to the preceding three waves, leading to a situation where essentially no organization would fulfill this criterion. As such, representativeness is calculated for all organizations where at least one respondent is employed and the abovementioned exclusion criterion is not fulfilled.

After applying this exclusion criterion, the target population has 5,260 employees at the ministry level and 10,123 employees at subordinate directorates/agencies.¹⁵ 34.2 percent of the target population were employed by ministries, 65.8 in directorates/agencies. In our net sample, 2,180 respondents (56.6 percent) were employed by ministries and 1,673 (43.4 percent) by directorates/agencies, leaving us with an overrepresentation of respondents employed by ministries (Figure 6).

Figure 6: Representativeness of administrative levels



Both administrative levels, ministries and subordinate directorates/agencies have an overrepresentation of respondents above 50 years of age (Figure 7). As a result of this, both levels have an underrepresentation of respondents aged 40 years or less.

Figure 7: Representativeness of administrative level by age

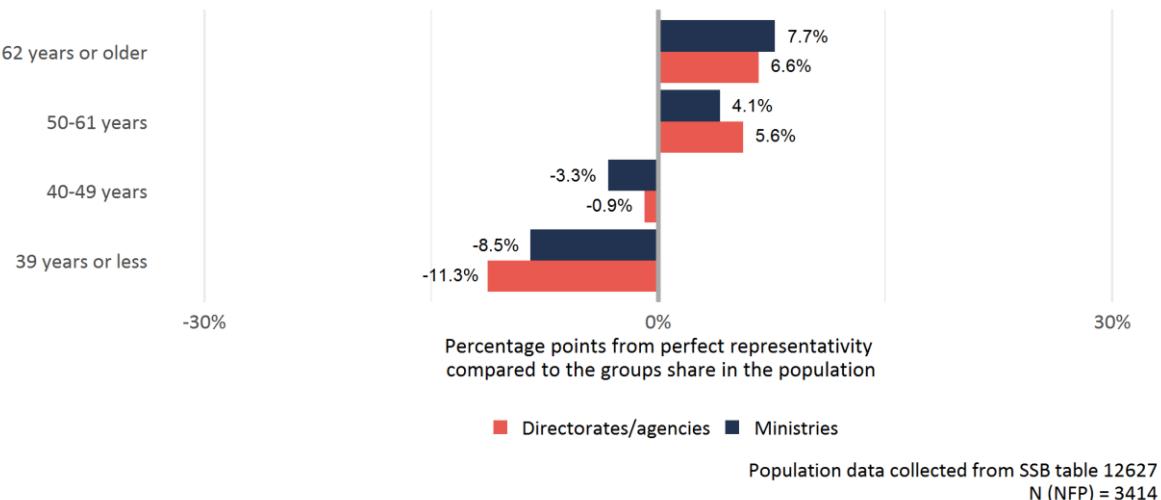
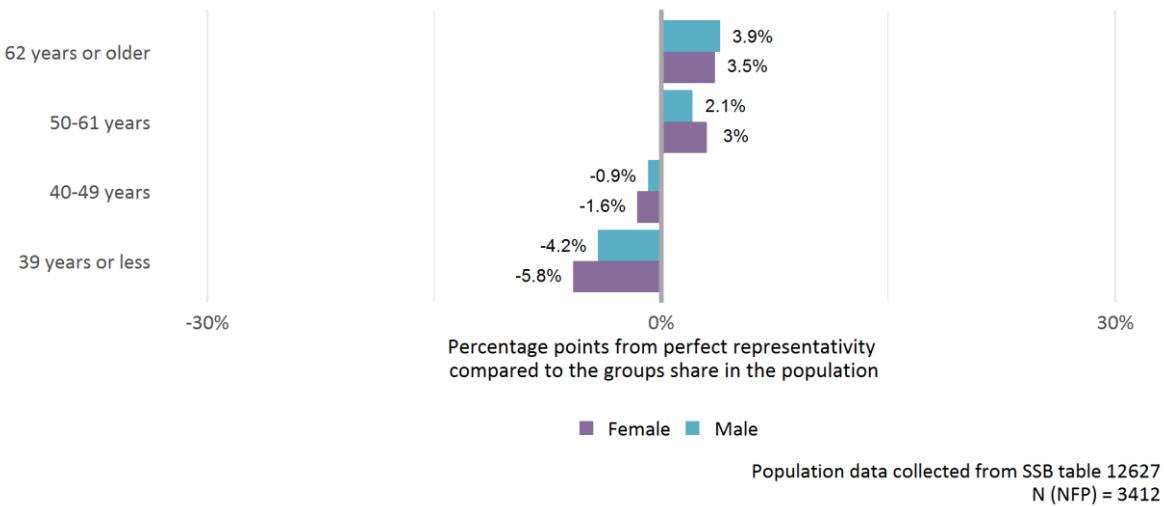


Figure 8 shows how the proportion of men and women in the panel compares to the proportion in the target population. There is a clear overrepresentation of respondents 50 years and above, regardless of gender. As we

¹⁵ According to SSB table 12623.

have already seen, younger employees are underrepresented. Female employees are more underrepresented than their male colleagues.

Figure 8: Representativity of men and women by age



Lastly, we turn our focus to the level of education. As in all DIGSSCOREs panels, higher education levels are overrepresented among the respondents. However, the education level among public administrators is generally, and naturally, higher than among the general public. Most public administrators at ministries and directorates/agencies have university/university college education of more than four years. This is true for 71 percent of public administrators at ministries in the target population, and 60 percent at directorates/agencies. In NFP, public administrators with the highest level of education are overrepresented by approximately 12 percent at both ministries and agencies/directorates (Figure 9).

Figure 9: Representativity of administrative level by education

